



# **DISEASE STAGING:** *Clinical Criteria*

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## **Preface**

Since its initial development in the late sixties, Disease Staging has undergone extensive review. The inclusion of criteria for additional diseases and periodic adjustments of laboratory data and diagnostic code assignments have ensured the timeliness, accuracy, and clinical relevance of Disease Staging.

Much of the initial development of Disease Staging was sponsored by the Office of Planning, Evaluation, and Legislation, the evaluation component of the Health Services Administration with the (then) Department of Health, Education and Welfare. The Staging concept was used to develop medically meaningful clusters of patients in terms of disease severity. Staging was also designed as a quality assurance tool for evaluating ambulatory care by comparing levels of severity at the time of hospitalization for patients receiving their health benefits from different government and private insurers.

Later development of Disease Staging was sponsored by the National Center for Health Services Research (NCHSR), a branch of the Public Health Service. Under contract to NCHSR, Systemetrics (which is now part of The MEDSTAT Group) assembled a panel of physicians to develop Disease Staging criteria for 400 high-incidence diseases. Computer software was developed to apply Disease Staging criteria to automated hospital discharge abstract data. This software was validated in re-abstracting studies that compared manual and computer staging on a large sample of records. Results showed a high level of agreement between stages assigned manually using the full medical record and stages assigned by computer software operating on automated discharge abstract data.

Since the completion of the NCHSR work in 1983, improvements include the clinical modification of Staging criteria to reflect current clinical practice and the annual updating of coded Staging criteria to reflect current coding conventions. The result is a more complete and more precise system for defining disease severity. The Disease Staging definitions thus reflect the severity of a disease at any given time and the clusters have clinical significance in terms of prognosis and choice of therapy. Policy makers, health care administrators, and researchers, both in the United States and other countries, have applied Disease Staging in risk adjustment evaluations of health care efficiency and effectiveness.

Three decades of work developing Disease Staging have allowed the writer to appreciate the dedicated work of many, both in medicine and in other professions. The contributions of colleagues in the development of the first four editions, as well as the

present edition, are documented in the Contributors section. Others have made unique contributions which should be recognized: Cathleen A. Barnes, RRA, MEDSTAT, Santa Barbara, CA, who has supervised the assignment of the codes, a complex and monumental task; Clara A. Callahan, MD, the newest member of the team, who provided a clinical perspective, especially for the diseases of children; Marvin E. Gozum, MD, who has lent his research and computer skills to the project for a good part of ten years; and Daniel Z. Louis, who has been a collaborator on many studies for the past twenty-five years.

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# Introduction

A disease can be effectively treated only when I as a doctor understand its causes in that particular patient, its site of origin, the internal havoc it creates, and the course which the process is likely to take whether treated or not. With that knowledge, I can make a diagnosis, prescribe a program of treatment, and predict an outcome.<sup>1</sup>

Where? Why? How serious? These are the basic questions that a clinician must attempt to answer when a patient presents with a medical problem. The same questions must be answered to make appropriate comparisons in studies of outcomes, quality, or costs of care. The "where" is the specific organ or system of the body; the "why" is the etiology of the problem; and the "how serious" is the pathophysiologic changes that have occurred and ranking of the disease's complications.

Physicians use information from a patient's history, physical examination, laboratory findings, and other diagnostic tests to answer these questions in order to diagnose a disease, to estimate the patient's prognosis, and to prescribe appropriate treatment. Ideally, answers should be available before therapeutic intervention. Even in those cases when definitive answers may not be available and treatment must be given, it should be based on the presumptive answers to these questions.

Disease Staging is a classification system that uses diagnostic findings to produce clusters of patients who require similar treatment and have similar expected outcomes. It can serve as the basis for clustering of clinically homogeneous patients for assessment of quality of care, analysis of clinical outcomes, review of utilization of resources, assessment of efficacy of alternative treatments, and assignment of credentials for hospital privileges.

Ideally, a diagnostic label should have explicit data about the location of the health problem, cause of the problem, and severity of the problem. The majority of diagnostic labels identify the site of the disease (e.g., appendicitis, cholecystitis, diverticulitis, and peptic ulcer). Some provide information about the system involved and cause of the problem (e.g., Pneumococcal pneumonia and urinary tract infection caused by *E. coli*). Other diagnostic labels are manifestations of problems (e.g., hypertension and anemia). A few, because of the body system involved, also convey a degree of severity (e.g., myocardial infarction or

bacterial meningitis). And some may even be distinguished by the time of the disease's onset (e.g. congenital toxoplasmosis).

Only in the area of cancer has the medical profession developed a diagnostic classification that includes severity based on the understanding of the need to measure the efficacy of various forms of treatment for similar clusters of patients. Now that society is challenging the medical profession to document quality of care in a more objective manner, similar measurement instruments are needed for all medical problems.

### **Disease Staging Criteria**

The Disease Staging criteria define levels of biological severity for specific medical diseases, where severity is defined as the risk of organ failure or death. The classification is based on the severity of the pathophysiologic manifestations of the disease:

<b>Stage 1</b>	A disease with no complications;
<b>Stage 2</b>	-the disease has local complications;
<b>Stage 3</b>	-the disease involves multiple sites, or has systemic complications;
<b>Stage 4</b>	-death.

Subdivisions of these stage levels have been defined to allow more precise classification. The challenge is to include enough detail to allow for a rich description of each disease and yet not be so overwhelmingly complete that the staging is cumbersome.

In the definition of the Staging criteria, most of the diseases begin at Stage 1 and continue through Stage 4. There are several exceptions to this rule. Some self-limiting diseases, such as cataracts, do not include a Stage 3 or 4. Other criteria begin at either Stage 2 or 3 since they are often complications of other diseases; e.g., bacterial meningitis, which can be a complication of sinusitis, otitis media, or bacterial pneumonia. Stage 0 has also been included in the classification of diseases for patients with a history of a significant predisposing risk factor for the disease, but for whom there is currently no pathology, e.g. history of carcinoma or a newborn baby born to a mother suspected of having an infection at the time of delivery.

The Stage levels are ordinal in nature for each medical problem. Stage 1 of one disease may have different implications for resource use, treatment, and prognosis than a similar stage of another disease. For example, hyperglycemia (Stage 1 diabetes mellitus) is different than positive serological evidence of AIDS (Stage 1). Even when major pathophysiologic damage exists such as coma, which in all diseases is a Stage 3 complication, the prognosis may be different for each disease since for some there is treatment which may reverse the complication. Treatment, whether medical or surgical, has not, however, been introduced into the staging classification; staging is driven by the natural history of the disease. Nor has quality of life been taken into consideration in Disease Staging. Controlling for other factors, such as choice of treatment, age, and presence of co-morbid disease, risk of death is a function of etiology and stage of disease and, while generally increasing by Stage level, may vary dramatically by Stage from one disease to another.

It is important to distinguish the etiology of a disease whenever possible. For example, "pneumonia" does not specify etiology. Designating that the pneumonia was bacterial in origin would be an improvement, (e.g., "bacterial pneumonia"), but optimally a physician should document the specific bacteria causing the pneumonia (e.g., "Pneumococcal pneumonia").

Health problems, such as congestive heart failure, and laboratory findings, such as anemia, that may result from a variety of causes, are not diagnoses. When this is all that is recorded as the patient's "diagnosis," the implication is that the physician did not know, or did not document, the disease process that produced the problem. Unfortunately, many users of medical information fail to distinguish between non-specific health problems (e.g., symptoms and laboratory findings) and diagnoses of specific diseases. As a result, patients may be inappropriately classified for the purposes of reimbursement, for the analysis of resource utilization, and for the assessment of quality of care.

For each Staging criteria set included in this volume the most likely etiology is specified. Some of the diseases may have multiple etiologies (e.g. bacterial pneumonia). While the classification of Pneumococcal pneumonia is essentially the same as for Staphylococcal or *Pseudomonas* pneumonia, each type of bacterial pneumonia should be analyzed separately when evaluating quality of care, clinical trials, and utilization of resources because of the varying prognosis associated with each.

There are a number of complications (for example, sepsis and congestive heart failure) that may result from many diseases. Generally, these complications have been assigned the same integer stage level across the different diseases, although not necessarily the same

substage level. Different integer stage levels have been used when the complication may indicate different levels of severity depending upon the underlying disease. For example, pneumonia is classified as a Stage 2 complication when it occurs secondary to other problems. There are a few diseases, such as botulism, where aspiration pneumonia or bacterial pneumonia is a reflection of the systemic nature of the problem rather than just the involvement of the respiratory system. For these diseases, pneumonia is classified as a Stage 3 complication.

## **Diagnostic Findings**

In addition to the stages of the disease, each criteria set includes a specification of “diagnostic findings” that can be used to validate the presence of the disease and stage level. The diagnostic findings include physical findings, radiological and laboratory results, and pathological and operative reports.<sup>2</sup>

The present edition has addressed the validation issue more comprehensively than previous editions. Only the information that specifically documents a complication is included, with the understanding that physicians should first gather data from the history and physical examination to state an hypothesis (presumptive diagnosis) and use the laboratory judiciously to validate the diagnosis. Which laboratory data are collected will depend on available facilities and cost-benefits for the patients. For some diagnoses, both the patient and physician can accept uncertainty. However, if major treatment decisions are to be made, validation using objective data is essential. For instance, patients should not be treated for cancer on a presumptive diagnosis.

For some diagnostic testing (e.g. the use of the glucose tolerance test or fasting blood sugar for the diagnosis of diabetes mellitus), criteria have been recommended that are accepted by the medical community. Many laboratory tests, however, do not have nationally accepted values to delineate normal and abnormal results. In these situations, laboratory results have been defined to be abnormal when they exceed three standard deviations from the mean value.<sup>3,4</sup>

In summary, the physician’s clinical judgment based on the history and physical examination should be used along with laboratory data to confirm or rule out the presence of a particular problem. In addition, laboratory values may need to be adjusted based on the calibration of the laboratory performing the test.

## **Applications of Disease Staging**

Disease Staging is a valuable tool in many clinical, research, management, and educational studies. Examples of how Disease Staging has been used to classify patients for a number of applications are highlighted below.

### ***Timing of Hospitalization***<sup>5-8</sup>

Disease Staging may be used to document potential quality of care problems in ambulatory settings by providing data relating to the level of severity of illness of patients at time of hospitalization. Patients admitted to the hospital with advanced stages of illness represent possible failures of outpatient care. For example, an admission for cellulitis secondary to diabetes mellitus might have been preventable if the disease progression could have been averted with appropriate outpatient care.

For some diseases, such as appendicitis, hospitalization is clearly appropriate at the earliest stage of the disease. Other diseases, such as essential hypertension, rarely require hospitalization at the early stages; hospitalization is only required if the disease progresses to more advanced stages.

Because admitting patients to an acute care hospital involves incurring significant cost and potential risk, patients should be admitted to the hospital only if the expected benefits outweigh the costs and risks of the admission, such as: when they require inpatient diagnostic testing; when their symptoms suggest a serious illness which, if confirmed, may require immediate treatment; when they require treatment that is most appropriately provided as an inpatient; and, when they require the types of monitoring and nursing care which are available only in an acute care hospital.

Classification of severity of illness at the time of hospitalization is important for analysis of both inpatient and outpatient care. Comparison of outcomes of inpatient care can be accomplished only if one adjusts for patient risk at time of admission.

For patients admitted at earlier stages of illness, one may question whether an acceptable level of care could have been provided in an outpatient setting. A number of factors could make such an earlier stage admission appropriate. For example, a patient with acute symptoms (e.g. chest pain), but without a confirmed diagnosis, may be appropriately admitted to the hospital until a diagnosis and a decision can be made as to whether further inpatient care is necessary. A patient may have other co-morbid conditions (for example, poorly controlled diabetes mellitus) that make the admission advisable, or a patient may

choose to undergo an elective surgical procedure that must be performed as an inpatient. A patient with osteoarthritis of the hip who decides to have a total hip replacement would clearly require hospitalization.

For patients hospitalized at more advanced stages, the issue is whether the patient has complications that could have been preventable with earlier inpatient care. For example, a patient admitted with acute cholecystitis and gangrene of the gallbladder has a serious complication that may have been prevented with earlier hospitalization and treatment.

Timeliness of admission is, in part, a function of whether hospitalization is the first or subsequent admission for a particular complication of episode of care. For example, a first admission at advanced-stage cancer should raise questions about whether earlier detection was feasible. Subsequent scheduled admissions for the same patient to undergo chemotherapy would not, or course, raise the same question.

It is important to differentiate the concept of a timely admission from a preventable admission. For example, an admission at Stage 1 appendicitis is timely and, given current medical knowledge, not preventable. Such an admission does not raise issues of appropriateness of care. On the other hand, while an admission for Stage 2.5 diabetes mellitus and cellulitis is also timely, it may have been a preventable admission if the disease progression could have been averted with appropriate outpatient care.

### ***Case-Mix Classification for Analysis of Resource Utilization and Reimbursement***<sup>9-19</sup>

Disease Staging should be an integral part of systems designed to analyze resource utilization. Differences in length of stay and cost may result from differences in patient populations treated, as well as from differences in efficiency. Etiology and stage of disease are directly related to the use of resources and must be considered in these types of analyses whether the focus is at the level of an individual physician, a hospital product line, or an entire institution.

In addition to the stage of the principal disease, other variables to be included in analysis of utilization include: presence of co-morbid, or co-existing, medical problems (e.g., presence of diabetes mellitus in a patient hospitalized for appendicitis - both the diabetes mellitus and appendicitis should be staged); reason for admission (e.g., for diagnostic purposes, therapeutic purposes, both diagnosis and therapy, chemotherapy, or observation); and the

use of surgical procedures or special units (e.g., ICU, CCU) if such use is justified by the needs of the patient.

The use of resources depends on the clinical status of the patient, on the reason for admission, and whether the latter is the first or one of many re-admissions. For instance, a woman with Stage 3 cancer of the breast will consume more resources during the first hospitalization, when more diagnostic and therapeutic interventions will be used, than on her third hospitalization, when for the same problem she may likely receive only chemotherapy or radiation therapy. In addition, the social support needs of the patient should be considered, although this variable would have a greater impact on timing of hospitalization and length of stay than on the diagnostic or therapeutic intervention.

By using Disease Staging, the variation in resource use resulting from patient differences can be controlled so that the manager or researcher can appropriately focus on the analysis of differences resulting from variation in physician and institutional practices. For similar reasons, reimbursement systems should be modified to account for differences in severity of illness.

### ***Quality of Care Assessment***<sup>5, 20-30</sup>

Whether the goal is assessment and improvement of the process of care or evaluation of clinical outcomes, there is a need for clinical specificity. The Health Care Financing Administration, for Medicare patients, and several statewide data organizations publish institution specific, and in some cases physician specific, information on outcome measures such as mortality. Without appropriate ways to account for differences in the severity of the patient mix treated, the meaningfulness of these types of analyses is questionable. For example, analysis of data from the National Hospital Discharge Survey demonstrated a 5.6% mortality rate for patients hospitalized with Stage 1 bacterial pneumonia, 9.5% for those with Stage 2, and a 33.1% mortality rate for Stage 3.<sup>29</sup> These estimates were further refined by considering the specific etiology (organism) of the pneumonia.

As a part of a quality improvement program, these types of advanced stage admissions should be reviewed to evaluate whether they resulted from physician related problems (e.g., delayed or incorrect diagnosis or treatment), patient related problems (e.g., failure to seek timely care or comply with prescribed treatment), system problems (e.g., lack of access to care), or were not preventable (e.g., resulting from rapid disease progression in a particular patient).

Disease Staging can also be used as a direct measure of patient outcomes by studying changes in disease stage over time. For instance, severity at hospital admission can be compared with severity at discharge. Patient based longitudinal data can be used in conjunction with Disease Staging to assess changes in severity of illness for defined populations and specific episodes of care.

Disease Staging is useful in evaluating processes as well as outcomes of medical care. A great deal of activity is currently being devoted to the development of clinical guidelines designed to reduce uncertainty and help guide the process of care. One of the difficulties faced in guidelines development is that the appropriateness of a specific diagnostic test or prescribed treatment varies by stage of disease. By defining stage-specific criteria it is possible to improve the specificity of clinical guidelines and process review criteria and make them more useful and acceptable to clinicians.

### ***Clinical Trials***<sup>29</sup>

The primary objective of clinical trials is to test the efficacy of therapeutic interventions under highly controlled conditions. By using Disease Staging to help specify the study population, comparability of the treatment and control groups can be assessed. Staging allows the investigator to stratify patients more accurately both for their principal diagnoses or problems and for any co-morbid conditions that they may have. Depending on the goals of the trial, it can be restricted to samples defined using specific stages of disease or designed to allow the assessment of efficacy across different levels of severity.

### ***Professional Staffing and Facility Planning in Health Care Institutions***<sup>9-11, 31</sup>

Severity of illness as documented by Disease Staging may be used to evaluate the appropriateness of current or planned staffing levels within hospitals or managed care institutions in relationship to patients' health care needs. Staging can provide data concerning the level of severity of specific patient groups that may warrant establishing or expanding special care units or securing special diagnostic equipment or other facilities.

### ***Specialty Board Certification and Clinical Privileges***<sup>32-34</sup>

A major responsibility of medical specialty boards is the development and administration of procedures and examinations for board certification and recertification. Disease Staging has



been used to classify the content of test items from the board certification/recertification examinations administered by the American Board of Family Practice<sup>32</sup> and to analyze medical licensing examinations in Japan.<sup>33</sup> Each item on the examination is classified by organ system, etiology, and stage of illness, along with other dimensions such as age group affected and whether the item focuses on diagnosis or management.

Use of this type of classification enables the specialty board to assess the current mix of items and begin to develop a "blueprint" to guide development of future examinations. For example, by using Disease Staging, one can refine the assessment of the physician's knowledge of the management of diabetes mellitus to assure that there is an appropriate mixture of items concerning management of the disease at its early stages along with prevention and management of specific advanced stage complications.

Disease Staging can be used in the assignment of hospital clinical privileges.<sup>34</sup> Currently, the delineation of clinical privileges is primarily procedure oriented, even in the medically oriented specialties. For example, a general internist may be credentialled to perform procedures such as arterial puncture, thoracentesis, and lumbar puncture. However, the skills necessary to successfully perform an arterial puncture say very little about the physician's ability to diagnose or manage the complex patient with advanced stage medical problems.

Disease Staging can be used to delineate disease specific privileges that more appropriately reflect the clinical challenges of patient management. For example, a board certified general internist may have the appropriate education and experience to manage early stage diabetes mellitus, but not for the management of a patient admitted for hyperosmolar coma. Potentially, the volume and outcomes of stage specific experience could also be monitored, as is increasingly done for surgical volume and outcomes, to reassess the privileges assignment.

### ***Medical Education***<sup>35, 36</sup>

A significant part of both undergraduate and graduate medical education involves increasing levels of patient care responsibility as the experience of the student/physician increases. Disease Staging can be used as a part of systems designed to document these clinical experiences. For example, what is the mix of severity of illness of patients with diabetes mellitus seen by medical students? Does the student have adequate experience managing a patient with this disease to avoid complications as well as in treating complications, which

may occur? Does this vary depending on the site where the students perform their clerkship? Is there significant variation from student to student?

Similarly, Disease Staging concepts can be used to evaluate the content of the curriculum. To what extent does the medical curriculum address Stage 1 illness and to what extent does it address Stage 3 illness? To what extent is attention devoted to problems associated with particular body organ systems or to problems of a particular etiological nature?

Use of Disease Staging can also help the student and resident become more effective diagnosticians. By understanding the evolution of a disease, the physician will use the laboratory more effectively and avoid delay in arriving at an accurate diagnosis.

### **Staged Diseases**

The following pages include a detailed listing of all staged diseases.

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**Disease: CVS01 Aneurysm, Abdominal**

**Etiology: Degenerative**

Stage	Description	Diagnostic findings
1.01	Abdominal aneurysm ≤ 5 cm.	Abdominal aortic aneurysm ≤ 5 cm. in diameter [CT scan or sonogram or aortogram or operative/pathology report]
1.02	Abdominal aneurysm > 5 cm.	Abdominal aortic aneurysm > 5 cm. in diameter [CT scan or sonogram or aortogram or operative/pathology report]
2.01	Symptomatic abdominal aneurysm	Stage 1.01-1.02 AND tender pulsatile abdominal mass OR diffuse dull abdominal pain
2.02	with dissection	Stage 1.01-2.01 AND dissecting abdominal aneurysm [operative/pathology report]
3.01	with rupture	Stage 1.01-2.02 AND rupture of abdominal aneurysm [operative/pathology report]
3.02	with shock	Stage 2.02-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

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**Disease: CVS02 Aneurysm, Thoracic**

**Etiology: Degenerative; Trauma**

Stage	Description	Diagnostic findings
1.01	Asymptomatic thoracic aneurysm	Fusiform thoracic aneurysm [chest x-ray or aortography or MRI or CT scan report] OR saccular thoracic aneurysm [chest x-ray or aortography or MRI or CT scan report]
2.01	with bronchial obstruction or laryngeal nerve involvement	Stage 1.01 AND history of persistent cough OR deviation of trachea [chest x-ray or MRI or CT scan report] OR hoarseness
2.02	with superior vena cava obstruction	Stage 1.01-2.01 AND edema of face OR edema of head OR edema of neck
2.03	with dissection	Stage 1.01-2.02 AND dissecting thoracic aneurysm [CT scan or MRI report or operative/pathology report]
3.01	with rupture	Stage 1.01-2.03 AND rupture of thoracic aneurysm [operative/pathology report]
3.02	with shock	Stage 2.02-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

CVS03

**Disease: CVS03 Anomaly: Patent Ductus Arteriosus**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Asymptomatic patent ductus arteriosus	Patent ductus arteriosus [cardiac catheterization report] OR 'machinery' murmur AND diastolic pressure $\leq$ 50 mmHg AND left atrial enlargement [EKG report or echocardiogram report] AND left ventricular hypertrophy [EKG report or echocardiogram report]
2.01	with hypoxemia	Stage 1.01 AND <b>hypoxemia:</b>
3.01	with pulmonary hypertension	Stage 1.01-2.01 AND <b>pulmonary hypertension:</b>
3.02	with infective endocarditis	Stage 1.01-3.01 AND <b>infective endocarditis:</b>
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 1.01-3.03 AND <b>sepsis:</b>
3.05	with respiratory failure	Stage 1.01-3.04 AND <b>respiratory failure:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.06 AND death



**Disease: CVS03 Anomaly: Patent Ductus Arteriosus**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

CVS04

**Disease: CVS04 Aortic Regurgitation**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
1.01	Mild chronic aortic regurgitation	<b>Chronic:</b> AND mild aortic regurgitation [echocardiogram report or cardiac catheterization report]
2.01	Moderate chronic aortic regurgitation	<b>Chronic:</b> AND moderate aortic regurgitation [echocardiogram report or cardiac catheterization report]
2.02	Mild chronic aortic regurgitation with atrial fibrillation	Stage 1.01 AND atrial fibrillation [EKG report]
2.03	Moderate chronic aortic regurgitation with atrial fibrillation	Stage 2.01 AND atrial fibrillation [EKG report]
3.01	Mild chronic aortic regurgitation with CHF	Stage 1.01 OR Stage 2.02 AND <b>congestive heart failure:</b>
3.02	Moderate chronic aortic regurgitation with CHF	Stage 2.01 OR Stage 2.03 AND <b>congestive heart failure:</b>
3.03	Severe asymptomatic chronic aortic regurgitation	Stage 1.01-3.02 AND end-systolic left ventricular diameter $\leq$ 55 mm [echocardiogram report] OR end-systolic volume index $\leq$ 90 mL/M <sup>2</sup> [radionuclide angiography] OR left ventricular ejection fraction < 55% [echocardiogram report or radionuclear ventriculogram report]
3.04	Acute severe aortic regurgitation	<b>Acute:</b> AND severe aortic regurgitation [echocardiogram report or radionuclear ventriculogram report]
3.05	Severe aortic regurgitation with ventricular dilatation	Stage 3.03-3.04 AND end systolic left ventricular diameter > 55 mm [echocardiogram report] OR end-systolic volume index > 90 mL/M <sup>2</sup> [radionuclide angiography] OR left ventricular ejection fraction > 55% [echocardiogram report or radionuclear ventriculogram report]
3.06	Severe aortic regurgitation with CHF	Stage 3.03-3.05 AND <b>congestive heart failure:</b>
3.07	Severe aortic regurgitation with sepsis	Stage 3.03-3.06 AND <b>sepsis:</b>
3.08	Severe aortic regurgitation with respiratory failure	Stage 3.03-3.07 AND <b>respiratory failure:</b>
3.09	Severe aortic regurgitation with shock	Stage 3.03-3.08 with <b>shock:</b>

**Disease: CVS04 Aortic Regurgitation**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
4.00	Severe aortic regurgitation with death	Stage 3.03-3.09 AND death

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# Clinical Criteria for Disease Staging

CVS05

**Disease: CVS05 Aortic Stenosis**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
1.01	Mild aortic valve stenosis	Mean aortic valve gradient $\leq$ 25mm Hg [echocardiogram report or Doppler report or cardiac catheterization report] OR aortic valve area $>$ 1.5cm <sup>2</sup> [echocardiogram report or Doppler report or cardiac catheterization report]
2.01	Moderate aortic valve stenosis	Mean aortic valve gradient $>$ 25 mmHg [echocardiogram report or Doppler report or cardiac catheterization report] AND mean aortic valve gradient $\leq$ 50 mmHg [echocardiogram report or Doppler report or cardiac catheterization report] OR aortic valve area $<$ 1.5 cm <sup>2</sup> [echocardiogram report or Doppler report or cardiac catheterization report]
3.01	Severe aortic valve stenosis	Mean aortic valve gradient $>$ 50 mmHg [echocardiogram report or Doppler report or cardiac catheterization report] OR aortic valve area $<$ 1.0 cm <sup>2</sup> [echocardiogram report or Doppler report or cardiac catheterization report]
3.02	Severe aortic valve stenosis with angina	Stage 3.01 AND <b>angina pectoris:</b>
3.03	Severe aortic valve stenosis with low ejection fraction	Stage 3.01-3.02 AND left ventricular ejection fraction $<$ 50% [echocardiogram report or doppler report or cardiac catheterization report or radionuclide ventriculogram report]
3.04	Severe aortic valve stenosis with syncope	Stage 3.01-3.03 AND syncope
3.05	Severe aortic valve stenosis with atrial fibrillation	Stage 3.01-3.04 AND <b>atrial fibrillation:</b>
3.06	Severe aortic valve stenosis with CHF	Stage 3.01-3.05 AND <b>congestive heart failure:</b>
3.07	Severe aortic valve stenosis with respiratory failure	Stage 3.01-3.06 AND <b>respiratory failure:</b>
3.08	Severe aortic valve stenosis with shock	Stage 3.01-3.07 AND <b>shock:</b>
4.00	Severe aortic valve stenosis with death	Stage 3.01-3.08 AND death

**Disease: CVS05 Aortic Stenosis**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

CVS06

**Disease: CVS06 Arrhythmias**

**Etiology: Congenital; Degenerative; Idiopathic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Atrial premature contractions or sinus arrhythmia or junctional rhythm	Atrial premature contractions [EKG report] OR atrial bigeminy [EKG report] OR atrial trigeminy [EKG report] OR sinus arrhythmia [EKG report] OR ectopic atrial rhythm [EKG report] OR junctional rhythm [EKG report]
1.02	Asymptomatic unifocal ventricular premature contractions	No history of dizziness OR no history of being lightheaded AND unifocal ventricular contractions [EKG report] OR ventricular bigeminy [EKG report] OR ventricular trigeminy [EKG report]
1.03	Wolff-Parkinson-White syndrome or Lown-Ganong-Levine syndrome	WPW syndrome [EKG report] OR LGL syndrome [EKG report] OR Short PR Syndrome [EKG report]
1.04	Asymptomatic multifocal ventricular premature contractions	No history of dizziness OR no history of being lightheaded AND multifocal ventricular contractions [EKG report]
2.01	Paroxysmal atrial fibrillation or flutter	Paroxysmal atrial fibrillation [EKG report] OR paroxysmal atrial flutter [EKG report] OR paroxysmal atrial flutter-fibrillation [EKG report]
2.02	Atrial fibrillation or flutter	Atrial fibrillation [EKG report] OR atrial flutter [EKG report]
2.03	Sick sinus syndrome	Sick sinus syndrome [EKG report]
2.04	Supraventricular tachycardia	Supraventricular tachycardia [EKG report]
2.05	Symptomatic ventricular ectopy	History of dizziness OR history of being lightheaded AND multifocal ventricular contractions [EKG report] OR unifocal ventricular contractions [EKG report]
3.01	Arrhythmias with ventricular fibrillation or flutter or shock	Stage 1.01-2.05 AND ventricular fibrillation [EKG or rhythm strip report] OR ventricular flutter [EKG or rhythm strip report] OR <b>shock:</b>
4.00	Arrhythmias with death	Stage 2.01-3.01 AND death

**Disease: CVS06 Arrhythmias**

**Etiology: Congenital; Degenerative; Idiopathic; Toxicologic**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

CVS07

**Disease: CVS07 Cardiomyopathies**

**Etiology: Congenital; Genetic (or hereditary); Immune; Infection; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Transient hypertrophic cardiomyopathy of infancy	Transient hypertrophic cardiomyopathy of infancy [echocardiogram report or cardiac catheterization report or CT report or MRI report or nuclear medicine report or contrast ventriculography report]
2.01	Cardiomyopathies	Restrictive cardiomyopathy [biopsy report or echocardiogram report or cardiac catheterization report or CT report or MRI report or nuclear medicine report or contrast ventriculography report] OR Dilated cardiomyopathy [biopsy report or echocardiogram report or cardiac catheterization report or CT report or MRI report or nuclear medicine report or contrast ventriculography report] OR hypertrophic cardiomyopathy [biopsy report or echocardiogram report or cardiac catheterization report or CT report or MRI report or nuclear medicine report or contrast ventriculography report]
2.02	with first degree heart block or Mobitz I heart block or bundle branch block	Stage 1.01-2.01 AND bundle branch block [EKG report] OR 1st degree heart block [EKG report] OR Mobitz I heart block [EKG report]
2.03	with Mobitz II heart block	Stage 1.01-2.02 AND second degree heart block [EKG report]
2.04	with supraventricular tachycardia or atrial fibrillation or atrial flutter	Stage 1.01-2.03 AND atrial fibrillation [EKG report] OR atrial flutter [EKG report] OR supraventricular tachycardia [EKG report]
3.01	with complete heart block	Stage 1.01-2.04 AND complete heart block [EKG report]
3.02	with pulmonary embolism	Stage 1.01-3.01 AND <b>pulmonary embolism:</b>
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with non-sustained ventricular tachycardia	Stage 1.01-3.03 AND non-sustained ventricular tachycardia [rhythm report or EKG report]
3.05	with respiratory failure	Stage 1.01-3.04 AND <b>respiratory failure:</b>
3.06	with sustained ventricular tachycardia	Stage 1.01-3.05 AND sustained ventricular tachycardia [rhythm report or EKG report]
3.07	with ventricular fibrillation or ventricular flutter or shock	Stage 1.01-3.06 AND ventricular fibrillation [EKG report] OR ventricular flutter [EKG report] OR <b>shock:</b>



**Disease: CVS07 Cardiomyopathies**

**Etiology: Congenital; Genetic (or hereditary); Immune; Infection; Toxicologic**

Stage	Description	Diagnostic findings
4.00	with death	Stage 1.01-3.07 AND death

**References**

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**Disease: CVS08 Conduction Disorders**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
1.01	First degree heart block	First degree heart block [EKG report]
1.02	Hemiblocks	Left anterior hemiblock [EKG report] OR left posterior hemiblock [EKG report]
1.03	Right bundle branch block	Right bundle branch block [EKG report]
1.04	Left bundle branch block	Left bundle branch block [EKG report]
2.01	Mobitz type I heart block	Mobitz type I heart block or Wenckebach block [EKG report]
2.02	Mobitz type II heart block	Mobitz type II heart block or 2:1 block [EKG report]
2.03	Third degree heart block or complete heart block	Third degree heart block [EKG report] OR complete heart block [EKG report]
3.01	Conduction disorders with shock	Stage 1.01-2.03 AND <b>shock:</b>
4.00	Conduction disorders with death	Stage 2.01-3.01 AND death

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**Disease: CVS09 Congestive Heart Failure**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
3.01	Congestive heart failure	<b>Congestive heart failure:</b>
3.02	with azotemia or hyponatremia	Stage 3.01 AND <b>azotemia:</b> OR <b>hyponatremia:</b>
3.03	with low ejection fraction	Stage 3.01 AND ejection fraction $\leq$ 20% [echocardiogram report or nuclear ejection fraction report]
3.04	with respiratory failure	Stage 3.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 3.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.05 AND death

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# Clinical Criteria for Disease Staging

**Disease: CVS10 Coronary Artery Disease with Prior Coronary Revascularization**

**Etiology: Degenerative; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Coronary atherosclerosis or asymptomatic chronic ischemic heart disease or old myocardial infarction	Coronary atherosclerosis OR asymptomatic chronic ischemic heart disease OR old myocardial infarction OR history of myocardial infarction $\geq$ 30 days old AND ejection fraction $\geq$ 50% [echocardiogram report or nuclear ejection fraction report]
1.02	Chronic stable exertional angina or chronic ischemic heart disease	Chronic stable exertional angina OR chronic ischemic heart disease
2.01	Progressing angina pectoris or exertional myocardial ischemic at low workload or old myocardial infarction with low ejection fraction	Progressing angina pectoris OR exercise induced myocardial ischemia at $<$ 6 METS [stress test report] OR history of prior myocardial infarction $\geq$ 30 days AND left ventricular ejection fraction $<$ 50% [echocardiogram report or nuclear ejection fraction report] AND left ventricular ejection fraction $\geq$ 30% [echocardiogram report or nuclear ejection fraction report]
2.02	Prinzmetal's variant angina	Change in nature of onset of symptoms and severity of known anginal pain AND past history of angina OR angina occurring at rest AND ST-T elevations at time of pain [EKG report] OR Prinzmetal's variant angina
2.03	Angina with hypertrophy or akinesia or dyskinesia or S3 gallop or S4 gallop	Stage 1.01-2.02 AND hypertrophy [nuclear ejection fraction report or echocardiogram report] OR akinesia [nuclear ejection fraction report or echocardiogram report] OR hypokinesia [nuclear ejection fraction report or echocardiogram report] OR dyskinesia [nuclear ejection fraction report or echocardiogram report] OR S4 gallop OR S3 gallop
2.04	Unstable angina pectoris	Stage 1.01-2.03 AND change in nature of onset of symptoms and severity of known anginal pain AND past history of angina OR angina occurring at rest
3.01	Acute inferior or posterior wall myocardial infarction	Acute inferior or posterior wall myocardial infarction [EKG report or cardiac catheterization report] AND CPK-MB $\geq$ normal [CPK isoenzyme report]
3.02	Acute inferior or posterior wall myocardial infarction with heart block or pericarditis	Stage 3.01 AND heart block [EKG report] OR pericarditis [EKG report]

# Clinical Criteria for Disease Staging

**Disease: CVS10 Coronary Artery Disease with Prior Coronary Revascularization**

**Etiology: Degenerative; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
3.03	Acute inferior or posterior wall myocardial infarction with left ventricular thrombus	Stage 3.01-3.02 AND left ventricular thrombus [cardiac catheterization report or echocardiogram report]
3.04	Acute inferior or posterior wall myocardial infarction with left ventricular aneurysm	Stage 3.01-3.03 AND left ventricular aneurysm [cardiac catheterization report or echocardiogram report]
3.05	Acute inferior or posterior wall myocardial infarction with CHF	Stage 3.01-3.04 AND <b>congestive heart failure:</b>
3.06	Acute anterior wall myocardial infarction	Acute anterior myocardial infarction [EKG report or cardiac catheterization report] AND CPK-MB $\geq$ normal [CPK isoenzyme report]
3.07	Acute anterior wall or all other myocardial infarction with low ejection fraction	Stage 3.01-3.06 AND ejection fraction < 30% [echocardiogram report or radionuclide ventriculogram]
3.08	Acute anterior wall myocardial infarction with heart block or pericarditis	Stage 3.06 AND heart block OR pericarditis
3.09	Acute anterior wall myocardial infarction with ventricular thrombus formation	Stage 3.06 OR Stage 3.08 AND ventricular thrombus formation [echocardiogram report or catheterization report]
3.10	Acute anterior wall myocardial infarction with ventricular aneurysm	Stage 3.06 OR Stage 3.08-3.10 AND ventricular aneurysm [echocardiogram report]
3.11	Acute anterior wall myocardial infarction with CHF	Stage 3.06 OR Stage 3.08-3.10 AND <b>congestive heart failure:</b>
3.12	Acute myocardial infarction with pulmonary embolism	Stage 3.06 OR Stage 3.08-3.11 AND <b>pulmonary embolism:</b>
3.13	Acute myocardial infarction with cerebrovascular accident	Stage 3.06 OR Stage 3.08-3.12 AND cerebrovascular accident [CT scan report or MRI report]

**Disease: CVS10 Coronary Artery Disease with Prior Coronary Revascularization**

**Etiology: Degenerative; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
3.14	Acute anterior myocardial infarction with papillary muscle rupture or ventricular septal rupture	Stage 3.06 OR Stage 3.08-3.13 AND papillary muscle rupture [cardiac catheterization report or echocardiogram report] OR ventricular septal rupture [cardiac catheterization report or echocardiogram report]
3.15	Coronary artery disease with ventricular fibrillation or shock	Stage 1.01-3.14 AND ventricular fibrillation [rhythm strip report or EKG report] OR <b>shock:</b>
3.16	Coronary artery disease with cardiac arrest	Stage 1.01-3.15 AND cardiac arrest [rhythm strip report or EKG report]
4.00	Coronary artery disease with death	Stage 1.01-3.16 with death

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# Clinical Criteria for Disease Staging

CVS11

## Disease: CVS11 Coronary Artery Disease without Prior Coronary Revascularization

### Etiology: Degenerative; Genetic (or hereditary)

Stage	Description	Diagnostic findings
1.01	Old myocardial infarction or coronary atherosclerosis or chronic ischemic heart disease	Coronary atherosclerosis OR chronic ischemic heart disease OR history of myocardial infarction $\geq$ 30 days old AND ejection fraction $\geq$ 50% [echocardiogram report or nuclear ejection fraction report]
1.02	Chronic stable exertional angina	Chronic stable exertional angina
2.01	Progressing angina pectoris or exertional myocardial ischemia at low workload or old myocardial infarction with low ejection fraction	Progressing angina pectoris OR exercise induced myocardial ischemia at $<$ 6 METS [stress test report] OR history of prior myocardial infarction $\geq$ 30 days AND left ventricular ejection fraction $<$ 50% [echocardiogram report or nuclear ejection fraction report] AND left ventricular ejection fraction $\geq$ 30% [echocardiogram report or nuclear ejection fraction report]
2.02	Prinzmetal's variant angina	Change in nature of onset of symptoms and severity of known anginal pain AND past history of angina OR angina occurring at rest AND ST-T elevations at time of pain [EKG report] OR Prinzmetal's variant angina
2.03	Angina with hypertrophy or akinesia or dyskinesia or S3 gallop or S4 gallop	Stage 1.01-2.02 AND hypertrophy [nuclear ejection fraction report or echocardiogram report] OR akinesia [nuclear ejection fraction report or echocardiogram report] OR hypokinesia [nuclear ejection fraction report or echocardiogram report] OR dyskinesia [nuclear ejection fraction report or echocardiogram report] OR S4 gallop OR S3 gallop
2.04	Unstable angina pectoris	Stage 1.01-2.03 AND change in nature of onset of symptoms and severity of known anginal pain AND past history of angina OR angina occurring at rest
3.01	Acute inferior or posterior wall myocardial infarction	Acute inferior or posterior wall myocardial infarction [EKG report or cardiac catheterization report] AND CPK-MB $\geq$ normal [CPK isoenzyme report]
3.02	Acute inferior or posterior wall myocardial infarction with heart block or pericarditis	Stage 3.01 AND heart block [EKG report] OR pericarditis [EKG report]
3.03	Acute inferior or posterior wall myocardial infarction with left ventricular thrombus	Stage 3.01-3.02 AND left ventricular thrombus [cardiac catheterization report or echocardiogram report]

# Clinical Criteria for Disease Staging

CVS11

## Disease: CVS11 Coronary Artery Disease without Prior Coronary Revascularization

### Etiology: Degenerative; Genetic (or hereditary)

Stage	Description	Diagnostic findings
3.04	Acute inferior or posterior wall myocardial infarction with left ventricular aneurysm	Stage 3.01-3.03 AND left ventricular aneurysm [cardiac catheterization report or echocardiogram report]
3.05	Acute inferior or posterior wall myocardial infarction with CHF	Stage 3.01-3.04 AND <b>congestive heart failure:</b>
3.06	Acute anterior wall myocardial infarction	Acute anterior myocardial infarction [EKG report or cardiac catheterization report] AND CPK-MB $\geq$ normal [CPK isoenzyme report]
3.07	Acute myocardial infarction with low ejection fraction	Stage 3.01-3.06 AND ejection fraction < 30% [echocardiogram report or radionuclide ventriculogram]
3.08	Acute anterior wall myocardial infarction with heart block pericarditis	Stage 3.06 AND heart block OR pericarditis
3.09	Acute anterior wall myocardial infarction with ventricular thrombus formation	Stage 3.06 OR Stage 3.08 AND ventricular thrombus formation [echocardiogram report or catheterization report]
3.10	Acute anterior wall myocardial infarction with ventricular aneurysm	Stage 3.06 OR Stage 3.08-3.09 AND ventricular aneurysm [echocardiogram report]
3.11	Acute anterior wall myocardial infarction with CHF	Stage 3.06 OR Stage 3.08-3.10 AND <b>congestive heart failure:</b>
3.12	Acute myocardial infarction with pulmonary embolism	Stage 3.06 OR Stage 3.08-3.11 AND <b>pulmonary embolism:</b>
3.13	Acute myocardial infarction with cerebrovascular accident	Stage 3.06 OR Stage 3.08-3.12 AND cerebrovascular accident [CT scan report or MRI report]
3.14	Acute anterior myocardial infarction with papillary muscle rupture or ventricular septal rupture	Stage 3.06 OR Stage 3.08-3.13 AND papillary muscle rupture [cardiac catheterization report or echocardiogram report]
3.15	Coronary artery disease with ventricular fibrillation or shock	Stage 1.01-3.14 AND ventricular fibrillation [rhythm strip report or EKG report] OR <b>shock:</b>
3.16	Coronary artery disease with cardiac arrest	Stage 1.01-3.15 AND cardiac arrest [rhythm strip report or EKG report]
4.00	Coronary artery disease with death	Stage 1.01-3.16 with death



**Disease: CVS11 Coronary Artery Disease without Prior Coronary Revascularization**

**Etiology: Degenerative; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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**Disease: CVS12 Digoxin Toxicity**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Digoxin toxicity	Digoxin level $\geq$ 3.0 ng/ml [chemistry report]
2.01	with unifocal PVCs	Stage 1.01 AND unifocal premature ventricular contractions [EKG report]
2.02	with Mobitz type I heart block	Stage 1.01-2.01 AND Mobitz type I heart block [EKG report]
2.03	with multifocal PVCs	Stage 1.01-2.02 AND multifocal premature ventricular contractions [EKG report]
3.01	with Mobitz II or third degree heart block	Stage 1.01-2.03 AND Mobitz type II heart block or 2:1 heart block [EKG report or Holter report] OR third degree heart block [EKG report or Holter report]
3.02	with ventricular tachycardia	Stage 1.01-3.01 AND ventricular tachycardia [EKG report or Holter report or CRT monitor report]
3.03	with ventricular fibrillation or flutter or shock	Stage 1.01-3.02 AND ventricular fibrillation [EKG report or Holter report or CRT monitor report] OR ventricular flutter [EKG report or Holter report or CRT monitor report] OR <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

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# Clinical Criteria for Disease Staging

**Disease: CVS13 Essential Hypertension**

**Etiology: Degenerative; Genetic (or hereditary); Idiopathic**

Stage	Description	Diagnostic findings
1.01	Hypertension, minimal	History of minimal hypertension OR Diastolic pressure $\geq$ 90 mmHg on three separate readings within one month AND diastolic pressure $<$ 100 mmHg on three separate readings within one month OR history of diastolic pressure $\geq$ 90 mmHg on three separate readings AND history of diastolic pressure $<$ 100 mmHg on three separate readings OR systolic pressure $\geq$ 140 mmHg on three separate readings within one month AND systolic pressure $<$ 160 mmHg on three separate readings within one month
1.02	Hypertension, moderate	History of moderate hypertension OR diastolic pressure $\geq$ 100 mmHg on three separate readings within one month AND diastolic pressure $<$ 110 mmHg on three separate readings within one month OR history of diastolic pressure $\geq$ 100 mmHg on three separate readings AND history of diastolic pressure $<$ 110 mmHg on three separate readings OR systolic pressure $\geq$ 160 mmHg on three separate readings within one month AND systolic pressure $<$ 180 mmHg on three separate readings within one month
1.03	Hypertension, severe	History of severe hypertension OR Diastolic pressure $\geq$ 110 mmHg on three separate readings within one month AND diastolic pressure $<$ 120 mmHg on three separate readings within one month OR history of diastolic pressure $\geq$ 110 mmHg on three separate readings AND history of diastolic pressure $<$ 120 mmHg on three separate readings OR systolic pressure $\geq$ 180 mmHg on three separate readings within one month AND systolic pressure $<$ 210 mmHg on three separate readings within one month
2.01	Hypertension, very severe	Diastolic pressure $\geq$ 120 mmHg OR systolic pressure $\geq$ 210 mmHg
2.02	Hypertensive retinopathy, Grade I or II of Keith and Wagener	Stage 1.02-2.01 AND A-V nicking [fundoscopy report] OR copper wire' vessels [fundoscopy report] OR narrowing of arterioles [fundoscopy report] OR Grade I Keith and Wagener retinopathy [fundoscopy report] OR Grade II Keith and Wagener retinopathy [fundoscopy report]
2.03	Hypertensive retinopathy, Grade III or IV of Keith and Wagener	Stage 1.02-2.02 AND retinal hemorrhage [fundoscopy report] OR retinal exudates [fundoscopy report] OR Grade III Keith and Wagener retinopathy [fundoscopy report] OR Grade IV Keith and Wagener retinopathy [fundoscopy report]

# Clinical Criteria for Disease Staging

CVS13

**Disease: CVS13 Essential Hypertension**

**Etiology: Degenerative; Genetic (or hereditary); Idiopathic**

Stage	Description	Diagnostic findings
2.04	Hypertensive cardiomegaly, arrhythmias, or wall motion abnormalities	Stage 1.01-2.03 AND    cardiomegaly [nuclear ejection fraction, cardiac catheterization, echocardiogram or chest x-ray report] OR    ventricular hypertrophy [echocardiogram report] OR    arrhythmias [EKG report] OR    heart blocks [EKG or nuclear ejection fraction phase study report] OR    dyskinesia [nuclear ejection fraction or cardiac catheterization report] OR    hypokinesia [nuclear ejection fraction, cardiac catheterization or echocardiogram report] OR    akinesia [nuclear ejection fraction, cardiac catheterization or echocardiogram report]
3.01	Hypertensive renal failure	Stage 1.02-2.04 AND <b>renal failure:</b>
3.02	Hypertensive congestive heart failure	Stage 1.02-3.01 AND <b>congestive heart failure:</b>
3.03	Hypertensive CVA or Hypertensive encephalopathy	Stage 1.02-3.02 AND    intracranial hemorrhage [CT scan report] OR    papilledema [fundoscopy report] AND <b>disorientation:</b>
3.04	Hypertensive CVA with cranial nerve involvement	Stage 3.03 AND <b>cranial nerve palsy:</b>
3.05	Hypertensive CVA with cerebellar or pyramidal tract dysfunction	Stage 3.03-3.04 AND    sudden onset of one of the following which does not resolve within 24 hours: loss of coordination, [heel to shin test report] OR    finger to nose test report OR    Romberg's test report OR    within 24 hours, onset of nystagmus OR    within 24 hours, onset of dizziness OR    within 24 hours, onset of vertigo
3.06	Hypertensive CVA with hemiparesis or hemiplegia	Stage 3.03-3.05 AND    onset of hemiparesis unresolved within 24 hours OR    onset of hemiplegia unresolved within 24 hours
3.07	Hypertensive CVA with amblyopia and contralateral hemiplegia	Stage 3.03-3.06 AND    onset of amblyopia unresolved within 24 hours OR    onset of dimness of vision unresolved within 24 hours AND    onset of contralateral hemiplegia unresolved within 24 hours

**Disease: CVS13 Essential Hypertension**

**Etiology: Degenerative; Genetic (or hereditary); Idiopathic**

Stage	Description	Diagnostic findings
3.08	Hypertensive CVA with quadriplegia	Stage 3.03-3.07 AND onset of quadriplegia unresolved within 24 hours
3.09	with coma	Stage 1.02-3.08 AND <b>coma:</b>
4.00	with death	Stage 1.02-3.09 AND death

**References**

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**Disease: CVS14 Infective Endocarditis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
3.01	Infective endocarditis	<b>Infective endocarditis:</b>
3.02	with glomerulonephritis	Stage 3.01 AND <b>hematuria:</b> AND <b>proteinuria:</b> AND <b>azotemia:</b>
3.03	with renal failure	Stage 3.01-3.02 AND <b>renal failure:</b>
3.04	with pulmonary embolism	Stage 3.01-3.03 AND <b>pulmonary embolism:</b>
3.05	with transient cerebral ischemic attacks	Stage 3.01-3.04 AND transient ischemic attack [no new infarct or normal per CT scan report] AND sudden onset of one of the following, with resolution within 24 hours: <b>cranial nerve palsy:</b>
3.06	with myocarditis or myocardial abscess or valve obstruction or prosthetic valve dehiscence or acute mitral valve regurgitation or acute aortic valve regurgitation	Stage 3.01-3.05 AND <b>myocarditis:</b> OR myocardial abscess [myocardial biopsy report] OR valve obstruction [sonogram report or operative/pathology report] OR prosthetic valve dehiscence [sonogram report or operative/pathology report] OR acute mitral valve regurgitation OR acute aortic valve regurgitation
3.07	with meningitis or intracranial abscess or intracranial infarction or intracranial hemorrhage	Stage 3.01-3.06 AND intracranial infarction [CT scan or MRI report] OR intracranial hemorrhage [CT scan or MRI report] OR intracranial abscess [CT scan or MRI report] OR <b>meningitis:</b>
3.08	with congestive heart failure	Stage 3.01-3.07 AND <b>congestive heart failure:</b>
3.09	with sepsis	Stage 3.01-3.08 AND <b>sepsis:</b>
3.10	with respiratory failure	Stage 3.01-3.09 AND <b>respiratory failure:</b>
3.11	with shock	Stage 3.01-3.10 AND <b>shock:</b>

**Disease: CVS14 Infective Endocarditis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
4.00	with death	Stage 3.01-3.11 AND death

**References**

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**Disease: CVS15 Mitral Regurgitation**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
1.01	Mitral valve prolapse without regurgitation	Mitral valve prolapse without regurgitation [echocardiogram report or cardiac catheterization report]
1.02	Mild chronic mitral regurgitation	<b>Chronic:</b> AND mild mitral regurgitation [echocardiogram report or cardiac catheterization report]
2.01	Mild chronic mitral regurgitation with left atrial enlargement	Stage 1.02 AND <b>chronic:</b> AND left atrial enlargement [echocardiogram report or cardiac catheterization report]
2.02	Moderate chronic mitral regurgitation	<b>Chronic:</b> Moderate mitral regurgitation [echocardiogram report or cardiac catheterization report]
2.03	Mild chronic mitral regurgitation with atrial fibrillation	<b>Chronic:</b> Mild mitral regurgitation [echocardiogram report or cardiac catheterization report] AND atrial fibrillation [EKG report]
2.04	Moderate chronic mitral regurgitation with atrial fibrillation	<b>Chronic:</b> Mild mitral regurgitation [echocardiogram report or cardiac catheterization report] AND atrial fibrillation [EKG report]
2.05	Severe chronic mitral regurgitation	<b>Chronic:</b> AND severe mitral regurgitation [echocardiogram report or cardiac catheterization report]
3.01	Severe acute mitral regurgitation	<b>Acute:</b> AND severe mitral regurgitation [echocardiogram report or cardiac catheterization report]
3.02	Mild chronic mitral regurgitation with congestive heart failure	<b>Chronic:</b> AND mild mitral regurgitation [echocardiogram report or cardiac catheterization report] AND <b>congestive heart failure:</b>
3.03	Moderate chronic mitral regurgitation with congestive heart failure	<b>Chronic:</b> AND moderate mitral regurgitation [echocardiogram report or cardiac catheterization report] AND <b>congestive heart failure:</b>
3.04	Mitral regurgitation with low ejection fraction	Stage 3.01-3.03 AND left ventricular ejection fraction < 60% [echocardiogram report or cardiac catheterization report or radionuclide ventriculogram report]
3.05	Severe mitral regurgitation with congestive heart failure	Stage 3.01 AND <b>congestive heart failure:</b>
3.06	Mitral regurgitation with sepsis	Stage 3.01-3.05 AND <b>sepsis:</b>
3.07	Mitral regurgitation with respiratory failure	Stage 3.01-3.06 AND <b>respiratory failure:</b>
3.08	Mitral regurgitation with shock	Stage 3.01-3.07 AND <b>shock:</b>



**Disease: CVS15 Mitral Regurgitation**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
4.00	Mitral regurgitation with death	Stage 3.01-3.08 AND <b>death</b>

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**Disease: CVS16 Mitral Stenosis**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
1.01	Mild mitral stenosis or mitral atresia	Mitral valve area $\geq 1.5$ cm <sup>2</sup> [echocardiogram report or cardiac catheterization report] AND mitral valve area $< 2.0$ cm <sup>2</sup> [echocardiogram report or cardiac catheterization report] OR Mitral atresia [echocardiogram report or cardiac catheterization report]
2.01	Moderate mitral stenosis	Mitral valve area $\geq 1.0$ cm <sup>2</sup> [echocardiogram report or cardiac catheterization report] AND mitral valve area $< 1.5$ cm <sup>2</sup> [echocardiogram report or cardiac catheterization report]
2.02	Moderate mitral stenosis with left atrial enlargement	Stage 2.01 AND left atrial enlargement [echocardiogram report or cardiac catheterization report]
2.03	Moderate mitral stenosis with atrial fibrillation	Stage 2.01-2.02 AND atrial fibrillation [EKG report]
2.04	Severe mitral stenosis	Mitral valve area $< 1.0$ cm <sup>2</sup> [echocardiogram report or cardiac catheterization report]
2.05	Severe mitral stenosis with atrial fibrillation	Stage 2.04 AND atrial fibrillation [EKG report]
3.01	Severe mitral stenosis with congestive heart failure	Stage 2.04-2.05 AND <b>congestive heart failure:</b>
3.02	Severe mitral stenosis with pulmonary hypertension	Stage 2.04-3.01 AND <b>pulmonary hypertension:</b>
3.03	Severe mitral stenosis with systemic embolic phenomena	Stage 2.04-3.02 AND systemic embolic phenomena OR <b>pulmonary embolism:</b>
3.04	Severe mitral stenosis with respiratory failure	Stage 2.04-3.03 AND <b>respiratory failure:</b>
3.05	Severe mitral stenosis with shock	Stage 2.04-3.04 AND <b>shock:</b>
4.00	Severe mitral stenosis with death	Stage 2.04-3.05 AND death

**References**

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# Clinical Criteria for Disease Staging

CVS17

**Disease: CVS17 Periarteritis Nodosa**

**Etiology: Immune**

Stage	Description	Diagnostic findings
1.01	Periarteritis nodosa or polyarteritis nodosa	Any three of the following: Weight loss of > 4 kg OR livedo reticularis OR testicular tenderness or pain OR diffuse myalgias or weakness OR neuropathies OR diastolic BP . 90 mmHg OR <b>azotemia:</b> OR creatinine > 1.5 mg/dl [chemistry report] OR hepatitis B infection [serology report] OR arteriographic abnormalities [arteriogram report] OR segmental necrotizing inflammation of the media and adventitia layers of arteries [operative/pathology report]
1.02	with hypertension	Stage 1.01 AND <b>hypertension:</b>
2.01	with mononeuritis complex	Stage 1.01-1.02 AND neuralgia
2.02	with hepatitis	Stage 1.01-2.01 AND <b>hepatitis:</b>
2.03	with nephritis	Stage 1.01-2.02 AND <b>proteinuria:</b> OR <b>hematuria:</b>
2.04	with peritonitis	Stage 1.01-2.03 AND peritonitis [operative/pathology report]
3.01	with myocardial infarction	Stage 1.01-2.04 AND <b>acute myocardial infarction:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with renal failure	Stage 1.01-3.02 AND <b>renal failure:</b>
3.04	with bleeding or ruptured aneurysm	Stage 1.01-3.03 AND <b>bleeding:</b>
3.05	with coma	Stage 1.01-3.04 AND <b>coma:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>

**Disease: CVS17 Periarthritis Nodosa**

**Etiology: Immune**

Stage	Description	Diagnostic findings
4.00	with death	Stage 2.01-3.06 AND death

**References**

Anonymous. Guidelines for the use of antiretroviral agents in HIV-infected adults and adolescents. <i>Annals of Internal Medicine</i> . 1998;128(12):1079-1100.
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Katz MH, Hollander H. HIV infection. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. <i>Current Medical Diagnosis &amp; Treatment</i> . Stamford, CT: Appleton & Lange; 1998:1204-1231.
Mellors J, Rinaldo C, Gupta P, White RM, Todd JA, Kingsley LA. Prognosis in HIV infection predicted by the quantity of virus in plasma. <i>Science</i> . 1996;373;123-126.
Montaner JS, Hogg R, Raboud J, Harrigan R, O'Shaughnessy M. Antiretroviral treatment in 1998. <i>Lancet</i> . 1998;352(9144):1919-22.
O'Brien W, Pomerantz RJ. AIDS and other diseases due to HIV infection. In: Neal Nathanson, ed. <i>Viral Pathogenesis</i> . New York, NY: Raven Press; 1997;813-837.

**Disease: CVS18 Pericarditis: Chronic**

**Etiology: Infection; Idiopathic; Metabolic**

Stage	Description	Diagnostic findings
2.01	Chronic pericarditis	Chronic pericarditis [pericardial biopsy or operative/pathology report or CT Scan report or MRI report or echocardiogram report]
2.02	Constrictive pericarditis	Constrictive pericarditis [pericardial biopsy or operative/pathology report or CT Scan report or MRI report or echocardiogram report or pulmonary catheter reports elevation and equalization of diastolic pressure in atria and ventricles, elevated end diastolic pressures, and early diastolic dip in ventricular pressure contours or 'square root' sign]
2.03	with effusion	Stage 2.01-2.02 AND pericardial effusion [echocardiogram report]
2.04	with mediastinitis	Stage 2.01-2.03 AND inflammation of mediastinum [operative/pathology report]
3.01	with myocarditis	Stage 2.01-2.04 AND <b>myocarditis:</b>
3.02	with congestive heart failure	Stage 2.01-3.01 AND <b>congestive heart failure:</b>
3.03	with anasarca	Stage 2.01-3.02 AND ascites OR hepatomegaly OR pleural effusion [chest x-ray report]
3.04	with respiratory failure	Stage 2.01-3.03 AND <b>respiratory failure:</b>
4.00	with death	Stage 2.01-3.04 AND death

**References**

Bernstein D. Diseases of the pericardium. In: Behrman RE, Kliegman RM, Arvin AM, Nelson WE, eds. Nelson Textbook of Pediatrics. 15th ed. Philadelphia, PA: WB Saunders; 1996:1355-1358.

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Farraj RS, McCully RB, Oh JK, Smith TF. Mycoplasma-associated pericarditis. Mayo Clinic Proceedings. 1997;72(1):33-36.

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**Disease: CVS19 Pericarditis: Viral or Traumatic**

**Etiology: Idiopathic; Infection, Viral; Trauma**

Stage	Description	Diagnostic findings
2.01	Acute pericarditis from viral infection or trauma or idiopathic pericarditis	Idiopathic pericarditis OR history of viral infection OR viral infection OR trauma to chest wall AND <b>pericarditis:</b>
2.02	with pericardial effusion	Stage 2.01 AND pericardial effusion [echocardiogram report]
3.01	with myocarditis	Stage 2.01-2.02 AND <b>myocarditis:</b>
3.02	with pericardial tamponade	Stage 2.01-3.01 AND pericardial tamponade [pulmonary artery catheter report reveals 'equalization' of filling pressures or pulmonary catheter report equal diastolic pressure of right atrium, right ventricle and pulmonary capillary wedge pressure or echocardiogram reports pericardial effusion with diastolic collapse of the right atrium, right ventricle or both]
3.03	with congestive heart failure	Stage 2.01-3.02 AND <b>congestive heart failure:</b>
3.04	with respiratory failure	Stage 2.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

**References**

Bernstein D. Diseases of the pericardium. In: Behrman RE, Kliegman RM, Arvin AM, Nelson WE, eds. Nelson Textbook of Pediatrics. 15th ed. Philadelphia, PA: WB Saunders; 1996:1355-1358.

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**Disease: CVS20 Raynaud's Disease**

**Etiology: Idiopathic; Immune; Trauma**

Stage	Description	Diagnostic findings
1.01	Raynaud's disease or phenomenon	History of vasospasm of arteries or arterioles of the hands in response to cold OR history of vasospasm of arteries or arterioles of the hands in response to stress OR trophic ulcers on the hands OR sclerodactyly cyanosis during vasospasm attacks
2.01	Gangrene of the digits	Stage 1.01 AND gangrene of the fingers [operative/pathology report or physical examination]
3.01	with sepsis	Stage 1.01-2.01 AND <b>sepsis:</b>
3.02	with shock	Stage 3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

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Kahaleh B, Matucci-Cerinic M. Raynaud's phenomenon and scleroderma. Dysregulated neuroendothelial control of vascular tone. *Arthritis & Rheumatism*. 1995;38(1):1-4.

**Disease: CVS21 Thromboangiitis Obliterans**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Thromboangiitis obliterans	History of tobacco smoking AND nonsuppurative panarteritis of small and medium arteries [operative/pathology report] OR Raynaud's phenomenon AND intermittent claudication OR history of migratory thrombophlebitis OR arterial occlusion in affected upper limbs [arteriogram report] AND arterial occlusion in affected lower limbs [arteriogram report]
2.01	with stasis ulcerations	Stage 1.01 AND stasis ulceration
2.02	with gangrene	Stage 1.01-2.01 AND gangrene of involved extremity [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 2.02-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.02 AND death

**References**

Aqel MB, Olin JW. Thromboangiitis obliterans (Buerger's disease). <i>Vascular Medicine</i> . 1997;2(1):61-6.
Szuba A, Cooke JP. Thromboangiitis obliterans. An update on Buerger's disease. <i>Western Journal of Medicine</i> . 1998;168(4):255-60.



**Disease: CVS22 Thrombophlebitis**

**Etiology: Idiopathic; Infection; Trauma**

Stage	Description	Diagnostic findings
1.01	Superficial thrombophlebitis or vein compression, postphlebitic syndrome, venous hypertension or insufficiency, or varices without bleed,	Superficial thrombophlebitis [venogram report or Doppler report or nuclear venogram report]
2.01	Deep vein thrombosis	<b>DVT</b> Stage 1.01-2.01 AND stasis ulcerations OR <b>cellulitis:</b>
2.02	with stasis ulceration or cellulitis	
2.03	Portal vein thrombosis or vena cava thrombosis or of renal vein thrombosis	Portal vein thrombosis [ultrasound or portal venography or MRI report] OR vena cava thrombosis [ultrasound or portal venography or MRI report] OR renal vein thrombosis [ultrasound or portal venography or MRI report]
3.01	with pulmonary embolism	Stage 2.01-2.03 AND pulmonary embolism [nuclear ventilation/perfusion scan or pulmonary angiogram report]
3.02	with sepsis	Stage 2.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**References**

Kearon C, Julian JA, Newman TE, Ginsberg JS. Noninvasive diagnosis of deep venous thrombosis. McMaster diagnostic imaging practice guidelines initiative. *Annals of Internal Medicine*. 1998;128(8):663-77.

Koopman MM, Buller HR. Low-molecular-weight heparins in the treatment of venous thromboembolism. *Annals of Internal Medicine*. 1998;128(12 Pt 1):1037-9.

# Clinical Criteria for Disease Staging

**Disease: CVS23 Tibial, Iliac, Femoral, or Popliteal Artery Disease**

**Etiology: Degenerative**

Stage	Description	Diagnostic findings
1.01	Intermittent claudication	History of lower extremity pain or aching or fatigue with walking subsiding with rest OR venous filling time $\geq$ 15 seconds AND pallor of extremity with elevation for $\geq$ 1 minute AND rubor on dependency OR dorsalis pedis systolic pressure $\leq$ 90% of brachial systolic pressure [Doppler ultrasonography report] AND dorsalis pedis systolic pressure $>$ 70% OR $\leq$ 50% occlusion of tibial, iliac, femoral or popliteal artery [arteriogram report]
1.02	Persistent claudication	History of lower extremity pain or aching or fatigue with walking subsiding with rest AND dorsalis pedis systolic pressure $\leq$ 70% of brachial systolic pressure [Doppler ultrasonography report] OR $\geq$ 50% occlusion of tibial, iliac, femoral or popliteal artery [arteriogram report]
2.01	with ischemic ulceration	Stage 1.01-1.02 AND ulcerations
2.02	with gangrene	Stage 1.01-2.01 AND gangrene of the extremity [physical examination or operative/pathology report]
3.01	with sepsis	Stage 2.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

Anonymous. Thrombolysis in the management of lower limb peripheral arterial occlusion--a consensus document. Working Party on Thrombolysis in the Management of Limb Ischemia. American Journal of Cardiology. 1998;81(2):207-18.

Cantwell-Gab K. Identifying chronic peripheral arterial disease. American Journal of Nursing. 1996;96(7):40-6; quiz 47.

Golledge J. Lower-limb arterial disease. Lancet. 1997;350(9089):1459-65.

# Clinical Criteria for Disease Staging

CVS24

**Disease: CVS24 Varicose Veins of Lower Extremities**

**Etiology: Degenerative; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Varicose veins	Varicose veins
1.02	with superficial thrombophlebitis	Stage 1.01 AND superficial thrombophlebitis [nuclear venogram report or Doppler ultrasonography report or physical examination]
2.01	with chronic venous insufficiency	Stage 1.01-1.02 AND dermal pigmentation OR stasis dermatitis OR induration of the skin
2.02	with stasis ulcers	Stage 1.01-2.01 AND stasis ulcers
2.03	with cellulitis	Stage 1.01-2.02 AND <b>cellulitis:</b> OR area of redness, induration, tenderness and heat with indistinct borders
2.04	with deep vein thrombosis	Stage 1.01-2.03 AND <b>DVT:</b>
3.01	with pulmonary embolism	Stage 2.04 AND pulmonary embolism [nuclear ventilation/perfusion scan or pulmonary angiogram report]
3.02	with sepsis	Stage 2.03-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 2.03-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 2.03-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.04 AND death

**References**

Angle N, Bergan JJ. Chronic venous ulcer. BMJ. 1997;314(7086):1019-23.
Bradbury A, Evans C, Allan P, et al. What are the symptoms of varicose veins? Edinburgh vein study cross sectional population survey. BMJ. 1999;318(7180):353-6.
Chant AD. Venous insufficiency and perforating veins. British Journal of Surgery. 1998;85(12):1721.

**Disease: CVS80 Neoplasm, Benign, Cardiovascular System**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of cardiovascular system	

References

**Disease: CVS81 Neoplasm, Malignant, Cardiovascular**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Primary malignant neoplasm of heart	
2.01	with lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

**References**

**Disease: CVS82 Other Atherosclerosis**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Other atherosclerosis of peripheral or renal arteries or of bypass grafts of extremities	
2.01	Atheroembolisms of kidney and other sites; hypersensitivity angiitis	

**References**

**Disease: CVS83 Other Cardiac Conditions**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Kyphoscoliotic heart disease or chronic pulmonary heart disease; nonrheumatic valve disorder, heart or other coronary transplant or implanted device status	
2.01	Aneurysm of heart wall or coronary vessel, cardiomegaly, ill-defined heart disease	
3.01	Acute cor pulmonale, dissection of coronary artery, myocarditis or endocarditis not specified as infective, heart failure, septal defect, sequelae of AMI	

**References**

# Clinical Criteria for Disease Staging

CVS84

**Disease: CVS84 Other Cardiovascular Symptoms**

## Etiology:

Stage	Description	Diagnostic findings
0.00	Observation for suspected cardiovascular disease	Added stage 5/8/06 cb
1.01	Tachycardia, palpitations, or murmurs	
3.01	Shock	

## References



**Disease: CVS85 Hypotension**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Hypotension	

References

**Disease: CVS86 Other Diseases of Arteries**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Peripheral aneurysms, embolisms, and arterial strictures	
1.02	Thoracic and abdominal aneurysms, embolisms, and arterial strictures	
1.03	Cerebral aneurysms, embolisms, and arterial strictures	
3.01	Arterial dissections	

**References**

**Disease: CVS87 Other Diseases of Veins**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Hemorrhage or other circulatory diseases	
2.01	Chronic venous hypertension with ulcer, varices with bleed	

**References**

**Disease: CVS88 Other Disorders of Pulmonary Circulation**

**Etiology:**

<b>Stage</b>	<b>Description</b>	<b>Diagnostic findings</b>
1.01	Disorder of pulmonary circulation	
2.01	Pulmonary artery aneurysm or arteriovenous fistula of pulmonary vessel	

**References**

**Disease: CVS89 Secondary Hypertension**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Secondary hypertension, minimal	
1.02	Secondary hypertension, moderate	
1.03	Secondary hypertension, severe	
2.01	Secondary hypertension, very severe	
2.02	Hypertensive retinopathy, Grade I or II of Keith and Wagener	
2.03	Hypertensive retinopathy, Grade III or IV of Keith and Wagener	
2.04	Hypertensive cardiomegaly, arrhythmias, or wall motion abnormalities	
3.01	with renal failure	
3.02	with CHF	
3.03	with CVA or encephalopathy	
3.04	with CVA and cranial nerve involvement	
3.05	with CVA and cerebellar or pyramidal tract dysfunction	
3.06	with CVA and hemiparesis or hemiplegia	
3.07	with CVA and amblyopia and contralateral hemiplegia	
3.08	with CVA and quadriplegia	
3.09	with coma	
4.00	with death	

**References**

# Clinical Criteria for Disease Staging

DEN01

**Disease: DEN01 Anomaly: Cleft Lip or Palate**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Cleft lip	Cleft lip, unilateral or bilateral
1.02	Cleft palate	Unilateral or bilateral cleft palate not extending beyond the incisive foramen
1.03	Cleft lip and palate	Stage 1.01 AND Stage 1.02
2.01	with recurrent otitis media and hearing loss	Stage 1.01-1.03 AND history of recurrent otitis media AND threshold for conductive sound $\geq$ 30 dB [audiometry report]
2.02	with other deformities of the maxilla or mandible or pharynx	Stage 1.01-2.01 AND maxillary retrusion or protrusion OR mandible retrusion or protrusion OR small mandible or Pierre Robin or Treacher Collins syndromes OR hypertelorism OR poor feeding OR dysphagia
2.03	with aspiration pneumonia	Stage 1.01-2.02 AND aspiration AND <b>pneumonia:</b>
3.01	with sepsis	Stage 3.01 AND <b>sepsis:</b>
3.02	with respiratory failure	Stage 2.03 AND <b>respiratory failure:</b>
3.03	with shock	Stage 2.03-3.02 AND <b>shock:</b>
4.00	Cleft lip or palate and death	Stage 2.03-3.03 AND death

## References

Milerad J, Larson O, Hagberg C, Ideberg M. Associated malformations in infants with cleft lip and palate: a prospective, population-based study. *Pediatrics*. 1997;100(2 Pt 1):180-6.

**Disease: DEN02 Dental Disease**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Dental caries or tooth decay	Radiolucent areas on dentin of teeth [dental x-ray report] AND softened enamel or dentin by dental probing OR thermal sensitivity OR cold sensitivity OR sugar sensitivity
1.02	Pulpitis	Sharp, throbbing intermittent pain from tooth worsened by cold and relieved by heat
1.03	Dental-alveolar abscess	Stage 1.01-1.02 AND dull continuous pain AND perforation of apical dental periosteum AND pain on percussion of tooth AND abscess formation [dental x-ray report]

**References**

Greenspan JS. Oral manifestations of disease. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:185-190.

# Clinical Criteria for Disease Staging

DEN03

**Disease: DEN03 Diseases of the Salivary Gland or Parotitis Including Benign Tumors**

**Etiology: Genetic (or hereditary); Idiopathic; Infection**

Stage	Description	Diagnostic findings
1.01	Sialolithiasis	Pain from salivary gland AND stone in salivary gland duct [x-ray report]
1.02	Viral parotitis	Viral parotitis
1.03	Recurrent sialoadenitis	Tender swelling of gland with eating
2.01	Suppurative parotitis	Swelling of parotid gland AND tenderness of parotid gland AND abscess formation AND parotitis [culture reports growth of pathologic organism(s)]
2.02	Mixed salivary gland benign tumors	Swelling of parotid gland AND pleomorphic adenoma [operative/pathology report] OR Warthin's tumor [operative/pathology report] OR oncocytomas [operative/pathology report] OR benign lymphoepithelial lesion [operative/pathology report] OR monomorphic adenomas [operative/pathology report]

**References**

Jackler RK, Kaplan MJ. Ear, nose and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:244-245.

McEwen DR, Sanchez MM. A guide to salivary gland disorders. AORN Journal. 1997;65(3):554-6, 559-67; quiz 568-9, 571-2.

Vokes EE. Head and neck cancer. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:549-552.



**Disease: DEN04 Gingival and Periodontal Disease**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Gingivitis	Gingivitis OR band or erythematous, inflamed gum tissue surrounding neck of teeth AND edematous swelling of interdental papillae AND bleeding on minimal injury
1.02	Herpetic gingivostomatitis	Herpetic gingivostomatitis
1.03	Periodontitis	Stage 1.01 AND destruction of the supporting osseous tissue of teeth [dental x-ray report]
1.04	Periodontitis with abscess formation	Stage 1.01-1.03 AND abscess formation on gums
1.05	Vincent's angina or trench mouth	Acutely painful and bleeding gums AND fetid breath AND ulcerations limited to marginal gingivae and interdental papillae AND gums bleed on slight pressure AND interdental grayish membrane AND fusospirochete bacillus [gram stain report]

**References**

Greenspan JS. Oral manifestations of disease. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:185-190.

Sheiham A. The future of preventive dentistry. BMJ. 1994;309(6949):214-5.

# Clinical Criteria for Disease Staging

DEN05

**Disease: DEN05 Neoplasm, Malignant: Hypopharynx**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of cancer of the hypopharynx	
1.01	Confined to one site	TNM Classification Stage 1 OR American Joint Committee on Cancer Stage I OR Cancer of the hypopharynx ≤ 2 cm. in diameter [operative/pathology report] OR Cancer of the hypopharynx localized to one anatomic site [operative/pathology report]
2.01	Involving two sites	TNM Classification Stage 2 OR American Joint Committee on Cancer Stage II OR Cancer of the hypopharynx ≤ 4 cm. in diameter [operative/pathology report] OR Cancer of the hypopharynx localized to two adjacent anatomic sites [operative/pathology report]
2.02	with extension	TNM Classification Stage 3 OR American Joint Committee on Cancer Stage III OR Cancer of the hypopharynx ≥ 4 cm. in diameter [operative/pathology report] OR Cancer of the hypopharynx involves three or more adjacent anatomic sites [operative/pathology report] OR isolated neck node ≤ 3 cm. in diameter [operative/pathology report]
3.01	with distant metastasis	TNM Classification Stage 4 OR American Joint Committee on Cancer Stage IV OR cancer of the hypopharynx involves any structure beyond the neck [operative/pathology report] OR extends beyond the confines of the nasopharynx [operative/pathology report] OR isolated neck node ≥ 3 cm. in diameter [operative/pathology report] OR neck metastasis involving > 1 lymph node [operative/pathology report] OR neck metastasis has fixation to surrounding soft tissue [operative/pathology report]
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	and death	Stage 2.01-3.02 AND death

**Disease: DEN05 Neoplasm, Malignant: Hypopharynx**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

<p>Jackler RK, Kaplan MJ. Ear, nose and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange; 1998:244-245.</p>
<p>Vokes EE. Head and neck cancer. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison’s Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:549-552.</p>
<p>Zbaren P, Becker M, Lang H. Pretherapeutic staging of hypopharyngeal carcinoma. Clinical findings, computed tomography, and magnetic resonance imaging compared with histopathologic evaluation. Archives of Otolaryngology -- Head &amp; Neck Surgery. 1997;123(9):908-13.</p>

# Clinical Criteria for Disease Staging

DEN06

**Disease: DEN06 Neoplasm, Malignant: Oral Cavity**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of cancer of the oral cavity	
1.01	Cancer of the oral cavity < 2 cm in diameter	TNM Classification Stage 1 OR American Joint Committee on Cancer Stage I OR Cancer of the oral cavity ≤ 2 cm. in diameter [operative/pathology report or CT scan report or MRI scan report]
2.01	Tumor ≥ 2 cm in diameter and < 4 cm in diameter	TNM Classification Stage 2 OR American Joint Committee on Cancer Stage II OR Cancer of the oral cavity ≤ 4 cm. in diameter [operative/pathology report or CT scan report or MRI scan report]
3.01	Tumor ≥ 4 cm in diameter	TNM Classification Stage 3 OR American Joint Committee on Cancer Stage III OR Cancer of the oral cavity ≥ 4 cm. in diameter [operative/pathology report or CT scan report or MRI scan report] OR isolated neck node ≤ 3 cm. in diameter [operative/pathology report or CT scan report or MRI scan report]
3.02	with invasion of adjacent tissues or beyond	TNM Classification Stage 4 OR American Joint Committee on Cancer Stage IV OR cancer of the oral cavity involves any structure beyond the neck [operative/pathology report or CT scan report or MRI scan report] OR isolated neck node ≥ 3 cm. in diameter [operative/pathology report or CT scan report or MRI scan report] OR neck metastasis involving > 1 lymph node [operative/pathology report or CT scan report or MRI scan report] OR neck metastasis has fixation to surrounding soft tissue [operative/pathology report or CT scan report or MRI scan report] OR multiple contralateral or ipsilateral nodes [operative/pathology report or CT scan report or MRI scan report]
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	and death	Stage 2.01-3.03 AND death

**Disease: DEN06 Neoplasm, Malignant: Oral Cavity**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

<p>Jackler RK, Kaplan MJ. Ear, nose, and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange; 1998:234-235, 244-245.</p>
<p>Vokes EE. Head and neck cancer. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison’s Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:549-552.</p>

# Clinical Criteria for Disease Staging

DEN07

**Disease: DEN07 Neoplasm, Malignant: Oropharynx**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of cancer of the oropharynx	
1.01	Confined to one site	TNM Classification Stage 1 OR American Joint Committee on Cancer Stage I OR Cancer of the oropharynx ≤ 2 cm. in diameter [operative/pathology report] OR Cancer of the oropharynx localized to one anatomic site [operative/pathology report]
2.01	Involving two sites	TNM Classification Stage 2 OR American Joint Committee on Cancer Stage II OR Cancer of the oropharynx ≤ 4 cm. in diameter [operative/pathology report] OR Cancer of the oropharynx localized to two adjacent anatomic sites [operative/pathology report]
2.02	with extension	TNM Classification Stage 3 OR American Joint Committee on Cancer Stage III OR Cancer of the oropharynx ≥ 4 cm. in diameter [operative/pathology report] OR Cancer of the oropharynx involves three or more adjacent anatomic sites [operative/pathology report] OR isolated neck node ≤ 3 cm. in diameter [operative/pathology report]
3.01	with distant metastasis	TNM Classification Stage 4 OR American Joint Committee on Cancer Stage IV OR cancer of the oropharynx involves any structure beyond the neck [operative/pathology report] OR extends beyond the confines of the nasopharynx [operative/pathology report] OR isolated neck node ≥ 3 cm. in diameter [operative/pathology report] OR neck metastasis involving > 1 lymph node [operative/pathology report] OR neck metastasis has fixation to surrounding soft tissue [operative/pathology report]
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	and death	Stage 2.01-3.02 AND death

**Disease: DEN07 Neoplasm, Malignant: Oropharynx**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

<p>Jackler RK, Kaplan MJ. Ear, nose and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange; 1998:234-235, 244-245.</p>
<p>Vokes EE. Head and neck cancer. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:549-552.</p>
<p>Zbaren P, Becker M, Lang H. Pretherapeutic staging of hypopharyngeal carcinoma. Clinical findings, computed tomography, and magnetic resonance imaging compared with histopathologic evaluation. Archives of Otolaryngology -- Head &amp; Neck Surgery. 1997;123(9):908-13.</p>

# Clinical Criteria for Disease Staging

DEN08

**Disease: DEN08 Neoplasm, Malignant: Salivary Glands and Mandible**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of cancer of the salivary gland	
1.01	Solitary salivary gland cancers < 4 cm in diameter without invasion	American Joint Committee on Cancer Stage I OR Salivary gland carcinoma [operative/pathology report or CT scan report or MRI report] OR low grade mucoepidermoid carcinoma [operative/pathology report] OR Acinic cell carcinoma [operative/pathology report]
2.01	Tumor ≥ 4 cm in diameter and < 6 cm in diameter without local invasion or < 4 cm in diameter with local invasion	American Joint Committee on Cancer Stage II OR salivary gland carcinoma [operative/pathology report] OR Malignant mixed tumor [operative/pathology report] OR Mucoepidermoid carcinoma [operative/pathology report] OR Adenocarcinoma [operative/pathology report] OR Acinic cell carcinoma [operative/pathology report] OR fixation to the skin OR tumor ≥ 4cm in diameter and < 6 cm in diameter without local invasion [operative/pathology report] OR tumor < 4cm in diameter with local invasion [operative/pathology report]
2.02	with < 4 cm in diameter and one metastatic node or > 6 cm in diameter with local invasion	American Joint Committee on Cancer Stage III Stage 2.01 AND salivary gland carcinoma [operative/pathology report] OR Malignant mixed tumor [operative/pathology report] OR Mucoepidermoid carcinoma [operative/pathology report] OR Adenocarcinoma [operative/pathology report] OR Acinic cell carcinoma [operative/pathology report] OR Squamous cell carcinoma [operative/pathology report] AND lesion > 6 cm. in diameter AND local invasion OR lesion < 4cm in diameter AND one metastatic lymph node [operative/pathology report]



# Clinical Criteria for Disease Staging

DEN08

**Disease: DEN08 Neoplasm, Malignant: Salivary Glands and Mandible**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
2.03	Tumor ≥ 6 cm in diameter with local invasion and one lymph node or > 1 lymph node involvement or with facial paralysis or distant metastasis	American Joint Committee on Cancer Stage IV Salivary gland carcinoma [operative/pathology report] OR Adenocystic carcinoma [operative/pathology report] AND tumor ≥ 6cm in diameter with local invasion and one lymph node [operative/pathology report] OR tumor > 2 cervical lymph node involvement [operative/pathology report or CT scan or MRI report] OR paresis of one side of the face OR paralysis of one side of the face OR facial nerve palsy OR with distant metastases [operative/pathology report or CT scan or MRI report]
3.01	with distant metastasis	Stage 1.01-2.03 AND distant metastases
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	and death	Stage 2.01-3.02 AND death

**References**

Jackler RK, Kaplan MJ. Ear, nose and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:244-245.

McEwen DR, Sanchez MM. A guide to salivary gland disorders. AORN Journal. 1997;65(3):554-6, 559-67; quiz 568-9, 571-2.

Vokes EE. Head and neck cancer. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:549-552.

**Disease: DEN80 Anomaly: Other Dentofacial**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Dentofacial anomalies other than cleft lip or palate	

References

**Disease: DEN81 Other Disorders of Oral Cavity**

**Etiology:**

<b>Stage</b>	<b>Description</b>	<b>Diagnostic findings</b>
1.01	Disorders of tooth eruption and dentition, other oral cavity conditions	
2.01	Stomatitis, cellulitis or abscess or mouth	

**References**

**Disease: END01 Adrenal Insufficiency**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
1.01	Primary adrenal insufficiency or Addison's disease	Hyperpigmentation OR serum ACTH $\geq$ 120 pg/ml at 9 a.m. [chemistry report] OR serum ACTH $\geq$ 35 pg/ml at midnight [chemistry report] OR serum a.m. cortisol $\leq$ 4 mg/dl [chemistry report] AND positive cosyntropin stimulation test: at $\geq$ 60 minute post infusion, serum cortisol is $\leq$ 2 times baseline serum cortisol level [chemistry report] OR positive ACTH stimulation test: at $\geq$ 60 minute post infusion, serum cortisol $\leq$ 18 mg/dl [chemistry report]
1.02	Secondary adrenal insufficiency	Serum ACTH $<$ 35 pg/ml [chemistry report] AND serum a.m. cortisol $\leq$ 4 mg/dl [chemistry report] AND positive cosyntropin stimulation test: at $\geq$ 60 minute post infusion, serum cortisol is $\leq$ 2 times baseline serum cortisol level [chemistry report]
2.01	with hyponatremia or hyperkalemia or hypochloremia	Stage 1.01 AND <b>hyponatremia:</b> OR <b>hyperkalemia:</b> OR <b>hypochloremia:</b>
3.01	Addisonian crisis	Stage 1.01-2.01 AND <b>hypotension:</b> AND generalized weakness
3.02	with renal failure	Stage 2.01-3.01 AND <b>renal failure:</b>
4.00	with death	Stage 2.1-3.3 AND death

**References**

Fitzgerald PA. Adrenocortical hypofunction. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:1072-1075.

White PC. Disorders of aldosterone biosynthesis and action. N Engl J Med. 1994;331(4):250-258.

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# Clinical Criteria for Disease Staging

END02

**Disease: END02 Cushing's Syndrome**

**Etiology: Metabolic; Neoplasm**

Stage	Description	Diagnostic findings
1.01	Cushing's Syndrome	Cushing's Syndrome [dexamethasone suppression test report]  Presumptive Diagnostic Findings: urinary free cortisol $\geq$ 110ug/24hrs [chemistry report]
1.02	Cushing's Disease	Stage 1.1 AND 9 pm ACTH $\geq$ 35 pg/ml [chemistry report] OR Basophilic pituitary adenoma [operative/pathology report ] OR Chromophobe pituitary adenoma [operative/pathology report or immunohistochemical stain for ACTH report]
2.01	with growth retardation	Stage 1.01-1.02 AND age < 16 years AND height < 3rd percentile OR growth velocity < 4 cm/yr OR bone age < 2 yrs. behind chronological age
2.02	with osteoporosis	Stage 1.01-2.01 AND <b>osteoporosis:</b>
2.03	with diabetes mellitus or hypertension or hypokalemia	Stage 1.01-2.02 AND <b>Diabetes mellitus:</b> OR <b>hypertension:</b> OR <b>hypokalemia:</b> OR centripetal obesity OR proximal muscle wasting OR proximal muscle weakness
2.04	with vertebral fractures	Stage 1.01-2.03 AND vertebral fracture [vertebrae x-ray report]
2.05	with visual field defects	Stage 1.01-2.04 AND visual field defects
3.01	with Nelson's syndrome	Stage 1.01-2.05 AND Nelson's syndrome OR history of bilateral adrenalectomy AND hyperpigmentation AND history of glucocorticoid replacement therapy AND pituitary tumor [CT scan or MRI report]
3.02	with coma	Stage 1.01-3.01 AND <b>coma:</b>

**Disease: END02 Cushing's Syndrome**

**Etiology: Metabolic; Neoplasm**

Stage	Description	Diagnostic findings
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**References**

Fitzgerald PA. Cushing's syndrome. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:1075-1076

Orth DN, Kovacs WJ, DeBold CR. The adrenal cortex. In: Wilson JD, Foster DW, eds. Williams Textbook of Endocrinology. 8th ed. Philadelphia, PA: WB Saunders; 1992:489-620.

Orth DN. Cushing's syndrome. N Engl J Med. 1995;332(12):791-803.

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**Disease: END03 Diabetes insipidus**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
1.01	Primary diabetes insipidus	Diabetes insipidus OR fluid restriction to >1kg weight loss ≤ 24 hrs AND vasopressin challenge test shows rise in urinary osmolality ≥ 9 % AND plasma osmolality ≥ 288 mmol/kg [chemistry report] OR Wolfram Syndrome
1.02	Secondary diabetes insipidus	Stage 1.01 AND pituitary or hypothalamic tumors [MRI report]
1.03	Vasopressinase induced diabetes insipidus	Stage 1.01 AND pregnancy OR vasopressinase positive [chemistry report]
1.04	Nephrogenic diabetes insipidus	Fluid restriction to > 1kg weight loss ≤ 24 hrs Elevated serum vasopressin [chemistry report]
2.01	with hyponatremia	Stage 1.01-1.04 AND <b>hyponatremia:</b>
2.02	with hypernatremia	Stage 1.01-2.01 AND <b>hypernatremia:</b>
2.03	with azotemia or dehydration	Stage 1.01-2.02 AND <b>azotemia:</b> OR <b>dehydration:</b>
3.01	with renal failure	Stage 1.01-2.03 AND <b>renal failure:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**References**

Fitzgerald PA. Diabetes insipidus. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:1037-1039.

Fitzgerald PA. Diabetes insipidus. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:1037-1039.

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Singer I, Oster JR, Fishman LM. The management of diabetes insipidus in adults. Archives of Internal Medicine. 1997;157(12):1293-1301.

# Clinical Criteria for Disease Staging

END04

**Disease: END04 Diabetes Mellitus Type 1**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
1.01	Type 1 diabetes mellitus	Fasting plasma glucose $\geq$ 126 mg/dl drawn $\geq$ 8 hours after a meal AND $\geq$ 24 hours later confirmation by repeat testing OR Casual plasma glucose $\geq$ 200 mg/dl AND $\geq$ 24 hours later confirmation by repeat testing OR 2 hour postprandial glucose $\geq$ 200 mg/dl under the World Health Organization protocol for oral glucose tolerance test using 75g anhydrous glucose in water AND $\geq$ 24 hours later confirmation by repeat testing OR History of Type 1 Diabetes mellitus
1.02	Symptomatic diabetes mellitus	Stage 1.01 AND polyuria OR polydypsia OR polyphagia
1.03	with history of ketoacidosis or pancreatic islet cell antibodies	Stage 1.01-1.02 AND history of ketoacidosis OR pancreatic islet cell antibodies [chemistry report]
2.01	with retinopathy	Stage 1.01-1.03 AND microaneurysms of retinal vessels [ophthalmoscopy report] OR retinal exudates [ophthalmoscopy report] OR retinal hemorrhages [ophthalmoscopy report] OR neovascularization of the retina [ophthalmoscopy report] OR neovascularization of the iris [ophthalmoscopy report] OR rhegmatogenous detachments [ophthalmoscopy report] OR nonrhegmatogenous detachments [ophthalmoscopy report]
2.02	with neuropathy	Stage 1.01-2.01 AND gastroparesis [nuclear or radiology contrast gastric emptying time] OR neuropathy [EMG report or physical examination]
2.03	with glomerulosclerosis	Stage 1.01-2.02 AND glomerulosclerosis [operative/pathology report] OR Kimmelstiel-Wilson syndrome [operative/pathology report] OR <b>proteinuria:</b>



# Clinical Criteria for Disease Staging

END04

**Disease: END04 Diabetes Mellitus Type 1**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
2.04	with vascular disease (peripheral, cardiovascular, or cerebral)	Stage 1.01-2.03 AND diminished arterial circulation [Doppler report or angiography report] OR foot ulcers OR <b>hypertension:</b> OR <b>angina pectoris:</b> OR cerebrovascular disease [angiography report or LT report or MRI report]
2.05	with cellulitis	Stage 1.01-2.04 AND <b>cellulitis:</b> area of redness, induration, tenderness and heat with indistinct borders OR purulent skin effusion [skin culture reports showing growth of pathologic organisms]
2.06	with pyelonephritis	Stage 1.01-2.05 AND <b>pyelonephritis:</b>
2.07	with gangrenous infection	Stage 1.01-2.06 AND gangrene [operative/pathology report]
2.08	with osteomyelitis	Stage 1.01-2.07 AND <b>osteomyelitis:</b>
3.01	with renal failure	Stage 1.01-2.08 AND <b>renal failure:</b>
3.02	with hyperosmolar state	Stage 1.01-3.01 AND serum osmolality $\geq$ 305 mOsm/kg [chemistry report]
3.03	with ketoacidosis	Stage 1.01-3.02 AND <b>anion gap acidosis:</b> OR <b>acidosis:</b> AND serum acetone $\geq$ 1 mg/dl [chemistry report] OR b-hydroxybutyrate > 1.0 mg/dl [chemistry report] OR acetoacetate > 1 mg/dl [chemistry report] OR serum acetest positive at > 1:2 dilution [chemistry report]
3.04	with acute myocardial infarction	Stage 2.04-3.03 AND acute myocardial infarction [EKG report] OR CPK-MB > normal [CPK isoenzyme report] OR LDH1/LDH2 ratio $\geq$ 1.0 [LDH isoenzyme report]
3.05	with acute cerebral vascular accident	Stage 2.04-3.04 AND <b>acute cerebral vascular accident:</b>
3.06	with sepsis	Stage 2.05-3.05 AND <b>sepsis:</b>

**Disease: END04 Diabetes Mellitus Type 1**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
3.07	with coma	Stage 2.01-3.06 AND <b>coma:</b>
3.08	with hyperosmolar coma	Stage 2.01-3.07 AND <b>coma:</b> AND unresponsive to tactile stimuli
3.09	with shock	Stage 2.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.09 AND death

**References**

Anonymous. Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care*. 2003;26[1]Suppl 1]:S5-20.

Foster DW. Diabetes mellitus. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. *Harrison's Principles of Internal Medicine*. 14th ed. New York, NY: McGraw-Hill; 1998:2060-81.

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Unger RH, Foster DW. Diabetes mellitus. In: Wilson JD, Foster DW, eds. *Williams Textbook of Endocrinology*. 8th ed. Philadelphia, PA: WB Saunders; 1992:1255.

# Clinical Criteria for Disease Staging

END05

**Disease: END05 Diabetes Mellitus Type 2 and Hyperglycemic States**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
1.01	Impaired fasting glucose	Glucose > 110 mg/dl and < 126 mg/dl drawn ≥ 8 hours after a meal
1.02	Impaired glucose tolerance	2 hour post prandial glucose > 140 and < 200 mg/dl under the World Health Organization protocol for oral glucose tolerance test using 75g anhydrous glucose in water
1.03	Asymptomatic diabetes mellitus	Fasting plasma glucose ≥ 126 mg/dl drawn ≥ 8 hours after a meal AND ≥ 24 hours later confirmation by repeat testing OR Casual plasma glucose ≥ 200 mg/dl AND ≥ 24 hours later confirmation by repeat testing OR 2 hour postprandial glucose ≥ 200 mg/dl under the World Health Organization protocol for oral glucose tolerance test using 75g anhydrous glucose in water AND ≥ 24 hours later confirmation by repeat testing OR History of Type 2 Diabetes mellitus
1.04	Symptomatic diabetes mellitus	Stage 1.03 AND polyuria OR polydypsia OR polyphagia
2.01	with retinopathy	Stage 1.03-1.04 AND microaneurysms of retinal vessels [ophthalmoscopy report] OR retinal exudates [ophthalmoscopy report] OR retinal hemorrhages [ophthalmoscopy report] OR neovascularization of the retina [ophthalmoscopy report] OR neovascularization of the iris [ophthalmoscopy report] OR rhegmatogenous detachments [ophthalmoscopy report] OR nonrhegmatogenous detachments [ophthalmoscopy report]
2.02	with neuropathy	Stage 1.03-2.01 AND gastroparesis [nuclear or radiology contrast gastric emptying time] OR neuropathy [EMG report or physical examination]
2.03	with glomerulosclerosis	Stage 1.03-2.02 Glomerulosclerosis [operative/pathology report] OR Kimmelstiel-Wilson syndrome [operative/pathology report] OR <b>proteinuria:</b>

# Clinical Criteria for Disease Staging

END05

**Disease: END05 Diabetes Mellitus Type 2 and Hyperglycemic States**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
2.04	with vascular disease (peripheral, cardiovascular, or cerebral)	Stage 1.03-2.03 OR diminished arterial circulation [Doppler report or angiography report] OR foot ulcers OR <b>hypertension:</b> OR <b>angina pectoris:</b> OR cerebrovascular disease [angiography report or CT report or MRI report]
2.05	with cellulitis	Stage 1.03-2.04 AND <b>cellulitis:</b> area of redness, induration, tenderness and heat with indistinct borders OR purulent skin effusion [skin culture reports showing growth of pathologic organisms]
2.06	with pyelonephritis	Stage 1.03-2.05 AND pyelonephritis
2.07	with gangrenous infection	Stage 1.03-2.06 AND gangrene [operative/pathology report]
2.08	with osteomyelitis	Stage 1.03-2.07 AND <b>osteomyelitis:</b>
3.01	with renal failure	Stage 1.03-2.08 AND <b>renal failure:</b>
3.02	with hyperosmolar state	Stage 1.03-3.01 AND serum osmolality $\geq$ 305 mOsm/kg [chemistry report]
3.03	with ketoacidosis	Stage 1.03-3.02 AND <b>anion gap acidosis:</b> OR <b>acidosis:</b> AND serum acetone $\geq$ 1 mg/dl [chemistry report] OR b-hydroxybutyrate > 1.0 mg/dl [chemistry report] OR acetoacetate > 1 mg/dl [chemistry report] OR serum acetest positive at > 1:2 dilution [chemistry report]
3.04	with acute myocardial infarction	Stage 2.03-3.03 AND acute myocardial infarction [EKG report] OR CPK-MB > normal [CPK isoenzyme report] OR LDH1/LDH2 ratio $\geq$ 1.0 [LDH isoenzyme report]
3.05	with acute cerebral vascular accident	Stage 2.04-3.04 AND AND new intracranial infarction [CT scan or MRI report ] OR new intracranial hemorrhage [CT scan or MRI report]
3.06	with sepsis	Stage 2.05-3.05 AND <b>sepsis:</b>

# Clinical Criteria for Disease Staging

END05

**Disease: END05 Diabetes Mellitus Type 2 and Hyperglycemic States**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
3.07	with coma	Stage 2.01-3.06 AND <b>coma:</b>
3.08	with hyperosmolar coma	Stage 2.01-3.07 AND <b>coma:</b> AND unresponsive to tactile stimuli
3.09	with shock	Stage 2.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.09 AND death

**References**

Anonymous. Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care*. 2003;26[1]Suppl 1]:S5-20.

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Grossman E, Messerli FH. Diabetic and hypertensive heart disease. *Annals of Internal Medicine*. 1996;125[4]:304-10.

Karam J. Diabetes mellitus and hypoglycemia. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. *Current Medical Diagnosis & Treatment*. Stamford, CT: Appleton & Lange; 1998: 1095-1138.

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Unger RH, Foster DW. Diabetes mellitus. In: Wilson JD, Foster DW, eds. *Williams Textbook of Endocrinology*. 8th ed. Philadelphia, PA: WB Saunders; 1992:1255.

**Disease: END06 Goiter: Nontoxic or Euthyroid**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Euthyroid goiter	Diffuse enlargement of the thyroid gland [thyroid scan report or physical examination] AND free thyroxine index $\leq$ 456 [chemistry report] OR serum t3, triiodothyronine, $\leq$ 256 ng/dl [chemistry report] OR serum t4, thyroxine, $\leq$ 13 ug/dl [chemistry report] AND serum t4 $\geq$ 4 ug/dl [chemistry report] AND serum t3 $\geq$ 75 ng/dl [chemistry report] AND TSH $\geq$ 0.4 uU/ml [chemistry report]
1.02	Multinodular goiter	Multinodular enlargement of the thyroid gland [thyroid scan report or physical examination] AND free thyroxine index $\leq$ 456 [chemistry report] OR serum t3, triiodothyronine, $\leq$ 256 ng/dl [chemistry report] OR serum t4, thyroxine, $\leq$ 13 ug/dl [chemistry report] AND serum t4 $\geq$ 4 ug/dl [chemistry report] AND serum t3 $\geq$ 75 ng/dl [chemistry report] AND TSH $\geq$ 0.4 uU/ml [chemistry report]
2.01	with compression of the trachea or esophagus	Stage 1.01-1.02 AND dysphagia OR dysphonia OR dyspnea OR stridor
3.01	with respiratory failure	Stage 2.01 AND <b>respiratory failure:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

END07

**Disease: END07 Hyperthyroidism**

**Etiology: Immune; Metabolic**

Stage	Description	Diagnostic findings
1.01	Primary Hyperthyroidism	<b>Hyperthyroidism, primary:</b> Hyperthyroidism[nuclear thyroid scan] AND free thyroxine index $\geq$ normal [chemistry report] OR serum free T3 (triiodothyronine) $\geq$ normal [chemistry report] OR serum total T4 (thyroxine) $\geq$ normal [chemistry report] OR serum free T4 $\geq$ normal [chemistry report] AND TSH $\geq$ normal [chemistry report] AND pituitary tumor [CT scan or operative/pathology report]
1.02	Secondary Hyperthyroidism	
2.01	with infiltrating dermopathy	Stage 1.01 AND diffuse thyromegaly AND pretibial erythematous pruritic skin lesion OR increased skin collagen and glycosaminoglycans [biopsy report]
2.02	with infiltrating ophthalmopathy	Stage 1.01-2.01 AND exophthalmos OR diplopia OR lymphocytic infiltration of extraocular muscles [CT scan report or echography report] OR increased retro-orbital tissue [CT scan or ultrasound report] OR lid lag OR gaze limitation OR conjunctival edema OR corneal exposure
2.03	with compressive optic neuropathy	Stage 1.01-2.02 AND vision $\leq$ 20/70 AND central scotomas AND reduced color sensation AND relative afferent pupillary defect
2.04	with atrial fibrillation	Stage 1.01-2.03 AND atrial fibrillation [EKG report]
3.01	with thyroid storm	Stage 1.01-2.04 AND temperature $\geq$ 102°F orally or 102.5°F rectally AND <b>disorientation:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with respiratory failure	Stage 3.01-3.02 AND <b>respiratory failure:</b>

**Disease: END07 Hyperthyroidism**

**Etiology: Immune; Metabolic**

Stage	Description	Diagnostic findings
3.04	with coma	Stage 3.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 2.03-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.05 AND death

**References**

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# Clinical Criteria for Disease Staging

END08

**Disease: END08 Hypoglycemia**

**Etiology: Metabolic; Toxicologic; Neoplasm**

Stage	Description	Diagnostic findings
1.01	Reactive or other hypoglycemia secondary to meals, abnormal nutrient metabolism, increased glucose utilization, chemicals or drugs, or deficient glucose production	Hypoglycemia AND postgastrectomy history OR idiopathic "functional" hypoglycemia OR late hypoglycemia of maturity onset diabetes mellitus
1.02	Hypoglycemia secondary to increased glucose utilization	Hypoglycemia AND exercise induced hypoglycemia OR fever induced hypoglycemia OR pregnancy induced hypoglycemia
1.03	Reactive hypoglycemia secondary to abnormal nutrient metabolism	Hypoglycemia AND hereditary fructose intolerance OR fructose-1-phosphate aldolase deficiency OR galactosemia OR galactose-1-phosphate uridyl transferase deficiency OR leucine hypersensitivity OR branch chain ketonuria OR maple syrup urine disease
1.04	Reactive hypoglycemia secondary to chemicals or drugs	Hypoglycemia AND exogenous insulin administration OR exogenous insulin administration AND use of beta blocker drugs systemically OR use of oxytetracycline systemically OR use of ethylenediaminetetraacetic acid, systemically OR use of mebanazine systemically OR use of manganese systemically OR use of sulfonylurea systemically OR use of sulfonylurea systemically AND use of sulfisoxazole systemically OR use of dicumarol systemically OR use of phenylbutazone systemically OR use of ethyl alcohol systemically OR use of phenformin systemically OR use of pentamidine systemically OR use of disopyramide systemically OR use of quinine systemically

# Clinical Criteria for Disease Staging

END08

**Disease: END08 Hypoglycemia**

**Etiology: Metabolic; Toxicologic; Neoplasm**

Stage	Description	Diagnostic findings
1.05	Reactive hypoglycemia secondary to deficient glucose production	Hypoglycemia AND alcoholism OR Jamaican vomiting sickness OR use of salicylate systemically OR use of aminobenzoic acid systemically OR use of haloperidol systemically OR use of propoxyphene systemically OR use of chlorpromazine systemically
1.06	Hypoglycemia secondary to excessive glucose utilization	Hypoglycemia AND insulinoma (op/path report). OR glucagon deficiency OR cortisol deficiency OR growth hormone deficiency OR epinephrine deficiency OR hypothyroidism. OR neonatal hypoglycemia of diabetic mothers OR erythroblastosis fetalis OR renal glycosuria OR sarcoma induced hypoglycemia (op/path report)
1.07	Hypoglycemia secondary to deficient glucose production	Hypoglycemia AND hepatic necrosis (op/path report). OR hepatoma (op/path report). OR glycogen storage disease OR glucose-6-phosphatase deficiency OR fructose-1-6-diphosphatase deficiency OR deficient gluconeogenic substrate alanine OR neoplasm induced hypoglycemia
2.01	Symptomatic hypoglycemia	Stage 1.01-1.07 AND feeling faint OR weakness OR tremulousness OR palpitations OR diaphoresis OR nervousness
3.01	Hypoglycemia and loss of consciousness	Stage 2.01 AND <b>loss of consciousness:</b>

**Disease: END08 Hypoglycemia**

**Etiology: Metabolic; Toxicologic; Neoplasm**

Stage	Description	Diagnostic findings
3.02	Hypoglycemia and coma	Stage 2.01-3.01 AND <b>coma:</b>
3.03	Hypoglycemia with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	Hypoglycemia with death	Stage 2.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

END09

**Disease: END09 Hypothyroidism**

**Etiology: Congenital; Immune**

Stage	Description	Diagnostic findings
1.01	Asymptomatic primary hypothyroidism	<b>Hypothyroidism:</b> Stage 1.01 TSH ≤ 0.4uU/ml [chemistry report] AND TRH stimulation test positive [TRH stimulation test reports no increase of serum TSH]
1.02	Secondary hypothyroidism	
2.01	Symptomatic hypothyroidism	Stage 1.01-1.02 AND macroglossia OR cutaneous myxedema OR carpal tunnel syndrome OR <b>bradycardia:</b> OR periorbital edema OR coarse and dry skin OR personality changes OR <b>hypothermia:</b> OR <b>anemia:</b>
2.02	Cretinism	Stage 1.01-2.01 AND Goitrous cretinism
2.03	with abdominal effusion	Stage 1.01-2.02 AND abdominal effusion [sonogram or flat plate of abdomen report]
2.04	with pericardial or pleural effusion	Stage 1.01-2.03 OR pleural effusion [sonogram or chest x-ray report] OR pericardial effusion [echocardiogram report]
3.01	with congestive heart failure	Stage 1.01-2.04 AND <b>congestive heart failure:</b>
3.02	with respiratory failure	Stage 3.01 AND <b>respiratory failure:</b>
3.03	with myxedema madness	Stage 1.01-3.02 AND myxedema madness
3.04	with myxedema coma	Stage 1.01-3.03 AND myxedema coma OR <b>hypothermia:</b> AND seizures
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: END09 Hypothyroidism**

**Etiology: Congenital; Immune**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

**Disease: END10 Monotropic Hormone Deficiency**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Monotropic hormone deficiency	FSH normal for sex and cycle[chemistry report] AND LH normal for sex and cycle[chemistry report] AND estrogen deficiency for sex [chemistry report] OR testosterone deficiency for sex [chemistry report] OR Serum ACTH < 35 pg/ml [chemistry report] AND serum a.m. cortisol ≤ 4 mg/dl [chemistry report] AND positive cosyntropin stimulation test: at ≥ 60 minute post infusion, serum cortisol is ≤ 2 times baseline serum cortisol level [chemistry report] OR TSH < 7.4uU/ml [chemistry report] AND free T4 ≤ 4 ug/dl [chemistry report] OR growth hormone concentration of < 10 ug/L after insulin induced hypoglycemia of 40 mg/dL [chemistry report]
2.01	Hypopituitarism with pituitary adenoma	Stage 1.01 AND pituitary adenoma [ operative/pathology report or CT scan report] OR Sheehan's syndrome OR empty sella syndrome
2.02	Hypopituitarism with bilateral hemianopsia	Stage 2.01 AND bilateral hemianopsia OR loss of lateral visual fields on both eyes
3.01	Panhypopituitarism	FSH normal for sex and cycle [chemistry report] AND LH normal for sex and cycle [chemistry report] AND estrogen deficiency for sex [chemistry report] OR testosterone deficiency for sex [chemistry report] AND Serum ACTH < 35 pg/ml [chemistry report] AND serum a.m. cortisol ≤ 4 mg/dl [chemistry report] AND positive cosyntropin stimulation test: at ≥ 60 minute post infusion, serum cortisol is ≤ 2 times baseline serum cortisol level [chemistry report] AND TSH < 7.4uU/ml [chemistry report] AND free T4 ≤ 4 ug/dl [chemistry report] AND growth hormone concentration of < 10 ug/L after insulin induced hypoglycemia of 40 mg/dL [chemistry report]
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>

**Disease: END10 Monotropic Hormone Deficiency**

**Etiology:**

Stage	Description	Diagnostic findings
4.00	with death	Stage 1.01-3.02 AND death

**References**

Billir BM, Daniels GH. Neuroendocrine regulation and diseases of the anterior pituitary and hypothalamus. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:1972-1999.

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# Clinical Criteria for Disease Staging

END11

**Disease: END11 Neoplasm, Benign: Acromegaly**

**Etiology: Congenital; Neoplasm; Metabolic**

Stage	Description	Diagnostic findings
1.01	Acromegaly	Pituitary adenoma [CT scan, MRI or operative/pathology report] AND gigantism OR acromegaly OR oral glucose suppression test of 100gms shows growth hormone excess > 10ug/L OR serum insulin-like growth factor-1 level > normal for age [chemistry report] OR serum somatomedin C > normal for age[chemistry report]
1.02	with osteoarthritis or carpal tunnel syndrome	Stage 1.01 AND osteoarthritis [joint x-ray report] OR carpal tunnel syndrome
2.01	with hypertension	Stage 1.01-1.02 AND <b>hypertension:</b>
2.02	with diabetes mellitus	Stage 1.01-2.01 AND <b>diabetes mellitus:</b>
2.03	with thyroid dysfunction	Stage 1.01-2.02 AND <b>hyperthyroidism:</b> OR <b>hypothyroidism:</b>
3.01	with myocardial infarction	Stage 1.01-2.03 AND <b>acute myocardial infarction:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with new cerebrovascular accident	Stage 1.01-3.02 AND new intracranial infarction [CT scan or MRI report ] OR new intracranial hemorrhage [CT scan or MRI report]
3.04	with respiratory failure	Stage 3.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.1-3.5 AND death



**Disease: END11 Neoplasm, Benign: Acromegaly**

**Etiology: Congenital; Neoplasm; Metabolic**

Stage	Description	Diagnostic findings
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**References**

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<p>Silverman BL, Friedlander JR. Is growth hormone good for the heart? Journal of Pediatrics. 1997;131(1 Pt 2):S70-S74.</p>

# Clinical Criteria for Disease Staging

END12

**Disease: END12 Neoplasm, Benign: Adenoma, Parathyroid, or Hyperparathyroidism**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Single parathyroid adenoma or hyperparathyroidism	<b>Hypercalcemia:</b> AND parathyroid hormone levels $\geq$ than normal [chemistry report] OR parathyroid adenoma [thallium 201-technetium 99m subtraction scan or operative/pathology report]
1.02	Multiple parathyroid adenomas	More than one parathyroid adenoma [thallium 201-technetium 99m subtraction scan or operative/pathology report]
2.01	with clinical manifestations	Stage 1.01-1.02 AND hypertension: OR fatigue OR arthralgia OR epigastric pain OR constipation OR nausea OR polydypsia OR polyuria OR "clubbing" of fingers or toes OR nephrolithiasis [IVP or sonogram report] OR osteoporosis: OR hypercalciuria
3.01	with renal failure	Stage 1.01-2.01 AND <b>renal failure:</b>
3.02	with coma	Stage 1.01-3.01 AND <b>coma:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: END12 Neoplasm, Benign: Adenoma, Parathyroid, or Hyperparathyroidism**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

END13

**Disease: END13 Neoplasm, Benign: Primary Hyperaldosteronism**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Primary hyperaldosteronism or Conn's syndrome	<b>Hyperaldosteronism:</b> AND <b>hyporeninemia:</b> AND Adenoma of the adrenal cortex [iodocholesterol adrenal scan or operative/pathology report or CT scan of pelvis report or MRI of pelvis report] OR multiple hyperplasia of the adrenal cortex [iodocholesterol adrenal scan or operative/pathology report or CT scan of pelvis report or MRI of pelvis report] OR bilateral hyperplasia of the adrenal cortex [iodocholesterol adrenal scan or operative/pathology report or CT scan of pelvis report or MRI of pelvis report]
2.01	with hypernatremia or hyperchloremia or hypokalemia or alkalosis	Stage 1.01 AND <b>hypernatremia:</b> OR <b>hyperchloremia:</b> OR <b>hypokalemia:</b> OR <b>alkalosis:</b>
2.02	with paresthesia or weakness	Stage 1.01-2.01 AND paresthesia OR weakness
2.03	with tetany	Stage 1.01-2.02 AND tetany
2.04	with ventricular ectopy	Stage 1.01-2.03 AND ventricular ectopy [EKG report]
3.01	with renal failure	Stage 2.01-2.04 AND <b>renal failure:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**Disease: END13 Neoplasm, Benign: Primary Hyperaldosteronism**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

Fitzgerald PA. Primary hyperaldosteronism. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:1079-1080.
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**Disease: END14 Neoplasm, Malignant: Thyroid**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of thyroid carcinoma	
1.01	Thyroid adenoma	Thyroid adenoma(s) [operative/pathology report]
1.02	Papillary thyroid carcinoma ≤ 1.05 cm in diameter	Papillary thyroid carcinoma ≤ 1.5 cm in diameter [operative/pathology report]
1.03	Papillary thyroid carcinoma > 1.05 cm in diameter	Papillary thyroid carcinoma > 1.5 cm in diameter [per operative/pathology report]
2.01	Follicular thyroid carcinoma	Follicular thyroid carcinoma [operative/pathology report]
2.02	Medullary carcinoma of the thyroid	Medullary carcinoma of the thyroid [operative/pathology report]
2.03	Anaplastic carcinoma of the thyroid	Anaplastic carcinoma of the thyroid [operative/pathology report]
2.04	with involvement of regional lymph nodes	Stage 1.02-1.05 AND carcinoma of the thyroid in lymph nodes of the neck [operative/pathology report]
3.01	with distant metastasis	Stage 1.02-2.01 AND carcinoma of the thyroid beyond the confines of the neck [operative/pathology report]
3.02	with shock	Stage 1.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.02-3.02 AND death

**References**

Fitzgerald PA. Thyroid cancer. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:1057-1059.

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# Clinical Criteria for Disease Staging

END15

**Disease: END15 Neoplasm: Pheochromocytoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Adrenal pheochromocytoma	Adrenal pheochromocytoma [operative/pathology report]  <u>Presumptive Diagnostic Findings:</u> total urinary metanephrines $\geq$ 2.2 ug/mg creatinine/24 hrs. OR urinary VMA $\geq$ 5.5 ug/mg creatinine/24 hrs. OR pheochromocytoma [metaiodobenzylguanidine scintiscan report] AND paroxysmal headache OR paroxysmal palpitations OR paroxysmal profuse sweating
1.02	Extra-adrenal pheochromocytoma	Celiac pheochromocytoma [operative/pathology report] OR superior mesenteric pheochromocytoma [operative/pathology report] OR inferior mesenteric pheochromocytoma [operative/pathology report] OR urinary bladder pheochromocytoma [operative/pathology report] OR sympathetic ganglia pheochromocytoma [operative/pathology report] OR extracranial branches of IX or X cranial nerve pheochromocytoma [operative/pathology report]  <u>Presumptive Diagnostic Findings:</u> total urinary metanephrines $\geq$ 2.2 ug/mg creatinine/24 hrs. OR urinary VMA $\geq$ 5.5 ug/mg creatinine/24 hrs. OR pheochromocytoma [metaiodobenzylguanidine scintiscan report] AND paroxysmal headache OR paroxysmal palpitations OR paroxysmal profuse sweating
1.03	with hypertension	Stage 1.01-1.02 AND <b>hypertension:</b>
2.01	with impaired glucose tolerance	Stage 1.01-1.02 AND impaired glucose tolerance OR 2 hour post prandial glucose > 140 and < 200 mg/dl under the World Health Organization protocol for oral glucose tolerance test using 75g anhydrous glucose in water
2.02	with bundle branch block	Stage 1.01-2.01 AND right bundle branch block [EKG report] OR left bundle branch block [EKG report] OR interventricular conduction defect [EKG report]

**Disease: END15 Neoplasm: Pheochromocytoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
2.03	with supraventricular tachyarrhythmias or ventricular ectopy	Stage 1.01-2.02 AND supraventricular tachyarrhythmias [EKG report] OR ventricular ectopy [EKG report]
2.04	with angina pectoris	Stage 1.01-2.03 AND <b>angina pectoris:</b>
2.05	with cardiomyopathy	Stage 1.01-2.04 AND cardiomyopathy [EKG report]
3.01	with myocardial infarction	Stage 1.01-2.05 AND <b>acute myocardial infarction:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

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**Disease: END16 Primary Amyloidosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Amyloidosis	Primary amyloidosis [operative/pathology report]
2.01	with hepatosplenomegaly	Stage 1.01 AND hepatomegaly [physical examination or liver/spleen scan or CT scan or MRI report] OR splenomegaly [physical examination or liver/spleen scan or CT scan or MRI report]
2.02	with nephrotic syndrome	Stage 1.01-2.01 AND <b>hypoalbuminemia:</b> AND urine protein > 3 gm/24 hrs [urine chemistry report]
2.03	with pulmonary involvement	Stage 1.01-2.02 AND pulmonary amyloidosis [operative/pathology report or biopsy report]
2.04	with intestinal obstruction	Stage 1.01-2.03 AND large bowel obstruction [KUB x-ray report or operative/pathology report] OR small bowel obstruction [KUB x-ray report or operative/pathology report]
3.01	Amyloidosis of the heart	Stage 1.01-2.04 AND cardiac amyloidosis [echocardiogram report]
3.02	with renal failure	Stage 2.01-3.01 AND <b>renal failure:</b>
3.03	with congestive heart failure	Stage 3.01 AND <b>congestive heart failure:</b>
3.04	with respiratory failure	Stage 2.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

**References**

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**Disease: END17 Thyroiditis**

**Etiology: Immune; Infection**

Stage	Description	Diagnostic findings
1.01	Silent thyroiditis	Thyromegaly AND elevated erythrocyte sedimentation rate, ESR [hematology report] AND hyperthyroidism: AND low thyroid uptake of radioiodine [nuclear medicine report]
1.02	Subacute thyroiditis	Acute onset of neck pain or sore throat AND thyromegaly AND elevated erythrocyte sedimentation rate, ESR [hematology report] AND hyperthyroidism: AND low thyroid uptake of radioiodine [nuclear medicine report]
1.03	Hashimoto's thyroiditis or chronic lymphocytic thyroiditis	Lymphocytic infiltration of the thyroid [operative/pathology report] AND low thyroid uptake of radioiodine [nuclear medicine report] AND thyromegaly AND positive anti-thyroidglobin antibodies [serology report] OR positive anti-thyroid peroxidase antibodies [serology report] OR positive anti-thyroid microsomal antibodies [serology report]
1.04	Thyroiditis with hypothyroidism	Stage 1.01-1.03 OR history of thyroiditis AND hypothyroidism:
1.05	Riedel's thyroiditis	Stony hard thyromegaly AND dysphagia OR dyspnea OR hoarseness OR chronic fibrous thyroiditis [operative/pathology report]

**References**

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**Disease: END18 Vitamin D Deficiency**

**Etiology: Metabolic; Nutritional**

Stage	Description	Diagnostic findings
1.01	Vitamin D deficiency	25-(OH)D <sub>3</sub> ≤ 21 ng/ml [chemistry report] OR 1,25-(OH) <sub>2</sub> D <sub>3</sub> < 14 ng/ml [chemistry report]
2.01	with rickets or osteoporosis or osteomalacia	Stage 1.01 AND rickets [skeletal x-ray report] OR osteoporosis: OR osteomalacia [x -ray report]
2.02	with pathologic fractures	Stage 1.01-2.01 AND fracture of bones without history of trauma
2.03	with hypocalcemia	Stage 1.01-2.02 AND hypocalcemia:
2.04	with rachitic tetany	Stage 1.01-2.03 AND tetany OR Chvostek's sign OR Trousseau's sign
3.01	with respiratory failure	Stage 1.01-2.04 AND <b>respiratory failure:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

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**Disease: END80 Neoplasm, Benign: Other Endocrine System**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of endocrine system	

**References**

# Clinical Criteria for Disease Staging

END81

**Disease: END81 Neoplasm, Malignant: Other Endocrine System**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Primary malignant neoplasm of parathyroid, pituitary, pineal gland and other endocrine structures	
2.01	with lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

**References**

**Disease: END82 Other Endocrine Disorders**

**Etiology:**

<b>Stage</b>	<b>Description</b>	<b>Diagnostic findings</b>
1.01	Other disorders of thyroid, parathyroid, pituitary and other endocrine functions	

**References**

**Disease: ENT01 Cholesteatoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Cholesteatoma localized to middle ear space	Cholesteatoma localized to middle ear space [operative/pathology report]
1.02	Cholesteatoma lateral to ossicles	Cholesteatoma Lateral to ossicles [operative/pathology report]
1.03	Cholesteatoma medial to ossicles	Cholesteatoma medial to ossicles [operative/pathology report]
1.04	with erosion into attic	Cholesteatoma with erosion into the attic [operative/pathology report]
1.05	with erosion into mastoid	Cholesteatoma with erosion into the mastoid [operative/pathology report]
2.01	with facial nerve paralysis	Stage 1.01-1.05 AND paralysis of one or both sides of the face
2.02	with labyrinthitis	Stage 1.01-2.01 AND spontaneous vertigo OR spontaneous nystagmus

**References**

Albino AP, Kimmelman CP, Parisier SC. Cholesteatoma: a molecular and cellular puzzle. American Journal of Otology. 1998;19(1):7-19.

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# Clinical Criteria for Disease Staging

**Disease: ENT02 Deviated Nasal Septum**

**Etiology: Congenital; Trauma**

Stage	Description	Diagnostic findings
1.01	Deviated nasal septum with mild obstruction of one nasal cavity	Deviated nasal septum with mild obstruction of one nasal cavity
1.02	with mild obstruction of both nasal cavities	with mild obstruction of both nasal cavities [nasal exam or CT scan report]
1.03	with moderate obstruction of both nasal cavities	with moderate obstruction of both nasal cavities [nasal exam or CT scan report]
1.04	severe obstruction of one nasal cavity	with severe obstruction of one nasal cavity [nasal exam or CT scan report]
1.05	severe obstruction of both nasal cavities	with severe obstruction of both nasal cavities [nasal exam or CT scan report]
1.06	with sinusitis*	Stage 1.01-1.05 AND mucopurulent rhinitis OR facial pressure

**References**

Bomer KV, Naclerio RM. Embryology, Anatomy, and Physiology of the Upper Airway. In Middleton: Allergy: Principles and Practice, 5th ed., 1998, Mosby-Year Book, Inc. p. 544-560.

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# Clinical Criteria for Disease Staging

ENT03

**Disease: ENT03 Diphtheria**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Carrier or suspected carrier state	Carrier or suspected carrier state of diphtheria
1.02	Cutaneous or nasal diphtheria	Deep punched out skin ulcers with fibrinopurulent membrane growing <i>Corynebacterium diphtheriae</i> [skin culture report] OR serosanguinous mucopurulent nasal discharge growing <i>Corynebacterium diphtheriae</i> [culture report] OR diphtheria conjunctivitis [conjunctival culture report]
2.01	of the pharynx or larynx or vagina or eye or bladder	Culture reports growth of <i>Corynebacterium diphtheriae</i> from cultured lesions [culture report] AND Tenacious gray membrane on tonsils and pharyngeal walls with narrow erythematous zone and wide edematous regions from pharynx or larynx OR vaginitis OR endophthalmitis
2.02	with toxic neuritis	Stage 1.02-2.01 AND ophthalmoplegia OR dysphagia OR diplopia OR generalized weakness OR dyspnea
2.03	with hypoxia and progressive laryngeal or pharyngeal edema	Stage 1.02-2.02 AND <b>hypoxemia:</b> OR laryngeal edema OR pharyngeal edema
2.04	with peritonitis	Stage 1.02-2.03 AND peritonitis
3.01	with myocarditis	Stage 1.02-2.03 AND <b>myocarditis:</b>
3.02	with congestive heart failure	Stage 1.02-3.01 AND <b>congestive heart failure:</b>
3.03	with respiratory failure	Stage 1.02-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 1.02-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: ENT03 Diphtheria**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

Begg N, Balraj V. Diphtheria: are we ready for it? <i>Archives of Disease in Childhood</i> . 1995;73(6):568-72.
Chambers, HF. Infectious diseases: bacterial and rickettsial/tetanus. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. <i>Current Medical Diagnosis &amp; Treatment</i> . Stamford, CT: Appleton & Lange; 1998:1278-1279.
Hardy IR, Dittmann S, Sutter RW. Current situation and control strategies for resurgence of diphtheria in newly independent states of the former Soviet Union <i>Lancet</i> . 1996;347(9017):1739-44.
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Ogle, JW. Infections: bacterial and spirochetal/diphtheria. In: Hay WW, Groosthius JR, Hayward AR, Levin MJ, eds. <i>Current Pediatric Diagnosis and Treatment</i> . 13th ed. Stamford, CT: Appleton & Lange; 1997:1024-1025.

# Clinical Criteria for Disease Staging

ENT04

**Disease: ENT04 Foreign Body: Nasopharynx, Throat or Bronchus**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Foreign body in larynx or trachea or bronchus	Foreign body in larynx or trachea or bronchus [laryngoscopy report or bronchoscopy report]
1.02	with hoarseness	Stage 1.01 AND hoarseness
1.03	with wheezing	Stage 1.01-1.02 AND wheezing
1.04	with bronchitis	Stage 1.01-1.03 AND bronchitis
2.01	with atelectasis	Stage 1.01-1.04 AND atelectasis [chest x-ray report]
2.02	with pulmonary abscess	Stage 1.01-2.01 AND pulmonary abscess [chest x-ray report or CT scan report]
2.03	with hypoxemia	Stage 1.01-2.02 AND <b>hypoxemia:</b>
2.04	with mediastinitis	Stage 1.01-2.04 AND mediastinitis [CT scan report]
2.05	with stridor	Stage 1.01-2.04 AND stridor
3.01	with respiratory failure	Stage 1.10-2.05 AND <b>respiratory failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
4.00	with death	Stage 1.01-3.02 AND death

## References

Seidman, MD, Simpson GT, Khan MJ. Otolaryngology. In Noble: Textbook of Primary Care Medicine, 3rd ed., 2001 Mosby, Inc. p.1750-1753.

**Disease: ENT05 Hearing Loss due to Acoustic Trauma**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Unilateral mild hearing loss secondary to acoustic trauma	Hearing threshold > 21dB [audiogram report] AND hearing threshold ≤ 40 dB [audiogram report]
1.02	Bilateral mild hearing loss secondary to acoustic trauma	Stage 1.01 AND involving both ears
1.03	Mild hearing loss secondary to acoustic trauma with tinnitus	Stage 1.01-1.02 AND tinnitus
1.04	Moderate hearing loss secondary to acoustic trauma	Hearing threshold > 41dB [audiogram report] AND hearing threshold ≤ 56 dB [audiogram report]
1.05	Bilateral moderate hearing loss secondary to acoustic trauma with tinnitus	Stage 1.04 AND involving both ears
1.06	Moderate hearing loss secondary to acoustic trauma with tinnitus	Stage 1.04-1.05 AND tinnitus
1.07	Moderately severe hearing loss secondary to acoustic trauma	Hearing threshold > 56dB [audiogram report] AND hearing threshold ≤ 70 dB [audiogram report]
1.08	Bilateral moderately severe hearing loss secondary to acoustic trauma	Stage 1.07 AND involving both ears
1.09	Moderately severe hearing loss secondary to acoustic trauma with tinnitus	Stage 1.07-1.08 AND tinnitus
1.10	Severe hearing loss secondary to acoustic trauma	Hearing threshold > 71 [audiogram report] AND hearing threshold ≤ 90 dB [audiogram report]
1.11	Bilateral severe hearing loss secondary to acoustic trauma	Stage 1.10 AND involving both ears
1.12	Severe hearing loss secondary to acoustic trauma with tinnitus	Stage 1.10-1.11 AND tinnitus
1.13	Profound hearing loss secondary to acoustic trauma	Hearing threshold > 91 dB [audiogram report]
1.14	Bilateral profound hearing loss secondary to acoustic trauma	Stage 1.13 AND involving both ears
1.15	Profound hearing loss secondary to acoustic trauma with tinnitus	Stage 1.14-1.15 AND tinnitus

**References**

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**Disease: ENT06 Hearing Loss due to Aminoglycosides**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	with minimum hearing loss	History of aminoglycoside use AND sensorineural hearing loss at 4 kHz [audiometry report]
1.02	with mild hearing loss	Stage 1.01 AND sensorineural hearing loss at 2 kHz and 8 kHz [audiometry report]
1.03	with tinnitus	Stage 1.01-1.02 AND tinnitus
2.01	with high frequency deafness	History of aminoglycoside use AND deaf at 4 kHz and 8 kHz [audiometry report]
2.02	with high and midrange frequency deafness	Stage 2.01 AND deaf at 2 kHz [audiometry report]
2.03	with high and midrange frequency deafness and tinnitus	Stage 2.02 AND tinnitus

**References**

Minor LB. Gentamicin-induced bilateral vestibular hypofunction. *JAMA*. 1998;279(7):541-4, 1998.

Richard A, Jacobs RA, Guglielmo BJ. Anti-infective chemotherapeutic & antibiotic agents. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. *Current Medical Diagnosis & Treatment*. Stamford, CT: Appleton & Lange; 1998:1421-1424.

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# Clinical Criteria for Disease Staging

**Disease: ENT07 Hearing Loss due to Otosclerosis**

**Etiology: Degenerative**

Stage	Description	Diagnostic findings
1.01	Otosclerosis	Ankylosis of the stapes by overgrowth of bone or otosclerosis [operative/pathology report] OR history of hearing loss beginning in third decade of life AND normal tympanic membrane AND conductive hearing loss [physical examination via Rinne's or Weber's test] OR threshold for conductive sound elevated $\geq$ 30 dB [audiometry report]
1.02	with unilateral mild hearing loss	Hearing threshold > 21dB [audiogram report] AND hearing threshold $\leq$ 40 dB [audiogram report]
1.03	with bilateral mild hearing loss	Stage 1.01-1.02 AND involving both ears
1.04	with mild hearing loss and tinnitus	Stage 1.01-1.03 AND tinnitus
1.05	with moderate hearing loss	Stage 1.01 AND hearing threshold > 41dB [audiogram report] AND hearing threshold $\leq$ 56 dB [audiogram report]
1.06	with bilateral moderate hearing loss	Stage 1.05 AND involving both ears
1.07	with moderate hearing loss and tinnitus	Stage 1.05-1.06 AND tinnitus
1.08	with moderately severe hearing loss	Stage 1.01 AND hearing threshold > 56dB [audiogram report] AND hearing threshold $\leq$ 70 dB [audiogram report]
1.09	with bilateral moderately severe hearing loss	Stage 1.08 AND involving both ears
1.10	with moderately severe hearing loss and tinnitus	Stage 1.08-1.09 AND tinnitus
1.11	with severe hearing loss	Stage 1.01 AND hearing threshold > 71 [audiogram report] AND hearing threshold $\leq$ 90 dB [audiogram report]
1.12	with bilateral severe hearing loss	Stage 1.11 AND involving both ears
1.13	with severe hearing loss and tinnitus	Stage 1.11-1.12 AND tinnitus
1.14	with profound hearing loss	Stage 1.01 AND hearing threshold > 91 dB [audiogram report]
1.15	with bilateral profound hearing loss	Stage 1.14 AND involving both ears

**Disease: ENT07 Hearing Loss due to Otosclerosis**

**Etiology: Degenerative**

Stage	Description	Diagnostic findings
1.16	with profound hearing loss and tinnitus	Stage 1.14-1.15 AND tinnitus

**References**

Jackler RK, Kaplan MJ. Ear, nose and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:222-223.

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# Clinical Criteria for Disease Staging

ENT08

**Disease: ENT08 Labyrinthitis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Labyrinthitis	History of Cholesteatoma or ear surgery AND vertigo AND <b>hearing loss:</b> AND positive caloric test
1.02	Serous labyrinthitis	History of otitis media AND <b>hearing loss:</b> AND vertigo
1.03	Purulent labyrinthitis	History of otitis media OR history of meningitis AND <b>hearing loss:</b> AND vertigo AND tinnitus
2.01	with petrositis	Stage 1.03 AND cranial nerve V pain OR cranial nerve VI paresthesia OR facial weakness OR diplopia
2.02	with otic hydrocephalus	Stage 1.02 AND headache AND Cranial Nerve VI paralysis
2.03	with lateral sinus thrombosis	Stage 1.01-2.03 AND headache AND <b>fever:</b> AND cranial Nerve IX deficit AND cranial XI deficit AND increase CSF pressure AND tender mastoid process
3.01	with meningitis	Stage 1.01-2.04 AND <b>meningitis:</b>
3.02	with brain abscess or encephalitis	Stage 2.04-3.01 AND brain abscess or encephalitis [MRI report or CT Scan report] AND <b>disorientation:</b>
3.03	with sepsis	Stage 2.04-3.02 AND <b>sepsis:</b>
3.04	with shock	Stage 2.04-3.03 AND <b>shock:</b>



**Disease: ENT08 Labyrinthitis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
4.00	with death	Stage 2.04-3.03 AND death

**References**

Arenberg IK, Lemke C, Shambaugh GE Jr. Viral theory for Meniere's disease and endolymphatic hydrops: overview and new therapeutic options for viral labyrinthitis. *Annals of the New York Academy of Sciences*. 1997;830:306-13.

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**Disease: ENT09 Meniere's Disease**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Recurrent fluctuating vertiginous attacks with hearing loss and tinnitus	Vertigo AND horizontal or rotatory nystagmus OR hearing loss at affected ear during attacks AND history of recurrent vertigo with nystagmus or hearing loss AND tinnitus
1.02	with increasing frequency	Stage 1.01 AND increasing frequency of attacks
1.03	with bilateral involvement	Stage 1.01-1.02 AND bilateral ear involvement
2.01	with residual sensorineural hearing loss	Stage 1.01-1.02 AND hearing threshold for sound $\geq$ 30 dB in affected ear [audiometry report]
2.02	with residual sensorineural hearing loss in both ears	Stage 2.01 AND bilateral ear involvement

**References**

Jackler RK, Kaplan MJ. Ear, nose and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:224-227.

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Saeed SR. Fortnightly review. Diagnosis and treatment of Meniere's disease. BMJ. 1998;316(7128):368-72.

# Clinical Criteria for Disease Staging

**Disease: ENT10 Neoplasm, Benign: Acoustic Neuroma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Acoustic neuroma with hearing loss	Acoustic neuroma [operative/pathology report or CT scan report or MRI scan report]  Presumptive Diagnostic Findings: Hearing threshold $\geq$ 30 dB [audiometry report] AND impairment of speech discrimination AND marked tone decay [audiometry report] AND acoustic reflex decay [brainstem response audiometry report] AND absence of wave forms [brainstem response audiometry report] AND increased latency of 5th wave [brainstem response audiometry report] AND absence of caloric response testing or canal paresis
1.02	with vertigo	Stage 1.01 AND <b>vertigo:</b>
1.03	with ataxia	Stage 1.01-1.02 AND <b>ataxia:</b>
2.01	with facial nerve involvement	Stage 1.01-1.03 AND <b>paralysis of one side of the face:</b>
2.02	with involvement of other cranial nerves	Stage 1.01-2.01 AND <b>cranial nerve palsy:</b>
3.01	with mental status changes	Stage 1.01-2.02 AND papilledema OR <b>encephalopathy:</b> OR persistent headache with nausea and vomiting
3.02	with respiratory failure	Stage 3.01 AND <b>respiratory failure:</b>
3.03	with coma	Stage 3.01-3.02 AND <b>coma:</b>
3.04	with shock	Stage 3.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**Disease: ENT10 Neoplasm, Benign: Acoustic Neuroma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

<p>Friedman RA, Brackmann DE, van Loveren HR, Hitselberger WE. Management of the contracted mastoid in the translabyrinthine removal of acoustic neuroma. Archives of Otolaryngology -- Head &amp; Neck Surgery. 1997;123(3):342-4.</p>
<p>Jackler RK, Kaplan MJ. Ear, nose and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange; 1998:227.</p>
<p>Snow JB, Martin JB. Disorders of smell, taste, and hearing. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:173-179.</p>

**Disease: ENT11 Neoplasm, Benign: Larynx**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	with mild hoarseness	Hoarseness AND papilloma [laryngoscopy or operative/pathology report] OR papilloma [laryngoscopy or operative/pathology report] OR chondroma[laryngoscopy or operative/pathology report]
1.02	with severe hoarseness	Stage 1.01 AND severe hoarseness
2.01	with partial airway obstruction	Stage 1.01-1.02 AND stridor
3.01	with respiratory failure	Stage 1.01-2.01 AND <b>respiratory failure:</b>
4.00	with death	Stage 2.01-3.01 AND death

**References**

Jackler RK, Kaplan MJ. Ear, nose, and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:234-235, 244-245.

Jackler RK, Kaplan MJ. Ear, nose, and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:234-235, 244-245.

**Disease: ENT12 Neoplasm, Benign: Sinuses**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Squamous papillomas	Exophytic squamous papillomas of the sinuses [operative/pathology report]
1.02	Retention cyst	Retention cyst of the sinuses [operative/pathology report]
1.03	Mucocele	Mucocele of the sinuses [operative/pathology report]
1.04	Osteoma	Osteoma of the sinuses [operative/pathology report]
1.05	Fibrous dysplasia	Fibrous dysplasia of the sinuses [operative/pathology report]
1.06	Inverting papilloma	Inverting papillomas of the sinuses [operative/pathology report or CT Scan or MRI report]
2.01	Benign neoplasms of the sinuses with bony involvement	Stage 1.01-1.06 AND involvement of the surrounding bone [operative/pathology report or CT Scan or MRI report]
3.01	with sepsis	Stage 1.01-2.01 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-2.01 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.01 AND death

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# Clinical Criteria for Disease Staging

**Disease: ENT13 Neoplasm, Malignant: Larynx, Glottis**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of glottic cancer	
1.01	tumor limited to vocal cords	Cancer of the glottis limited to the vocal cords [laryngoscopy report or operative/pathology report] OR American Joint Committee on Cancer Stage I
2.01	with extension to the supraglottic or subglottic area with impaired vocal cord mobility	Stage 1.01 AND Glottic carcinoma extends to the supraglottic area [laryngoscopy report or operative/pathology report] AND Glottic carcinoma extends to the subglottic area [laryngoscopy report or operative/pathology report] OR American Joint Committee on Cancer Stage II
2.02	with fixation of the vocal cords	Stage 1.01-2.01 AND Glottic carcinoma fixes to the vocal cords [laryngoscopy report or operative/pathology report] OR American Joint Committee on Cancer Stage III OR single metastatic node < 3cm in diameter [laryngoscopy report or operative/pathology report]
2.03	with extension beyond the larynx	Stage 1.01-2.02 AND Glottic carcinoma extends beyond the larynx [laryngoscopy report or CT Scan or MRI report] OR Glottic carcinoma extends to the soft tissues of the neck [laryngoscopy report or CT Scan or MRI report] OR Glottic carcinoma extends to the thyroid cartilage [laryngoscopy report or CT Scan or MRI report]
2.04	with lymph node metastasis	Stage 1.01-2.03 AND any two metastatic nodes [laryngoscopy report or CT Scan or MRI report] OR lymph node > 6cm in diameter [laryngoscopy report or CT Scan or MRI report] OR American Joint Committee on Cancer Stage IV
3.01	with distant metastasis	Stage 1.01-2.04 AND distant metastasis
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.05 AND death

**Disease: ENT13 Neoplasm, Malignant: Larynx, Glottis**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

<p>Jackler RK, Kaplan MJ. Ear, nose, and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange; 1998:234-235, 244-245.</p>
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# Clinical Criteria for Disease Staging

**Disease: ENT14 Neoplasm, Malignant: Larynx, Subglottic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of subglottic carcinoma	
1.01	Subglottic carcinoma limited to one subsite without vocal cord fixation	Dysphonia AND Subglottic carcinoma without fixation of the vocal cords [operative/pathology report or laryngoscopy report or CT scan report] OR American Joint Committee on Cancer Stage
2.01	more than one subsite with impaired mobility	Stage 1.01 AND more than one subsite with impaired mobility [operative/pathology report or laryngoscopy report or CT scan report] OR American Joint Committee on Cancer Stage II
3.01	with fixation or one metastatic node or < 3cm in diameter	Dysphonia AND with fixation or one metastatic node of < 3 cm in diameter[operative/pathology report or laryngoscopy report or CT scan report] OR American Joint Committee on Cancer Stage III
3.02	with extension beyond the larynx or multiple non-fixed metastatic node	Stage 1.01-2.01 AND Subglottic carcinoma with extension beyond the larynx [laryngoscopy report or CT scan report] OR Subglottic carcinoma with extension to the soft tissues of the neck [laryngoscopy report or CT scan report] OR Subglottic carcinoma with extension to the thyroid cartilage [laryngoscopy report or CT scan report] OR multiple non-fixed metastatic nodes [operative/pathology report or laryngoscopy report or CT scan report] OR one fixed metastatic node [operative/pathology report or laryngoscopy report or CT scan report]

**Disease: ENT14 Neoplasm, Malignant: Larynx, Subglottic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.03	with one cervical node > 3cm in diameter or one ipsilateral node < 6 cm in diameter or multiple ipsilateral nodes or contralateral nodes or any node > 6cm	Stage 1.01-3.02 AND cervical node > 3 cm. in diameter [operative/pathology report or laryngoscopy report or CT scan report] OR 1 ipsilateral node < 6 cm. in diameter [operative/pathology report or laryngoscopy report or CT scan report] OR multiple ipsilateral nodes [operative/pathology report or laryngoscopy report or CT scan report] OR contralateral nodes [operative/pathology report or laryngoscopy report or CT scanreport] OR any node > 6cm in diameter [operative/pathology report or laryngoscopy report or CT scan report] OR American Joint Committee on Cancer Stage IV
3.04	with distant metastasis	Stage 1.01-3.03 AND with distant metastasis [operative/pathology report or laryngoscopy report or CT scan report]
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

## References

Jackler RK, Kaplan MJ. Ear, nose, and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:234-235, 244-245.

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# Clinical Criteria for Disease Staging

**Disease: ENT15 Neoplasm, Malignant: Larynx, Supraglottic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of supraglottic or laryngeal carcinoma	
1.01	Supraglottic carcinoma limited to one subsite without vocal cord fixation	Dysphonia AND supraglottic carcinoma without fixation of the vocal cords [operative/pathology report or laryngoscopy report or CT scan report] OR American Joint Committee on Cancer Stage I
2.01	More than one subsite with impaired mobility	Stage 1.01 AND more than one subsite with impaired mobility [operative/pathology report or laryngoscopy report or CT scan report] OR American Joint Committee on Cancer Stage II
3.01	with fixation or one metastatic node of < 3cm in diameter	Dysphonia AND with fixation or one metastatic node of < 3 cm in diameter [operative/pathology report or laryngoscopy report or CT scan report] OR American Joint Committee on Cancer Stage III
3.02	with extension beyond the larynx or multiple non-fixed metastatic nodes or one fixed metastatic node	Stage 1.01-2.01 AND supraglottic carcinoma with extension beyond the larynx [laryngoscopy report or CT scan report] OR supraglottic carcinoma with extension to the soft tissues of the neck [laryngoscopy report or CT scan report] OR supraglottic carcinoma with extension to the thyroid cartilage [laryngoscopy report or CT scan report] OR multiple non-fixed metastatic nodes [operative/pathology report or laryngoscopy report or CT scan report] OR one fixed metastatic node [operative/pathology report or laryngoscopy report or CT scan report]
3.03	Multiple ipsilateral nodes or contralateral nodes or any node > 6cm with nodal involvement	Stage 1.01-3.02 AND multiple ipsilateral nodes [operative/pathology report or laryngoscopy report or CT scan report] OR contralateral nodes [operative/pathology report or laryngoscopy report or CT scan report] OR any node > 6cm in diameter [operative/pathology report or laryngoscopy report or CT scan report] OR American Joint Committee on Cancer Stage IV

**Disease: ENT15 Neoplasm, Malignant: Larynx, Supraglottic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.04	with distant metastasis	Stage 1.01-3.03 AND with distant metastasis [operative/pathology report or laryngoscopy report or CT scan report]
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

## References

Jackler RK, Kaplan MJ. Ear, nose, and throat. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:234-235, 244-245.

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# Clinical Criteria for Disease Staging

ENT16

**Disease: ENT16 Neoplasm, Malignant: Nasopharyngeal**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of nasopharyngeal carcinoma	
1.01	confined to one site	TNM Classification Stage 1 OR primary neoplasm localized to one anatomic site [operative/pathology report] OR American Joint Committee on Cancer Stage I
2.01	involving two sites	TNM Classification Stage 2 OR primary neoplasm localized to two adjacent anatomic sites [operative/pathology report] OR American Joint Committee on Cancer Stage II
2.02	with extension into nasal cavity or oropharynx	TNM Classification Stage 3 OR primary neoplasm involves nasal cavity or oropharynx [operative/pathology report] OR isolated neck metastasis ≤ 3 cm. in diameter [operative/pathology report] OR American Joint Committee on Cancer Stage III
2.03	with invasion of skull base or cranial nerve involvement	Stage 1.01-2.02 TNM Classification Stage 4 OR invasion of the skull base [operative/pathology report or CT Scan or MRI report] OR extends beyond the confines of the nasopharynx [operative/pathology report or CT Scan or MRI report] OR isolated neck metastasis ≥ 3 cm. in diameter [operative/pathology report or CT Scan or MRI report] OR neck metastasis involving > 1 lymph node [operative/pathology report or CT Scan or MRI report] OR neck metastasis and fixated to surrounding soft tissue [operative/pathology report] OR <b>cranial nerve palsy:</b> OR American Joint Committee on Cancer Stage IV
3.01	with distant metastasis	Stage 1.01-2.03 AND distant metastasis [operative/pathology report or CT Scan or MRI report]
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: ENT16 Neoplasm, Malignant: Nasopharyngeal**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

**Disease: ENT17 Neoplasm, Malignant: Sinuses**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of neoplasm of the sinuses	
1.01	Malignant neoplasms of the sinuses without bony erosion	Squamous cell carcinoma of the sinuses without bony erosion [operative/pathology report or CT Scan or MRI report] OR lymphoma of the sinuses without bony erosion [operative/pathology report or CT Scan or MRI report] OR adenoid cystic carcinoma of the sinuses without bony erosion [operative/pathology report or CT Scan or MRI report] OR mucoepidermoid carcinoma of the sinuses without bony erosion [operative/pathology report or CT Scan or MRI report] OR sarcomas of the sinuses without bony erosion [operative/pathology report or CT Scan or MRI report] OR adenocarcinomas of the sinuses without bony erosion [operative/pathology report or CT Scan or MRI report] OR Stage T1 for maxillary sinus carcinomas OR tumor confined to the inferior antrum [operative/pathology report or CT Scan or MRI report] OR tumor confined to the superior antrum [operative/pathology report or CT Scan or MRI report] OR American Joint Committee on Cancer Stage I
2.01	Malignant neoplasms of the sinuses with extension into hard palate and middle nasal meatus	Stage T2 for sinus carcinomas OR American Joint Committee on Cancer Stage II OR Stage T3 for sinus carcinomas OR Stage T4 for sinus carcinomas OR Stage 0.00-1.01 AND invasions of the surrounding bone or had palate

**Disease: ENT17 Neoplasm, Malignant: Sinuses**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
2.02	Malignant neoplasms of the sinuses with extension to ethmoid sinuses or sphenoid sinuses or nasopharynx or pterygoid or cribriform plate or base of the skull	Stage 1.01-2.03 AND tumor with extension to anterior ethmoid sinus(es) [operative/pathology report or CT Scan or MRI report] OR with extension to pterygoid muscle [operative/pathology report or CT Scan or MRI report] OR with extension to cribriform plate [operative/pathology report or CT Scan or MRI report] OR with extension to posterior ethmoid sinus(es) [operative/pathology report or CT Scan or MRI report] OR with extension to sphenoid sinus(es) [operative/pathology report or CT Scan or MRI report] OR with extension to nasopharynx [operative/pathology report or CT Scan or MRI report] OR with extension to pterygoid plates [operative/pathology report or CT Scan or MRI report] OR with extension to base of the skull [operative/pathology report or CT Scan or MRI report]
2.03	Malignant neoplasms of the sinuses with lymph node involvement	Stage 2.02-2.04 AND lymph node metastasis [operative/pathology report or CT Scan or MRI report] OR American Joint Committee on Cancer Stage III
3.01	Malignant neoplasms of the sinuses with distant metastasis	Stage 1.01-2.05 AND extension of tumor beyond the confines of the skull [operative/pathology report or CT Scan or MRI report] OR American Joint Committee on Cancer Stage IV
4.00	Malignant neoplasms of the sinuses with death	Stage 1.01-3.01 AND death

**References**

Franchi A, Gallo O, Santucci M. Pathologic quiz case 1. Necrotizing sialometaplasia obscuring recurrent well-differentiated squamous cell carcinoma of the maxillary sinus. Archives of Otolaryngology -- Head & Neck Surgery. 1995;121(5):584-86

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# Clinical Criteria for Disease Staging

**Disease: ENT18 Otitis Media**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Otitis media with serous effusion	History of upper respiratory tract infection AND <b>hearing loss:</b> AND air/fluid level in ear drum OR serous effusion from middle ear
1.02	Acute otitis media	Stage 1.01 AND earache AND erythema of tympanic membrane AND decrease mobility of tympanic membrane
1.03	with persistent effusion	Stage 1.01-1.02 AND effusion persists > 12 weeks
1.04	Recurrent acute otitis media	Stage 1.01-1.02 AND acute otitis media episodes ≤ 6 months OR more than 4 acute otitis media episodes yearly
2.01	with spontaneous perforation	Stage 1.01-1.03 AND spontaneous perforation
2.02	Chronic suppurative otitis media	Stage 1.01-2.01 AND drainage or otorrhea from ear ≥ 6 week period
2.03	with cholesteatoma	Stage 1.01-2.02 AND cholesteatoma
2.04	with labyrinthitis	Stage 1.01-2.03 AND nystagmus OR dizziness OR vertigo
2.05	with mastoiditis	Stage 1.01-2.04 AND mastoiditis [operative/pathology report or mastoid air cells culture reports growth of pathologic organism(s) or CT scan or mastoid x-ray report]
2.06	with facial nerve paralysis	Stage 1.01-2.05 AND paralysis of one side of the face
2.07	with petrositis	Stage 1.01-2.06 AND petrositis [operative/pathology report] OR growth of pathologic organism(s) [bone culture report] OR osteomyelitis [bone scan or MRI x-ray report ]
3.01	with meningitis	Stage 1.01-2.07 AND <b>meningitis:</b>

**Disease: ENT18 Otitis Media**

**Etiology: Infection**

Stage	Description	Diagnostic findings
3.02	with cavernous sinus thrombosis	Stage 1.01-3.01 AND thrombus in cranial sinus [operative/pathology report or MRI or CT scan of head or MRI report]
3.03	with subdural or intracranial abscess	Stage 1.01-3.02 AND intracranial abscess [operative/pathology report or MRI or CT scan report]
3.04	with sepsis	Stage 1.01-3.03 AND <b>sepsis:</b>
3.05	with shock	Stage 2.02-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.05 AND death

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**Disease: ENT19 Pharyngitis: Non-Streptococcal**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Pharyngitis or tonsillitis	Streptococcal infection of the pharynx [culture reports growth of pathologic organism(s)]
2.01	with cervical suppurative adenitis	Stage 1.01 AND cervical suppurative adenitis
2.02	with peritonsillar or retropharyngeal abscess	Stage 1.01-2.01 AND peritonsillar or retropharyngeal abscess
2.03	with bronchopneumonia	Stage 1.01-2.02 AND bronchopneumonia [chest x-ray report]
2.04	with pharyngeal edema	Stage 1.01-2.03 AND pharyngeal edema
3.01	with meningitis	Stage 1.01-2.04 AND <b>meningitis:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 2.04-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.04 AND death

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# Clinical Criteria for Disease Staging

**Disease: ENT20 Pharyngitis: Streptococcal**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Streptococcal pharyngitis or tonsillitis	Streptococcal infection of the pharynx [culture reports growth of pathologic organism(s)]
2.01	with cervical suppurative adenitis	Stage 1.01 AND cervical suppurative adenitis
2.02	with peritonsillar or retropharyngeal abscess	Stage 1.01-2.01 AND peritonsillar or retropharyngeal abscess
2.03	with bronchopneumonia	Stage 1.01-2.02 AND bronchopneumonia [chest x-ray report]
2.04	with pharyngeal edema	Stage 1.01-2.03 AND pharyngeal edema
2.05	Streptococcal pharyngitis and scarlet fever	Stage 1.01-2.04 AND pink-red cutaneous flush that blanches on pressure; distributed on body, particularly abdomen, lateral chest, and skin folds
3.01	Acute post-streptococcal glomerulonephritis	Stage 1.01-2.04 AND Acute poststreptococcal glomerulonephritis [operative/pathology report]
3.02	with acute renal failure	Stage 3.01 AND <b>renal failure:</b>
3.03	with meningitis	Stage 1.01-3.02 AND <b>meningitis:</b>
3.04	with acute rheumatic fever	Stage 1.01-3.03 AND rheumatic fever [Aschoff lesions in myocardium or subcutaneous nodules in operative/pathology report] (any one of the following:) OR carditis OR Sydenham's chorea OR subcutaneous nodules OR erythema marginatum OR polyarthritits OR (any one above and two of the following:) <b>fever:</b> OR polyarthralgia OR EKG PR segment $\geq$ .21 seconds [EKG report] OR antistreptolysin O titer $\geq$ 250 units [chemistry report] AND antihyaluronidase titer $\geq$ 1000 units [chemistry report] OR positive anti-DNAse B titer [chemistry report]
3.05	with congestive heart failure	Stage 3.04 AND <b>congestive heart failure:</b>

**Disease: ENT20 Pharyngitis: Streptococcal**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
3.06	with sepsis	Stage 1.01-3.05 AND <b>sepsis:</b>
3.07	with respiratory failure	Stage 2.04-3.06 AND <b>respiratory failure:</b>
3.08	with shock	Stage 1.01-3.07 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.08 AND <b>death</b>

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# Clinical Criteria for Disease Staging

ENT21

**Disease: ENT21 Sinusitis**

**Etiology: Immune; Infection**

Stage	Description	Diagnostic findings
1.01	Acute sinusitis with one sinus involved	Tenderness over sinus area OR swelling over sinus area OR pain over sinus area AND rhinorrhea OR air/fluid levels or radiopaque densities or sclerotic bone in sinus [sinus x-ray report or CT scan or MRI report]
1.02	Multiple sinus involvement	Stage 1.01 AND involvement of > 1 sinus
1.03	Chronic sinusitis	Chronic sinusitis OR history of recurrent episodes of acute sinusitis AND nasal congestion AND chronic discharge AND nasal injection AND facial pressure
2.01	with preseptal cellulitis or osteitis	Stage 1.01-1.03 AND preseptal cellulitis OR osteitis [operative/pathology report]
2.02	with osteomyelitis of surrounding bone	Stage 1.01-2.01 AND <b>fever:</b> AND edema of surrounding tissue OR <b>osteomyelitis:</b>
2.03	with extension into the orbit	Stage 1.01-2.02 AND orbital abscess [operative/pathology report or MRI or CT scan report] OR orbital cellulitis OR subperiosteal abscess [operative/pathology report or MRI or CT scan report] OR optic neuritis [ophthalmology report] OR superior orbital fissure [MRI or CT scan report] OR cavernous sinus thrombosis [operative/pathology report or MRI or CT scan report]
2.04	with mucocele or pyocele	Stage 1.01-2.03 AND mucocele or pyocele
3.01	with meningitis	Stage 1.01-2.04 AND <b>meningitis:</b>
3.02	with intracranial abscess	Stage 1.01-3.01 AND brain abscess [CT scan report or MRI report] OR epidural abscess [CT scan report or MRI report] OR subdural abscess [CT scan report or MRI report]

**Disease: ENT21 Sinusitis**

**Etiology: Immune; Infection**

Stage	Description	Diagnostic findings
3.03	with venous or cavernous sinus thrombosis or cranial nerve palsy	Stage 1.01-3.02 AND <b>cranial nerve palsy:</b> OR venous or cavernous sinus thrombosis
3.04	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.05	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**References**

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Durand M, Joseph M, Baker AS. Infections of the upper respiratory tract. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:179-85.

Guarderas JC. Rhinitis and sinusitis: office management. Mayo Clinic Proceedings. 1996;71(9):882-8.

Low DE, Desrosiers M, McSherry J, et al. A practical guide for the diagnosis and treatment of acute sinusitis. CMAJ. 1997;156 Suppl 6:S1-14.

**Disease: ENT80 Neoplasm, Benign: Oral Cavity and Pharyngeal Structures**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm oral cavity and pharyngeal structures	

References



**Disease: ENT81 Other Ear, Nose and Throat Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Other disorders of ear and mastoid, nose, and throat, chronic rhinitis, vocal cord polyps, congenital anomalies of ear, nose throat, pharynx, or sinuses	

**References**

**Disease: ENT82 Other Ear, Nose, and Throat Infections**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Laryngitis, tracheitis, epiglottitis, supraglottitis, upper respiratory infections without obstruction	
2.01	with obstruction	

**References**

**Disease: EYE01 Cataract**

**Etiology: Degenerative; Trauma**

Stage	Description	Diagnostic findings
1.01	Lens opacities, nonsenile or traumatic cataract or congenital lens anomalies or after-cataract	Cortical spokes [slit lamp ophthalmoscopy report] OR nuclear sclerosis [slit lamp ophthalmoscopy report] OR posterior or anterior subscapular opacities [slit lamp ophthalmoscopy report]
1.02	Senile immature cataract	Stage 1.01 AND fundus poorly visualized [indirect ophthalmoscopy report] AND visual acuity $\leq$ 20/50
1.03	Senile mature cataract	Stage 1.01-1.02 AND visual acuity $\leq$ 20/400, Snellen notation, in either one or both eyes with cataract AND fundus not visualized
2.01	Cataract with intumescent lens and secondary glaucoma	Stage 1.01-1.03 AND swollen opaque lens [slit lamp ophthalmoscopy] AND chamber angle closed [slit lamp ophthalmoscopy] AND intraocular pressure $\geq$ 21 mmHg [tonometer report]
2.02	Hypermature lens with phacolytic uveitis	Stage 1.01-2.01 AND nucleus floats within lens [ophthalmoscopy report] AND lens capsule is wrinkled [ophthalmoscopy report] AND flare in anterior chamber [ophthalmoscopy report]

**References**

Datiles III MB, Magno BV. Cataract: clinical types. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippincott-Raven; 1998.

Datiles III MB. Clinical evaluation of cataracts. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippincott-Raven; 1998.

Duke-Elder S. Diseases of the lens. System of Ophthalmology. Vol IX. Henry Kimpton. 1969.

**Disease: EYE02 Conjunctivitis: Bacterial**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Bacterial conjunctivitis	Bacterial conjunctivitis [conjunctival discharge culture reports growth of pathologic organism(s) or Gram stain shows organism(s)]
1.02	Bacterial conjunctivitis with keratitis	Stage 1.01 AND corneal infiltrate [slit lamp report]
2.01	Bacterial conjunctivitis with preseptal cellulitis	Stage 1.01-1.02 AND preseptal cellulitis

**References**

Abbott RL, Abrams MA. Bacterial corneal ulcers. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1986:(4)18.

**Disease: EYE03 Conjunctivitis: Chemical**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Chemical keratoconjunctivitis	History of chemical exposure to eyes AND conjunctival injection AND corneal staining [slit lamp report]
2.01	Chemical keratoconjunctivitis with diminished vision	Stage 1.01 AND conjunctival chemosis OR diffuse corneal staining [fluorescein dye staining report] OR anterior chamber cell, flare [slit lamp exam report] AND vision ≤ 20/40 after exposure
2.02	Chemical keratoconjunctivitis with vision ≤20/200	Stage 1.01-2.01 AND vision ≤ 20/200 after exposure

**References**

Ralph RA. Chemical burns of the eye. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1978:(4)28.

# Clinical Criteria for Disease Staging

EYE04

**Disease: EYE04 Conjunctivitis: Chlamydial Inclusion**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Adult inclusion conjunctivitis	History of sexual transmission AND upper tarsal follicles AND chlamydia trachomatis conjunctivitis [culture report serotype D,E,F,G,H,I,J,K] OR follicular conjunctivitis without scarring OR corneal micro vascularization
1.02	Newborn inclusion conjunctivitis	Chlamydia trachomatis conjunctivitis [culture report serotype D,E,F,G,H,I,J,K] OR lid swelling OR infiltration of conjunctiva OR purulent discharge
2.01	Chronic inclusion conjunctivitis	Stage 1.01 AND tarsal conjunctival scarring OR corneal vascularization

## References

Dawson CR, Schachter J. Ocular chlamydia infections. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippincott-Raving; 1998.

# Clinical Criteria for Disease Staging

EYE05

**Disease: EYE05 Contusion or Ruptured Globe**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Contusion of the globe	Ocular contusion OR subconjunctival hemorrhage AND history of trauma to the eye AND vision unchanged from baseline AND pupillary reactions unchanged from baseline
2.01	with hyphema	Stage 1.01 AND vision changed from baseline OR pupillary reactions changed from baseline AND blood in anterior chamber [slit lamp examination] AND ocular pressure ≥ 21 mmHg [tonometer report] AND corneal staining
2.02	with subluxation of the crystalline lens or retinal detachment or choroidal rupture or iridodialysis or angle recession	Stage 1.01-Stage 2.01 AND subluxation of the crystalline lens [ophthalmoscopy report] OR retinal detachment [ophthalmoscopy report] OR choroidal rupture [ophthalmoscopy report] OR iridodialysis [ophthalmoscopy report] OR angle recession [ophthalmoscopy report]
2.03	Ruptured globe or injury to optic nerve	Stage 1.01-2.02 AND ruptured globe [operative/pathology report] OR loss of lens [operative/pathology report] OR loss of uvea [operative/pathology report] OR loss of vitreous [operative/pathology report] OR loss of retina [operative/pathology report] OR optic nerve injury [operative/pathology report]
2.04	with degenerated globe	No light perception AND shrunken globe OR opacified cornea OR opacified lens [ophthalmoscopy report] OR retinal detachment [ophthalmoscopy report]

**References**

Berman W, Jeffers J. Blunt trauma. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippincott-Raven; 1998, Vol 3.
Deutsch TA, Feller DB. Paton and Goldberg's Management of Ocular Injuries. 2nd ed. Philadelphia, PA: WB Saunders; 1985.

# Clinical Criteria for Disease Staging

EYE06

**Disease: EYE06 Dacryostenosis or Dacryocystitis**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
1.01	Dacryostenosis	Dacryostenosis [operative/pathology report] OR chronic overflow of tears, epiphora AND history of chronic conjunctivitis OR history of chronic nasal infections OR history of nasal trauma or surgery AND reflux of material from lacrimal puncta
1.02	Acute dacryocystitis	Infection of lacrimal sac [Gram stain report or culture reports growth of pathologic organism(s)] OR redness around lacrimal sac AND edema around lacrimal sac AND pain or tenderness around sac AND reflux of material from lacrimal puncta
1.03	Chronic or recurrent dacryocystitis	History of previous dacryocystitis AND redness around lacrimal sac AND edema around lacrimal sac AND reflux of material from lacrimal puncta
1.04	Canaliculitis	Infection of canalicular system [Gram stain report] OR redness of canaliculus AND pain/tenderness around canaliculus AND reflux of material from lacrimal puncta
2.01	with cellulitis of the face	Stage 1.02-1.03 AND cellulitis of the face OR area of redness, induration, tenderness and heat with indistinct borders
3.01	with cellulitis of the face and sepsis	Stage 2.01 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.1-3.2 AND death

## References

McCord Jr CD. The lacrimal drainage system. In: Duane TD, ed. Clinical Ophthalmology. Revised ed., Philadelphia, PA: JB Lippincott Co.; 1988:(4)13:6,14-15.



**Disease: EYE07 Detachment of the Retina**

**Etiology: Degenerative; Trauma**

Stage	Description	Diagnostic findings
1.01	Posterior vitreous detachment (PVD)	Posterior vitreous detachment [indirect ophthalmoscopy report]
1.02	Posterior vitreous detachment and breaks	Stage 1.01 AND retinal breaks [indirect ophthalmoscopy report] OR retinal tears [indirect ophthalmoscopy report] OR round holes [indirect ophthalmoscopy report] OR senile retinoschisis [indirect ophthalmoscopy report] OR dialysis [indirect ophthalmoscopy report] OR vitreous hemorrhage [indirect ophthalmoscopy report] AND pigmentation cells in vitreous [indirect ophthalmoscopy report]
1.03	Retinal detachment with subretinal fluid	Stage 1.01-1.02 AND subretinal fluid [ophthalmoscopy report]
2.01	Retinal detachment with proliferative retinopathy	Stage 1.01-1.03 AND preretinal fibrous scar tissue [indirect ophthalmoscopy report] OR subretinal fibrous scar tissue [indirect ophthalmoscopy report]report]
2.02	Retinal detachment with phthisis bulbi	Stage 1.01-2.01 AND no light perception AND globe shrunken
2.03	PVD and macular hole	Stage 1.01 AND macular hole [ophthalmoscopy report]report]

**References**

Benson, W. Retinal detachment: diagnosis and management. Hagerstown, MD: Harper and Row; 1988.
The Retina Society Terminology Committee. The classification of retinal detachment with proliferative vitreoretinopathy. Ophthalmology. 1983;(90)121-125.
Vander, JF. In: Clinical Decisions in Medical Retinal Disease. Tasman, W, ed. St. Louis: Mosby, 1994.

# Clinical Criteria for Disease Staging

**Disease: EYE08 Ectropion or Entropion (Abnormal Lower Lid Position)**

**Etiology: Degenerative; Trauma**

Stage	Description	Diagnostic findings
1.01	Looseness of lower lid with tearing or foreign body sensation, or entropion or ectropion	Intermittent or constant ectropion of lower lid AND lid laxity OR tearing (epiphora) OR cicatricial changes of skin OR cranial nerve VII palsy OR Intermittent or constant entropion of lower lid AND lid laxity AND over-riding preseptal orbicularis AND superficial punctate keratitis (with fluorescein staining of cornea)
2.01	with corneal vascularization, ulcer, ocular pemphigoid, or keratinization of palpebral conjunctiva	Ectropion AND corneal vascularization OR corneal ulcer OR keratinization of palpebral conjunctiva OR Entropion AND corneal ulcer OR corneal vascularization OR severe cicatricial conjunctival changes consistent with ocular pemphigoid or pseudopemphigoid

**References**

Dortzback RK, McGetrick JJ. Industrial entropion of the lower eyelid. *Adv. Ophthalm. Plastic Reconstructive Surgery.* 1983;2:257.

Doxanas MT. Eyelid abnormalities: ectropion, entropion. In: Tasman W, Jaeger EA, eds. *Duane's Ophthalmology.* Philadelphia, PA: Lippincott-Raving; 1998:Vol. 5(73).

**Disease: EYE09 Endophthalmitis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
2.01	Endophthalmitis	Conjunctival injection AND anterior chamber reaction [slit lamp or ophthalmoscopy report] AND vitreous reaction [slit lamp or ophthalmoscopy report] AND vitreous infection [culture reports growth of pathologic organism(s)]
2.02	with vision loss	Stage 2.01 AND visual acuity $\leq$ 20/70 AND hazy retinal details
2.03	with marked vision loss	Stage 2.01-2.02 AND vision $\leq$ 20/400 AND dense vitreous opacifications OR diffuse conjunctival injection AND corneal edema AND hypopyon
2.04	with retinal detachment or retinal infarction or optic nerve atrophy	Stage 2.01-2.03 AND retinal detachment [ophthalmoscopy report] OR retinal infarction [ophthalmoscopy report] OR optic nerve atrophy [ophthalmoscopy report]
2.05	with shrunken globe	Stage 2.01 AND shrunken globe

**References**

Forster RK. Endophthalmitis. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1987:(4)24.

**Disease: EYE10 Foreign Body: Orbit**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Corneal or conjunctival or lacrimal punctum foreign body	Corneal foreign body OR conjunctival foreign body OR lacrimal punctum foreign body
2.01	Foreign body in the anterior segment	Corneal penetration by foreign body OR foreign body in anterior segment [ophthalmoscopy report] OR foreign body in crystalline lens [ophthalmoscopy report]
2.02	Foreign body in the posterior segment	Stage 1.01-2.01 AND foreign body in posterior segment [ophthalmoscopy report]
2.03	Orbital foreign body without ocular injury	Orbital foreign body [physical examination or CT scan of head] AND vision unchanged from baseline AND pupillary reactions unchanged from baseline
2.04	Orbital foreign body with injury to the optic nerve	Orbital foreign body [physical examination or CT scan of head] AND motility changed from baseline AND pupillary reactions changed from baseline AND vision markedly reduced from baseline

## References

Deutsch TA, Feller DB. Paton and Goldberg's Management of Ocular Injuries. 2nd ed. Philadelphia, PA: WB Saunders; 1985.
Iwamoto MA, Iliff NT. Management of orbital trauma. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippincott-Raven; 1998, Vol 3.

**Disease: EYE11 Fracture: Orbit, Blow-Out**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Blow-out fracture of the orbit with normal ocular alignment and normal motility and normal position	Blow-out fracture of the orbit [skull x-ray report or CT scan of head report] AND with normal ocular alignment AND normal motility AND normal position
2.01	with enophthalmos	Blow-out fracture of the orbit [skull x-ray report or CT scan of head report] AND ≥ 2 mm enophthalmos [exophthalmometer report]
2.02	with diplopia in primary gaze or down gaze or heterotropia or gaze restriction	Blow-out fracture of the orbit [skull x-ray report or CT scan of head] AND diplopia in primary gaze OR down gaze OR heterotropia OR gaze restriction
2.03	with traumatic optic neuropathy	Blow-out fracture [CT scan report] AND decreased vision AND afferent pupillary defect (APD)
2.04	with retrobulbar hemorrhage	Blow-out fracture [CT scan report] AND retrobulbar hemorrhage

**References**

Dortzbach RK, Elnor VM. Which orbital blowout fractures need surgery? <i>Ophthalmology Plastic Reconstructive Surgery</i> . 1987;(6)287.
Wilkins RB, Havins WE. Current treatment of blow-out fractures. <i>Ophthalmology</i> . 1982;(89)464-466.

**Disease: EYE12 Fungal Infection of the Eye**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Peripheral fungal keratitis	Peripheral corneal ulcer AND fungal infection [corneal culture reports growth of fungi(us)]
2.01	Central fungal keratitis	Central corneal ulcer OR hypopyon OR satellite lesions OR immune ring AND fungal infection [corneal culture reports growth of fungi(us)]
2.02	Fungal keratitis with glaucoma or corneal perforation	Stage 1.01-2.01 AND corneal perforation OR intraocular pressure $\geq$ 21 mmHg tonometry report]
2.03	End-stage fungal keratitis	Stage 1.01-2.02 AND vision limited to light perception OR corneal scar OR cataract AND shrunken globe
2.04	Fungal endophthalmitis	White retinal infiltrates AND vitreous fungal infection [vitreous culture reports growth of fungi(us)] OR <b>fungemia:</b>
2.05	Fungal endophthalmitis with retinitis or vitritis	Stage 2.04 AND corrected vision $\leq$ 20/70 OR retinitis [ophthalmoscopy report] OR vitritis [ophthalmoscopy report]
2.06	Fungal endophthalmitis with vision loss	Stage 2.04-2.05 AND vision < 20/400 OR retinal detachment [ophthalmoscopy report] OR retinal infarction [ophthalmoscopy report] OR optic nerve atrophy [ophthalmoscopy report] OR cataract formation [ophthalmoscopy report]

**References**

Clarkson JG, Green WR. Endogenous fungal endophthalmitis. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1979:(3)11.
Jones DB. Fungal infections. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1976:(4)21.

# Clinical Criteria for Disease Staging

**Disease: EYE13 Glaucoma**

**Etiology: Congenital; Genetic (or hereditary); Idiopathic**

Stage	Description	Diagnostic findings
1.01	Ocular hypertension	Intraocular pressure $\geq$ 21 mmHg [tonometer report] AND visual acuity $\geq$ 20/20
1.02	Early glaucoma	Stage 1.01 AND cup/disk ratio $\geq$ 0.3 OR asymmetric cupping AND arcuate or paracentral scotoma AND visual acuity $\leq$ 20/40
1.03	Narrow angle glaucoma	Normal ocular pressure AND narrow angle [gonioscopy report]
2.01	Moderate glaucoma	Stage 1.01 AND cup/disk ratio $\geq$ 0.5 AND visual field shows nasal step AND visual acuity $\leq$ 20/40
2.02	Severe glaucoma	Stage 1.01 AND cup/disk ratio $\geq$ 0.8 AND visual field limited to central vision AND pale optic nerve head
2.03	Advanced glaucoma	Stage 1.01 AND cup/disk ratio $\geq$ 0.8 [ophthalmoscopy report] OR central field $\leq$ 20 degrees AND pale optic nerve head [ophthalmoscopy report] AND visual acuity $\leq$ 20/200 in either one or both eyes
2.04	Angle closure glaucoma	Stage 1.03 AND closed angle AND increased IOP $>$ 21 mmHg [tonometer report] AND ocular pain OR nausea OR headache OR visual changes (halos)

## References

Hoskins HD, Hetherington J. Developmental glaucomas. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1979, Vol. 3.

Migdel C. Primary open angle glaucoma. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippencott-Raven; 1998.

Simons RB, Montenegro MH, Simons RJ, Migdel C. Primary angle closure glaucoma. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippencott-Raven; 1998.

# Clinical Criteria for Disease Staging

EYE14

## Disease: EYE14 Herpes Virus Ocular Infection

### Etiology: Infection, Viral

Stage	Description	Diagnostic findings
1.01	Herpes keratitis or dendritic keratitis	Herpes keratitis or dendritic keratitis [corneal culture reports growth of pathologic organism(s) or dendrites by fluorescein stain]
1.02	with vision loss	Stage 1.01 AND visual acuity $\leq$ 20/70 OR ciliary flush [ophthalmoscopy report]
2.01	with trophic ulcer	Stage 1.01-1.02 AND visual acuity $\leq$ 20/100 AND epithelial ulceration OR stromal ulceration OR stromal infiltrate
2.02	with stromal keratitis	Stage 1.01-2.01 AND corneal necrosis with thinning OR corneal perforation
2.03	with stromal scarring	Stage 1.01-2.02 AND stromal scarring [ophthalmoscopy report]
2.04	Acute retinal necrosis syndrome	Stage 1.01 - 2.03 AND anterior retinal necrosis OR blurred vision AND anterior chamber reaction [ophthalmoscopy report] AND photophobia
2.05	Acute retinal necrosis syndrome with vision loss	Stage 2.04 AND visual acuity $\leq$ 20/70 OR vitritis [ophthalmoscopy report] AND patchy white retinal infiltrates [ophthalmoscopy report] OR retinal hemorrhages [ophthalmoscopy report] AND macular edema [ophthalmoscopy report] OR optic disk edema [ophthalmoscopy report]
2.06	Acute retinal necrosis syndrome with retinal detachment	Stage 2.04-2.05 AND retinal detachment [ophthalmoscopy report]

### References

Fisher JP, Lewis ML, Blumenkrantz M, et al. The acute retinal necrosis syndrome. part I: clinical manifestations. *Ophthalmology*. 1982;(89)1309-1316.

O'Day DM, Jones BR. Herpes simplex keratitis. In: Duane TD, Jaeger EA, eds. *Clinical Ophthalmology*. Philadelphia, PA: Harper & Row; 1987:(4)19.



**Disease: EYE15 Hypovitaminosis A**

**Etiology: Nutritional**

Stage	Description	Diagnostic findings
1.01	Conjunctival xerosis	Conjunctival xerosis OR    Bitot's spots on conjunctiva [slit lamp exam report] OR    night blindness AND    vitamin A level ≤ 10 ug/dl [chemistry report]
1.02	Corneal xerosis	Haziness of inferior cornea OR    keratinized corneal plaques [slit lamp exam report] OR    white opacities in peripheral retina [ophthalmoscopy report] AND    vitamin A level ≤ 10 ug/dl [chemistry report]
2.01	Corneal ulceration	Stage 1.01-1.02 AND    thinning of cornea [slit lamp examination report]

**References**

Bloch RS. Gastrointestinal and nutritional diseases. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1982:(3)30.

# Clinical Criteria for Disease Staging

EYE16

**Disease: EYE16 Injury or Laceration: Eyelids, Periocular Area, Cornea, or Conjunctiva**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Laceration or superficial injury of the eyelids, periocular area, cornea or conjunctiva	Laceration of the eyelids with separation of the skin [operative/pathology report] OR laceration of the eyelids with separation of the orbicularis oculi muscle [operative/pathology report] OR superficial injury of periocular area, cornea or conjunctiva
1.02	Full thickness laceration of the eyelids	Stage 1.01 AND laceration of the tarsus [operative/pathology report] AND laceration of the conjunctiva [operative/pathology report]
2.01	Laceration of the eyelids with involvement of lacrimal canaliculi	Stage 1.01-1.02 AND laceration of the lacrimal canaliculi [operative/pathology report]
2.02	Laceration of the eyelids with loss of tissue	Stage 1.01-2.01 AND loss of lacerated tissue [operative/pathology report]

## References

Wilkins RB, Havins WE. Current treatment of blow-out fractures. Ophthalmology. 1982;(89)464-466.

Wulc AE, Arterberry, JF. The pathogenesis of canalicular lacerations. Ophthalmology. 1991;98;1243.

# Clinical Criteria for Disease Staging

EYE17

**Disease: EYE17 Injury: Eyes, Nonionizing Radiation**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Ultraviolet keratoconjunctivitis	History of sun exposure OR history of ultraviolet light exposure AND conjunctival injection OR reduced vision from baseline develops $\leq$ 1 day AND corneal punctate keratitis
1.02	Solar retinopathy	History of sun exposure OR history of ultraviolet light exposure OR history of exposure to intense welder's arc light AND reduced vision from baseline develops $\leq$ 1 month AND yellow discoloration in center of fovea [direct ophthalmoscopy report]

## References

Deutsch TA, Feller DB. Paton and Goldberg's Management of Ocular Injuries. 2nd ed. Philadelphia, PA: WB Saunders; 1985.

**Disease: EYE18 Injury: Eyes, Radiation**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Radiation keratitis	History of ocular radiation exposure AND reduced tear film OR rose-bengal staining [slit lamp report]
2.01	Radiation cataracts	History of radiation exposure AND posterior subcapsular cataract develops $\geq$ 1 month post-exposure [slit lamp or direct ophthalmoscopy report]
2.02	Radiation retinopathy	History of radiation exposure AND retinal hemorrhages develop $\geq$ 1 month post-exposure [direct ophthalmoscopy report] OR cotton wool spots develop $\geq$ 1 month post-exposure [direct ophthalmoscopy report] OR microaneurysms develop $\geq$ 1 month post-exposure [direct ophthalmoscopy report] OR exudates develop $\geq$ 1 month post-exposure [direct ophthalmoscopy report] OR retinal neovascularization [direct ophthalmoscopy report]
2.03	Radiation optic neuropathy	History of radiation exposure AND optic disk edema develops $\geq$ 1 month post-exposure [direct ophthalmoscopy report] OR optic disk pallor develops $\geq$ 1 month post-exposure [direct ophthalmoscopy report]

**References**

Augsburger JJ. Radiation neuropathy. In: Clinical Decisions in Medical Retinal Disease. Tasman, W, ed. St. Louis, MO: Mosby; 1994.  
Brown GC, Shields JA, Sanborn G, et al. Radiation optic neuropathy. Ophthalmology. 1982;(89)1489-1493.

**Disease: EYE19 Keratitis, Acanthamoeba**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Acanthamoeba keratitis	History of ocular trauma OR history of contact lens wear AND dendriform epithelial lesions [slit lamp report] OR Acanthamoeba keratitis [calcufluor white stain or culture report]
2.01	with reduced vision	Stage 1.01 AND corrected vision $\leq$ 20/70 OR central infiltrate [ophthalmoscopy report] OR ring infiltrate [ophthalmoscopy report] AND conjunctival chemosis
2.02	with corneal thinning or corneal perforation or visual loss	Stage 1.01-2.01 AND vision $\leq$ 20/200 OR corneal thinning OR corneal perforation

**References**

Moore MD, McCulley JP. Acanthamoeba keratitis: a growing problem in soft and hard contract lens wearers. Ophthalmology. 1987;(94)1654-1661.

# Clinical Criteria for Disease Staging

EYE20

**Disease: EYE20 Keratitis, Adenovirus**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Adenovirus keratitis	Epidemic keratoconjunctivitis OR adenovirus keratitis [corneal culture reports growth of pathologic organism(s)]
1.02	with vision loss	Stage 1.01 AND visual acuity $\leq$ 20/70 OR conjunctival edema OR eyelid edema
2.01	with subepithelial infiltrates	Stage 1.02 AND subepithelial infiltrates [slit lamp exam report]

## References

Dawson CR. Follicular conjunctivitis. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1986:(4)7.

# Clinical Criteria for Disease Staging

EYE21

**Disease: EYE21 Keratitis, Bacterial**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Bacterial keratitis	Bacterial keratitis [corneal culture reports growth of pathologic organism(s) or Gram stain shows organism(s)] OR conjunctival injection [slit lamp report] AND epithelial infiltrate OR corneal ulcer
2.01	Bacterial keratitis with intraocular inflammation	Stage 1.01 AND visual acuity ≤ 20/70 OR corneal stroma involvement OR corneal thinning [slit lamp report] OR hypopyon
2.02	Bacterial keratitis with vision loss	Stage 1.01-2.01 AND visual acuity ≤ 20/400 OR corneal perforation [slit lamp report] OR scleritis [slit lamp report] OR corneal scar [slit lamp report]
2.03	Bacterial keratitis with endophthalmitis	Stage 1.01-2.02 AND visual acuity ≤ 5/200 OR corneal opacification OR vitritis [slit lamp or echography report] OR hypopyon
2.04	Phthisis bulbi or degenerate globe	Stage 1.01-2.03 AND no light perception AND shrunken globe

**References**

Krohler GB, Krauss HR, Winnick J. Orbital abscess, presentation, diagnosis, therapy, and equalae. Ophthalmology. 1982;(89)492-498.

Watters EC, Wallar PH, Hiles DA, Michaels RH. Acute orbital cellulitis. Arch Ophthalmology. 1976;(94)785-788.

# Clinical Criteria for Disease Staging

EYE22

**Disease: EYE22 Laceration: Cornea**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Superficial laceration of cornea or conjunctiva	History of trauma AND laceration of cornea or conjunctiva without globe penetration
2.01	Full thickness corneal, and/or scleral laceration	Stage 1.01 AND penetrating injury history AND shallow anterior chamber OR uveal prolapse

## References

Brackup AB, Carter KD, et al. Long term follow-up of severely injured eyes following globe rupture. Ophthalmology Plastic and Reconstructive Surgery. 1991;(7)194.  
Cullom Jr RD, Chang B. The Wills Eye Manual. Philadelphia, PA: J.B. Lippincott Co.; 1994.



**Disease: EYE23 Macular Degeneration**

**Etiology: Degenerative**

Stage	Description	Diagnostic findings
1.01	Macular degeneration with drusen	Visual acuity $\geq$ 20/50 AND drusen [ophthalmoscopy report]
1.02	with pigment epithelial atrophy	Visual acuity $\geq$ 20/50 AND pigment epithelial atrophy [ophthalmoscopy report]
2.01	with serous detachment of retinal pigment epithelium	Visual acuity $\leq$ 20/50 AND subretinal fluid or hemorrhage or exudate [ophthalmoscopy report] AND neovascularization [fluorescein angiography report]
2.02	with fibrotic subretinal or disciform scar	Visual acuity $\leq$ 10/200 AND white subretinal scar [ophthalmoscopy report]
2.03	with vitreous or suprachoroidal hemorrhage	Visual acuity $\leq$ 5/200 AND diffuse hemorrhage obscuring fundus [ophthalmoscopy report]

**References**

Maguire JI, Annesly, Jr WH. Age related macular degeneration. In: Clinical Decisions in Medical Retinal Disease. Tasman, W, ed. St. Louis, MO: Mosby; 1994.

**Disease: EYE24 Neoplasm, Benign: Pterygium**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Limbal mass	Flat mass in the horizontal meridian AND with no active borders AND no staining of the cornea
1.02	Inactive pterygium	Flat mass in the horizontal meridian with borders on the corneal limbus onto the superficial cornea AND with no active borders AND no staining of the cornea
1.03	Active pterygium	Flat mass in the horizontal meridian with borders on the corneal limbus onto the superficial cornea AND active borders AND staining of the cornea
1.04	Advanced pterygium	Flat mass in the horizontal meridian with borders grown past the apex of the cornea AND active borders AND staining of the cornea

**References**

Grayson M. Degenerations, dystrophies and edema of the cornea. In: Duane TD, ed. Clinical Ophthalmology. Hagerstown, MD: Harper & Row, 1979.
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# Clinical Criteria for Disease Staging

EYE25

**Disease: EYE25 Neoplasm, Malignant: Ocular Melanoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of ocular melanoma	
1.01	Choroidal nevus	Choroidal nevus [ophthalmoscopy report] OR ciliary body nevus [ophthalmoscopy report] AND minimal elevation of mass [ophthalmoscopy report]
2.01	Ocular melanoma confined to uvea	Elevated choroid mass with growth over $\geq 1$ month [ophthalmoscopy report] OR elevated ciliary body mass with growth over $\geq 1$ month [ophthalmoscopy report] OR serous retinal detachment AND low internal reflectivity [A-scan echography report]
2.02	Choroidal melanoma penetrating Bruch's membrane	Choroidal melanoma penetrating Bruch's membrane [ophthalmoscopy report or echography report]
2.03	with periocular extension	Stage 2.01-2.02 AND extrascleral spread confined to orbit [echography or operative/pathology report or CT scan report] OR proptosis
3.01	with metastasis	Stage 2.01-2.03 OR history of ocular melanoma AND liver metastasis [CT scan report] or biopsy report OR brain metastasis [CT scan report] or MRI report OR lung metastasis [CT scan report] or MRI report
3.02	with shock	Stage 3.01 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.02 AND death

## References

Shields JA. Tumors of the uveal tract. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1981:(4)67.

# Clinical Criteria for Disease Staging

**Disease: EYE26 Neoplasm, Malignant: Retinoblastoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of retinoblastoma	
1.01	Retinoblastoma	Retinal tumor with telangiectatic vessels [ophthalmoscopy report] AND retinal calcifications [CT scan of orbit report] OR retinoblastoma [operative/pathology report]
2.01	Retinoblastoma with reduced vision	Stage 1.01 AND vision $\leq$ 20/70 OR vitreous seeding [ophthalmoscopy report] OR vitreous hemorrhage [ophthalmoscopy report] OR intraocular pressure $\geq$ 21 mmHg [tonometer report] OR retinal detachment [ophthalmoscopy report]
2.02	Retinoblastoma with extension to the optic nerve	Stage 1.01-2.01 AND retinoblastoma of the optic nerve [operative/pathology report]
3.01	Retinoblastoma with metastasis	Stage 1.01-2.02 AND meningeal tumor [CT scan report or operative/pathology report] OR brain metastasis [CT scan report] OR lymph node retinoblastoma [operative/pathology report]
3.02	with shock	Stage 3.01 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.02 AND death

## References

Ellsworth RM. Retinoblastoma. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1979:(3)35.

# Clinical Criteria for Disease Staging

EYE27

**Disease: EYE27 Neoplasm: Eyelid**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of Basal Cell Carcinoma or Squamous Cell Carcinoma of lids	
1.01	In-situ Basal Cell Carcinoma or Sebaceous Adenocarcinoma or Squamous Cell Carcinoma of lids	Basal cell carcinoma or squamous cell carcinoma limited to skin of lids [operative/pathology report] OR sebaceous adenocarcinoma limited to conjunctiva of lids or globe without spread as found on map biopsy [operative/pathology report]
2.01	with involvement of lacrimal system	Stage 1.01 AND involvement of the lacrimal system [operative/pathology report]
2.02	with involvement of orbit	Stage 2.01 AND extension into orbital fat [operative/pathology report] OR extension into extraocular muscles [operative/pathology report] OR diplopia
2.03	with blepharoconjunctivitis	Stage 2.01-2.02 AND widespread involvement of lid and globe conjunctiva [operative/pathology report]
3.01	with brain invasion or sinus invasion	Stage 2.01-2.03 AND Extension into brain or sinus [CT or MRI report]
3.02	Malignant tumor with distant metastasis	Stage 2.01-3.01 AND metastasis to lymph nodes [operative/pathology report] OR metastasis to distant site
4.00	Death	Stage 3.01-3.02 AND death

## References

Crawford JB. Neoplastic and inflammatory tumors of the eyelids. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippincott-Raving; 1998:Vol 5(73).  
Kersten RC, Ewing-Chow D. Accuracy of clinical diagnosis of cutaneous eyelid tumors. Ophthalmology. 1997;104:479.

**Disease: EYE28 Ocular Onchocerciasis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Ocular onchocerciasis	Microfilariae in anterior chamber [slit lamp report] AND skin-snip test shows onchocerciasis [operative/pathology report]
1.02	with punctate keratitis	Stage 1.01 AND punctate white corneal opacities [slit lamp report]
2.01	with keratitis or uveitis or chorioretinitis	Stage 1.01-1.02 AND sclerosing keratitis [ ophthalmoscopy report] OR anterior uveitis [ophthalmoscopy report] OR chorioretinitis [ophthalmoscopy report]
2.02	with retinal epithelial pigment atrophy	Stage 1.01-2.01 AND retinal pigment epithelial atrophy [ophthalmoscopy report] OR optic nerve atrophy [ophthalmoscopy report]

**References**

Taylor HR. Onchocerciasis. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1984:(5)62.

# Clinical Criteria for Disease Staging

EYE29

**Disease: EYE29 Orbital Infection**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Preseptal cellulitis or chalazion or blepharitis or hordeolum	Lid area of cellulitis OR chalazion OR blepharitis OR hordeolum
1.02	Advanced preseptal cellulitis	Stage 1.01 AND <b>fever:</b> OR <b>leukocytosis:</b>
2.01	Orbital cellulitis	Orbital cellulitis AND proptosis AND reduced ocular motility AND sinusitis
2.02	Orbital cellulitis with subperiosteal abscess	Stage 2.01 AND subperiosteal abscess [CT scan of head report] OR abscess [culture reports growth of pathologic organism(s)] AND sinusitis
2.03	Orbital cellulitis with orbital abscess	Stage 2.01-2.02 AND orbital abscess [CT scan of head report or ultrasound of orbit report or MRI of head report]
3.01	Orbital cellulitis with meningitis	Stage 2.01-2.03 AND <b>meningitis:</b>
3.02	Orbital cellulitis with sepsis	Stage 1.02-3.01 AND <b>sepsis:</b>
3.03	Orbital cellulitis with coma	Stage 1.02-3.02 AND <b>coma:</b>
3.04	Orbital cellulitis with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	Orbital cellulitis with death	Stage 2.01-3.04 AND death

**References**

Krohel GB, Krauss HR, Winnick J. Orbital abscess, presentation, diagnosis, therapy, and equalae. Ophthalmology. 1982;(89)492-498.

Watters EC, Wallar PH, Hiles DA, Michaels RH. Acute orbital cellulitis. Arch Ophthalmology. 1976;(94)785-788.

**Disease: EYE30 Orbital Mucormycosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Orbital mucormycosis	Orbital mucormycosis [biopsy report] AND change in vision ≤ 24 hrs. AND facial pain OR ocular pain OR lid edema AND corneal hypesthesia OR proptosis OR internal ophthalmoplegia OR external ophthalmoplegia AND sinus opacification [orbital x-ray report]
2.01	with loss of vision	Stage 1.01 AND visual acuity ≤ 20/70
2.02	with apex syndrome	Stage 2.01 AND proptosis AND sinus opacification [orbital x-ray report]
3.01	with cerebral mucormycosis	Stage 2.02 AND cerebral mucormycosis [MRI or CT scan brain ] OR <b>disorientation:</b>
3.02	with coma	Stage 3.01 AND <b>coma:</b>
3.03	with shock	Stage 3.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 3.01 AND death

**References**

Fisher JP, Lewis ML, Blumenkrantz M, et al. The acute retinal necrosis syndrome. part I: clinical manifestations. *Ophthalmology*. 1982;(89)1309-1316.

O'Day DM, Jones BR. Herpes simplex keratitis. In: Duane TD, Jaeger EA, eds. *Clinical Ophthalmology*. Philadelphia, PA: Harper & Row; 1987:(4)19.



**Disease: EYE31 Prematurity: Retinopathy**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Demarcation line separating vascular from avascular retina	Demarcation line separating vascular from avascular retina [indirect ophthalmoscopy report] OR Stage I retinopathy of prematurity
1.02	Elevated retinal ridge	Elevated retinal ridge [indirect ophthalmoscopy report] OR Stage II retinopathy of prematurity
2.01	Retinal ridge with extraretinal fibrovascular proliferation	Stage 1.02 AND retinal ridge with extraretinal fibrovascular proliferation [indirect ophthalmoscopy report]
2.02	Subtotal traction detachment of retinopathy of prematurity	Stage 1.01-2.01 AND subtotal traction retinal detachment [indirect ophthalmoscopy report]
2.03	Total traction detachment of retinopathy of prematurity	Stage 1.01-2.01 AND total traction retinal detachment [indirect ophthalmoscopy report]
2.04	Retinopathy of prematurity with total blindness or cataract or glaucoma	Stage 1.01-2.02 AND vision limited to light perception OR cataract [slit lamp report or operative/pathology report] OR intraocular pressure $\geq$ 21 mmHg tonometer report]

**References**

Committee for the Classification of Retinopathy of Prematurity. An international classification of retinopathy of prematurity, Arch Ophthalmology. 1984; 102:1130-1134.

International Committee for the Classification of the Late Stages of Retinopathy of Prematurity, II. The classification of retinal detachment. Arch Ophthalmology. 1987;105:906-912.

**Disease: EYE32 Ptosis of Upper Lid**

**Etiology: Congenital; Degenerative; Trauma**

Stage	Description	Diagnostic findings
1.01	Ptosis of upper lid, acquired	Unilateral or bilateral drooping of upper lid
1.02	Ptosis of upper lid, congenital	Stage 1.01 AND decreased function of levator palpebrae muscle AND congenital
1.03	Ptosis of upper lid, acquired with systemic disease	Stage 1.01 AND history of Myasthenia gravis OR muscular dystrophy
2.01	Ptosis of upper lid with visual field defect	Stages 1.01-1.03 AND decreased superior visual field to less than 30 degrees vertically [automated visual field testing]
2.02	Ptosis of upper lid, congenital with amblyopia or abnormal head position	Stage 1.02 AND decreased visual function due to occlusion OR elevated chin position

**References**

Cliff WJ, Pacheco EM. Ptosis sSurgery. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippencott-Raven; 1998.
McCulloch DL, Wright KW. Unilateral congenital ptosis: compensatory head posturing and amblyopia. Ophthalm Plast and Reconstr Surg. 1996;9:196.

**Disease: EYE33 Retrobulbar Orbital Hemorrhage**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Orbital hemorrhage	Orbital hemorrhage AND normal motility AND normal pupillary reactions AND intraocular pressure unchanged from baseline OR intraocular pressure ≤ 21 mmHg [tonometer report] AND ≤ 2 mm proptosis [exophthalmometer report]
2.01	with proptosis	Stage 1.01 AND ≥ 2 mm proptosis [exophthalmometer report]
2.02	Orbital hemorrhage with optic nerve compression	Orbital hemorrhage AND vision changed from baseline OR limitation of ocular motility OR intraocular pressure changed from baseline OR intraocular pressure ≥ 21 mmHg [per tonometer report]report OR ≥ 2 mm proptosis [per exophthalmometer report]report OR afferent pupillary defect
2.03	Blindness	<b>Blindness:</b>

**References**

Deutsch TA, Feller DB. Paton and Goldberg’s Management of Ocular Injuries. 2nd ed. Philadelphia, PA: WB Saunders; 1985.

**Disease: EYE34 Strabismus**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Phoria or latent strabismus	Absence of double vision AND convergent deviation from orthotropia of both eyes, esophoria OR divergent deviation from orthotropia of both eyes, exophoria OR high vertical divergence deviation from orthotropia of both eyes, hyperphoria OR low vertical divergence deviation from orthotropia of both eyes, hypophoria
1.02	Periodic strabismus	Periodic double vision AND intermittent horizontal or vertical deviation from orthotropia
1.03	Strabismus	Convergent deviation from orthotropia of both eyes, esotropia OR divergent deviation from orthotropia of both eyes, exotropia OR high vertical divergence deviation from orthotropia of both eyes, hypertropia OR low vertical divergence deviation from orthotropia of both eyes, hypotropia
2.01	Amblyopia	Stage 1.03 AND dimness of vision OR amblyopia

**References**

Parks MM. Eye movements and positions. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. Philadelphia, PA: Lippencott-Raven; 1998.

# Clinical Criteria for Disease Staging

EYE35

**Disease: EYE35 Trachoma**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Trachoma with immature tarsal conjunctiva follicles	Immature follicles on upper tarsal conjunctiva without scarring OR diffuse punctate keratitis OR corneal neovascularization AND Chlamydia trachomatis conjunctivitis [conjunctiva culture reports serotype A,B,Ba or C] OR granular cytoplasmic inclusion bodies [Giemsa stain epithelial conjunctival scraping report] OR MacCallan Stage I trachoma
1.02	with mature tarsal conjunctiva follicles	Mature follicles on upper tarsal conjunctiva without scarring AND Chlamydia trachomatis conjunctivitis [conjunctiva culture report] OR granular cytoplasmic inclusion bodies [Giemsa stain epithelial conjunctival scraping report] OR MacCallan Stage IIa trachoma
1.03	with papillary hypertrophy	Stage 1.01-1.02 AND papillary hypertrophy OR MacCallan Stage IIb trachoma
2.01	with tarsal conjunctival scarring	Stage 1.01-1.03 AND tarsal conjunctival scarring OR Herbert's pits OR MacCallan Stage III trachoma with follicles - superior scarring OR MacCallan Stage IV trachoma without follicles - extensive scarring
2.02	with reduced vision or corneal scars or trichiasis or entropion	Stage 1.01-2.01 AND vision $\leq$ 20/200 OR corneal scars OR trichiasis OR entropion

## References

Dawson CR. Follicular conjunctivitis. In: Duane TD, Jaeger EA, eds. Clinical Ophthalmology. Philadelphia, PA: Harper & Row; 1979:(4)9.

**Disease: EYE80 Neoplasm, Benign: Eye**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of eye structures	

References

# Clinical Criteria for Disease Staging

EYE81

**Disease: EYE81 Neoplasm, Malignant: Other Eye and Periocular**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Primary malignant neoplasm of conjunctiva, cornea, lacrimal duct and other eye areas	
2.01	with lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

References

# Clinical Criteria for Disease Staging

EYE82

**Disease: EYE82 Other Eye Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
0.00	Eye exam or screening for eye conditions	Added stage 5/8/06 cb
1.01	Minor disorder of globe, cysts, foreign body in eye, other visual problems	
2.01	Degenerative globe, hypotony, retinal cysts, retinopathy, blindness	

**References**



# Clinical Criteria for Disease Staging

GEN01

**Disease: GEN01 Down's Syndrome**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Mosaic Down's syndrome	Genotype: 46/47 with trisomy 21 [cytogenetics report]
1.02	Down's syndrome	Trisomy 21 [cytogenetics report] OR mongolism
2.01	with mental retardation	Stage 1.01-1.02 AND <b>mental retardation:</b>
2.02	with atlantoaxial instability	Stage 1.01-2.01 AND with atlantoaxial instability [x-ray report]
2.03	with duodenal atresia	Stage 1.01-2.02 AND duodenal atresia [UGI report]
2.04	with cardiac malformation	Stage 1.01-2.03 AND ventricular septal defect [cardiac catheterization report] OR atrial septal defect [cardiac catheterization report] OR atrioventricular defect [cardiac catheterization report]
2.05	with leukemia	Stage 1.01-2.04 AND leukemia [peripheral smear, or bone marrow aspiration report or bone marrow biopsy]
3.01	with endocarditis	Stage 1.01-2.05 AND <b>endocarditis:</b>
3.02	with congestive heart failure	Stage 1.01-3.03 AND <b>congestive heart failure:</b>
3.03	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.04	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

**Disease: GEN01 Down's Syndrome**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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**References**

Cuckle H. Rational Down syndrome screening policy. <i>American Journal of Public Health</i> . 1998;88(4):558-9.
German J. Cytogenetic aspects of human disease. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, martin JB, Kasper DL, Hauser SL, Longo DL, eds. <i>Harrison's Principles of Internal Medicine</i> . 14th ed. New York, NY: McGraw-Hill; 1998:395-403.
Pyeritz RE. Medical genetics. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. <i>Current Medical Diagnosis &amp; Treatment</i> . Stamford, CT: Appleton & Lange; 1998:1496-1518.
State MW, King BH, Dykens E. Mental retardation: a review of the past 10 years. Part II. <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i> . 36(12):1664-71, 1997 Dec.
Thompson GH, Scoles PV. Atlantoaxial instability. In: Behrman RE, Kliegman RM, Arvin AM, Nelson WE, eds. <i>Nelson Textbook of Pediatrics</i> , 15th ed. Philadelphia, PA: WB Saunders; 1996:1950-1951.
Tolmie JL. Down syndrome and other autosomal trisomies. In: Rimoin DL, Conner JM and Pyeritz, eds. <i>Principles and Practice of Medical Genetics</i> . 3rd Ed. New York, NY: Churchill Livingstone; 1997:925-971.

**Disease: GEN02 Klinefelter's Syndrome**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Mosaic Klinefelter's syndrome	Genotype: 46 XY, 47 XXY [cytogenetics report] OR genotype: 46 XX, 47 XXY [cytogenetics report] OR genotype: 46 XXY, 48 XXYY [cytogenetics report] OR genotype: 46 XY/47 XXY, 48 XXYY [cytogenetics report]
1.02	Klinefelter's syndrome	Genotype: 47 XXY [cytogenetics report] OR leukocyte RNA X-inactive specific transcriptase, XIST [PCR chemistry report] OR small firm testis AND gynecomastia AND < 20 million sperm/ml [semen analysis report] AND <b>mental retardation:</b>
1.03	Klinefelter's syndrome with three X chromosomes	Genotype: 47 XXXY [cytogenetics report]
1.04	Klinefelter's syndrome with four X chromosomes	Genotype: 47 XXXXY [cytogenetics report]
1.05	Klinefelter's syndrome with five X chromosomes	Genotype: 47 XXXXXY [cytogenetics report]
2.01	with obesity	Stage 1.01-1.05 AND <b>obesity:</b>
2.02	with hypothyroidism or hyperthyroidism	Stage 1.01-2.01 AND <b>hypothyroidism:</b> OR <b>hyperthyroidism:</b>
2.03	with diabetes mellitus	Stage 1.01-2.02 AND <b>diabetes mellitus:</b>
2.04	with breast carcinoma	Stage 1.01-2.03 AND carcinoma of the breast [operative/pathology report]

**References**

New MI. Steroid 21-hydroxylase deficiency (congenital adrenal hyperplasia). *American Journal of Medicine*. 1995;98(1A):2S-8S.

Orth DN, Kovacs WJ, DeBold CR. The adrenal cortex. In: Wilson JD, Foster DW, eds. *Williams Textbook of Endocrinology*. 8th ed. Philadelphia, PA: WB Saunders; 1992:489-620.

White PC. Inherited forms of mineralocorticoid hypertension. *Hypertension*. 1996;28(6):927-936.

Wilson JD, Griffin JE. Disorders of sexual differentiation. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. *Harrison's Principles of Internal Medicine*. 14th ed. New York, NY: McGraw-Hill; 1998:2119-2131.

# Clinical Criteria for Disease Staging

GEN03

**Disease: GEN03 Turner's or Noonan's Syndrome**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Mosaic Turner's syndrome	Genotype: 45 X/46 XX [cytogenetics report] OR genotype: 45 X/46 XY [cytogenetics report] OR genotype: 45 X/46 X, fragment plus [cytogenetics report]
1.02	Noonan's syndrome	Genotype 46 XX [ cytogenetics report] OR genotype 46 XY [cytogenetics report] AND height < 3rd percentile OR growth velocity < 4 cm/yr. OR bone age > 2 yrs. behind chronological age AND webbed neck AND ptosis AND low hairline on the back of neck AND wide chest with broadly spaced nipples AND multiple pigmented nevi AND short 4th metacarpal AND hypoplasia of nails AND amenorrhea AND failure of breast development AND juvenile external genitalia
1.03	Turner's syndrome	Genotype 45 X [cytogenetics report] AND height < 3rd percentile OR growth velocity < 4 cm/yr OR bone age > 2 yrs. behind chronological age AND webbed neck AND ptosis AND low hairline on the back of the neck AND wide chest with broadly spaced nipples AND multiple pigmented nevi AND short 4th metacarpal AND hypoplasia of nails AND amenorrhea AND failure of breast development AND juvenile external genitalia
1.04	with mental retardation	Stage 1.01-1.03 AND <b>mental retardation:</b>

# Clinical Criteria for Disease Staging

GEN03

**Disease: GEN03 Turner's or Noonan's Syndrome**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
2.01	with gastrointestinal telangiectasias	Stage 1.01-1.04 AND guaiac positive stools [hemocult test] OR gastrointestinal telangiectasias [operative/pathology or endoscopy report]
2.02	with gonadoblastoma	Stage 1.01-2.01 AND gonadoblastoma [operative/pathology report]
2.03	with renal tumor	Stage 1.01-2.01 AND renal tumor [sonogram or CT scan report]
2.04	with acute gastrointestinal bleeding	Stage 2.01 AND <b>bleeding:</b>
2.05	with cardiovascular malformations	Stage 1.01-2.04 AND coarctation of the aorta [cardiac catheterization report] OR pulmonic stenosis [cardiac catheterization report] OR atrial septal defect [cardiac catheterization report]
3.01	with renal failure	Stage 2.03 AND <b>renal failure:</b>
3.02	with congestive heart failure	Stage 2.05 AND <b>congestive heart failure:</b>
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

Carr BR. Disorders of the ovaries and female reproductive tract. In: Wilson JD, Foster DW, eds. Williams Textbook of Endocrinology. 8th ed. Philadelphia, PA: WB Saunders; 1992:733-798

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# Clinical Criteria for Disease Staging

GEN80

**Disease: GEN80 Other Chromosomal Anomalies**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
0.00	Other genetic carrier state	Added stage 5/8/06 cb
1.01	Anomalies of spleen, endocrine system, or hamartoses, Patau's, Edward's, Marfan's Fragile X, or Prader-Willi syndrome, situs inversus, conjoined twins, and other chromosomal anomalies	

## References

# Clinical Criteria for Disease Staging

GIS01

## Disease: GIS01 Alpha 1-Antitrypsin Deficiency

### Etiology: Genetic (or hereditary)

Stage	Description	Diagnostic findings
1.01	Heterozygous alpha-1-antitrypsin deficiency	Serum alpha-1-antitrypsin < 50 mg/dl [chemistry report] AND serum alpha-1-antitrypsin ≤ 250 mg/dl [chemistry report]
1.02	Homozygous alpha-1-antitrypsin deficiency	Serum alpha-1-antitrypsin < 50 mg/dl [chemistry report]
1.03	Alpha-1-antitrypsin deficiency with panniculitis	Stage 1.01-1.02 AND panniculitis or fat necrosis [operative/pathology report]
2.01	with hepatitis	Stage 1.01-1.03 AND <b>hepatitis:</b>
2.02	with COPD	Stage 1.01-2.01 AND <b>COPD:</b>
2.03	with cirrhosis	Stage 1.01-2.02 AND cirrhosis [biopsy report or sonogram report or liver/spleen scan report]
2.04	with coagulation defects	Stage 1.01-2.03 AND <b>coagulation defect:</b>
3.01	with renal failure	Stage 1.01-2.04 AND <b>renal failure:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with coma	Stage 1.01-3.02 AND <b>coma:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

**Disease: GIS01 Alpha 1-Antitrypsin Deficiency**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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**References**

<p>Beaudet AL. Genetics and disease. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:365-395.</p>
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# Clinical Criteria for Disease Staging

GIS02

**Disease: GIS02 Amebiasis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Asymptomatic Entamoeba histolytica carrier	Entamoeba histolytica cysts in stool [stool examination report]
2.01	Entamoeba histolytica colitis	Diarrhea with blood OR guaiac positive stools AND Entamoeba histolytica cysts or trophozoites in stool [stool examination report] OR amebiasis [serology test report]
2.02	Entamoeba histolytica dermatitis	Stage 2.01 AND Entamoeba histolytica cysts or trophozoites in skin lesions [slide examination report]
2.03	Entamoeba histolytica hepatic abscess	Stage 2.01-2.02 AND <b>jaundice:</b> AND liver abscess [operative/pathology report or sonogram or MRI report or CT scan report or liver/spleen scan report] OR amoebic liver abscess [operative/pathology report]
2.04	Entamoeba histolytica lung abscess	Stage 2.01-2.03 AND lung abscess [operative/pathology report or sonogram or CT scan report or chest x-ray report or bronchoscopy report] OR amoebic lung abscess [operative/pathology report]
2.05	with bowel obstruction	Stage 2.01-2.04 AND large bowel obstruction [plain abdomen x-ray report or operative/pathology report] OR amoeboma [operative/pathology report or barium enema report]
2.06	with perforation or peritonitis	Stage 2.01-2.05 AND intestinal perforation [plain abdomen x-ray or operative/pathology report] OR peritonitis per operative/pathology report
3.01	with meningitis or brain abscess	Stage 2.01-3.01 AND <b>meningitis:</b> OR brain abscess [CT scan report or MRI report or operative/pathology report]
3.02	with sepsis	Stage 2.01-2.06 AND <b>sepsis:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: GIS02 Amebiasis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**Disease: GIS03 Anal Fissure**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Chronic anal fissure	Anal ulcer AND hypertrophic papillae [proctoscopy report] AND sentinel pile
1.02	Acute anal fissure	Anal ulcer per proctoscopy report AND history of rectal bleeding related to defecation

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**Disease: GIS04 Anorectal Suppuration**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Proctitis	Proctitis [proctoscopy report or sigmoidoscopy report]
2.01	Fistula in ano	Fistula in ano [anoscopy report or sigmoidoscopy report]
2.02	Anorectal abscess	Anorectal abscess [operative/pathology report] OR perianal abscess [operative/pathology report] OR pararectal abscess [operative/pathology report] OR intermuscular abscess [operative/pathology report]
2.03	Ischiorectal abscess or supralelevator abscess	Ischiorectal abscess [operative/pathology report] OR supralelevator abscess [operative/pathology report]
2.04	Pelvirectal abscess	Pelvirectal abscess [operative/pathology report]
3.01	Anorectal suppuration with sepsis	Stage 1.01-2.04 AND <b>sepsis:</b>
3.02	Anorectal suppuration with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	Anorectal suppuration with death	Stage 2.01-3.02 AND death

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**Disease: GIS05 Appendicitis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Appendicitis	Appendicitis [operative/pathology report]
2.01	with localized peritonitis or abscess	Stage 1.01 AND localized peritonitis [operative/pathology report] OR abscess [operative/pathology report]
2.02	and intestinal obstruction	Stage 1.01-2.01 AND small bowel obstruction or large bowel obstruction [operative/pathology report or KUB x-ray report]
2.03	with perforation and generalized peritonitis	Stage 1.01-2.02 AND perforation and generalized peritonitis [operative/pathology report] OR peritonitis (peritoneal fluid culture reports growth of pathologic organisms)
2.04	with pylephlebitis or liver abscess	Stage 1.01-2.03 AND pylephlebitis or liver abscess [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.04 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

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**Disease: GIS06 Celiac Disease**
**Etiology: Metabolic**

Stage	Description	Diagnostic findings
1.01	Celiac disease or gluten enteropathy	History of diet containing gluten AND absence of jejunal villi [operative/pathology report or biopsy report] AND jejunal crypt hyperplasia
1.02	with malnutrition	Stage 1.01 AND body weight $\leq$ 85% of ideal body weight OR <b>hypoalbuminemia:</b>
2.01	with anemia	Stage 1.01-1.02 AND <b>anemia:</b>
2.02	with non-Hodgkin's lymphoma or esophageal Ca	Stage 1.01-2.01 AND non-Hodgkin's lymphoma [operative/pathology report or biopsy report] OR esophageal carcinoma [operative/pathology report or biopsy report]
2.03	with intestinal obstruction	Stage 1.01-2.02 AND small bowel obstruction [KUB x-ray report]
3.01	with CHF	Stage 1.01-2.03 AND <b>congestive heart failure:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

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# Clinical Criteria for Disease Staging

GIS07

**Disease: GIS07 Cholera**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
0.00	Contact with or exposure to cholera	Added stage 5/8/06 cb
1.01	Cholera carrier state	Vibrio cholerae in stools [stool culture report]
1.02	with mild dehydration	Stage 1.01 AND estimated loss of $\geq$ 5% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 3% of ideal body weight in adults/adolescents in 24 hours
2.01	with moderate dehydration	Stage 1.01 AND estimated loss of $\geq$ 10% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 5% of ideal body weight in adults/adolescents in 24 hours
3.01	with severe dehydration	Stage 1.01 AND estimated loss of $\geq$ 15% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 7% of ideal body weight in adults/adolescents in 24 hours
3.02	with renal failure	Stage 2.01-3.01 AND <b>renal failure:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

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**Disease: GIS08 Clostridium difficile Colitis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Asymptomatic Clostridium difficile	Clostridium difficile toxin [stool examination report]
2.01	Clostridium difficile colitis with bleeding	Stage 1.01 AND diarrhea with blood OR guaiac positive stools
2.02	with bowel obstruction	Stage 2.01 AND large bowel obstruction [plain abdomen x-ray report or operative/pathology report] OR amoeboma [operative/pathology report or barium enema report]
2.03	with perforation or peritonitis	Stage 2.01-2.02 AND intestinal perforation [plain abdomen x-ray or operative/pathology report] OR peritonitis per operative/pathology report
3.01	with sepsis	Stage 2.01-2.03 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

GIS09

**Disease: GIS09 Crohn's Disease**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Crohn's disease	<p>Crohn's Disease [operative/pathology report]                      OR patchy mucosal 'aphthoid' ulcerations with underlying nodules of lymphoid tissue or granulomas later developing submucosal edema and further lymphoid infiltration which eventually involve the entire bowel wall. There is lymphedema and thickening of the surrounding mesentery and hypertrophy of local lymph nodes. Inevitably, involved areas fibrose and are sharply demarcated from normal areas [operative/pathology report]</p> <p><u>Presumptive Diagnostic Findings:</u>                      Irregularity, thickening, nodularity and narrowing lumen of the bowel wall [barium enema report or colonoscopy report or UGI series report]</p>
2.01	with arthritis or involvement of the eyes or involvement of the mouth or erythema nodosum or pyoderma gangrenosum or anemia or hypoproteinemia or growth retardation or hypertrophic osteoarthropathy	<p>Stage 1.01                      AND stomatitis                      OR <b>arthritis:</b>                      OR ankylosing spondylitis [chest x-ray report]                      OR uveitis [ophthalmologist's report]                      OR episcleritis [ophthalmologist's report]                      OR erythema nodosum                      OR red, tender nodules on the anterior tibial surface                      OR pyoderma gangrenosum (rapidly evolving cutaneous ulcer(s) with markedly undermined borders)                      OR hypertrophic osteoarthropathy                      OR <b>anemia:</b>                      OR growth retardation                      OR <b>hypoproteinemia:</b></p>
2.02	with obstructive uropathy or biliary tract stones	<p>Stage 1.01-2.01                      AND obstructive uropathy [IVP report or nuclear renogram report or sonogram reports dilated ureters or hydronephrosis]                      OR cholelithiasis or choledocholithiasis [oral cholecystogram report or HIDA scan report or sonogram report or endoscopic retrograde cholangiopancreatography report or CT scan report]</p>
2.03	with enteroenteric or enterovesical or enterovaginal or enterocutaneous fistula	<p>Stage 1.01-2.02                      AND enteroenteric fistula [barium enema report or UGI series report]                      OR enterovesical fistula [barium enema report or urinalysis reports fecaluria]                      OR enterovaginal fistula [barium enema report or feces and flatus per vagina]                      OR enterocutaneous fistula [barium enema report or feces and flatus per sinus tract]</p>

# Clinical Criteria for Disease Staging

GIS09

**Disease: GIS09 Crohn's Disease**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
2.04	with acute gastrointestinal bleed	Stage 1.01-2.03 AND hematochezia AND <b>bleeding:</b>
2.05	with intestinal obstruction	Stage 1.01-2.04 AND intestinal obstruction [KUB x-ray reports small bowel or large bowel obstruction]
2.06	with intra-abdominal abscess	Stage 1.01-2.05 AND intra-abdominal abscess [sonogram report or CT scan report or gallium scan report or operative/pathology report]
2.07	with perforation of bowel or peritonitis	Stage 1.01-2.06 AND free air within peritoneal cavity [KUB x-ray report or chest x-ray report] OR perforation of the bowel [barium enema report or UGI series reports spilling of barium into the peritoneal cavity] OR peritonitis [operative/pathology report]
2.08	with renal or hepatic amyloidosis	Stage 1.01-2.07 AND renal amyloidosis [operative/pathology report] OR hepatic amyloidosis [operative/pathology report]
2.09	with sclerosing cholangitis or cirrhosis of the liver	Stage 1.01-2.08 AND <b>sclerosing cholangitis:</b> fibrosing inflammation of the intrahepatic or extrahepatic bile ducts [liver biopsy operative/pathology reports sclerosing cholangitis] OR <b>primary biliary cirrhosis:</b> inflammation of the medium sized bile ducts or portal triad progressing to periportal fibrosis [liver biopsy operative/pathology reports primary biliary cirrhosis] OR <b>micronodular cirrhosis:</b> thin bands of connective tissue within the hepatic parenchyma with no delineation of hepatic veins or portal spaces [liver biopsy operative/pathology reports micronodular cirrhosis] OR <b>macronodular cirrhosis:</b> bands of connective tissue within the hepatic parenchyma which contain hepatic veins or portal spaces [liver biopsy operative/pathology reports macronodular cirrhosis] OR <b>mixed cirrhosis:</b> bands of connective tissue within the hepatic parenchyma with areas with and without hepatic veins or portal spaces [liver biopsy operative/pathology reports mixed cirrhosis] OR <b>cirrhosis:</b> [sonogram report or liver/spleen scan report]
3.01	with sepsis	Stage 1.01-2.09 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>

**Disease: GIS09 Crohn's Disease**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
4.00	with death	Stage 1.01-3.02 AND death

**References**

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**Disease: GIS10 Diverticular Disease**

**Etiology: Degenerative**

Stage	Description	Diagnostic findings
1.01	Diverticulosis	Diverticulosis [operative/pathology report or barium enema report or colonoscopy report or CT scan report]
1.02	Diverticulitis	Stage 1.01 AND diverticulitis [operative/pathology report or barium enema report or colonoscopy report]
2.01	with lower gastrointestinal bleeding	Stage 1.01-1.02 AND bleeding diverticulum [colonoscopy report or bleeding scan or angiography report or operative/pathology report] OR <b>bleeding:</b>
2.02	with fistula	Stage 1.01-2.01 AND fistula from diverticulum [colonoscopy report or barium enema report]
2.03	with obstruction	Stage 1.01-2.02 AND large bowel obstruction [operative/pathology report or KUB x-ray report]
2.04	with intra-abdominal abscess	Stage 1.01-2.03 AND diverticular disease and intra-abdominal abscess operative/pathology report or CT scan report ]
2.05	with generalized peritonitis or gross perforation	Stage 1.01-2.04 AND generalized peritonitis or gross perforation [operative/pathology report or peritoneal effusion culture reports growth of pathologic organism(s)]
3.01	with sepsis	Stage 1.01-2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

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# Clinical Criteria for Disease Staging

**Disease: GIS11 Food Poisoning: C. perfringens**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Food poisoning due to C. perfringens	Clostridium perfringens isolated from contaminated food [food culture reports]
1.02	with mild dehydration	Stage 1.01 AND estimated loss of $\geq$ 5% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 3% of ideal body weight in adults/adolescents in 24 hours
2.01	with moderate dehydration	Stage 1.01 AND estimated loss of $\geq$ 10% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 5% of ideal body weight in adults/adolescents in 24 hours
3.01	with severe dehydration	Stage 1.01 AND estimated loss of $\geq$ 15% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 7% of ideal body weight in adults/adolescents in 24 hours
3.02	with enteritis necroticans or bloody diarrhea	Stage 1.01-3.01 AND gross blood in diarrhea fluid OR Clostridium perfringens type C isolated from contaminated food [food culture reports] OR enteritis necroticans [operative/pathology report or biopsy report]
3.03	with renal failure	Stage 2.01-3.02 AND <b>renal failure:</b>
3.04	with central nervous system involvement	Stage 2.01-3.03 AND <b>disorientation:</b> OR <b>coma:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

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# Clinical Criteria for Disease Staging

**Disease: GIS12 Food Poisoning: Other Organisms**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Food poisoning	Bacillus cereus isolated from contaminated food [food culture reports] OR Clostridium perfringens isolated from contaminated food [food culture reports] OR Campylobacter fetus isolated from contaminated food [food culture reports] OR E. coli isolated from contaminated food [food culture reports] OR Staphylococcus aureus isolated from contaminated food [food culture reports] OR Vibrio cholerae isolated from contaminated food [food culture reports] OR Vibrio parahaemolyticus isolated from contaminated food [food culture reports] OR Yersinia enterocolitica isolated from contaminated food [food culture reports]
1.02	with mild dehydration	Stage 1.01 AND estimated loss of $\geq 5\%$ of ideal body weight in children $\leq 12$ years old in 24 hours. OR estimated loss of $\geq 3\%$ of ideal body weight in adults/adolescents in 24 hours
2.01	with moderate dehydration	Stage 1.01 AND estimated loss of $\geq 10\%$ of ideal body weight in children $\leq 12$ years old in 24 hours OR estimated loss of $\geq 5\%$ of ideal body weight in adults/adolescents in 24 hours
2.02	with bloody diarrhea	Stage 1.01-3.01 AND gross blood in diarrhea fluid OR enteritis necroticans [operative/pathology report or biopsy report]
3.01	with severe dehydration	Stage 1.01 AND estimated loss of $\geq 15\%$ of ideal body weight in children $\leq 12$ years old in 24 hours OR estimated loss of $\geq 7\%$ of ideal body weight in adults/adolescents in 24 hours
3.02	with renal failure	Stage 2.01-3.02 AND <b>renal failure:</b>
3.03	with central nervous system involvement	Stage 2.01-3.03 AND <b>disorientation:</b> OR <b>coma:</b>
3.04	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

**Disease: GIS12 Food Poisoning: Other Organisms**

**Etiology:**

Stage	Description	Diagnostic findings
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**Disease: GIS13 Food Poisoning: S. aureus**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Food poisoning due to Staphylococcus aureus enterotoxin	Staphylococcus aureus isolated from contaminated food [food culture reports]
1.02	with mild dehydration	Stage 1.01 AND estimated loss of $\geq$ 5% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 3% of ideal body weight in adults/adolescents in 24 hours
2.01	with moderate dehydration	Stage 1.01 AND estimated loss of $\geq$ 10% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 5% of ideal body weight in adults/adolescents in 24 hours
3.01	with severe dehydration	Stage 1.01 AND estimated loss of $\geq$ 15% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 7% of ideal body weight in adults/adolescents in 24 hours
3.02	with renal failure	Stage 2.01-3.01 AND <b>renal failure:</b>
3.03	with disorientation or coma	Stage 2.01-3.02 AND <b>disorientation:</b> OR <b>coma:</b>
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**References**

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**Disease: GIS14 Foreign Body: Digestive Tract**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Foreign body in stomach or intestine or anus or rectum and digestive system unspecified	Foreign body in esophagus OR foreign body in stomach OR foreign body in intestine OR foreign body in anus OR foreign body in rectum OR foreign body in unspecified digestive system

References

**Disease: GIS15 Foreign Body: Esophagus**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Foreign body in esophagus	Foreign body in esophagus [laryngoscopy report or upper endoscopy report]
1.02	with mild dysphagia	Stage 1.01 AND mild dysphagia
2.01	with severe dysphagia	Stage 1.01-1.02 AND severe dysphagia
2.02	with esophagitis	Stage 1.01-2.01 AND esophagitis [barium swallow report or CT scan report]
2.03	with esophageal perforation	Stage 1.01-2.02 AND esophageal perforation [CT scan with Hypaque swallow report]
2.04	with mediastinitis	Stage 1.01-2.03 AND mediastinitis [CT scan report]
3.01	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**References**

**Disease: GIS16 Functional Digestive Disorders**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Constipation or impaction of the large intestine or functional diarrhea or pylorospasm or achalasia or diffuse esophageal spasm or dysphagia	Constipation OR    impaction of the large intestine [barium enema report or endoscopy report] OR    functional diarrhea OR    pylorospasm [UGI series report or endoscopy report] OR    achalasia [esophageal manometry report or UGI series report or endoscopy report] OR    diffuse esophageal spasm [esophageal manometry report or UGI series report or endoscopy report] OR    dysphagia

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# Clinical Criteria for Disease Staging

GIS17

**Disease: GIS17 Gastritis**

**Etiology: Idiopathic; Infection; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Chronic erosive gastritis	Numerous punctate or aphthous gastric erosions [operative/pathology report or gastroscopy report]
1.02	Nonerosive gastritis	<p><b>Superficial gastritis:</b> patchy mucosal inflammation with round cell and plasma cell infiltration [operative/pathology report]</p> <p>OR</p> <p><b>deep gastritis:</b> patchy mucosal inflammation with round cell and plasma cell infiltration extending to the muscularis layer [operative/pathology report]</p> <p>OR</p> <p><b>atrophic gastritis:</b> diminished gastric glands in size and number [operative/pathology report]</p> <p>OR</p> <p>Helicobacter pylori gastritis [H. pylori stain report or rapid urease positivity by gastric biopsy report]</p>
1.03	Gastric hyperplasia	<b>Ménétrier's Disease:</b> enlargement of the gastric mucosal folds with thickened mucosa and hyperplasia of the mucous cells with loss of parietal and chief cells and infiltration of the lamina propria with lymphocytes [operative/pathology report]
2.01	Acute erosive gastritis	Petechiae or ecchymoses on the mucosal surface progressing to irregular erosions [operative/pathology report] AND history of alcoholic beverage abuse within 5 days of event OR history of severe trauma or stress within 5 days of event.
2.02	with hemorrhage	Stage 1.01-2.01 AND <b>bleeding:</b>
3.01	with hypotension	Stage 2.02 AND <b>hypotension:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: GIS17 Gastritis**

**Etiology: Idiopathic; Infection; Toxicologic**

Stage	Description	Diagnostic findings
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**Disease: GIS18 Hemorrhoids**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Internal hemorrhoids	Hemorrhoidal tissue [proctoscopy report] OR Stage 1 Hemorrhoids
1.02	Spontaneously reducible external hemorrhoids	Spontaneously reducible hemorrhoidal tissue in rectum with defecation or tenesmus OR Stage 2 Hemorrhoids
1.03	Prolapsed external hemorrhoids	Manually reducible hemorrhoidal tissue in rectum with defecation or tenesmus OR Stage 3 Hemorrhoids
1.04	Non-reducible external hemorrhoids	Non-reducible Hemorrhoidal tissue in rectum with defecation or tenesmus
2.01	Thrombosed hemorrhoids	Stage 1.01-1.04 AND tenderness of hemorrhoids AND erythema of hemorrhoids
2.02	Ulcerated hemorrhoids	Stage 1.01-2.01 AND ulceration of hemorrhoids
2.03	Hemorrhoids with hemorrhage or anemia	Stage 1.01-2.02 AND <b>anemia:</b> OR <b>bleeding:</b>

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# Clinical Criteria for Disease Staging

GIS19

**Disease: GIS19 Hernia, External**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
1.01	Spontaneously reducible external hernia	Spontaneously reducible external hernia AND inguinal hernia OR femoral hernia OR epigastric hernia OR umbilical hernia OR spigelian hernia OR lumbar hernia OR pelvic hernia
1.02	External hernia reducible only by pressure	Spontaneously reducible external hernia AND inguinal hernia OR femoral hernia OR epigastric hernia OR umbilical hernia OR spigelian hernia OR lumbar hernia OR pelvic hernia
1.03	Irreducible external hernia	External hernia not reducible by pressure AND inguinal hernia OR femoral hernia OR epigastric hernia OR umbilical hernia OR spigelian hernia OR lumbar hernia OR pelvic hernia
2.01	Irreducible external hernia with intestinal obstruction	Stage 1.03 AND small bowel obstruction or large bowel obstruction [operative/pathology report or KUB x-ray report]
2.02	Strangulated external hernia	Stage 1.03-2.01 AND strangulated herniated segment [operative/pathology report]
2.03	Strangulated hernia with gangrene	Stage 1.03-2.02 AND gangrene of herniated segment [operative/pathology report]
2.04	Strangulated hernia with perforation	Stage 1.03-2.03 AND strangulated hernia with perforation [operative/pathology report]
2.05	Strangulated hernia with peritonitis	Stage 1.03-2.04 AND strangulated hernia with peritonitis [operative/pathology report or peritoneal effusion culture reports growth of pathologic organisms]

**Disease: GIS19 Hernia, External**

**Etiology: Congenital; Degenerative**

Stage	Description	Diagnostic findings
3.01	Strangulated hernia with sepsis	Stage 1.03-2.05 AND <b>sepsis:</b>
3.02	Strangulated hernia with shock	Stage 1.03-3.01 AND <b>shock:</b>
4.00	Strangulated hernia with death	Stage 2.01-3.02 AND death

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# Clinical Criteria for Disease Staging

**Disease: GIS20 Hernia, Hiatal or Reflux Esophagitis**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
1.01	Hiatal hernia	Hiatal hernia [chest x-ray or barium swallow report]
1.02	Reflux esophagitis	Reflux esophagitis [Bernstein's acid perfusion test or biopsy or esophagoscopy report or esophageal pH monitoring]
1.03	Reflux esophagitis with chronic hoarseness or asthma or bronchospasm or chronic cough	Stage 1.03 AND chronic hoarseness OR <b>asthma:</b> OR bronchospasm OR chronic cough
2.01	with iron deficiency anemia	Stage 1.02 AND <b>iron deficiency anemia:</b>
2.02	with Barrett's metaplasia	Stage 1.02-2.01 AND Barrett's metaplasia [biopsy report]
2.03	with stricture	Stage 1.02-2.02 AND esophageal stricture [esophagoscopy report]
2.04	Hiatal hernia with incarceration	Incarcerated hiatal hernia [operative/pathology report]
2.05	with acute hemorrhage	Stage 1.02-2.04 AND <b>bleeding:</b>
2.06	with aspiration pneumonia	Stage 1.02-2.05 AND aspiration pneumonia
2.07	with perforation	Stage 1.2-2.6 AND perforation of the esophagus [chest-x-ray reports free air in the mediastium or abdominal x-ray reports free air in the diaphragm]
3.01	with sepsis	Stage 2.06-2.08 AND <b>sepsis:</b>
3.02	with respiratory failure	Stage 2.06-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 2.03-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.04-3.03 AND death

**Disease: GIS20 Hernia, Hiatal or Reflux Esophagitis**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

GIS21

## Disease: GIS21 Hookworm Disease

### Etiology: Infection

Stage	Description	Diagnostic findings
1.01	Hookworm disease	Hookworm eggs in stool [stool exam report]
2.01	with skin invasion or ground itch	Stage 1.01 AND pruritic maculopapular rash
2.02	with anemia	Stage 2.01 AND <b>anemia:</b>
2.03	with hypoalbuminemia	Stage 2.01-2.02 AND <b>hypoalbuminemia:</b>
2.04	with anasarca	Stage 2.01-2.03 AND <b>anasarca:</b>
2.05	with growth retardation	Stage 2.01-2.04 AND height $\leq$ 3rd percentile for age
2.06	with pneumonia	Stage 2.01-2.05 AND <b>pneumonia:</b>
3.01	with congestive heart failure	Stage 2.01-2.06 AND <b>congestive heart failure:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

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**Disease: GIS22 Intussusception**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Intussusception	Intussusception [ultrasound report or barium enema report or operative/pathology report] <u>Presumptive Diagnostic Findings:</u> currant jelly stools AND soft abdominal mass AND vomiting
2.01	with dehydration	Stage 1.01 AND loss of $\geq$ 3% of body weight
2.02	with bowel obstruction	Stage 1.01-2.01 AND large bowel obstruction [KUB x-ray report or operative/pathology report]
2.03	with gangrene of the bowel	Stage 1.01-2.02 AND gangrene of the bowel [operative/pathology report]
2.04	with peritonitis or perforation	Stage 1.01-2.03 AND peritonitis [operative/pathology report] OR perforation [KUB x-ray reports air under the diaphragm or perforation]
3.01	with sepsis	Stage 1.01-2.04 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

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**Disease: GIS23 Irritable Bowel Syndrome**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Irritable bowel syndrome	Stage 1.01 AND irritable bowel syndrome OR abdominal pain relieved by defecation AND stool frequency > 3 day OR stool frequency < 3 per week AND changed in stool form from baseline AND altered stool passage AND bloating AND abdominal distention OR spastic colitis OR mucous colitis

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**Disease: GIS24 Malabsorption from Blind Loop Syndrome**

**Etiology: Mechanical**

Stage	Description	Diagnostic findings
1.01	Blind loop syndrome	Bacterial overgrowth [quantitative intestinal aspirates which have $\geq 10^6$ cfu/ml] AND positive breath test report OR carbohydrate absorption deficiency [D-xylose tolerance test report]
2.01	with anemia	Stage 1.01 AND <b>anemia:</b>
2.02	with malnutrition	Stage 1.01-2.01 AND body weight $\geq$ 85% of ideal weight
2.03	with hypoalbuminemia	Stage 1.01-2.02 AND <b>hypoalbuminemia:</b>
2.04	with peripheral neuropathy or tetany or night blindness or hypocalcemia or dermatitis	Stage 1.01-2.03 AND peripheral neuropathy OR tetanus OR <b>hypocalcemia:</b> OR night blindness OR dermatitis
2.05	with hepatitis	Stage 1.01-2.04 AND <b>hepatitis:</b>
3.01	with renal failure	Stage 1.01-2.05 AND <b>renal failure:</b>
3.02	with wasting	Stage 1.01-2.03 AND body weight $\leq$ 75% of ideal weight
3.03	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.04	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

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# Clinical Criteria for Disease Staging

GIS25

**Disease: GIS25 Neoplasm, Benign: Adenomatous Polyps, Colon**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Hyperplastic polyps	Hyperplastic polyps [operative/pathology report]
1.02	Small tubular adenoma	Adenomatous polyp $\leq$ 15 mm. in diameter [operative/pathology report]
1.03	Tubular adenoma	Tubular adenomas > 15 mm. in diameter [operative/pathology report]
1.04	Tubulovillous adenoma	Stage 1.03 AND > 20% villous glands in polyp [operative/pathology report]
1.05	Villous adenoma	Stage 1.01-1.03 AND villous adenoma [operative/pathology report] OR > 50% villous glands in polyp [operative/pathology report]
2.01	with rectal bleeding	Stage 1.01-1.05 AND guaiac positive stools OR <b>bleeding:</b>
2.02	Villous adenomas with hypokalemia	Stage 1.05 AND <b>hypokalemia:</b>
2.03	Familial polyposis	History of polyps among members of the family AND > 100 colonic polyps [operative/pathology report] OR Peutz-Jeghers syndrome OR Turcot's syndrome
2.04	with carcinoma or Gardner's syndrome	Stage 1.01-2.03 AND adenocarcinoma [operative/pathology report] OR Gardner's syndrome
2.05	with intestinal or colonic obstruction	Stage 1.01-2.04 AND large bowel obstruction [KUB x-ray report or operative/pathology report]
2.06	with peritonitis	Stage 1.01-2.05 AND peritonitis [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.06 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: GIS25 Neoplasm, Benign: Adenomatous Polyps, Colon**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

GIS26

**Disease: GIS26 Neoplasm, Benign: Small Bowel**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign tumors small bowel	Adenomatous polyps [operative/pathology report] AND leiomyomas [operative/pathology report] OR fibromas [operative/pathology report] OR fibromyomas [operative/pathology report] OR neurofibromas [operative/pathology report] OR lipomas [operative/pathology report] OR hemangiomas [operative/pathology report] OR arteriovenous malformations [operative/pathology report]
2.01	with bleeding	Stage 1.01 AND guaiac positive stools OR <b>bleeding:</b>
2.02	with intestinal obstruction	Stage 1.01-2.01 AND small bowel obstruction [KUB x-ray report or operative/pathology report]
2.03	with peritonitis	Stage 1.01-2.02 AND peritonitis [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.03 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

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# Clinical Criteria for Disease Staging

**Disease: GIS27 Neoplasm, Malignant: Colon and Rectum**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of colon or rectal carcinoma	
1.01	Colon or rectal carcinoma in situ or limited to the mucosa and submucosa	Colorectal carcinoma limited to mucosa and submucosa AND carcinoma in situ OR American Joint Committee on Cancer Stage 0 OR Duke's classification for colorectal cancer Stage A [operative/pathology report]
2.01	Colon or rectal carcinoma extending to muscularis or serosa	Colorectal carcinoma limited to muscularis or serosa AND Duke's classification for colorectal cancer Stage B1 [operative/pathology report] OR American Joint Committee on Cancer Stage 1
2.02	with localized peritonitis or intra-abdominal abscess or extending to the subserosa or nonperitoneal tissue	Stage 1.01-2.01 AND localized peritonitis [operative/pathology report] OR intra-abdominal abscess [operative/pathology report or sonogram report or CT scan report] OR Duke's classification for colorectal cancer Stage B2 [operative/pathology report] OR American Joint Committee on Cancer Stage 2
2.03	with acute bleeding	Stage 1.01-3.01 AND <b>bleeding:</b>
2.04	with intestinal obstruction	Stage 1.01-2.03 AND intestinal obstruction [KUB x-ray reports small or large bowel obstruction]
2.05	with intususception or volvulus	Stage 1.01-2.04 AND intususception or volvulus [operative/pathology report]
2.06	with fistula formation	Stage 1.01-2.05 AND enteroenteric fistula [barium enema report or UGI series report] OR enterovesical fistula [barium enema report or urinalysis reports fecaluria] OR enterovaginal fistula [barium enema report or feces and flatus per vagina] OR enterocutaneous fistula [barium enema report or feces and flatus per sinus tract]
2.07	with gross perforation and peritonitis	Stage 1.01-2.06 AND free air within peritoneal cavity [KUB x-ray report or chest x-ray report] OR perforation of bowel [barium enema or chest x-ray report] OR peritonitis [perative/pathology report or peritoneal fluid culture reports growth of pathologic organism(s)]
3.01	extending to regional lymph nodes	Colorectal carcinoma limited to lymph nodes draining the colon and rectum AND Duke's classification for colorectal cancer Stage C [operative/pathology report] OR American Joint Committee on Cancer Stage 3

**Disease: GIS27 Neoplasm, Malignant: Colon and Rectum**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	with metastasis to extracolonic sites	Stage 1.01-3.01 AND mass lesion(s) in liver [CT scan report or MRI report or liver/spleen scan report] OR same carcinoma type present in liver [operative/pathology report] OR mass lesion(s) in bones [CT scan or bone scan report] OR same carcinoma type present in bones [operative/pathology report] OR mass lesion(s) in lungs [CT scan or MRI report or chest x-ray report] OR same carcinoma type present in lungs [operative/pathology report] OR mass lesion(s) in sites other than the colon or rectum [operative/pathology report or CT scan report] OR Duke's classification for colorectal cancer Stage D [operative/pathology report] OR American Joint Committee on Cancer Stage 4
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

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# Clinical Criteria for Disease Staging

GIS28

**Disease: GIS28 Neoplasm, Malignant: Esophagus**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of esophageal carcinoma	
1.01	Esophageal carcinoma in situ	Esophageal carcinoma in situ [operative/pathology report] AND Stage TIS N0 M0 OR American Joint Committee on Cancer Stage 0
1.02	Localized esophageal carcinoma	Esophageal carcinoma involves < 5 cm. of esophageal length [operative/pathology report] AND Stage T1 N0 M0 OR American Joint Committee on Cancer Stage 1
2.01	Extensive esophageal carcinoma	Esophageal carcinoma involves ≥ 5 cm. of esophageal length [operative/pathology report] AND esophageal carcinoma produces obstruction [operative/pathology report] OR circumferential involvement [operative/pathology report]
2.02	with nodal involvement	Stage 1.02-2.01 AND movable unilateral nodes [operative/pathology report] OR movable bilateral nodes [operative/pathology report] OR Stage T1 N1/N2 M0 OR America Joint Committee on Cancer Stage 2
3.01	with regional metastasis	Esophageal carcinoma involves nonesophageal tissues [operative/pathology report] AND involvement of recurrent laryngeal nerve [operative/pathology report] OR involvement of phrenic nerve [operative/pathology report] OR fixed lymph nodes [operative/pathology report] OR tracheal invasion [operative/pathology report] OR vena caval invasion [operative/pathology report] OR azygos vein invasion [operative/pathology report] OR Stage T3 OR Stage N3 OR American Joint Committee on Cancer Stage 3
3.02	with distant metastasis	Esophageal carcinoma tissue involves organs/tissue beyond the confines of the thoracic cavity [operative/pathology report] AND Stage M1 OR American Joint Committee on Cancer Stage 4
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: GIS28 Neoplasm, Malignant: Esophagus**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

GIS29

**Disease: GIS29 Neoplasm, Malignant: Small Bowel**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of malignant tumor of the small bowel.	
1.01	Malignant small bowel tumors	Adenocarcinoma [operative/pathology report] AND carcinoid tumors [operative/pathology report] OR sarcomas [operative/pathology report]
2.01	with bleeding	Stage 1.01 AND guaiac positive stools OR <b>bleeding:</b>
2.02	with intestinal obstruction	Stage 1.01-2.01 AND small bowel obstruction [x-ray report or operative/pathology report]
2.03	with peritonitis	Stage 1.01-2.02 AND peritonitis [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.03 AND <b>sepsis:</b>
3.02	with distant mets	Stage 1.01-3.01 AND adenocarcinoma of the small intestine [operative/pathology report] OR carcinoid tumor beyond the small intestine [operative/pathology report] OR sarcomas [operative/pathology report]
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

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# Clinical Criteria for Disease Staging

**Disease: GIS30 Neoplasm, Malignant: Stomach**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of gastric carcinoma	
1.01	Limited gastric carcinoma	Gastric carcinoma limited to the mucosa without penetration of the lamina propria [operative/pathology report] OR Stage T1S N0 M0 OR American Joint Committee on Cancer Stage 0
1.02	Mucosal gastric carcinoma	Gastric carcinoma limited to the mucosa and submucosa [operative/pathology report] OR Stage T1 N0 M0 OR Stage T1 N1 M0 OR Stage T2 N0 M0 OR American Joint Committee on Cancer Stage 1
2.01	Extensive gastric carcinoma	Gastric carcinoma involving the muscularis mucosa [operative/pathology report] OR Stage T1 N2 M0 OR Stage T2 N1 M0 OR American Joint Committee on Cancer Stage 2
2.02	invading beyond the serosa	Gastric carcinoma penetrates the serosa [operative/pathology report] OR Stage T3 N0 M0
3.01	with nodal involvement < 3 cm from primary tumor	Gastric carcinoma of the perigastric lymph node < 3 cm of the primary tumor along the greater or lesser curvature of the stomach [operative/pathology report] OR Stage T2 N2 M0 OR Stage T3 N1 M0 OR Stage T4 N0 M0 OR Stage T3 N2 M0 OR Stage T4 N1 M0 OR American Joint Committee on Cancer Stage 3
3.02	with nodal involvement ≥3 cm from primary tumor	Gastric carcinoma of the perigastric lymph node ≥ 3 cm from primary tumor along the greater or lesser curvature of the stomach [operative/pathology report]
3.03	involves adjacent tissue structures	Gastric carcinoma involving the lesser omentum [operative/pathology report] OR gastric carcinoma involving the perigastric fat [operative/pathology report] OR gastric carcinoma involving the regional ligaments [operative/pathology report] OR gastric carcinoma involving the greater omentum [operative/pathology report] OR gastric carcinoma involving the transverse colon [operative/pathology report] OR gastric carcinoma involving the spleen [operative/pathology report] OR gastric carcinoma involving the esophagus [operative/pathology report] OR gastric carcinoma involving the duodenum [operative/pathology report]

# Clinical Criteria for Disease Staging

**Disease: GIS30 Neoplasm, Malignant: Stomach**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.04	with involvement of distant lymph nodes	Gastric carcinoma involving the para-aortic lymph nodes [operative/pathology report] OR gastric carcinoma involving the hepatoduodenal lymph nodes [operative/pathology report] OR gastric carcinoma involving the retropancreatic lymph nodes [operative/pathology report] OR gastric carcinoma involving the mesenteric lymph nodes [operative/pathology report]
3.05	with extensive peritoneal tissue invasion	Gastric carcinoma involving the liver [operative/pathology report] OR gastric carcinoma involving the diaphragm [operative/pathology report] OR gastric carcinoma involving the pancreas [operative/pathology report] OR gastric carcinoma involving the abdominal wall [operative/pathology report] OR gastric carcinoma involving the adrenal glands [operative/pathology report] OR gastric carcinoma involving the kidneys [operative/pathology report] OR gastric carcinoma involving the retroperitoneum [operative/pathology report] OR gastric carcinoma involving the small intestine [operative/pathology report]
3.06	with distant metastasis	Gastric carcinoma involving tissues beyond confines of the abdominal cavity [operative/pathology report or CT scan or MRI report] OR Stage M1 OR Stage T4 N2 M0 OR American Joint Committee on Cancer Stage 4
3.07	with shock	Stage 2.01-3.06 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.07 AND death



**Disease: GIS30 Neoplasm, Malignant: Stomach**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

GIS31

**Disease: GIS31 Peptic Ulcer Disease**

**Etiology: Idiopathic; Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Peptic ulcer without complications	Peptic ulcer [endoscopy report or UGI series report] OR Helicobacter pylori infection [breath test report or pathology report]
2.01	with chronic bleeding	Stage 1.01 AND <b>anemia:</b> AND guaiac positive stools
2.02	with obstruction	Stage 1.01-2.01 AND gastric outlet obstruction [endoscopy report or UGI series report] OR peptic ulcer with obstruction [operative/pathology report]
2.03	with fistula formation	Stage 1.01-2.02 AND peptic ulcers with fistula formation [operative/pathology report or EGD report]
2.04	with free perforation or acute hemorrhage	Stage 1.01-2.03 AND peptic ulcers with perforation [operative/pathology report or UGI series report or KUB reports free air under diaphragm] OR acute hemorrhage [endoscopy report or angiography report] OR <b>bleeding:</b>
2.05	with generalized peritonitis	Stage 1.01-2.04 AND generalized peritonitis [operative or pathology report]
3.01	with hypotension	Stage 1.01-2.05 AND <b>hypotension:</b>
3.02	with sepsis	Stage 1.01-2.05 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.03 AND death

**Disease: GIS31 Peptic Ulcer Disease**

**Etiology: Idiopathic; Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

GIS32

**Disease: GIS32 Salmonellosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Salmonellosis	Salmonella spp. isolated from stools [stool culture reports]
2.01	Salmonellosis of the liver or bile ducts	Stage 1.01 AND <b>jaundice:</b> OR acute cholecystitis [operative/pathology report or sonogram report or HIDA scan report or oral cholecystogram report] OR liver abscess [operative/pathology report or sonogram report or liver/spleen scan report]
2.02	with intestinal complications	Stage 1.01-2.01 AND small bowel or large bowel abscess [operative/pathology report] OR small bowel or large bowel hemorrhage [bleeding scan report or operative/pathology report]
2.03	with peritonitis	Stage 1.01-2.02 AND peritonitis [operative/pathology report]
2.04	with pneumonia	Stage 1.01-2.03 AND <b>pneumonia:</b>
3.01	with sepsis	Stage 1.01-2.04 AND <b>sepsis:</b>
3.02	Salmonellosis of genitourinary tract	Stage 1.01-3.01 AND Salmonella pelvic abscess [operative/pathology report or sonogram or CT scan report] OR Salmonella <b>UTI:</b> OR Salmonella renal abscess [operative/pathology report or sonogram or CT scan report]
3.03	Salmonella endocarditis or pericarditis	Stage 1.01-3.02 AND <b>endocarditis:</b> OR <b>pericarditis:</b>
3.04	Salmonella meningitis	Stage 1.01-3.04 AND <b>meningitis:</b>
3.05	with shock	Stage 2.01-3.05 AND <b>shock:</b>
4.00	Salmonellosis with death	Stage 2.01-3.06 AND death

**Disease: GIS32 Salmonellosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

GIS33

**Disease: GIS33 Shigellosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Shigella gastroenteritis	Shigella spp. isolated from stools [stool culture report or serology report]
1.02	with mild dehydration	Stage 1.01 AND estimated loss of $\geq$ 5% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 3% of ideal body weight in adults/adolescents in 24 hours
2.01	with moderate dehydration	Stage 1.01 AND estimated loss of $\geq$ 10% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 5% of ideal body weight in adults/adolescents in 24 hours
3.01	with severe dehydration	Stage 1.01 AND estimated loss of $\geq$ 15% of ideal body weight in children $\leq$ 12 years old in 24 hours OR estimated loss of $\geq$ 7% of ideal body weight in adults/adolescents in 24 hours
3.02	with renal failure	Stage 2.01-3.01 AND <b>renal failure:</b>
3.03	with intestinal perforation	Stage 2.01-3.01 AND free air in the abdomen [flat plate x-ray report or CT scan report]
3.04	with sepsis	Stage 2.01-3.03 AND <b>sepsis:</b>
3.05	with disorientation or coma	Stage 2.01-3.04 AND <b>disorientation:</b> OR <b>coma:</b>
3.06	with shock	Stage 2.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.06 AND death

**Disease: GIS33 Shigellosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

**Disease: GIS34 Trichinosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Trichinosis	<p>Trichinella spp. myositis [muscle biopsy reports cysts or larvae]                      OR trichinosis [ELISA serologic test or complement fixation or fluorescent antibody or bentonite flocculation test show acute/convalescent titers ≥ fourfold increase]</p> <p><u>Presumptive Diagnostic Findings:</u>                      history of ingestion of inadequately cooked pork products or bear or walrus meat within 48 hours                      AND bowel movements ≥ 5 times a day                      AND edema of eyelids                      OR generalized muscle pain                      AND <b>eosinophilia:</b>                      AND CK &gt; 300 iu/l                      AND LDH &gt; 250 iu/l                      AND SGOT (AST) &gt; 60 iu/l</p>
2.01	with retinal hemorrhages	<p>Stage 1.01                      AND retinal hemorrhages</p>
2.02	with pneumonia	<p>Stage 1.01-2.01                      AND <b>pneumonia:</b></p>
3.01	with myocarditis	<p>Stage 1.01-2.02                      AND <b>myocarditis:</b></p>
3.02	with meningitis or encephalitis	<p>Stage 1.01-3.01                      AND <b>meningitis:</b></p>
3.03	with congestive heart failure	<p>Stage 1.01-3.02                      AND <b>congestive heart failure:</b></p>
3.04	with respiratory failure	<p>Stage 1.01-3.03                      AND <b>respiratory failure:</b></p>
3.05	with shock	<p>Stage 1.01-3.04                      AND <b>shock:</b></p>
4.00	with death	<p>Stage 1.01-3.05                      AND death</p>



**Disease: GIS34 Trichinosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**References**

Anonymous. From the Centers for Disease Control and Prevention. Foodborne Diseases Active Surveillance Network, 1996. JAMA. 1997;277(17):1344-1345.
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# Clinical Criteria for Disease Staging

GIS35

**Disease: GIS35 Tropical Sprue**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Tropical sprue	History of residence in tropics AND tropical sprue [jejunal biopsy reports absence of villi and lymphocytic infiltrate in lamina propria] AND <b>pancreatic insufficiency:</b>  <u>Presumptive Diagnostic Findings:</u> History of residence in tropics AND sore tongue AND history of $\geq 5$ bowel movements a day AND $\geq 5$ lbs. weight loss per week for $> 4$ weeks
1.02	with macrocytic anemia	Stage 1.01 AND <b>macrocytosis:</b> AND <b>anemia:</b> AND serum folate $\leq 2$ ng/ml [chemistry report] OR serum B12 $\leq 200$ pg/ml [chemistry report]
2.01	with moderate malnutrition	Stage 1.01-1.02 AND body weight $< 85\%$ of ideal weight
2.02	with severe malnutrition	Stage 1.01-2.01 AND body weight $\geq 75\%$ of ideal weight OR anasarca
3.01	with congestive heart failure	Stage 1.01-2.02 AND <b>congestive heart failure:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**Disease: GIS35 Tropical Sprue**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

GIS36

**Disease: GIS36 Typhoid Fever**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Typhoid carrier state	History of gastroenteritis within 14 days AND Salmonella typhi in stools [stool culture report]
1.02	Typhoid gastroenteritis	Salmonella typhi in stools [stool culture report] AND generalized abdominal pain AND bowel movements $\geq$ 5 times a day
2.01	Typhoid fever	Temperature $\geq$ 103 degrees orally or 103.5 degrees rectally AND 'rose spots' rash OR typhoid bacteremia [blood culture reports growth of Salmonella typhi] OR Salmonella typhi infection [Widal agglutination reaction or O/H antibody titers 2 weeks apart show $\geq$ fourfold increase in titers]
2.02	Typhoid hepatitis or leukopenia or anemia	Stage 2.01 AND <b>jaundice:</b> OR <b>leukopenia:</b> OR <b>anemia:</b>
2.03	with gastrointestinal bleeding	Stage 2.01-2.02 AND <b>bleeding:</b>
2.04	Typhoid fever with hepatomegaly or splenomegaly or cholecystitis	Stage 2.01-2.03 AND splenomegaly [physical examination or liver/spleen scan report or sonogram report or CT scan report or MRI report] OR hepatomegaly [physical examination or liver/spleen scan report or sonogram report or CT scan report or MRI report] OR acute cholecystitis [operative/pathology report or sonogram report or HIDA scan report] AND Salmonella typhi cholecystitis [biopsy culture reports growth of Salmonella typhi]
2.05	with peritonitis	Stage 2.01-2.04 AND air under diaphragm [KUB x-ray report] OR peritonitis [operative/pathology report]
2.06	Typhoid arthritis	Stage 2.01-2.05 AND Salmonella spp. arthritis [culture reports growth of pathologic organism(s)]
2.07	Typhoid osteomyelitis	Stage 2.01-2.06 AND <b>osteomyelitis:</b>
2.08	Typhoid urinary pyelonephritis or renal abscess or nephritis	Stage 2.01-2.07 AND pyelonephritis OR renal abscess [ultrasonography report or CT scan report or MRI report] OR nephritis

**Disease: GIS36 Typhoid Fever**

**Etiology: Infection**

Stage	Description	Diagnostic findings
2.09	Typhoid pneumonitis	Stage 2.01-2.08 AND <b>pneumonia:</b>
3.01	Typhoid endocarditis	Stage 2.01-2.09 AND <b>endocarditis:</b>
3.02	Typhoid meningitis	Stage 2.01-3.01 AND <b>meningitis:</b>
3.03	with sepsis	Stage 2.01-3.02 AND <b>sepsis:</b>
3.04	with shock	Stage 2.1-3.3 AND <b>shock:</b>
4.00	Typhoid with death	Stage 2.01-3.04 AND <b>death</b>

**References**

Anonymous. From the Centers for Disease Control and Prevention. Foodborne Diseases Active Surveillance Network, 1996. JAMA. 1997;277(17):1344-1345.

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# Clinical Criteria for Disease Staging

GIS37

**Disease: GIS37 Ulcerative Colitis**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Ulcerative colitis without complications	<p>Ulcerative colitis [operative/pathology report]                      OR Ulcerative colitis: A spectrum of colonic mucosal changes from finely granular and friable mucosa with scattered hemorrhagic areas to zones of spongy red blood and pus filled ulcerations; areas may extend into muscular layer; there are infiltrates of polymorphonuclear and lymphoid inflammatory cells around affected regions [operative/pathology report]</p> <p><u>Presumptive Diagnostic Findings:</u>                      Ulcerations, loss of haustrations and marginal spiculations with or without colonic pseudopolyposis [barium enema report or colonoscopy report]</p>
2.01	with arthritis or uveitis or stomatitis or erythema nodosum or pyoderma gangrenosum or anemia or hypoproteinemia	<p>Stage 1.01                      AND <b>arthritis:</b>                      OR ankylosing spondylitis [chest x-ray report]                      OR sacroiliitis [pelvic x-ray report]                      OR erythema nodosum                      OR red, tender nodules on the anterior tibial surface                      OR uveitis [ophthalmologist's report]                      OR stomatitis                      OR pyoderma gangrenosum                      OR rapidly evolving cutaneous ulcer(s) with markedly undermined borders                      OR <b>anemia:</b>                      OR <b>hypoproteinemia:</b></p>
2.02	with hepatitis	<p>Stage 1.01-2.01                      AND <b>hepatitis:</b></p>

# Clinical Criteria for Disease Staging

GIS37

**Disease: GIS37 Ulcerative Colitis**

**Etiology:**

Stage	Description	Diagnostic findings
2.03	with cirrhosis of the liver or sclerosing cholangitis	Stage 1.01-2.02 AND <b>sclerosing cholangitis:</b> fibrosing inflammation of the intrahepatic or extrahepatic bile ducts [liver biopsy operative/pathology reports sclerosing cholangitis] OR <b>primary biliary cirrhosis:</b> inflammation of the medium sized bile ducts or portal triad progressing to periportal fibrosis [liver biopsy operative/pathology reports primary biliary cirrhosis] OR <b>micronodular cirrhosis:</b> thin bands of connective tissue within the hepatic parenchyma with no delineation of hepatic veins or portal spaces [liver biopsy operative/pathology reports micronodular cirrhosis] OR <b>macronodular cirrhosis:</b> bands of connective tissue within the hepatic parenchyma which contain hepatic veins or portal spaces [liver biopsy operative/pathology reports macronodular cirrhosis] OR <b>mixed cirrhosis:</b> bands of connective tissue within the hepatic parenchyma with areas with and without hepatic veins or portal spaces [liver biopsy operative/pathology reports mixed cirrhosis] OR <b>cirrhosis</b> [sonogram report or liver/spleen scan report]
2.04	with acute bleeding	Stage 1.01-2.03 AND hematochezia AND <b>bleeding:</b>
2.05	with toxic megacolon	Stage 1.01-2.04 AND diameter of colon $\geq$ 6cm. [KUB x-ray report or barium enema report]
2.06	with colonic perforation	Stage 1.01-2.05 AND free air under diaphragm [chest x-ray report or KUB report] OR contrast within peritoneal cavity [barium enema report]
2.07	with peritonitis	Stage 1.01-2.06 AND peritonitis [operative/pathology report or peritoneal effusion culture reports growth of pathologic organism(s)]
2.08	with deep vein thrombosis	Stage 1.01-2.07 AND <b>DVT:</b>
3.01	with sepsis	Stage 1.01-2.08 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**Disease: GIS37 Ulcerative Colitis**

**Etiology:**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

GIS38

**Disease: GIS38 Vascular Insufficiency of the Bowels**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Intestinal angina or claudication	Celiac artery stenosis [angiography report] OR mesenteric artery stenosis [angiography report]
2.01	Intestinal infarction	Superior mesenteric artery occlusion [angiography report] AND superior mesenteric vein thromboembolism [angiography report] OR celiac artery occlusion [angiography report]  Presumptive Diagnostic Findings: mesenteric artery occlusion [doppler ultrasonography report] OR celiac artery occlusion [doppler ultrasonography report] OR pneumatosis intestinalis [KUB x-ray report] AND ileus pattern of small and large intestine [KUB x-ray report] OR thumb printing of the intestine [KUB or Barium enema report]
2.02	with gangrene of the bowels	Stage 2.01 AND gangrene of the bowels [operative/pathology report]
2.03	with perforation of the bowels or peritonitis	Stage 2.01-2.02 AND air under the diaphragm [KUB x-ray report] OR peritonitis [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.03 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: GIS38 Vascular Insufficiency of the Bowels**

**Etiology:**

Stage	Description	Diagnostic findings
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**References**

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**Disease: GIS80 Complications of Gastrointestinal Treatment**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Mechanical complications of gastrostomy, colostomy; post GI surgery syndrome, postop malabsorption, vomiting, or functional disorder	
2.01	Infection of gastrostomy, colostomy, radiation gastroenteritis	

**References**

# Clinical Criteria for Disease Staging

GIS81

**Disease: GIS81 Gastroenteritis**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Gastroenteritis with or without mild dehydration	
2.01	with moderate dehydration	
3.01	with severe dehydration	
3.02	with severe dehydration and renal failure	

**References**

# Clinical Criteria for Disease Staging

GIS82

**Disease: GIS82 Neoplasm, Benign: Other Gastrointestinal System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm gastrointestinal system	

References

# Clinical Criteria for Disease Staging

GIS83

**Disease: GIS83 Neoplasm, Malignant: Other Gastrointestinal System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of other gastrointestinal malignancy	
1.01	Primary malignant neoplasm of peritoneum or other gastrointestinal or intra-abdominal site	
2.01	with abdominal or peritoneal lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

## References

# Clinical Criteria for Disease Staging

GIS84

**Disease: GIS84 Other Diseases of Esophagus, Stomach, and Duodenum**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Esophagitis, duodenitis, dilation of stomach	
2.01	with hemorrhage, obstruction or fistula	

**References**

**Disease: GIS85 Other Gastrointestinal Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Peritoneal adhesions, rectal prolapse, angiodysplasia, malabsorption	
2.01	Paralytic ileus, volvulus, or other intestinal obstruction, hemoperitoneum, effusion, fistula, GI hemorrhage with or without blood loss anemia	

**References**



**Disease: GIS86 Other Gastrointestinal Infections****Etiology:**

Stage	Description	Diagnostic findings
2.01	Pneumococcal or other peritonitis, intestinal abscess	

**References**

**Disease: GIS87 Other Gastrointestinal or Abdominal Symptoms****Etiology:**

Stage	Description	Diagnostic findings
1.01	Nausea, vomiting, heartburn, abnormal bowel sounds, diarrhea	

**References**

# Clinical Criteria for Disease Staging

GUS01

**Disease: GUS01 Bladder Disorders**

**Etiology: Degenerative; Trauma; Metabolic**

Stage	Description	Diagnostic findings
1.01	Irradiation cystitis or chronic cystitis or calcified bladder or contracted bladder or hypertonic bladder or atonic bladder or diverticulum of bladder	Irradiation cystitis [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report] OR calcified bladder [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report] OR contracted bladder [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or scan report] OR hypertonic bladder [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report] OR atonic bladder [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report] OR diverticulum of bladder [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report]
1.02	Bladder neck obstruction	Bladder neck obstruction [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report]
2.01	Bladder fistula	Bladder fistula [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report]
2.02	Enterovesical fistula	Enterovesical fistula [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report]
2.03	Hemorrhage into bladder wall	Hemorrhage into bladder [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report]
2.04	Rupture of the bladder	Rupture of the bladder [operative/pathology report or cystography report or cystoscopy report or intravenous urography report or CT scan report]
2.05	with chronic renal failure	Stage 1.01-2.04 AND <b>chronic renal failure:</b>
3.01	with acute renal failure	Stage 1.01-2.05 AND <b>acute renal failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 3.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.03 AND <b>death</b>

**Disease: GUS01 Bladder Disorders**

**Etiology: Degenerative; Trauma; Metabolic**

Stage	Description	Diagnostic findings
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**References**

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**Disease: GUS02 Calculus of the Urinary Tract**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
1.01	Nephrolithiasis	Nephrolithiasis [KUB x-ray report or sonogram report or intravenous pyelogram report]
2.01	with urinary tract infection	Stage 1.01 AND <b>UTI:</b>
2.02	with hydronephrosis	Stage 1.01-2.01 AND hydronephrosis [operative/pathology report or sonogram report or intravenous pyelogram report]
2.03	with azotemia	Stage 1.01-2.02 AND <b>azotemia:</b>
2.04	with chronic renal failure	Stage 1.01-2.03 AND <b>chronic renal failure:</b>
3.01	with acute renal failure	Stage 1.01-2.04 AND <b>acute renal failure:</b>
3.02	with sepsis	Stage 2.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 2.02-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

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# Clinical Criteria for Disease Staging

GUS03

**Disease: GUS03 Glomerulonephritis, Acute**

**Etiology: Infection; Metabolic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Focal Glomerulonephritis	Glomerular hematuria AND Berger's disease [renal biopsy report] OR IgA mesangial nephropathy [renal biopsy report] OR idiopathic focal glomerulonephritis [renal biopsy report]
2.01	Glomerulonephritis	Red blood cell casts [urinalysis report] OR anti-glomerular basement membrane disease [renal biopsy report] OR Goodpasture's syndrome [renal biopsy report] OR membranoproliferative glomerulonephritis [renal biopsy report] OR immune complex glomerulonephritis [renal biopsy report] OR idiopathic glomerulonephritis [renal biopsy report] OR rapidly progressive glomerulonephritis [renal biopsy report] AND positive p-ANCA [chemistry report] OR positive c-ANCA [chemistry report] OR history of rheumatic fever $\leq$ 6 weeks AND <b>hematuria:</b> AND <b>oliguria:</b> OR ASO titer $\geq$ 250 u/l [chemistry report] OR antihyaluronidase titer $\geq$ 1000 u/l [chemistry report] AND serum complement C3 $\leq$ 48 mg/dl [chemistry report]
2.02	with hypertension	Stage 1.01-2.01 AND <b>hypertension:</b>
2.03	with nephrotic syndrome	Stage 1.01-2.02 AND urine protein excretion $>$ 3.5 g/1.73 m <sup>2</sup> per 24 hours [urine chemistry report] AND serum albumin $\leq$ 3.0 g/dl [chemistry report]
3.01	with renal failure	Stage 1.01-2.03 AND <b>acute renal failure:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.05 AND death

**Disease: GUS03 Glomerulonephritis, Acute**

**Etiology: Infection; Metabolic; Toxicologic**

Stage	Description	Diagnostic findings
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**References**

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**Disease: GUS04 Injury: Urinary Tract**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Trauma of urethra	History of trauma AND trauma of the urethra [operative/pathology report or cystoscopy report or physical examination]
1.02	Trauma of the bladder	History of trauma AND trauma of the bladder [cystography report or operative/pathology report or cystoscopy report]
1.03	Trauma of the ureters	History of trauma AND trauma of the ureter [excretory or retrograde urogram, sonogram or operative or pathology report]
1.04	Trauma of the kidney	History of trauma AND trauma of the kidney [CT scan report or KUB x-ray report]
2.01	with hemorrhage	Stage 1.01-1.04 AND <b>bleeding:</b>
2.02	with obstruction	Stage 1.01-2.01 AND urinary tract obstruction [excretory urogram report]
3.01	with acute renal failure	Stage 1.01-2.03 AND <b>acute renal failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

GUS05

**Disease: GUS05 Neoplasm, Malignant: Bladder, Urinary**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of carcinoma of the bladder	
1.01	Carcinoma of the bladder in situ or papillary noninvasive bladder carcinoma	Carcinoma of the bladder in situ [operative/pathology report] OR papillary bladder carcinoma [operative/pathology report]
1.02	within the mucosa	Carcinoma of the bladder without microscopic invasion beyond the lamina propria [operative/pathology report] OR Stage 1 of the American Joint Committee of Cancer OR Stage T1
2.01	with invasion of the superficial muscle layer of the bladder	Carcinoma of the bladder with microscopic invasion of the superficial muscle of the bladder [operative/pathology report] OR carcinoma of the bladder extending through muscle to both edges of the resected specimen [operative/pathology report] OR Stage 2 of the American Joint Committee of Cancer OR Stage T2 OR Stage T3a
3.01	with invasion of deep muscles	Carcinoma of the bladder with microscopic invasion of deep bladder muscle [operative/pathology report] OR carcinoma of the bladder invasion of perivesical fat [operative/pathology report] OR Stage 3 of the American Joint Committee of Cancer OR Stage T3b
3.02	with local invasion	Carcinoma of the bladder invades neighboring organs [operative/pathology report] OR carcinoma of the bladder invades the prostate [operative/pathology report] OR carcinoma of the bladder invades the uterus [operative/pathology report] OR carcinoma of the bladder invades the vagina [operative/pathology report] OR carcinoma of the bladder fixed to the pelvic wall [operative/pathology report] OR carcinoma of the bladder infiltrates the abdominal wall [operative/pathology report] OR carcinoma of the bladder infiltrates the abdominal wall [operative/pathology report] OR Stage T4 OR Stage T4a OR Stage T4b
3.03	with nodal involvement	Involvement of any homolateral regional node [operative/pathology report] OR involvement of bilateral regional nodes [operative/pathology report] OR involvement of contralateral regional nodes [operative/pathology report] OR Stage N1 OR Stage N2 OR Stage N3

**Disease: GUS05 Neoplasm, Malignant: Bladder, Urinary**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.04	with distant metastasis	Stage 1.01-3.03 AND carcinoma of the bladder beyond the confines of the pelvic cavity [operative/pathology report] OR Stage 4 American Joint Committee on Cancer
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

## References

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**Disease: GUS06 Neoplasm, Malignant: Kidneys**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of cancer of the kidneys	
1.01	Cancer confined to the kidney	Cancer confined to the kidney [operative/pathology report] OR Robeson stage I
2.01	Cancer extends through the renal capsule but is confined by Gerota's fascia	Cancer extends through the renal capsule but is confined by Gerota's fascia [operative/pathology report] OR Robeson stage II
2.02	Cancer invading renal vein or cancer extending into vena cava	Cancer extending into renal vein [operative/pathology report] OR cancer extending into vena cava [operative/pathology report] OR Robeson Stage IIIA
3.01	Cancer extending to hilar lymph nodes	Cancer extending to hilar lymph nodes [operative/pathology report] OR Robeson Stage IIIB
3.02	Cancer of the kidneys with distant metastasis	Cancer of the kidneys beyond the confines of the abdominal cavity [operative/pathology report] OR Robeson Stage 4
4.00	Cancer of the kidneys and death	Stage 2.01-3.03 AND death

**References**

Motzer RJ, Bander NH, Nanus DM. Renal-cell carcinoma. *N Engl J Med.* 1996;335(12):865-75.

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# Clinical Criteria for Disease Staging

GUS07

**Disease: GUS07 Nephrotic Syndrome**

**Etiology: Genetic (or hereditary); Immune; Metabolic; Toxicologic**

Stage	Description	Diagnostic findings
2.01	Nephrotic syndrome	Urine protein excretion > 3.5 g/1.73 m <sup>2</sup> per 24 hours [urine chemistry report] AND serum albumin ≤ 3.0 g/dl [chemistry report]
2.02	with hypercholesteremia	Stage 2.01 AND total serum cholesterol ≥ 200 mg/dl [chemistry report]
2.03	with hypertension	Stage 2.01-2.02 AND <b>hypertension:</b>
2.04	with deep vein thrombosis	Stage 2.01-2.03 AND <b>DVT:</b>
2.05	with renal vein thrombosis	Stage 2.01-2.04 AND renal vein thrombosis [renal vein Doppler or MRA or Angiogram report]
2.06	with peritonitis	Stage 2.01-2.05 AND peritonitis [operative/pathology report]
2.07	with chronic renal failure	Stage 2.01-2.06 AND <b>chronic renal failure:</b>
3.01	with acute renal failure	Stage 2.01-2.07 AND <b>acute renal failure:</b>
3.02	with sepsis	Stage 2.04-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

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Orth SR, Ritz E. The nephrotic syndrome. N Engl J Med. 1998;338(17):1202-11.

**Disease: GUS08 Renal Failure**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
2.01	Azotemia	<b>Azotemia:</b>
2.02	Azotemia with hypertension	Stage 2.01 AND <b>hypertension:</b>
2.03	Azotemia with oliguria	Stage 2.01-2.02 AND <b>oliguria:</b>
2.04	Chronic renal failure	<b>Chronic renal failure:</b>
3.01	Acute renal failure	<b>Acute renal failure:</b>
3.02	with pericarditis	Stage 3.01 AND <b>pericarditis:</b>
3.03	with coagulation defect	Stage 3.02 AND <b>coagulation defect:</b>
3.04	with acute congestive heart failure	Stage 3.01-3.03 AND <b>congestive heart failure:</b>
3.05	with pulmonary edema	Stage 3.01-3.04 AND pulmonary edema [chest x-ray report]
3.06	with shock or ventricular fibrillation or ventricular flutter	Stage 3.01-3.05 AND <b>shock:</b> OR ventricular fibrillation [EKG report] OR ventricular flutter [EKG report]
4.00	with death	Stage 3.01-3.06 AND death

**References**

Abuelo JG. Diagnosing vascular causes of renal failure. *Annals of Internal Medicine*. 1995;123(8):601-14.

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# Clinical Criteria for Disease Staging

GUS09

**Disease: GUS09 Urethritis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Urethritis	Dysuria AND <b>UTI:</b>
1.02	with cystitis	Stage 1.01 AND cystitis (cystoscopy report)
1.03	with chronic or recurrent prostatitis	Stage 1.01-1.02 AND <b>prostatitis:</b> AND history of prior prostatitis
1.04	with epididymitis	Stage 1.01-1.03 AND inguinal pain OR spermatic cord pain OR edema of scrotum AND erythema of scrotum AND tenderness of scrotum
1.05	with acute prostatitis	Stage 1.01-1.04 AND <b>prostatitis:</b>
1.06	Urethral abscess	Urethral abscess [by pelvic ultrasound or urologist report]
2.01	with obstruction	Stage 1.01-1.05 AND urinary tract obstruction [excretory urogram report]
3.01	with renal failure	Stage 1.01-2.01 AND <b>renal failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: GUS09 Urethritis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**References**

Morrison G. Kidney. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:850-878.
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# Clinical Criteria for Disease Staging

GUS10

**Disease: GUS10 Urinary Tract Infections**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Urinary tract infection	<b>UTI:</b>
1.02	Acute cystitis	Stage 1.01 AND <b>hematuria:</b>
2.01	Acute pyelonephritis	UTI: AND flank pain OR costovertebral tenderness OR kidney punch positive
2.02	with bacteremia	Stage 1.01-2.01 AND <b>bacteremia:</b>
2.03	Acute pyelonephritis with obstruction	Stage 2.01-2.02 AND hydronephrosis or dilated ureters [sonography report or CT scan report or KUB x-ray report]
2.04	with perinephric abscess	Stage 1.01-2.03 AND perinephric abscess [operative/pathology report or sonogram or CT scan report]
2.05	with necrotizing papillitis	Stage 1.01-2.04 AND necrotizing papillitis [operative/pathology report]
3.01	with renal failure	Stage 1.01-2.06 AND <b>chronic renal failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death



**Disease: GUS10 Urinary Tract Infections**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**Disease: GUS80 Neoplasm, Benign: Urinary Tract**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of urinary tract	

References

# Clinical Criteria for Disease Staging

GUS81

**Disease: GUS81 Neoplasm, Malignant: Other Genitourinary System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of malignant neoplasm of other urinary sites	
1.01	Primary malignant neoplasm of ureter, urethra, and other urinary sites	
2.01	with lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

## References

# Clinical Criteria for Disease Staging

GUS83

**Disease: GUS83 Other Disorders of Kidney or Ureter**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Impaired renal function, small kidney, hydronephrosis, nephroptosis, stricture or obstruction of ureter	
2.01	Renal sclerosis, osteodystrophy, chronic pyelonephritis, vesicoureteral reflux with nephropathy, urethral syndrome	
3.01	with acute renal failure	

**References**

**Disease: GUS84 Other Urinary Symptoms**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Dysuria, urinary retention, incontinence, polyuria, discharge, extravasation of urine	
1.02	Renal colic	

**References**

# Clinical Criteria for Disease Staging

GYN01

**Disease: GYN01 Abortion: Elective**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
1.01	Elective abortion	Voluntary dilation and evacuation of uterus AND pregnancy of < 12 weeks
1.02	Elective abortion of uterus ≥ 12 weeks gestation	Voluntary dilation and evacuation of uterus OR Voluntary pharmaceutical evacuation of uterus AND pregnancy of ≥ 12 weeks
2.01	Perforation of uterus	Stage 1.01-1.02 AND perforation of the uterus [operative/pathology report]
2.02	with laceration of bladder	Stage 1.01-2.01 AND laceration of bladder [operative/pathology report]
2.03	with perforation of the bowels	Stage 1.01-2.02 AND free air under the diaphragm [KUB upright x-ray report] OR perforation of bowels [operative/pathology report]
2.04	with peritonitis	Stage 1.01-2.03 AND peritonitis [operative/pathology report]
2.05	with laceration of pelvic arteries and mesenteric arteries	Stage 1.01-2.04 AND laceration of pelvic arteries [operative/pathology report] OR laceration of mesenteric arteries [operative/pathology report]
3.01	with pulmonary embolism	Stage 1.01-2.05 AND <b>pulmonary embolism:</b>
3.02	with renal failure	Stage 1.01-3.01 AND <b>renal failure:</b>
3.03	with sepsis	Stage 2.02-3.02 AND <b>sepsis:</b>
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

## References

Creasy R, Resnik R. Maternal Fetal Medicine. 4th ed. Saunders. 1999.

# Clinical Criteria for Disease Staging

GYN02

**Disease: GYN02 Abortion: Spontaneous**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
1.01	Threatened abortion	Bleeding per cervix AND dilation of the cervix < 1 cm. AND pregnancy of ≤ 20 weeks
1.02	Inevitable abortion	Cervix dilated ≥ 1 cm. AND bleeding per cervix AND pregnancy of ≤ 20 weeks
1.03	Incomplete abortion	Incomplete passage of products of conception AND pregnancy of ≤ 20 weeks AND cervix ≥ 1cm OR products of conception within uterus on ultrasound
1.04	Missed abortion	Pregnancy of ≤ 20 weeks AND no yolk sac when gestational sac average diameter ≥ 5 mm [transvaginal ultrasound report] AND no embryo when gestational sac average diameter ≥ 16mm [transvaginal ultrasound report] AND no heart activity when gestational sac average diameter ≥ 18mm [transvaginal ultrasound report]
1.05	Complete abortion	Products of conception AND passage of membranes AND passage of decidual lining AND pregnancy of ≤ 20 weeks AND dilatation of cervix < 1cm OR no products of conception [ultrasound report]
2.01	with hemorrhage	Stage 1.01-1.05 AND <b>bleeding:</b>
2.02	with chorioamnionitis or endometritis	Stage 1.01-2.01 AND chorioamnionitis [culture reports growth of pathologic organism(s)] OR antepartum fever and uterine tenderness OR endometritis [culture reports growth of pathologic organism(s)] OR postpartum fever and uterine tenderness
3.01	with disseminated intravascular coagulation	Stage 1.05-2.02 AND <b>DIC:</b>
3.02	with pulmonary embolism	Stage 1.01-3.01 AND <b>pulmonary embolism:</b>
3.03	with renal failure	Stage 1.01-3.02 AND <b>renal failure:</b>

**Disease: GYN02 Abortion: Spontaneous**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
3.04	with sepsis	Stage 1.01-3.03 AND <b>sepsis:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

## References

Creasy R, Resnik R. Maternal Fetal Medicine. 4th ed. Saunders. 1999.

Cunningham FG, MacDonald PC, Gant NF, Lareno K, Gilstrap LC, eds. Williams Obstetrics. 19th ed. Norwalk, CT: Appleton & Lange; 1994.



# Clinical Criteria for Disease Staging

GYN03

**Disease: GYN03 Abruptio Placentae**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
1.01	Localized abruptio placentae, grade I	Localized abruptio placentae [sonogram or physical/pathologic findings] OR placenta post delivery Grade 1 OR mild bleeding AND normal blood pressure AND normal fetal heart rate AND no <b>DIC</b> :
2.01	Moderate abruptio placentae or grade II	Stage 1.01 AND localized uterine pain AND moderate vaginal bleeding OR concealed bleeding [sonogram report] OR fetal tachycardia/distress OR fibrinogen < 250 mg/dl [chemistry report]
2.02	Severe abruptio placentae, grade III	Stage 1.01-2.01 AND board-like rigidity of the uterus AND diffuse abdominal pain AND hypotension AND fibrogen < 150 mg/dl [chemistry report] OR fetal death
3.01	with disseminated intravascular coagulation	Stage 1.01-2.03 AND <b>DIC</b> :
3.02	with renal failure	Stage 1.01-3.01 AND <b>renal failure</b> :
3.03	with shock	Stage 2.01-3.02 AND <b>shock</b> :
4.00	with death	Stage 2.01-3.03 AND death

**References**

Creasy R, Resnik R. Maternal Fetal Medicine. 4th ed. Saunders. 1999.

Cunningham FG, MacDonald PC, Gant NF, Lareno K, Gilstrap LC, eds. Williams Obstetrics. 19th ed. Norwalk, CT: Appleton & Lange; 1994.

# Clinical Criteria for Disease Staging

GYN04

**Disease: GYN04 Anomaly: External Female Genitalia**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Agglutination of the labia or labial fusion	Adherence of the labia at the midline
1.02	Imperforate hymen	Imperforate hymen
1.03	Septate vagina or double vagina	Septum running longitudinally through the length of the entire vagina OR septum running longitudinally through the length of part of the vagina
1.04	Transverse vaginal septum	Transverse vaginal septum
1.05	Cloaca	Common opening for the vaginal and urethra OR urogenital sinus
2.01	Congenital absence of the vagina	Absence of the upper third of the vagina
2.02	Female pseudohermaphroditism or total absence of vagina	Masculinization of the external female genitalia OR pseudohermaphroditism OR obliteration of vagina in female genotype

## References

MacKay HT. Gynecology. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:691-724.

Wentz AC. Congenital anomalies and intersexuality. In: Jones III HW, Wentz AC, Burnett LS, eds. Novak's Textbook of Gynecology. 11th ed. Baltimore, MD: Williams & Wilkins; 1988:140-188.

# Clinical Criteria for Disease Staging

GYN05

## Disease: GYN05 Anomaly: Uterus

### Etiology: Congenital

Stage	Description	Diagnostic findings
1.01	Arcuate uterus	Arcuate uterus [operative/pathology report]
1.02	Septate uterus	Septate uterus [hysteroscopy or hysterosalpingography or operative/pathology report]
1.03	Uterus bicornuate	One vagina AND one cervix AND two-horned uterus [hysteroscopy or hysterosalpingography or operative/pathology report]
1.04	Uterus bicornuate bicollis	Single vagina OR double vagina AND double cervix AND two-horned noncommunicating uterus [hysteroscopy or hysterosalpingography or operative/pathology report]
1.05	Uterus didelphys	Double vagina AND double cervix AND two-horned noncommunicating uteri with a common wall [operative/pathology report]
1.06	Asymmetrical double uterus	Stage 1.01-1.04 AND asymmetry of the double uterus
1.07	Unicornuate uterus	Unicornuate uterus [hysteroscopy or hysterosalpingography or operative/pathology report]
1.08	Rudimentary uterine horn	Stage 1.01-1.06 AND rudimentary uterine horn [hysteroscopy or hysterosalpingography or operative/pathology report]
1.09	Blind uterine horn	Stage 1.01-1.06 AND one horn does not communicate with either horn or vagina [hysteroscopy or hysterosalpingography or operative/pathology report]
1.10	Absence of the uterus	Absence of the uterus [hysteroscopy or hysterosalpingography or operative/pathology report]

### References

MacKay HT. Gynecology. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:691-724.

Wentz AC. Congenital anomalies and intersexuality. In: Jones III HW, Wentz AC, Burnett LS, eds. Novak's Textbook of Gynecology. 11th ed. Baltimore, MD: Williams & Wilkins; 1988:140-188.

# Clinical Criteria for Disease Staging

GYN06

**Disease: GYN06 Ante- and Postpartum Complications**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
1.01	Pregnancy with hyperemesis gravidarum	Pregnancy AND hyperemesis gravidarum OR vomiting AND <b>dehydration:</b> AND ketosis [chemistry report]
1.02	with malpresentation	Pregnancy AND breech presentation [sonogram or physical examination] OR face presentation [sonogram or physical examination] OR brow presentation [sonogram or physical examination] OR transverse lie [sonogram or physical examination]
1.03	with bacteriuria	Pregnancy AND bacteriuria [microbiology report or urinalysis report]
1.04	with vaginal bleeding	Pregnancy AND vaginal bleeding
2.01	with preterm labor	Pregnancy AND Preterm labor OR gestational age $\geq$ 20 weeks AND gestational age $<$ 36 weeks AND documented uterine contractions $>$ 8/hour AND Rupture membrane OR Intact membranes AND documented cervical change OR Cervical effacement $\geq$ 80% OR Cervical dilatation $\geq$ 2 cm
2.02	with chorioamnionitis	Pregnancy AND chorioamnionitis [amniotic fluid culture reports growth of pathologic organism(s)] OR <b>fever:</b> AND uterine tenderness
2.03	with deep vein thrombosis	Pregnancy AND <b>DVT:</b>
3.01	with pulmonary embolism	Pregnancy AND <b>pulmonary embolism:</b>
3.02	with renal failure	Pregnancy AND <b>renal failure:</b>
3.03	with congestive heart failure	Pregnancy AND <b>congestive heart failure:</b>

# Clinical Criteria for Disease Staging

GYN06

## Disease: GYN06 Ante- and Postpartum Complications

### Etiology: Pregnancy

Stage	Description	Diagnostic findings
3.04	with sepsis	Stage 3.01-3.03 AND <b>sepsis:</b>
3.05	with shock	Stage 3.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.04 AND death

### References

Creasy R, Resnik R. Maternal Fetal Medicine. 4th ed. Saunders. 1999.

**Disease: GYN07 Bartholinitis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Bartholin's gland cyst	Non-tender swelling of Bartholin's gland
1.02	Bartholinitis	Area of redness, induration, tenderness, and heat around Bartholin's gland OR     bartholinitis [culture reports growth of pathologic organism(s)]
1.03	with abscess formation	Stage 1.02 AND    abscess formation [operative/pathology report] OR     abscess

**References**

Holmes KK, Morse SA. Gonococcal infections. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:915-922.
Jones III HW. Benign diseases of the vulva and vagina. In: Jones III HW, Wentz AC, Burnett LS, eds. Novak's Textbook of Gynecology. 11th ed. Baltimore, MD: Williams & Wilkins; 1988:589-590.
MacKay HT. Gynecology. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:691-724.

# Clinical Criteria for Disease Staging

GYN09

**Disease: GYN09 Delivery, Cesarean Section**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
1.01	Cesarean section without complications	Delivery AND Cesarean section [operative/pathology report]
1.02	with wound hematoma or other minor complications	Stage 1.01 AND wound hematoma/seroma
1.03	with superficial abscess of incision area or cellulitis	Stage 1.02 AND superficial abscess formation of incision area OR cellulitis of incision area[s]
1.04	with endometritis	Stage 1.01 AND <b>fever:</b> AND uterine tenderness
2.01	with incision area dehiscence	Stage 1.02-1.03 AND dehiscence of incision area AND serous drainage OR sanguinous drainage
2.02	with deep abscess or necrotizing fasciitis	Stage 1.02-2.01 AND infection of incision area fat, muscle <u>and</u> fascia [operative/pathology report] OR necrotizing fasciitis [operative/pathology report]
2.03	with peritonitis	Stage 1.02-2.02 AND peritonitis [operative/pathology report] OR purulent abdominal drainage [(effusion culture reports growth of pathologic organism(s)]
2.04	with rupture of the uterus	Stage 1.01-2.03 AND rupture of the uterus [operative/pathology report]
3.01	with pulmonary embolism	Stage 1.02-2.04 AND <b>pulmonary embolism:</b>
3.02	with renal failure	Stage 1.01-3.01 AND <b>renal failure:</b>
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 1.01-3.03 AND <b>sepsis:</b>
3.05	with respiratory failure	Stage 1.01-3.04 AND <b>respiratory failure:</b>
3.06	with shock	Stage 1.02-3.05 AND <b>shock:</b>

# Clinical Criteria for Disease Staging

GYN09

**Disease: GYN09 Delivery, Cesarean Section**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
4.00	with death	Stage 1.02-3.06 AND death

## References

Creasy R, Resnik R. Maternal Fetal Medicine. 4th ed. Saunders. 1999.

Cunningham FG, MacDonald PC, Gant NF, Lareno K, Gilstrap LC, eds. Williams Obstetrics. 19th ed. Norwalk, CT: Appleton & Lange; 1994.



# Clinical Criteria for Disease Staging

GYN10

**Disease: GYN10 Delivery, Vaginal**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
1.01	Vaginal delivery with no complications or minor complications or delivery with first degree laceration	Delivery AND laceration of the vaginal mucosa OR laceration of the vulvar skin OR no complications OR minor complications
1.02	with second degree laceration or uterine atony with bleeding or retained placental fragments	Delivery AND laceration of the perineal musculature OR laceration of deep perimucosal vaginal tissue OR laceration of vaginal musculature OR uterine atony with bleeding < 500cc OR retained placental fragments
2.01	with third degree laceration	Delivery AND laceration of the anal sphincter OR laceration of the pelvic floor musculature
2.02	with fourth degree laceration	Delivery AND laceration of the anal mucosa OR laceration of the rectal mucosa
2.03	with laceration of the cervix or vaginal sulcus	Delivery AND laceration of the cervix OR laceration of the vaginal sulcus
2.04	with marked hemorrhage	Delivery AND > 500 cc. estimated total blood loss
2.05	with laceration of the bladder or urethra	Delivery AND laceration of the bladder [operative/pathology report or methylene blue test] OR laceration of the urethra [operative/pathology report or methylene blue test]
2.06	with deep vein thrombosis	Stage 1.01-2.05 AND <b>DVT:</b>
2.07	with inversion of the uterus	Stage 1.01-2.06 AND inversion of the uterus
2.08	with rupture of the uterus	Stage 1.01-2.07 AND rupture of the uterus [operative/pathology report]
3.01	with pulmonary embolism	Stage 1.01-2.08 AND <b>pulmonary embolism:</b>
3.02	with renal failure	Stage 1.01-3.01 AND <b>renal failure:</b>

# Clinical Criteria for Disease Staging

GYN10

**Disease: GYN10 Delivery, Vaginal**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 1.01-3.03 AND <b>sepsis:</b>
3.05	with respiratory failure	Stage 1.01-3.04 AND <b>respiratory failure:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.06 AND death

## References

Creasy R, Resnik R. Maternal Fetal Medicine. 4th ed. Saunders. 1999.

Cunningham FG, MacDonald PC, Gant NF, Lareno K, Gilstrap LC, eds. Williams Obstetrics. 19th ed. Norwalk, CT: Appleton & Lange; 1994.

# Clinical Criteria for Disease Staging

GYN11

## Disease: GYN11 Dysfunctional Uterine Bleeding

### Etiology: Metabolic

Stage	Description	Diagnostic findings
1.01	Hypomenorrhea, puberty bleeding, ovulation bleeding or metrorrhagia	Hypomenorrhea OR puberty bleeding OR ovulation bleeding OR metrorrhagia
1.02	Hypermenorrhea or polymenorrhea	Increase in the frequency of menses OR increase in the flow of menses OR increase in the duration of menses AND normal endometrium [operative/pathology report]
2.01	Dysfunctional uterine bleeding and anemia	Increase in the frequency of menses OR increase in the flow of menses OR increase in the duration of menses AND normal endometrium [operative/pathology report] AND <b>anemia:</b>
2.02	Dysfunctional uterine bleeding and marked anemia	Stage 2.01 AND hemoglobin < 8 gm/dl

### References

Carr BR, Bradshaw KD. Disorders of the ovary and female reproductive tract. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:2097-2115.

MacKay HT. Gynecology. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:691-724.

Wentz AC. Abnormal uterine bleeding. In: Jones III HW, Wentz AC, Burnett LS, eds. Novak's Textbook of Gynecology. 11th ed. Baltimore, MD: Williams & Wilkins; 1988:378-396.

# Clinical Criteria for Disease Staging

GYN12

## Disease: GYN12 Ectopic Pregnancy

### Etiology: Pregnancy

Stage	Description	Diagnostic findings
1.01	Tubal pregnancy	Ectopic pregnancy [operative/pathology/sonogram report]
2.01	Ruptured tubal pregnancy	Stage 1.01 AND blood in peritoneal cavity [operative/pathology report]
3.01	Abdominal pregnancy	Stage 1.01 AND Abdominal pregnancy [operative/pathology or sonogram report]
3.02	with shock	Stage 1.01-2.01 AND <b>shock:</b>
4.00	Ectopic pregnancy with death	Stage 2.01-3.02 AND death

### References

Creasy R, Resnik R. Maternal Fetal Medicine, 4th Ed., Saunders, 1999.

Cunningham FG, MacDonald PC, Gant NF, Lareno K, Gilstrap LC, eds. Williams Obstetrics, 19th Ed. Norwalk: Appleton & Lange, 1994.

# Clinical Criteria for Disease Staging

GYN13

**Disease: GYN13 Endometriosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Endometriosis interna	Endometriosis interna [laparoscopy or operative/pathology report] OR adenomyosis [laparoscopy or operative/pathology report]
1.02	Endometriosis externa, mild	Endometriosis externa [operative/pathology report]
2.01	Endometriosis externa	Stage 1.01 AND endometrial implants [laparoscopy or operative/pathology report] OR endometrioma [operative/path report] OR chocolate cysts [operative/pathology OR endometriosis, distant site [operative/pathology report] AND dense adhesions [laparoscopy or operative/pathology report] OR ovarian enclosure [laparoscopy or operative/pathology report] OR tubal enclosure [laparoscopy or operative/pathology report]
2.02	with ureteral obstruction or hydronephrosis	Stage 1.01 AND endometrial implants [laparoscopy or operative/pathology report] OR endometrioma [operative/path report] OR chocolate cysts [operative/pathology OR endometriosis, distant site [operative/pathology report] AND dense adhesions [laparoscopy or operative/pathology report] OR ovarian enclosure [laparoscopy or operative/pathology report] OR tubal enclosure [laparoscopy or operative/pathology report]
2.03	with intestinal obstruction	Stage 1.01-2.02 AND large bowel obstruction [KUB x-ray or operative/pathology report] OR small bowel obstruction [KUB x-ray or operative/pathology report]
2.04	with peritonitis	Stage 1.01-2.03 AND peritonitis [operative/pathology report]
3.01	with renal failure	Stage 2.02-2.04 AND <b>renal failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: GYN13 Endometriosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
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**References**

American College of Obstetrics and Gynecology. Endometriosis. ACOG Technical Bulletin 184. Washington, DC: ACOG 1993.
Carr BR, Bradshaw KD. Disorders of the ovary and female reproductive tract. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:2097-2115.
MacKay HT. Gynecology. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:691-724.
Wentz AC. Endometriosis. In: Jones III HW, Wentz AC, Burnett LS, eds. Novak's Textbook of Gynecology. 11th ed. Baltimore, MD: Williams & Wilkins; 1988:303-327.

# Clinical Criteria for Disease Staging

GYN14

**Disease: GYN14 Gonorrhea: Female**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Carrier or suspected carrier of gonorrhea	
1.02	Gonococcal endocervicitis or gonococcal infection of Skene's glands or gonococcal infection of Bartholin's glands or gonococcal pharyngitis or gonococcal conjunctivitis or gonococcal vulvovaginitis or gonococcal urethritis or gonococcal proctitis	Gonococci in exudates [gram stain of exudates report gram negative diplococci] OR gonococcal infection [culture reports growth of Neisseria gonorrhoeae] OR gonococcal conjunctivitis [gram stain of exudates report gram negative diplococci] OR gonococcal pharyngitis [gram stain of exudates report gram negative diplococci] OR gonococcal proctitis [gram stain of exudates report gram negative diplococci]
2.01	Gonococcal pelvic inflammatory disease	Stage 1.02 AND pain on cervical motion AND adnexal pain
2.02	with dermatitis	Stage 1.02-2.01 AND gonococcal dermatitis [skin wound culture reports growth of Neisseria gonorrhoeae]
2.03	with peritonitis	Stage 1.02-2.02 AND peritonitis [operative/pathology report]
3.01	with septic arthritis	Stage 1.02-2.03 AND <b>infectious arthritis:</b> OR gonococcal arthritis [culture reports growth of Neisseria gonorrhoeae]
3.02	Gonococcal endocarditis or gonococcal pericarditis	Stage 1.02-3.01 AND <b>endocarditis:</b> OR <b>pericarditis:</b>
3.03	Gonococcal meningitis	Stage 1.02-3.02 AND <b>meningitis:</b>
3.04	with congestive heart failure	Stage 3.01-3.03 AND <b>congestive heart failure:</b>
3.05	with sepsis	Stage 1.02-3.04 AND <b>sepsis:</b>
3.06	with shock	Stage 2.02-3.05 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.06 AND death

**Disease: GYN14 Gonorrhea: Female**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

<p>Eschenbach DA. Pelvic infections and sexually transmitted diseases. In: Scott JR, Disaia PJ, Hammond CB, Spellacy WN, eds. Danforth's Obstetrics and Gynecology. 6th ed. Philadelphia, PA: JB Lippincott; 1990:944-947.</p>
<p>Feigin RD, Sugerman R. Gonococcal infections. In: Behrman RE, Kliegman RM, Vaughan III VC, Nelson WE, eds. Nelson Textbook of Pediatrics. 14th ed. Philadelphia, PA: WB Saunders; 1992:716-720.</p>
<p>Holmes KK, Morse SA. Gonococcal infections. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:915-922.</p>
<p>Mackay HT. Gynecology. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange; 1998:691-724.</p>



**Disease: GYN15 Mastitis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Acute mastitis	Infected nipple discharge [nipple discharge culture reports growth of pathologic organism(s)] OR pus from nipple AND tenderness of breast AND erythema of breast
2.01	with abscess formation	Stage 1.01 AND abscess formation [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.01 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

Giuliano AE. Breast. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:666-689.

O'Hara RJ, Dexter SP, Fox JN. Conservative management of infective mastitis and breast abscesses after ultrasonographic assessment. British Journal of Surgery 1996;83(10):1413-4.

Schein M. Subareolar breast abscesses. Surgery 1996;120:902.

**Disease: GYN16 Neoplasm, Benign: Breast**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Contusion of the breast	Contusion of breast OR bruise of breast
1.02	Hematoma of the breast	Hematoma of the breast [operative/pathology report or physical examination]
1.03	Fat necrosis of the breast	Fat necrosis of the breast [operative/pathology report or physical examination]
1.04	Fibroadenoma of the breast	Fibroadenoma of the breast [operative/pathology report]
1.05	Fibrocystic disease of the breast or chronic cystic mastitis or solitary cyst or benign mammary dysplasia	Fibrocystic disease of the breast [operative/pathology report] OR chronic cystic mastitis [operative/pathology report] OR solitary cyst [operative/pathology report] OR benign mammary dysplasia [operative/pathology report]
2.01	Intraductal papilloma	Intraductal papilloma [operative/pathology report]

**References**

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Fiorica JV. Fibrocystic changes. Obstet Gynecol Clin North Am 1994;12:4

Giuliano AE. Breast. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:666-689.

**Disease: GYN17 Neoplasm, Benign: Ovary**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Follicle cysts or corpus luteum cysts	Follicle cysts [operative/pathology report] OR corpus luteum cysts [operative/pathology report]
1.02	Dermoid cysts	Dermoid cysts [operative/pathology report or pelvic x-ray report or pelvic sonogram report]
1.03	Serous cystic tumors	Serous tumors [operative/pathology report]
1.04	Endometrioid tumors or mucinous cystic tumors	Endometrioid tumors [operative/pathology report] OR mucinous cystic tumors [operative/pathology report]
1.05	Benign ovarian tumors and abdominal distention or symptoms of pressure on surrounding organs	Stage 1.01-1.04 AND abdominal distention OR nausea OR vomiting OR diffuse abdominal pain
1.06	Benign ovarian tumors and torsion of the ovaries	Stage 1.01-1.05 AND abdominal distention OR nausea OR vomiting OR diffuse abdominal pain
2.01	Benign ovarian tumors with rupture	Stage 1.01-1.06 AND ruptured benign tumor [operative/pathology report or sonogram report]
2.02	Benign ovarian tumors with peritonitis	Stage 1.01-2.01 AND peritonitis [operative/pathology report]
3.01	Benign ovarian tumors with sepsis	Stage 2.01-2.02 AND <b>sepsis:</b>
3.02	Benign ovarian tumors with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	Benign ovarian tumors with death	Stage 2.01-3.02 AND death

**References**

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**Disease: GYN18 Neoplasm, Benign: Uterus (Leiomyomas)**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Uterine leiomyomas	Uterine leiomyomas [operative/pathology report or sonogram report or CT scan or MRI report]
2.01	with anemia	Stage 1.01 AND <b>anemia:</b>
2.02	with pressure on bladder or rectum or bowels	Stage 1.01-2.01 AND frequency of urination OR abdominal distention OR lower abdominal distention OR constipation
2.03	with urinary retention	Stage 1.01-2.02 AND post-voiding residual urine $\geq$ 100 cc
2.04	with hydronephrosis or hydroureter	Stage 1.01-2.03 Hydronephrosis [IVP or sonogram report] OR hydroureter [IVP report or sonogram report]
2.05	with intestinal obstruction	Stage 1.01-2.04 AND large bowel obstruction [KUB x-ray or operative/pathology report ] OR small bowel obstruction [KUB x-ray or operative/pathology report]
2.06	with peritonitis	Stage 2.02-2.05 AND peritonitis [operative/pathology report]
3.01	with renal failure	Stage 2.02-2.06 AND <b>renal failure:</b>
3.02	with sepsis	Stage 2.02-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 2.02-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.03 AND death

**References**

Crombleholme WR. Obstetrics. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:724-748.

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# Clinical Criteria for Disease Staging

GYN19

**Disease: GYN19 Neoplasm, Malignant: Breast, Female**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of carcinoma of the breast	
1.01	in situ	Carcinoma of the breast in situ [operative/pathology report] OR American Joint Committee on Cancer Stage 0
1.02	Cystosarcoma phyllodes	Cystosarcoma phyllodes [operative/pathology report]
1.03	≤ 2cm in diameter	Carcinoma of the breast ≤ 2.0 cm in diameter [operative/pathology report] AND no lymph node involved [operative/pathology report] OR American Joint Committee on Cancer Stage 1
1.04	> 2cm and ≤ 5cm in diameter or single ipsilateral node involved	Carcinoma of the breast > 2 and ≤ 5.0 cm in diameter [operative/pathology report] OR single ipsilateral lymph node involved [operative/pathology report] OR American Joint Committee Stage 2a
2.01	> 5cm in diameter	Carcinoma of the breast > 5.0 cm in diameter [operative/pathology report] OR American Joint Committee Stage 2b
3.01	Nodal involvement with fixation	Cancer of the breast AND more than 1 ipsilateral node with fixation [operative/pathology report] OR American Joint Committee Stage 3a
3.02	tumor extension to skin or tumor extension to chest or internal mammary node involvement	Tumor extension to skin [operative/pathology report] OR tumor extension to chest [operative/pathology report] OR internal mammary node involvement [operative/pathology report] OR American Joint Committee Stage 3b
3.03	with metastasis	Carcinoma of the breast involving the lungs [operative/pathology report or chest x-ray or CT scan] OR carcinoma of the breast involving the liver [operative/pathology report or CT scan or liver/spleen scan] OR carcinoma of the breast involving the skeletal system [operative/pathology report or bone scan or x-ray] OR American Joint Committee Stage 4
4.00	with death	Stage 1.02-3.03 AND death

**Disease: GYN19 Neoplasm, Malignant: Breast, Female**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

GYN20

**Disease: GYN20 Neoplasm, Malignant: Cervix Uteri**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of cervical carcinoma	
1.01	Minimal cervical dysplasia	Dysplastic cells involve lower one-third of the cervical epithelium [operative/pathology/cytology report] OR Stage CIN I OR Low grade squamous intraepithelial lesion
1.02	Severe cervical dysplasia	Dysplastic cells involve lower two-thirds of the cervical epithelium [operative/pathology/cytology report] OR Stage CIN II OR Low grade squamous intraepithelial lesion
1.03	Carcinoma in situ or intraepithelial carcinoma	Dysplastic cells or carcinoma cells involve the full thickness of the cervical epithelium [operative/pathology/cytology report] OR International Federation of Gynecology and Obstetrics Stage 0 OR CIN III OR High risk squamous intraepithelial lesion
1.04	Microinvasive carcinoma or minimal stromal invasion	Atypical cells or dysplastic cells or carcinoma cells involve the basement membrane and/or minimal stromal (< 7mm horizontally and < 5mm vertically) invasion [operative/pathology/cytology report] OR International Federation of Gynecology and Obstetrics Stage IA
2.01	Macroscopic cervical carcinoma < 4cm confined to the cervix	Stage 1.04 AND Macroscopic carcinoma confined to the cervix < 4cm in size [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IB1
2.02	Macroscopic cervical carcinoma ≥ 4cm confined to the cervix	Stage 1.04-2.01 AND Macroscopic carcinoma ≥ 4cm in size confined to the cervix [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IB2
2.03	with extension to upper third of vagina	Stage 1.04-2.02 AND Cervical carcinoma with extension to upper third of vagina [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIA
2.04	with parametrial involvement	Stage 1.04-2.03 AND Cervical carcinoma with parametrial involvement [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIB
3.01	involves lower third of the vagina	Stage 1.04-2.04 AND Cervical carcinoma involves lower third of vagina [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIIA

# Clinical Criteria for Disease Staging

GYN20

**Disease: GYN20 Neoplasm, Malignant: Cervix Uteri**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	with extension to the pelvic wall or renal involvement	Stage 1.04-2.04 AND Cervical carcinoma extending to the pelvic wall [operative/pathology report] OR hydronephrosis [intravenous pyelography or CT scan or nuclear renogram or sonography] OR nonfunctioning kidney [intravenous pyelography or nuclear renogram] OR International Federation of Gynecology and Obstetrics Stage IIIB
3.03	with involvement of the bladder or rectum	Cervical carcinoma with extension into the urinary bladder [operative/pathology report] OR cervical carcinoma with extension into the rectum [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IVA
3.04	with distant organ involvement	Cervical carcinoma involves abdominal lymph nodes above the renal arteries [operative/pathology report] OR cervical carcinoma involves the liver [operative/pathology report] OR cervical carcinoma involves the large or small intestines [operative/pathology report] OR cervical carcinoma with growth beyond the peritoneal cavity [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IVB
4.00	with death	Stage 1.03-3.04 AND death

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# Clinical Criteria for Disease Staging

GYN22

**Disease: GYN22 Neoplasm, Malignant: Endometrium**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of endometrial carcinoma	
1.01	Endometrial carcinoma in situ	Endometrial carcinoma in situ [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage 0
1.02	Confined to the corpus uteri mucosa	Endometrial carcinoma limited to the corpus uteri mucosa [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IA
1.03	Confined to <50% of corpus uteri myometrial invasion	Stage 1.02 AND Endometrial carcinoma limited to <50% of corpus uteri myometrial invasion OR International Federation of Gynecology and Obstetrics Stage IB
1.04	Confined to corpus uteri with >50% myometrial invasion	Stage 1.01-1.03 AND Endometrial carcinoma with >50% myometrial invasion of corpus uteri OR International Federation of Gynecology and Obstetrics Stage IC
2.01	Involving the inguinal nodes	Stage 1.01-1.04 AND Endometrial carcinoma involving the cervical glands [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage II A
2.02	Involving the cervical stroma	Stage 1.01-2.01 AND Endometrial carcinoma involving the cervical stroma [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage II B
3.01	Extending to uterine serosa, adnexa or peritoneal cytology	Stage 1.01-2.02 AND Endometrial carcinoma extending to uterine serosa, adnexa or peritoneal cytology [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage III A
3.02	Extending to vagina	Stage 1.01-3.01 AND Endometrial carcinoma extending to vagina [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage III B
3.03	Extending to pelvic and paraaortic lymph nodes	Stage 1.01-3.02 AND Endometrial carcinoma extending to pelvic and paraaortic lymph nodes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage III C
3.04	Extending to bladder or rectal mucosa	Stage 1.01-3.03 AND Endometrial carcinoma extending to bladder or rectal mucosa [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IV A
3.05	Extending to distant organs or inguinal lymph nodes	Stage 1.01-3.04 AND Endometrial carcinoma extending to distant organs or inguinal lymph nodes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IV B

**Disease: GYN22 Neoplasm, Malignant: Endometrium**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.06 AND death

### References

American College of Obstetricians and Gynecologists. Classification and staging of gynecologic malignancies. ACOG Technical Bulletin 155. Washington, DC: ACOG 1991.

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# Clinical Criteria for Disease Staging

GYN23

**Disease: GYN23 Neoplasm, Malignant: Ovaries**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of ovarian carcinoma	
1.01	Ovarian carcinoma limited to one ovary with intact ovarian capsule	Carcinoma limited to one ovary and intact capsule [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IA
1.02	Limited to both ovaries with intact ovarian capsule	Stage 1.01 AND carcinoma limited to both ovaries and intact capsule [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IB
1.03	with ascites or malignant cells in peritoneal washings or rupture of ovarian capsule or spilling or external surface of ovary with carcinoma	Stage 1.01-1.02 AND ovarian carcinoma with ascites or malignant cells in peritoneal washings or rupture of ovarian capsule or spilling or external surface of ovary with carcinoma [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IC[report]
2.01	with extension to the uterus or fallopian tubes	Stage 1.01-1.03 AND ovarian carcinoma growth or metastasis to the uterus or fallopian tubes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIA
2.02	with extension to other pelvic structures	Stage 1.01-2.01 AND ovarian carcinoma involving the parametrium [operative/pathology report] OR ovarian carcinoma involving the rectum [operative/pathology report] OR ovarian carcinoma involving the urinary bladder [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIB
2.03	with pelvic extension and ascites	Stage 2.01-2.02 AND ascites [operative/pathology report] OR ovarian carcinoma cells in pelvic washings [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIC
3.01	with peritoneal micro-metastasis	Stage 1.01-2.03 AND ovarian carcinoma with peritoneal microscopic metastasis lymph nodes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIIA
3.02	with visible peritoneal/abdominal metastasis < 2cm in greatest dimension	Stage 1.01-3.01 AND ovarian carcinoma with a visible peritoneal/abdominal metastasis < 2cm in greatest dimension [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIIB
3.03	with visible peritoneal/abdominal metastasis =2cm in dimension and/or pelvic/abdominal lymph nodes	Stage 1.01-3.02 AND ovarian carcinoma with visible peritoneal/abdominal metastasis > or = 2cm in dimension and/or pelvic/abdominal lymph nodes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IIC

**Disease: GYN23 Neoplasm, Malignant: Ovaries**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.04	with distant metastasis or liver parenchymal involvement or positive pleural cytology	Ovarian carcinoma with growth or metastasis beyond the peritoneal cavity [operative/pathology report] OR ovarian carcinoma with metastasis to the liver parenchyma [operative/pathology report] OR positive pleural cytology [cytology report] OR International Federation of Gynecology and Obstetrics Stage V
4.00	with death	Stage 2.01-3.02 AND death

## References

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Jones III HW. Ovarian cysts and tumors. In: Jones III HW, Wentz AC, Burnett LS, eds. Novak's Textbook of Gynecology. 11th ed. Baltimore, MD: Williams & Wilkins; 1988:782-791.

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# Clinical Criteria for Disease Staging

GYN24

**Disease: GYN24 Neoplasm, Malignant: Vagina**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of carcinoma of the vagina	
1.01	Carcinoma of the vagina in situ	Carcinoma of the vagina in situ [operative/pathology report] OR intraepithelial carcinoma of the vagina [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage 0
1.02	limited to the vaginal mucosa	Carcinoma of the vagina limited to the vaginal mucosa [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage I
2.01	with involvement of the subvaginal tissue	Carcinoma of the vagina with involvement of the submucosa and/or parametrial [operative/pathology report] AND carcinoma of the vagina does not extend to the pelvic wall [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage II
3.01	with extension to the pelvic side wall	Carcinoma of the vagina with extension to the pelvic side wall [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage III
3.02	with extension beyond the true pelvis	Carcinoma of the vagina with extension beyond the true pelvis [operative/pathology report] OR carcinoma of the vagina with extension into the rectal mucosa [operative/pathology report] OR carcinoma of the vagina with extension into the bladder mucosa [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage IV
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND <b>death</b>

## References

American College of Obstetricians and Gynecologists. Classification and staging of gynecologic malignancies. ACOG Technical Bulletin 155. Washington, DC: ACOG 1991.

Jones III HW. Ovarian cysts and tumors. In: Jones III HW, Wentz AC, Burnett LS, eds. Novak's Textbook of Gynecology. 11th ed. Baltimore, MD: Williams & Wilkins; 1988:782-791.

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# Clinical Criteria for Disease Staging

GYN25

**Disease: GYN25 Neoplasm, Malignant: Vulva**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of carcinoma of the vulva	
1.01	Carcinoma in situ of the vulva	In situ cancer of the vulva [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage 0
1.02	Confined to the vulva and ≤ 2cm in diameter	Cancer of the vulva confined to the vulva [operative/pathology report] AND cancer of the vulva ≤ 2 cm in diameter [operative/pathology report] AND nonpalpable lymph nodes in either groin OR palpable but mobile lymph nodes in either groin OR normal lymph nodes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage I
2.01	Confined to the vulva but >2cm in diameter	Cancer of the vulva confined to the vulva [operative/pathology report] AND cancer of the vulva > 2 cm in diameter [operative/pathology report] OR nonpalpable lymph nodes in either groin OR normal lymph nodes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage II
3.01	with spread to adjacent organs	Cancer of the vulva with extension into the urethra [operative/pathology report] OR cancer of the vulva with extension into the anus [operative/pathology report] OR cancer of the vulva with extension into the perineum [operative/pathology report] OR cancer of the vulva with extension into the vagina [operative/pathology report] OR palpable lymph nodes in either groin OR enlarged and firm mobile lymph nodes in either groin OR cancer of the vulva in lymph nodes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage III
3.02	Invading the bladder or rectum or distant organs	Cancer of the vulva with extension into the urethra [operative/pathology report] OR cancer of the vulva with extension into the anus [operative/pathology report] OR cancer of the vulva with extension into the perineum [operative/pathology report] OR cancer of the vulva with extension into the vagina [operative/pathology report] OR palpable lymph nodes in either groin OR enlarged and firm mobile lymph nodes in either groin OR cancer of the vulva in lymph nodes [operative/pathology report] OR International Federation of Gynecology and Obstetrics Stage III
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: GYN25 Neoplasm, Malignant: Vulva**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

American College of Obstetricians and Gynecologists. Classification and staging of gynecologic malignancies. ACOG Technical Bulletin 155. Washington, DC: ACOG 1991.
Jones III HW. Ovarian cysts and tumors. In: Jones III HW, Wentz AC, Burnett LS, eds. Novak's Textbook of Gynecology. 11th ed. Baltimore, MD: Williams & Wilkins; 1988:782-791.
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# Clinical Criteria for Disease Staging

GYN26

**Disease: GYN26 Neoplasm: Trophoblastic Disease**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Hydatidiform mole	Hydatidiform mole [operative/pathology or biopsy or sonogram report]
2.01	Hydatidiform mole with pre-eclampsia	Stage 1.01 AND pre-eclampsia: blood pressure $\geq$ 140/90 mmHg on $\geq$ 2 occasions > 6 hrs apart AND urinary protein > 300 mg/24 hours or 1 plus on dip stick
2.02	Trophoblastic disease with hyperthyroidism	Stage 1.01-2.01 AND <b>hyperthyroidism:</b>
2.03	Trophoblastic disease with endometritis or myometritis	Stage 1.01-2.02 AND endometritis [endometrial culture reports growth of pathologic organism(s)] OR myometritis [myometrial culture reports growth of pathologic organism(s)]
2.04	Persistent trophoblastic disease	Stage 1.01-2.03 AND persistent or rising baseline beta-HCG levels after uterine evacuation
2.05	Trophoblastic disease with uterine hemorrhage	Stage 1.01 AND blood per vagina AND <b>bleeding:</b>
2.06	Invasive mole	Local invasion of the myometrium by the trophoblastic tissue [operative/pathology report]
2.07	Trophoblastic disease with choriocarcinoma	Hydatidiform mole [operative/pathology report] AND recent pregnancy AND choriocarcinoma [operative/pathology report]
2.08	Trophoblastic disease with disseminated intravascular coagulation	Stage 1.01-2.07 AND <b>DIC:</b>
3.01	Trophoblastic disease with metastasis	Stage 2.06-2.08 AND choriocarcinoma beyond the confines of the uterus [CT scan or operative/pathology report]
3.02	Trophoblastic disease with pulmonary embolism	Stage 1.01-3.01 AND pulmonary embolism [nuclear ventilation/perfusion scan or pulmonary angiogram report]
3.03	Trophoblastic disease with sepsis	Stage 2.03-3.02 AND <b>sepsis:</b>
3.04	Trophoblastic disease with respiratory failure	Stage 2.05-3.03 AND <b>respiratory failure:</b>
3.05	Trophoblastic disease with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	Trophoblastic disease with death	Stage 2.01-3.05 AND death



**Disease: GYN26 Neoplasm: Trophoblastic Disease**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

American College of Obstetrics and Gynecology. Management of gestational trophoblastic disease. Technical Bulletin 178. Washington, DC: ACOG 1993.
Crombleholme WR. Obstetrics. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:724-748.
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# Clinical Criteria for Disease Staging

GYN27

**Disease: GYN27 Obstructed Labor**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
1.01	Failed induction	Induction of labor AND cervix < 4cm AND adequate contractions OR > 200 Montevideo units AND no dilation > 4 hrs OR no descent > 2 hrs
1.02	Failure to dilate or descend	Cervix ≥ 4cm dilated and adequate contractions AND No dilation > 2 hrs OR No descent > 2 hrs
2.01	Malposition of the fetus	Stage 1.01-1.02 AND malposition of the fetus
2.02	Macrosomia of the fetus	Delivery AND large for gestational age fetus OR infant >90th percentile for gestational age
2.03	Shoulder dystocia	Delivery AND impacted shoulder girdles of fetus
3.01	with sepsis	Stage 1.01-2.03 AND <b>sepsis:</b>
3.02	with shock	Stage 3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

## References

Creasy R, Resnik R. Maternal Fetal Medicine. 4th ed. Saunders. 1999.

**Disease: GYN28 Pelvic Inflammatory Disease**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Pelvic inflammatory disease	Acute salpingitis [operative/pathology report]  <u>Presumptive Diagnostic Findings:</u> Adnexal pain on examination AND pain on cervical motion AND <b>fever:</b>
2.01	with pelvic abscess	Stage 1.01 AND pelvic abscess [operative/pathology report]  <u>Presumptive Diagnostic Findings:</u> Stage 1.01 AND adnexal mass [sonogram report]
2.02	with generalized peritonitis	Stage 1.01-2.02 AND peritonitis [operative/pathology report]
3.01	with renal failure	Stage 1.01-2.03 AND <b>renal failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

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**Disease: GYN29 Placenta Previa**

**Etiology: Pregnancy**

Stage	Description	Diagnostic findings
1.01	Marginal placenta previa	Pregnancy ≥ second trimester AND marginal placenta previa [sonogram report placenta encroaches on the cervical os]
1.02	Partial placenta previa	Pregnancy ≥ second trimester AND partial placenta previa [placenta incompletely covers cervical os per sonogram report]
2.01	Complete placenta previa	Pregnancy ≥ second trimester AND complete placenta previa [placenta completely covers cervical os per sonogram report]
2.02	with hemorrhage	Stage 1.01-2.01 AND <b>bleeding:</b>
2.03	with chorioamnionitis or endometritis	Stage 1.01-2.02 AND endometritis [culture reports growth of pathologic organism(s)] OR postpartum fever AND uterine tenderness OR chorioamnionitis [culture reports growth of pathologic organism(s)] OR antepartum fever AND uterine tenderness
2.04	with placenta accreta	Stage 1.01-2.03 AND Invasion of trophoblast beyond Nitabuch's fibrinoid layer [pathology report]
2.05	with placenta increta	Stage 1.01-2.04 AND Invasion of trophoblast into myometrium [pathology report]
2.06	with placental percreta	Stage 1.01-2.05 AND Invasion of trophoblast beyond uterine serosa [pathology report]
3.01	with sepsis	Stage 2.03-2.06 AND <b>sepsis:</b>
3.02	with shock	Stage 2.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.02 AND death

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# Clinical Criteria for Disease Staging

GYN30

## Disease: GYN30 Pregnancy-Induced Hypertension

### Etiology: Pregnancy

Stage	Description	Diagnostic findings
1.01	Pre-eclampsia	Pregnancy AND blood pressure $\geq$ 140/90 mmHg on $\geq$ 2 occasions $\geq$ 6 hrs. apart AND urinary protein $\geq$ 300 mg/24 hrs. or $>$ 1 plus on dip stick [urinalysis report]
2.01	Severe pre-eclampsia	Stage 1.01 AND blood pressure $\geq$ 160/110 mmHg $\geq$ 2 occasions $\geq$ 6 hrs. apart OR urinary protein $\geq$ 5 gms/24 hrs [urinalysis report] OR urine output $\leq$ 500 cc/24 hrs. OR CNS symptoms (headache, visual changes) OR epigastric pain OR HELLP syndrome (hemolysis, AST $>$ 70 iu/L, platelets $<$ 100,000/mm <sup>3</sup> ) OR eclampsia
2.02	with abruptio placentae	Stage 1.02-2.01 AND infection of incision area fat, muscle and fascia [operative/pathology report] OR necrotizing fasciitis [operative/pathology report]
2.03	with disseminated intravascular coagulation	Stage 1.01-2.02 AND <b>DIC:</b>
3.01	with renal failure	Stage 1.01-2.03 AND <b>renal failure:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with intracerebral hemorrhage	Stage 1.01-3.02 AND intracerebral hemorrhage [CT scan or MRI report]
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

### References

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**Disease: GYN31 Toxic Shock Syndrome**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
2.01	Toxic shock syndrome	<b>Fever:</b> AND diffuse erythroderma AND Staphylococcus aureus bacteremia [blood culture reports growth of pathologic organism(s)] OR conjunctivitis OR pharyngitis [pharyngeal culture reports growth of pathologic organism(s)] OR vaginitis [vaginal culture reports growth of pathologic organism(s)] OR history of tampon use AND diarrhea AND lethargy
2.02	with hepatitis	Stage 2.01 AND <b>hepatitis:</b>
3.01	with renal failure	Stage 2.01-2.02 AND <b>renal failure:</b>
3.02	with encephalopathy	Stage 2.01-3.01 AND <b>disorientation:</b>
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
3.05	with coma	Stage 2.01-3.04 AND <b>coma:</b>
4.00	with death	Stage 2.01-3.05 AND death

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**Disease: GYN32 Uterine Infection**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Endometritis or myometritis	Endometritis [endometrial culture reports growth of pathologic organism(s)] OR myometritis [myometrial culture reports growth of pathologic organism(s)]
2.01	with perforation of the uterus	Stage 1.01 AND perforation of the uterus [operative/pathology report]
2.02	with peritonitis	Stage 1.01-2.01 AND peritonitis [operative/pathology report]
3.01	with disseminated intravascular coagulation	Stage 2.01-2.02 AND <b>DIC:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

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**Disease: GYN33 Uterovaginal Prolapse**

**Etiology: Degenerative; Trauma**

Stage	Description	Diagnostic findings
1.01	Relaxation of the vagina	Urethrocele prolapse of the vagina
1.02	First grade prolapse of the uterus	Cervix of the uterus is within the vagina AND not in anatomical location AND before the ischial spine OR first grade prolapse of the uterus
1.03	Second grade prolapse of the uterus	Stage 1.02 AND cervix of the uterus is between the vaginal introitus and the ischial spine OR second grade prolapse of the uterus
2.01	Prolapse of the uterus with rectocele or cystocele	Stage 1.02-1.03 AND rectocele OR cystocele
2.02	Prolapse of the uterus with enterocele	Stage 1.02-1.03 AND herniation of the cul-de-sac of Douglas
2.03	Third grade prolapse of the uterus	Stage 1.02-1.03 AND cervix is at the hymen OR third grade prolapse of the uterus
2.04	Prolapse of the uterus with ulceration of the cervix	Stage 1.02-2.03 AND ulceration of the cervix
2.05	Prolapse of the uterus with procidentia	Stage 1.02-2.04 AND cervix is through the hymen OR fourth grade prolapse of the uterus

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**Disease: GYN34 Vulvovaginitis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Vulvovaginitis	Vulvovaginitis [gram stain, wet mount, or culture report growth of pathologic organism(s) from vaginal smears or wet mount identification
1.02	Symptomatic vulvovaginitis	Stage 1.01 AND symptomatic vaginal itching OR complains of vaginal discharge with foul odor OR complains of vaginal burning OR complains of vaginal pain OR complains of vaginal ulceration
2.01	with urinary retention	Stage 1.01-1.02 AND residual bladder urine > 100 cc
2.02	with urinary tract infection	Stage 1.01-2.01 AND <b>UTI:</b>
2.03	with pyelonephritis	Stage 2.02 AND <b>pyelonephritis:</b>
3.01	with sepsis	Stage 1.01-2.03 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

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# Clinical Criteria for Disease Staging

GYN80

**Disease: GYN80 Neoplasm, Benign: Other Female Reproductive System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of female reproductive sites	

References

# Clinical Criteria for Disease Staging

GYN81

**Disease: GYN81 Neoplasm, Malignant: Other Female Genitalia**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of other malignant neoplasm of female genitalia	
1.01	Primary malignant neoplasm of other uterine site or adnexa	
2.01	with lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

References

**Disease: GYN82 Other Breast Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Galactocele, mastodynia, lump or mass in breast	

**References**

# Clinical Criteria for Disease Staging

GYN83

## Disease: GYN83 Other Disorders of Female Genital System

### Etiology:

Stage	Description	Diagnostic findings
0.00	Encounter for postmenopausal hormone replacement therapy	Added stage 5/8/06 cb
1.01	Cervicitis, ovarian cyst, uterine malposition, polyp, menstrual irregularities, infertility	
2.01	Female genital fistula, broad ligament laceration syndrome, pelvic peritoneal adhesions, prolapse or torsion of ovary, anomalies of ovaries, Fallopian tubes, broad ligament or adnexa	

### References

**Disease: HEM01 Agranulocytosis**

**Etiology: Idiopathic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Neutropenia	<b>Neutropenia:</b>
1.02	Moderate neutropenia	Absolute neutrophil count $\leq$ 1,000 cells/mm <sup>3</sup> [hematology report]
2.01	Severe neutropenia	Absolute neutrophil count $\leq$ 500 cells/mm <sup>3</sup> [hematology report]
2.02	with oral or anal ulcerations	Stage 1.01-2.01 AND oral ulcers OR anal ulcers
2.03	with thrombocytopenia	Stage 1.01-2.02 AND <b>thrombocytopenia:</b>
3.01	with meningitis or endocarditis	Stage 1.01-2.03 AND <b>meningitis:</b> OR <b>endocarditis:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

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# Clinical Criteria for Disease Staging

HEM02

**Disease: HEM02 Anemia: Aplastic, Acquired**

**Etiology: Idiopathic; Toxicologic**

Stage	Description	Diagnostic findings
2.01	Early aplastic anemia	<b>Leukopenia:</b> AND <b>thrombocytopenia:</b> AND <b>anemia:</b> AND bone marrow cellularity < 20%[bone marrow biopsy report] AND reticulocytes < 1% [CBC report]
2.02	Advanced aplastic anemia	Bone marrow cellularity < 20%[bone marrow biopsy report] AND total WBC count < 1,000 cells/mm <sup>3</sup> [complete blood count report] AND platelet count < 50,000 cells/mm <sup>3</sup> [hematology report] AND hemoglobin < 8 gm/dl [hematology report] AND reticulocytes < 1% [CBC report]
3.01	Severe aplastic anemia	Bone marrow cellularity < 20%[bone marrow biopsy report] AND total WBC count ≤ 500 cells/mm <sup>3</sup> [complete blood count report] AND platelet count < 20,000 cells/mm <sup>3</sup> [hematology report] AND hemoglobin ≤ 6 gm/dl [hematology report] AND reticulocytes < 1% [CBC report]
3.02	with intracranial hemorrhage	Stage 2.01-3.01 AND intracranial hemorrhage [CT scan or MRI scan report]
3.03	with sepsis	Stage 2.01-3.02 AND <b>sepsis:</b>
4.00	with death	Stage 2.01-3.03 AND death

## References

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# Clinical Criteria for Disease Staging

HEM03

**Disease: HEM03 Anemia: Folic Acid Deficiency**

**Etiology: Nutritional**

Stage	Description	Diagnostic findings
1.01	Anemia secondary to folic acid deficiency	<b>Anemia:</b> AND <b>macrocytosis:</b> AND A red blood cell folate < 150 ng/mL [hematology report] OR serum folic acid levels ≤ 6 ng/ml [chemistry report]
2.01	with moderate anemia	Stage 1.01 AND hemoglobin ≤ 8 gm/dl [hematology report]
3.01	with congestive heart failure	Stage 1.01-2.01 AND <b>congestive heart failure:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

## References

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**Disease: HEM04 Anemia: Hemolytic**

**Etiology: Genetic (or hereditary); Toxicologic; Trauma**

Stage	Description	Diagnostic findings
2.01	Hemolytic anemia	<b>Hemolysis:</b> AND <b>anemia:</b>
2.02	Moderate anemia	Stage 2.01 AND hemoglobin ≤ 8 gm/dl [hematology report]
2.03	with gallstones	Stage 2.01-2.02 AND Stones in gallbladder [ultrasound report]
2.04	Hemolytic crisis	Stage 2.01-2.03 AND <b>bleeding:</b> AND hemoglobinuria [urinalysis report] OR <b>jaundice:</b>
3.01	with aplastic crisis	Stage 2.01-2.04 AND rapidly falling hemoglobin AND reticulocytopenia [hematology report] OR euthyroid bone marrow failure [pathology report]
3.02	with pulmonary embolism	Stage 2.01-3.01 AND <b>pulmonary embolism:</b>
3.03	with congestive heart failure	Stage 2.01-3.02 AND <b>congestive heart failure:</b>
3.04	with respiratory failure	Stage 2.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

## References

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**Disease: HEM05 Anemia: Iron Deficiency**

**Etiology: Nutritional**

Stage	Description	Diagnostic findings
1.01	Iron-deficiency anemia	<b>Iron-deficiency anemia:</b>
2.01	with moderate anemia	Stage 1.01 AND hemoglobin > 5 g [CBC report] AND ≤ 8 gm/dl [CBC report]
2.02	with severe anemia	Stage 1.01 AND hemoglobin ≤ 5 gm/dl [CBC report]
3.01	with congestive heart failure	Stage 2.01-2.02 AND <b>congestive heart failure:</b>
4.00	with death	Stage 2.01-3.01 AND death

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# Clinical Criteria for Disease Staging

HEM06

**Disease: HEM06 Anemia: Sickle Cell**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Sickle cell trait	Hemoglobin S 32-45% [hemoglobin electrophoresis report] AND hemoglobin A 52-65% [hemoglobin electrophoresis report]
1.02	Sickle cell trait with hematuria or hyposthenuria	Stage 1.01 AND urine red blood cells > 2/hpf [urinalysis report] OR specific gravity < 1.0005 [urinalysis report]
2.01	Sickle beta+ thalassemia	<b>Anemia:</b> AND Hemoglobin S 5-85%, hemoglobin A 10-30% [hemoglobin electrophoresis report] AND Hemoglobin F 5-10% [hemoglobin electrophoresis report]
2.02	Hemoglobin SC disease	<b>Anemia:</b> AND Hemoglobin S 45-50%, Hemoglobin C 45-50% [hemoglobin electrophoresis report]
2.03	Sickle cell anemia or sickle beta0 thalassemia	<b>Anemia:</b> AND Hemoglobin S 80-95% [ hemoglobin electrophoresis report] AND Hemoglobin F 2-20% [hemoglobin electrophoresis report] OR Hemoglobin S 75-90% [hemoglobin electrophoresis report] AND Hemoglobin F 5-25% [hemoglobin electrophoresis report]
2.04	with skin ulcers or vitreous hemorrhage	Stage 2.01-2.03 AND skin ulcerations OR vitreous hemorrhage [fundoscopy report]
2.05	with priapism	Stage 2.01-2.04 AND priapism
2.06	with retinal detachment	Stage 2.01-2.05 AND retinal detachment [ophthalmologist report]
2.07	with hepatitis or choledocholithiasis or cholelithiasis	Stage 2.01-2.06 AND <b>hepatitis:</b> OR hepatomegaly OR choledocholithiasis [sonogram or endoscopic retrograde cholangiopancreatography report] OR cholelithiasis [sonogram or KUB x-ray report]
2.08	with painful crisis	Stage 2.01-2.07 AND diffuse abdominal pain AND generalized bone pain
2.09	with papillary necrosis	Stage 2.01-2.08 AND papillary necrosis of the kidney [operative/pathology report]
2.10	with bacteremia	Stage 2.01-2.09 AND <b>bacteremia:</b>
2.11	with bacterial pneumonia	Stage 2.01-2.10 AND <b>pneumonia:</b>

# Clinical Criteria for Disease Staging

HEM06

**Disease: HEM06 Anemia: Sickle Cell**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
2.12	with osteomyelitis	Stage 2.01-2.11 AND <b>osteomyelitis:</b>
3.01	with aplastic crisis	Stage 2.01-2.12 AND acellular bone marrow [operative/pathology report] OR <b>leukopenia:</b> AND <b>thrombocytopenia:</b>
3.02	acute chest syndrome	Stage 2.01-3.01 OR pulmonary infarctions [chest x-ray report] OR pulmonary embolism [nuclear ventilation/perfusion scan or pulmonary angiogram report]
3.03	with renal failure	Stage 2.01-3.02 AND <b>renal failure:</b>
3.04	with congestive heart failure	Stage 2.01-3.03 AND <b>congestive heart failure:</b>
3.05	with cerebrovascular accidents	Stage 2.01-3.04 AND cerebrovascular infarction or hemorrhage [CT scan or MRI scan report]
3.06	with sepsis	Stage 2.01-3.05 AND <b>sepsis:</b>
3.07	with respiratory failure	Stage 2.01-3.06 AND <b>respiratory failure:</b>
3.08	with shock	Stage 2.01-3.07 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.08 AND death

**Disease: HEM06 Anemia: Sickle Cell**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

HEM07

**Disease: HEM07 Anemia: Thalassemia**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Alpha thalassemia trait	<b>Microcytosis:</b> AND <b>anemia:</b> AND serum iron > 55 ug/dl in males or > 35 ug/dl in females [chemistry report] AND total iron binding capacity < 513 ug/dl [chemistry report] OR serum ferritin > 12 ng/ml [chemistry report] OR normal iron stores [bone marrow biopsy report] OR hemoglobin Barts 5-10% in newborn [hemoglobin electrophoresis report]
1.02	Beta thalassemia trait or thalassemia minor	<b>Microcytosis:</b> AND <b>anemia:</b> AND hemoglobin A <sub>2</sub> > 3% [hemoglobin electrophoresis report]
2.01	Hemoglobin H disease (alpha thalassemia intermedia)	<b>Microcytosis:</b> AND <b>anemia:</b> AND hemoglobin H 4-20% in child or adult [hemoglobin electrophoresis report] OR hemoglobin Barts 5-10% in newborn [hemoglobin electrophoresis report]
2.02	Beta thalassemia intermedia	<b>Microcytosis:</b> AND hemoglobin 6-8 g/dl [hematology report] AND hemoglobin A 20-40% [hemoglobin electrophoresis report] AND hemoglobin F 60-80% [hemoglobin electrophoresis report]
3.01	Beta thalassemia major or Cooley's anemia	Hemoglobin F > 90% [hemoglobin electrophoresis report] AND hemoglobin ≤ 6 gm/dl [complete blood count report] AND erythroid hyperplasia of the bone marrow [bone marrow report] AND <b>microcytosis:</b> AND serum iron > 209 ug/dl [chemistry report] OR serum ferritin ≥ 370 ng/ml [chemistry report] OR normal iron stores [bone marrow biopsy report] AND reticulocyte count ≥ 1.5% of total erythrocytes [complete blood count report] AND total bilirubin ≥ 3.0 mg/dl [chemistry report]
3.02	with congestive heart failure	Stage 2.01-3.01 AND <b>congestive heart failure:</b>
3.03	Homozygous alpha thalassemia with hydrops fetalis	Hemoglobin Barts 80-90%; no Hemoglobin A or F in newborn [Hemoglobin electrophoresis report] AND hydrops fetalis
4.00	with death	Stage 2.01-3.03 AND death

**Disease: HEM07 Anemia: Thalassemia**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

HEM08

**Disease: HEM08 Anemia: Vitamin B-12 Deficiency**

**Etiology: Nutritional**

Stage	Description	Diagnostic findings
1.01	Anemia secondary to vitamin B12 deficiency	<b>Anemia:</b> AND <b>macrocytosis:</b> AND serum vitamin B <sub>12</sub> < 100 pg/ml [chemistry report]
2.01	with neuropathy	Stage 1.01 AND paresthesia of extremities OR ataxia or loss of balance OR loss of vibratory sensation in lower extremities OR Babinski's sign
2.02	with cardiomegaly	Stage 1.01-2.01 AND cardiomegaly [chest x-ray or echocardiogram report]
3.01	with megaloblastic madness (dementia)	Stage 1.01-2.02 AND delusions of grandeur and persecution OR disoriented to time or place or person
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

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# Clinical Criteria for Disease Staging

HEM09

## Disease: HEM09 Glucose 6-Phosphate Dehydrogenase Deficiency

### Etiology: Congenital; Genetic (or hereditary)

Stage	Description	Diagnostic findings
1.01	Glucose 6-phosphate dehydrogenase deficiency asymptomatic carrier or homozygotic female	Glucose 6-phosphate dehydrogenase activity $\geq$ 20% of normal [hematology report] AND glucose 6-phosphate dehydrogenase activity $\leq$ 100% of normal [hematology report]
1.02	with hemolytic anemia	Stage 1.01 AND <b>hemolysis:</b>
2.01	with moderate anemia	Stage 1.02 AND glucose 6-phosphate dehydrogenase deficiency $\geq$ 20% of normal [hematology report] OR hemoglobin $\leq$ 8 gm/dl [CBC report]
3.01	with severe anemia	Stage 1.02-2.01 AND hemoglobin $\leq$ 5 gm/dl [CBC report]
3.02	with congestive heart failure	Stage 1.02-3.01 AND <b>congestive heart failure:</b>
3.03	with shock	Stage 1.02-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.02-3.03 AND death

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**Disease: HEM10 Graft versus Host reaction**

**Etiology: Immune**

Stage	Description	Diagnostic findings
0.00	Graft vs. host reaction	
1.01	Acute reaction Grade I-IV	Stage 0.00 AND skin eruptions of erythematous maculo papules, bullae and toxic epidermal necrolysis (dermatology report)
1.02	with hepatitis	Stage 0.00-1.01 AND <b>hepatitis:</b>
1.03	with enteritis	Stage 0.00-1.02 AND bloody diarrhea
2.01	Lichen planus like or sclerodermoid reaction	Stage 0.00-1.03 AND Lichen planus like lesions on face, palms, soles and oral mucosa [operative/pathology report] OR systemic sclerodermoid lesions with tightening of skin of face, hands and feet (dermatology report)
2.02	with polymyositis	Stage 0.00-2.01 AND muscle weakness of proximal joints [EMG report]
2.03	with Sjogren's syndrome	Stage 0.00-2.02 AND Sjogren's syndrome [Rheumatology report]
2.04	with biliary cirrhosis	Stage 0.00-2.03 AND biliary cirrhosis [operative/pathology report]
3.01	with respiratory failure	Stage 0.00-2.04 AND <b>respiratory failure:</b>
3.02	with shock	Stage 0.00-3.01 AND <b>shock:</b>
4.00	with death	Stage 0.00-3.02 AND death

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**Disease: HEM11 Hemolytic Disease of the Newborn**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Hemolytic disease of the newborn secondary to rhesus isoimmunization or ABO incompatibility or minor blood group incompatibility	Umbilical cord blood bilirubin $\leq$ 5 mg/dl [chemistry report] AND direct Coombs' reaction [hematology report]
2.01	Severe hemolytic disease of the newborn secondary to rhesus isoimmunization or ABO incompatibility or minor blood group incompatibility	Umbilical cord blood bilirubin $\geq$ 5 mg/dl [chemistry report] AND direct Coombs' reaction [hematology report] AND cord blood hematocrit $\leq$ 40% [hematology report] AND cord blood reticulocytes $\geq$ 15% [hematology report]
3.01	with kernicterus	Stage 1.01-2.01 AND kernicterus
3.02	with hydrops fetalis	Stage 1.01-3.01 AND hydrops fetalis
4.00	with death	Stage 1.01-3.02 AND death

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# Clinical Criteria for Disease Staging

HEM12

**Disease: HEM12 Hemophilia A or B**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Mild asymptomatic, hemophilia A or B	Factor VIII:C 6-30% [hematology report] OR Factor IX 6-30% [hematology report]
1.02	Moderate hemophilia A or B	Factor VIII:C ≤ 5 % and ≥ 1% [hematology report] OR Factor IX ≤ 5 % and ≥ 1% [hematology report]
2.01	Severe hemophilia A or B	Factor VIII:C < 1% [hematology report] OR Factor IX < 1% [hematology report]
2.02	with intramuscular hematoma	Stage 1.01-2.01 AND intramuscular hematoma
2.03	with hemarthrosis	Stage 1.01-2.02 AND hemarthrosis
2.04	with ankylosis of the elbow or knee joints	Stage 1.01-2.03 AND ankylosis of the elbow [elbow x-ray report] OR ankylosis of the knee [knee x-ray report]
2.05	with upper airway obstruction	Stage 1.01-2.04 AND sublingual hematoma OR laryngeal hematoma OR retropharyngeal hematoma
3.01	with hemorrhage into the central nervous system or the heart of pericardium or thorax	Stage 1.01-2.05 AND intracranial hemorrhage [CT scan or MRI report] OR hemopericardium [echocardiogram report] OR hemothorax [chest x-ray report]
3.02	with respiratory failure	Stage 101-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 101-3.02 AND <b>shock:</b>
4.00	with death	Stage 101-3.03 AND death

**Disease: HEM12 Hemophilia A or B**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

**Disease: HEM13 Neoplasm, Malignant: Hodgkin's Disease with Lymphocytic Depletion**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of Hodgkin's disease with lymphocytic depletion	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with lymphocytic depletion [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region with involvement of adjacent extranodal tissue	Stage 1.01 AND Hodgkin's disease with lymphocytic depletion involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1AE
1.03	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq 10\%$ of baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.04	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.03 AND Hodgkin's disease with lymphocytic depletion involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with lymphocytic depletion involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND Hodgkin's disease with lymphocytic depletion involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq 10\%$ baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND Hodgkin's disease with lymphocytic depletion involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM13

**Disease: HEM13 Neoplasm, Malignant: Hodgkin's Disease with Lymphocytic Depletion**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with lymphocytic depletion involving both sides of the diaphragm [operative/pathology report] OR Hodgkin's disease with lymphocytic depletion involving the spleen [operative/pathology report] OR celiac nodes [operative pathology report] OR portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or spleen with extension to adjacent tissues	Stage 3.01 AND Hodgkin's disease with lymphocytic depletion involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01-3.02 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2, 3A2E, 3B2E OR Hodgkin's disease with lymphocytic depletion involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with Pneumocystis carinii pneumonia or Cryptococcus infection or opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report or gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>

**Disease: HEM13 Neoplasm, Malignant: Hodgkin's Disease with Lymphocytic Depletion**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

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# Clinical Criteria for Disease Staging

HEM14

**Disease: HEM14 Neoplasm, Malignant: Hodgkin's Disease with Lymphocytic Predominance**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of Hodgkin's disease with lymphocytic depletion	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with lymphocytic predominance [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region with involvement of adjacent extranodal tissue	Stage 1.01 AND Hodgkin's disease with lymphocytic predominance involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1AE
1.03	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq 10\%$ of baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.04	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.03 AND Hodgkin's disease with lymphocytic predominance involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with lymphocytic predominance involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND Hodgkin's disease with lymphocytic predominance involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq 10\%$ baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND Hodgkin's disease with lymphocytic predominance involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM14

**Disease: HEM14 Neoplasm, Malignant: Hodgkin's Disease with Lymphocytic Predominance**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with lymphocytic predominance involving both sides of the diaphragm [operative/pathology report] OR Hodgkin's disease with lymphocytic predominance involving the spleen [operative/pathology report] OR celiac nodes [operative pathology report] OR portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or spleen with extension to adjacent tissues	Stage 3.01 AND Hodgkin's disease with lymphocytic predominance involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01-3.02 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2, 3A2E, 3B2 OR Hodgkin's disease with lymphocytic predominance involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with opportunistic infections	Stage 1.01-3.05 AND <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>

# Clinical Criteria for Disease Staging

HEM14

**Disease: HEM14 Neoplasm, Malignant: Hodgkin's Disease with Lymphocytic Predominance**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
4.00	with death	Stage 1.01-3.09 AND death

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# Clinical Criteria for Disease Staging

HEM15

**Disease: HEM15 Neoplasm, Malignant: Hodgkin's Disease with Mixed Cellularity**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of Hodgkin's disease with mixed cellularity	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with mixed cellularity [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region with involvement of adjacent extranodal tissue	Stage 1.01 AND Hodgkin's disease with mixed cellularity involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1AE
1.03	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% of baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.04	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.03 AND Hodgkin's disease with mixed cellularity involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with mixed cellularity involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND Hodgkin's disease with mixed cellularity involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND Hodgkin's disease with mixed cellularity involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

**Disease: HEM15 Neoplasm, Malignant: Hodgkin's Disease with Mixed Cellularity**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with mixed cellularity involving both sides of the diaphragm [operative/pathology report] OR Hodgkin's disease with mixed cellularity involving the spleen [operative/pathology report] OR celiac nodes [operative pathology report] OR portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or spleen with extension to adjacent tissues	Stage 3.01 AND Hodgkin's disease with mixed cellularity involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01-3.02 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2, 3A2E, 3B2E OR Hodgkin's disease with mixed cellularity involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with Pneumocystis carinii pneumonia or cryptococcus infection or opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report or gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>

**Disease: HEM15 Neoplasm, Malignant: Hodgkin's Disease with Mixed Cellularity**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

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# Clinical Criteria for Disease Staging

HEM16

**Disease: HEM16 Neoplasm, Malignant: Hodgkin's Disease with Nodular Sclerosis**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of Hodgkin's disease with nodular sclerosis	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with nodular sclerosis [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region with involvement of adjacent extranodal tissue	Stage 1.01 AND Hodgkin's disease with nodular sclerosis involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1AE
1.03	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq 10\%$ of baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.04	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.03 AND Hodgkin's disease with nodular sclerosis involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with nodular sclerosis involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND Hodgkin's disease with nodular sclerosis involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq 10\%$ baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND Hodgkin's disease with nodular sclerosis involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM16

**Disease: HEM16 Neoplasm, Malignant: Hodgkin's Disease with Nodular Sclerosis**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with Hodgkin's disease with nodular sclerosis involving both sides of the diaphragm [operative/pathology report] OR Hodgkin's disease with nodular sclerosis involving the spleen [operative/pathology report] OR celiac nodes [operative pathology report] OR portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or spleen with extension to adjacent tissues	Stage 3.01 AND Hodgkin's disease with nodular sclerosis involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01-3.02 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2, 3A2E, 3B2E OR Hodgkin's disease with nodular sclerosis involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with Pneumocystis carinii pneumonia or cryptococcus infection or opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report or gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>



**Disease: HEM16 Neoplasm, Malignant: Hodgkin's Disease with Nodular Sclerosis**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

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# Clinical Criteria for Disease Staging

HEM17

**Disease: HEM17 Neoplasm, Malignant: Hodgkin's Lymphoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of Hodgkin's disease	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with Hodgkin's Disease [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region with involvement of adjacent extranodal tissue	Stage 1.01 AND Hodgkin's Disease involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1AE
1.03	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% of baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.04	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.03 AND Hodgkin's Disease involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with Hodgkin's Disease involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND Hodgkin's Disease involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND Hodgkin's Disease involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM17

**Disease: HEM17 Neoplasm, Malignant: Hodgkin's Lymphoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen with or without constitutional symptoms	Lymph node group or group of contiguous lymph nodes with Hodgkin's Disease involving both sides of the diaphragm [operative/pathology report] OR Hodgkin's Disease involving the spleen [operative/pathology report] OR celiac nodes [operative pathology report] OR portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or spleen with extension to adjacent tissues with or without constitutional symptoms	Stage 3.01 AND Hodgkin's Disease involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity with or without constitutional symptoms or involvement of adjacent tissues	Stage 3.01-3.02 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2, 3A2E, 3B2E OR Hodgkin's Disease involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement with or without constitutional symptoms	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with opportunistic infections	Stage 1.01-3.05 AND <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>

**Disease: HEM17 Neoplasm, Malignant: Hodgkin's Lymphoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
4.00	with death	Stage 1.01-3.09 AND death

## References

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# Clinical Criteria for Disease Staging

HEM18

**Disease: HEM18 Neoplasm, Malignant: Leukemia, Acute Lymphocytic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of acute lymphoblastic leukemia	
1.01	Acute lymphoblastic leukemia	Lymphoblastic leukemia [peripheral smear or bone marrow aspiration or bone marrow biopsy report]
1.02	with hyperdiploid states	Stage 1.01 AND hyperdiploid states [cytogenetics report]
2.01	with hyperuricemia or hypokalemia or hyperkalemia or hyperphosphatemia	Stage 1.01-1.02 AND <b>hyperuricemia:</b> OR <b>hyperkalemia:</b> OR <b>hyperphosphatemia:</b> OR <b>hypokalemia:</b>
2.02	with significant anemia	Stage 1.01-2.01 AND hemoglobin $\leq$ 7 gm/dl [CBC report]
2.03	with significant thrombocytopenia	Stage 1.01-2.02 AND platelets $<$ 60,000 cells/mm <sup>3</sup> [CBC report]
2.04	with leukopenia	Stage 1.01-2.03 AND <b>leukopenia:</b>
2.05	with urinary tract infection or nephrolithiasis or pyoderma	Stage 1.01-2.04 AND <b>UTI:</b> OR nephrolithiasis [sonogram report] OR pyoderma
2.06	with pneumonia	Stage 1.01-2.05 AND <b>pneumonia:</b>
2.07	with Pneumocystis pneumonia or opportunistic infections	Stage 1.01-2.06 AND Pneumocystis carinii pneumonia [per operative/pathology report or gallium scan report] OR opportunistic infection from: Pneumocystis carinii Cytomegalovirus spp. Herpes virus spp. Candida albicans Cryptococcus spp. Histoplasma spp. Toxoplasma gondii Mycobacterium intracellulare Mycobacterium tuberculosis Cryptosporidia spp. Isospora belli

# Clinical Criteria for Disease Staging

HEM18

**Disease: HEM18 Neoplasm, Malignant: Leukemia, Acute Lymphocytic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
2.08	with severe thrombocytopenia	Stage 1.01-2.07 AND platelets < 20,000 cells/mm <sup>3</sup> [CBC report]
2.09	with acute bleeding	Stage 1.01-2.08 AND <b>bleeding:</b>
2.10	with severe neutropenia	Stage 1.01-2.09 AND total neutrophil count ≤ 500 cells/mm <sup>3</sup> [CBC report]
3.01	with meningitis	Stage 1.01-2.10 AND <b>meningitis:</b>
3.02	with disseminated intravascular coagulation	Stage 1.01-3.01 AND <b>DIC:</b>
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

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# Clinical Criteria for Disease Staging

HEM19

**Disease: HEM19 Neoplasm, Malignant: Leukemia, Acute Nonlymphocytic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of acute nonlymphocytic leukemia	
1.01	Acute or subacute nonlymphocytic leukemia or myeloid sarcoma	Nonlymphocytic leukemia [peripheral smear or bone marrow aspiration or bone marrow biopsy report]  Note: nonlymphocytic leukemias include acute undifferentiated leukemia (M0), acute myeloblastic leukemia (M1), acute myeloblastic leukemia with differentiation (M2), acute promyelocytic leukemia (M3), acute myelomonocytic leukemia (M4), acute monoblastic leukemia (M5), erythroleukemia (M6), and megakaryoblastic leukemia (M7).
1.02	with monosomy 5 and 7 or abnormalities of 11q23	Stage 1.01 AND monosomy 5 and 7 [cytogenetics report] OR abnormalities of 11q23 [cytogenetics report]
2.01	with hyperuricemia or hyperkalemia or hyperphosphatemia	Stage 1.01-1.02 AND <b>hyperuricemia:</b> OR <b>hyperkalemia:</b> OR <b>hyperphosphatemia:</b>
2.02	with significant anemia	Stage 1.01-2.01 AND hemoglobin $\leq$ 7 gm/dl [CBC report]
2.03	with significant thrombocytopenia	Stage 1.01-2.02 AND platelets < 60,000 cells/mm <sup>3</sup> [CBC report]
2.04	with leukopenia	Stage 1.01-2.03 AND <b>leukopenia:</b>
2.05	with urinary tract infection or nephrolithiasis or pyoderma	Stage 1.01-2.04 AND <b>UTI:</b> OR nephrolithiasis OR pyoderma
2.06	with pneumonia	Stage 1.01-2.05 AND <b>pneumonia:</b>

# Clinical Criteria for Disease Staging

HEM19

**Disease: HEM19 Neoplasm, Malignant: Leukemia, Acute Nonlymphocytic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
2.07	with Pneumocystis pneumonia or opportunistic infections	Stage 1.01-2.06 AND Pneumocystitis carinii pneumonia [operative/pathology report or gallium scan report] OR opportunistic infection from: Pneumocystis carinii Cytomegalovirus spp. Herpes virus spp. Candida albicans Cryptococcus spp. Histoplasma spp. Toxoplasma gondii Mycobacterium intracellulare Mycobacterium tuberculosis Cryptosporidia spp. Isospora belli
2.08	with severe thrombocytopenia	Stage 1.01-2.07 AND platelets < 20,000 cells/mm <sup>3</sup> [CBC report]
2.09	with acute bleeding	Stage 1.01-2.08 AND <b>bleeding:</b>
2.10	with severe neutropenia	Stage 1.01-2.09 AND total neutrophil count ≤ 500 cells/mm <sup>3</sup> [CBC report]
3.01	with meningitis	Stage 1.01-2.10 AND <b>meningitis:</b>
3.02	with disseminated intravascular coagulation	Stage 1.01-3.01 AND <b>DIC:</b>
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death



**Disease: HEM19 Neoplasm, Malignant: Leukemia, Acute Nonlymphocytic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

HEM20

**Disease: HEM20 Neoplasm, Malignant: Leukemia, Chronic Lymphocytic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of chronic lymphocytic leukemia	
1.01	Chronic lymphocytic leukemia	Chronic lymphocytic leukemia [peripheral smear or bone marrow aspiration or bone marrow biopsy report] OR lymphocyte count > 5 x 10 <sup>9</sup> /l [hematology report] AND immunophenotype co-expresses B lymphocyte lineage markers CD19 with the T lymphocyte marker CD5 [cytogenetics report].
2.01	with adenopathy	Stage 1.01 AND lymphadenopathy
2.02	with hypogammaglobulinemia	Stage 1.01-2.01 AND hypogammaglobulinemia [hematology report]
2.03	with pneumonia	Stage 1.01-2.02 AND <b>pneumonia</b>
2.04	with hepatosplenomegaly	Stage 1.01-2.03 AND hepatosplenomegaly [physical examination or sonography report or CT scan report]
2.05	with anemia	Stage 1.01-2.04 AND <b>anemia:</b>
2.06	with thrombocytopenia	Stage 1.01-2.05 AND <b>thrombocytopenia:</b>
2.07	with large cell lymphoma or Richter's syndrome	Stage 2.01-2.06 AND large cell lymphoma or Richter's syndrome [operative/pathology report]
3.01	with meningitis	Stage 1.01-2.07 AND <b>meningitis:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

## References

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# Clinical Criteria for Disease Staging

HEM21

**Disease: HEM21 Neoplasm, Malignant: Leukemia, Chronic Myelogenous**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of chronic myelocytic leukemia	
1.01	Chronic myelogenous leukemia	Chronic myelogenous leukemia [peripheral smear report or bone marrow aspiration report or bone marrow biopsy report] OR <b>neutrocytosis:</b> AND Philadelphia chromosome positive [chromosome analysis report] OR splenomegaly OR bcr-abl gene [cytogenetics report or Southern Blot report]
2.01	with significant anemia	Stage 1.01 AND hemoglobin $\leq$ 7 gm/dl [CBC report]
2.02	with significant thrombocytopenia	Stage 1.01-2.01 AND platelets $<$ 60,000 cells/mm <sup>3</sup> [CBC report]
2.03	with significant leukocytosis	Stage 1.01-2.02 AND total WBC count $>$ 50,000 cells/mm <sup>3</sup> [CBC report]
2.04	with blast crisis	Stage 1.01-2.03 AND blast cells $\geq$ 30% of bone marrow cell count [bone marrow report]
2.05	with chloromas or hepatosplenomegaly	Stage 1.01-2.04 AND chloromas, myeloblast tumors in skin or lymph nodes or bone or liver or spleen [operative/pathology report] OR hepatosplenomegaly [physical examination report or sonography report or CT scan report]
2.06	with severe thrombocytopenia	Stage 1.01-2.05 AND platelets $<$ 20,000 cells/mm <sup>3</sup> [CBC report]
2.07	with acute bleeding	Stage 1.01-2.06 AND <b>bleeding:</b>
3.01	with sepsis	Stage 1.01-2.07 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**Disease: HEM21 Neoplasm, Malignant: Leukemia, Chronic Myelogenous**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

HEM22

**Disease: HEM22 Neoplasm, Malignant: Lymphoma, Cutaneous T Cell (Mycosis Fungoides)**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of mycosis fungoides	History of mycosis fungoides
1.01	T1 skin involvement	Papules, patches, or plaques involving <10% of skin (dermatology report) AND epidermotropism and Pautrier's abscess formation with larger nucleated lymphocytes, and diffuse infiltrates of lymphocytes in the dermis [dermatology report] AND immunophenotyping of T cells [operative/pathology report] AND analysis of the genetic sequences for the T cell receptor (pathology report)
1.02	T2 skin involvement	Stage 1.01 AND papules, patches, or plaques involving 10% or more of skin (dermatology report)
1.03	T3 skin involvement	Stage 1.01-1.02 AND > 1 tumors (dermatology report)
1.04	T4 skin involvement	Stage 1.01-1.03 AND generalized erythroderma (dermatology report)
2.01	N1 lymph node involvement	Stage 1.01-1.04 AND abnormal peripheral lymph node AND pathologically negative for MF [operative/pathology report]
2.02	N2 lymph node involvement	Stage 1.01-2.01 AND no abnormal peripheral lymph node AND pathologically positive for MF [operative/pathology report]
2.03	N3 lymph node involvement	Stage 1.01-2.02 AND clinically abnormal peripheral lymph node AND pathologically positive for MF [operative/pathology report]
3.01	B1 blood involvement	Stage 1.01-2.03 AND evidence of increased numbers of atypical circulating cells (Sezary cell) AND bone marrow biopsy (pathology report)
3.02	M1 visceral organ involvement	Stage 1.01-3.01 AND hepatosplenomegaly [sonography report or CT scan report or MRI report or liver/spleen scan report]
4.00	with death	Stage 1.01-3.02 AND death

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# Clinical Criteria for Disease Staging

HEM23

**Disease: HEM23 Neoplasm, Malignant: Lymphoma, Diffuse Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of diffuse large cell lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with diffuse mixed small and large cell lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND diffuse mixed small and large cell lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	Of two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND Diffuse large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND Diffuse large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with Diffuse large cell lymphoma involving both sides of the diaphragm [operative/pathology report] OR Diffuse large cell lymphoma involving the spleen [operative/pathology report] OR Diffuse large cell lymphoma involving the celiac nodes [operative/pathology report] OR Diffuse large cell lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1

# Clinical Criteria for Disease Staging

HEM23

**Disease: HEM23 Neoplasm, Malignant: Lymphoma, Diffuse Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND Diffuse large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND Diffuse large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

**Disease: HEM23 Neoplasm, Malignant: Lymphoma, Diffuse Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

Albano EA, et. al. Neoplastic diseases/lymphomas. In: Hay WW, Groosthius JR, Hayward AR, Levin MJ, eds. Current Pediatric Diagnosis and Treatment. 13th ed. Stamford, CT: Appleton & Lange; 1997:789-793.
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Sandlund JT. Downing JR. Crist WM. Non-hodgkin's lymphoma in childhood. N Engl J Med. 1996;334(19):1238-48.



# Clinical Criteria for Disease Staging

HEM24

**Disease: HEM24 Neoplasm, Malignant: Lymphoma, Diffuse Mixed Small and Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of diffuse mixed small and large cell lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with diffuse mixed small and large cell lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND diffuse mixed small and large cell lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	Of two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with diffuse mixed small and large cell lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND diffuse mixed small and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND diffuse mixed small and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM24

**Disease: HEM24 Neoplasm, Malignant: Lymphoma, Diffuse Mixed Small and Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with diffuse mixed small and large cell lymphoma involving both sides of the diaphragm [operative/pathology report] OR diffuse mixed small and large cell lymphoma involving the spleen [operative/pathology report] OR diffuse mixed small and large cell lymphoma involving the celiac nodes [operative/pathology report] OR diffuse mixed small and large cell lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND diffuse mixed small and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR diffuse mixed small and large cell lymphoma involving non-nodal surrounding tissues[operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]

# Clinical Criteria for Disease Staging

HEM24

**Disease: HEM24 Neoplasm, Malignant: Lymphoma, Diffuse Mixed Small and Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

## References

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Sandlund JT. Downing JR. Crist WM. Non-hodgkin's lymphoma in childhood. N Engl J Med. 1996;334(19):1238-48.

# Clinical Criteria for Disease Staging

HEM25

**Disease: HEM25 Neoplasm, Malignant: Lymphoma, Diffuse Small Cleaved Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of diffuse small cleaved cell lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with Diffuse small cleaved cell lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND diffuse small cleaved cell lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	Of two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with Diffuse small cleaved cell lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND diffuse small cleaved cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND diffuse small cleaved cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with Diffuse small cleaved cell lymphoma involving both sides of the diaphragm [operative/pathology report] OR diffuse small cleaved cell lymphoma involving the spleen [operative/pathology report] OR diffuse small cleaved cell lymphoma involving the celiac nodes [operative/pathology report] OR diffuse small cleaved cell lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1

# Clinical Criteria for Disease Staging

HEM25

**Disease: HEM25 Neoplasm, Malignant: Lymphoma, Diffuse Small Cleaved Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND diffuse small cleaved cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR Diffuse small cleaved cell lymphoma involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

**Disease: HEM25 Neoplasm, Malignant: Lymphoma, Diffuse Small Cleaved Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

Albano EA, et. al. Neoplastic diseases/lymphomas. In: Hay WW, Groosthius JR, Hayward AR, Levin MJ, eds. Current Pediatric Diagnosis and Treatment. 13th ed. Stamford, CT: Appleton & Lange; 1997:789-793.
Freedman AS, Nadler LM. Malignancies of lymphoid cells. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:695-712.
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Mead GM. ABC of clinical haematology. malignant lymphomas and chronic lymphocytic leukaemia. BMJ. 1997;314(7087):1103-6.
Sandlund JT. Downing JR. Crist WM. Non-hodgkin's lymphoma in childhood. N Engl J Med. 1996;334(19):1238-48.

# Clinical Criteria for Disease Staging

HEM26

**Disease: HEM26 Neoplasm, Malignant: Lymphoma, Follicular Mixed Small Cleaved and Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of follicular mixed small cleaved and large cell lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with follicular mixed small cleaved and large cell lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND follicular mixed small cleaved and large cell lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	Of two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with follicular mixed small cleaved and large cell lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND follicular mixed small cleaved and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND follicular mixed small cleaved and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM26

**Disease: HEM26 Neoplasm, Malignant: Lymphoma, Follicular Mixed Small Cleaved and Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with follicular mixed small cleaved and large cell lymphoma involving both sides of the diaphragm [operative/pathology report] OR follicular mixed small cleaved and large cell lymphoma involving the spleen [operative/pathology report] OR follicular mixed small cleaved and large cell lymphoma involving the celiac nodes [operative/pathology report] OR follicular mixed small cleaved and large cell lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND follicular mixed small cleaved and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR follicular mixed small cleaved and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]



# Clinical Criteria for Disease Staging

HEM26

**Disease: HEM26 Neoplasm, Malignant: Lymphoma, Follicular Mixed Small Cleaved and Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

## References

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Sandlund JT. Downing JR. Crist WM. Non-hodgkin's lymphoma in childhood. N Engl J Med. 1996;334(19):1238-48.

# Clinical Criteria for Disease Staging

HEM27

**Disease: HEM27 Neoplasm, Malignant: Lymphoma, Follicular Predominantly Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of follicular predominantly large cell lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with follicular predominantly large cell lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND follicular predominantly large cell lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	Of two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with follicular predominantly large cell lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND follicular predominantly large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND follicular predominantly large cell lymphoma involving non-nodal surrounding tissues[operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM27

**Disease: HEM27 Neoplasm, Malignant: Lymphoma, Follicular Predominantly Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with follicular predominantly large cell lymphoma involving both sides of the diaphragm [operative/pathology report] OR follicular predominantly large cell lymphoma involving the spleen [operative/pathology report] OR follicular predominantly large cell lymphoma involving the celiac nodes [operative/pathology report] OR follicular predominantly large cell lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND follicular mixed small cleaved and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR follicular mixed small cleaved and large cell lymphoma involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 1.01-3.03 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]

# Clinical Criteria for Disease Staging

HEM27

**Disease: HEM27 Neoplasm, Malignant: Lymphoma, Follicular Predominantly Large Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

## References

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# Clinical Criteria for Disease Staging

HEM28

**Disease: HEM28 Neoplasm, Malignant: Lymphoma, Follicular, Predominantly Small Cleaved Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of follicular predominantly small cleaved cell lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with follicular predominantly small cleaved cell lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND follicular predominantly small cleaved cell lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	Of two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with follicular predominantly small cleaved cell lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND follicular predominantly small cleaved cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND follicular predominantly small cleaved cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM28

**Disease: HEM28 Neoplasm, Malignant: Lymphoma, Follicular, Predominantly Small Cleaved Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with follicular predominantly small cleaved cell lymphoma involving both sides of the diaphragm [operative/pathology report] OR follicular predominantly small cleaved cell lymphoma involving the spleen [operative/pathology report] OR follicular predominantly small cleaved cell lymphoma involving the celiac nodes [operative/pathology report] OR follicular predominantly small cleaved cell lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND follicular predominantly small cleaved cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR follicular predominantly small cleaved cell lymphoma involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 3.01 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]

# Clinical Criteria for Disease Staging

HEM28

**Disease: HEM28 Neoplasm, Malignant: Lymphoma, Follicular, Predominantly Small Cleaved Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

## References

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Sandlund JT. Downing JR. Crist WM. Non-hodgkin's lymphoma in childhood. N Engl J Med. 1996;334(19):1238-48.

# Clinical Criteria for Disease Staging

HEM29

**Disease: HEM29 Neoplasm, Malignant: Lymphoma, Histiocytic Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of histiocytic cell lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with histiocytic cell lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND histiocytic cell lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	Of two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with histiocytic cell lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND histiocytic cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND histiocytic cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with histiocytic cell lymphoma involving both sides of the diaphragm [operative/pathology report] OR histiocytic cell lymphoma involving the spleen [operative/pathology report] OR histiocytic cell lymphoma involving the celiac nodes [operative/pathology report] OR histiocytic cell lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1



# Clinical Criteria for Disease Staging

HEM29

**Disease: HEM29 Neoplasm, Malignant: Lymphoma, Histiocytic Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND histiocytic cell lymphoma involving non-nodal surrounding tissues [operative/pathology report]  OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR histiocytic cell lymphoma involving non-nodal surrounding tissues[operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 3.01 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

**Disease: HEM29 Neoplasm, Malignant: Lymphoma, Histiocytic Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

<p>Albano EA, et. al. Neoplastic diseases/lymphomas. In: Hay WW, Groosthius JR, Hayward AR, Levin MJ, eds. Current Pediatric Diagnosis and Treatment. 13th ed. Stamford, CT: Appleton &amp; Lange; 1997:789-793.</p>
<p>Freedman AS, Nadler LM. Malignancies of lymphoid cells. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:695-712.</p>
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<p>Mead GM. ABC of clinical haematology. malignant lymphomas and chronic lymphocytic leukaemia. BMJ. 1997;314(7087):1103-6.</p>

# Clinical Criteria for Disease Staging

HEM30

**Disease: HEM30 Neoplasm, Malignant: Lymphoma, Large Cell Immunoblastic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of Large cell immunoblastic lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with Large cell immunoblastic lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND Large cell immunoblastic lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with Large cell immunoblastic lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND Large cell immunoblastic lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND Large cell immunoblastic lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with Large cell immunoblastic lymphoma involving both sides of the diaphragm [operative/pathology report] OR Large cell immunoblastic lymphoma involving the spleen [operative/pathology report] OR Large cell immunoblastic lymphoma involving the celiac nodes [operative/pathology report] OR Large cell immunoblastic lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1

# Clinical Criteria for Disease Staging

HEM30

**Disease: HEM30 Neoplasm, Malignant: Lymphoma, Large Cell Immunoblastic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND Large cell immunoblastic lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR Large cell immunoblastic lymphoma involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 3.01 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan ] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock</b>
4.00	with death	Stage 1.01-3.09 AND death

**Disease: HEM30 Neoplasm, Malignant: Lymphoma, Large Cell Immunoblastic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

HEM31

**Disease: HEM31 Neoplasm, Malignant: Lymphoma, Lymphoblastic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of Lymphoblastic lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with Lymphoblastic lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND Lymphoblastic lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with Lymphoblastic lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND Lymphoblastic lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND Lymphoblastic lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with Lymphoblastic lymphoma involving both sides of the diaphragm [operative/pathology report] OR Lymphoblastic lymphoma involving the spleen [operative/pathology report] OR Lymphoblastic lymphoma involving the celiac nodes [operative/pathology report] OR Lymphoblastic lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1

# Clinical Criteria for Disease Staging

HEM31

**Disease: HEM31 Neoplasm, Malignant: Lymphoma, Lymphoblastic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND Lymphoblastic lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR Lymphoblastic lymphoma involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 3.01 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

**Disease: HEM31 Neoplasm, Malignant: Lymphoma, Lymphoblastic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

Albano EA, et. al. Neoplastic diseases/lymphomas. In: Hay WW, Groosthius JR, Hayward AR, Levin MJ, eds. Current Pediatric Diagnosis and Treatment. 13th ed. Stamford, CT: Appleton & Lange; 1997:789-793.
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Sandlund JT. Downing JR. Crist WM. Non-hodgkin's lymphoma in childhood. N Engl J Med. 1996;334(19):1238-48.



# Clinical Criteria for Disease Staging

HEM32

**Disease: HEM32 Neoplasm, Malignant: Lymphoma, Small Lymphocytic Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of small lymphocytic cell lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with small lymphocytic cell lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND small lymphocytic cell lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with small lymphocytic cell lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND small lymphocytic cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>Fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND small lymphocytic cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with small lymphocytic cell lymphoma involving both sides of the diaphragm [operative/pathology report] OR small lymphocytic cell lymphoma involving the spleen [operative/pathology report] OR small lymphocytic cell lymphoma involving the celiac nodes [operative/pathology report] OR small lymphocytic cell lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1

# Clinical Criteria for Disease Staging

HEM32

**Disease: HEM32 Neoplasm, Malignant: Lymphoma, Small Lymphocytic Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND small lymphocytic cell lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR small lymphocytic cell lymphoma involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 3.01 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

**Disease: HEM32 Neoplasm, Malignant: Lymphoma, Small Lymphocytic Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

HEM33

**Disease: HEM33 Neoplasm, Malignant: Lymphoma, Small Noncleaved Cell or Burkitt's**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of small noncleaved cell or Burkitt's lymphoma	
1.01	Limited to one anatomic lymph node region	Lymph node group or group of contiguous lymph nodes with small noncleaved cell or Burkitt's lymphoma [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1A
1.02	Limited to one anatomic lymph node region and constitutional symptoms	Stage 1.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 1B
1.03	Limited to one anatomic lymph node region and constitutional symptoms and involvement of adjacent extranodal tissue	Stage 1.02 AND small noncleaved cell or Burkitt's lymphoma involving non-nodal surrounding tissue [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 1BE
2.01	On two anatomic lymph node regions on the same side of the diaphragm	Lymph node group or group of contiguous lymph nodes with small noncleaved cell or Burkitt's lymphoma involving two anatomic regions on the same side of the diaphragm [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2A
2.02	Of two anatomic lymph node regions on the same side of the diaphragm and adjacent tissue involvement	Stage 2.01 AND small noncleaved cell or Burkitt's lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2AE
2.03	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms	Stage 2.01 AND <b>fever:</b> OR history of night sweats OR weight loss of $\geq$ 10% baseline body weight in 6 months OR Ann Arbor Clinical Staging System Stage 2B
2.04	Of two anatomic lymph node regions on the same side of the diaphragm with constitutional symptoms and adjacent tissue involvement	Stage 2.03 AND small noncleaved cell or Burkitt's lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 2BE

# Clinical Criteria for Disease Staging

HEM33

**Disease: HEM33 Neoplasm, Malignant: Lymphoma, Small Noncleaved Cell or Burkitt's**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.01	On both sides of the diaphragm or involving the spleen	Lymph node group or group of contiguous lymph nodes with small noncleaved cell or Burkitt's lymphoma involving both sides of the diaphragm [operative/pathology report] OR small noncleaved cell or Burkitt's lymphoma involving the spleen [operative/pathology report] OR small noncleaved cell or Burkitt's lymphoma involving the celiac nodes [operative/pathology report] OR small noncleaved cell or Burkitt's lymphoma involving the portal nodes [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1 OR Ann Arbor Clinical Staging System Stage 3B1
3.02	On both sides of the diaphragm or involving the spleen with extension to adjacent tissues	Stage 3.01 AND small noncleaved cell or Burkitt's lymphoma involving non-nodal surrounding tissues [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A1E OR Ann Arbor Clinical Staging System Stage 3B1E
3.03	On both sides of the diaphragm or involving the spleen and further extension into the peritoneal cavity	Stage 3.01 AND mesenteric nodal involvement [operative/pathology report] OR para-aortic nodal involvement [operative/pathology report] OR iliac nodal involvement [operative/pathology report] OR femoral nodal involvement [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 3A2 OR Ann Arbor Clinical Staging System Stage 3B2 OR Ann Arbor Clinical Staging System Stage 3A2E OR Ann Arbor Clinical Staging System Stage 3B2E OR small noncleaved cell or Burkitt's lymphoma involving non-nodal surrounding tissues [operative/pathology report]
3.04	with diffuse extranodal tissue involvement	Stage 3.01 AND involvement of extranodal tissues without involvement of that organ's anatomic lymph node region [operative/pathology report] OR Ann Arbor Clinical Staging System Stage 4A OR Ann Arbor Clinical Staging System Stage 4B
3.05	with spinal cord compression	Stage 1.01-3.04 AND spinal cord compression [CT scan or MRI or operative/pathology report]

# Clinical Criteria for Disease Staging

HEM33

**Disease: HEM33 Neoplasm, Malignant: Lymphoma, Small Noncleaved Cell or Burkitt's**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.06	with opportunistic infections	Stage 1.01-3.05 AND Pneumocystis carinii pneumonia [operative/pathology report of gallium scan ] OR cryptococcal pneumonia [operative/pathology report] OR cryptococcal meningitis [CSF report] OR <b>opportunistic infection:</b>
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with shock	Stage 1.01-3.08 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.09 AND death

## References

Albano EA, et. al. Neoplastic diseases/lymphomas. In: Hay WW, Groosthus JR, Hayward AR, Levin MJ, eds. Current Pediatric Diagnosis and Treatment. 13th ed. Stamford, CT: Appleton & Lange; 1997:789-793.

Freedman AS, Nadler LM. Malignancies of lymphoid cells. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:695-712.

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Sandlund JT. Downing JR. Crist WM. Non-hodgkin's lymphoma in childhood. N Engl J Med. 1996;334(19):1238-48.

# Clinical Criteria for Disease Staging

HEM34

**Disease: HEM34 Neoplasm, Malignant: Multiple Myeloma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of multiple myeloma	
1.01	Multiple myeloma	Multiple myeloma in bone marrow [bone marrow biopsy report] OR monoclonal immunoglobulin, M component, paraprotein spike in serum [serum protein electrophoresis report]
2.01	with osteolytic lesions or anemia or pathologic fracture	Stage 1.01 AND <b>osteoporosis:</b> OR    osteolytic bone lesions [KUB x-ray or chest x-ray or skull x-ray or spine series x-ray] OR <b>anemia:</b> OR    pathologic fracture [x-ray report]
2.02	with hyperuricemia or hypercalcemia	Stage 1.01-2.01 AND <b>hyperuricemia:</b> OR <b>hypercalcemia:</b>
2.03	with amyloidosis of the lungs or liver or spleen	Stage 1.01-2.02 AND    amyloidosis of the lungs [operative/pathology report] OR    amyloidosis of the liver [operative/pathology report] OR    amyloidosis of the spleen [operative/pathology report]
2.04	with nephrotic syndrome or renal amyloidosis or renal tubular acidosis	Stage 1.01-2.03 AND    renal amyloidosis [operative/pathology report] OR    24 hour urine protein ≥ 3.0 g/dl AND    total serum protein ≤ 3.0 g/dl OR    renal tubular acidosis
3.01	with amyloidosis of the heart	Stage 1.01-2.04 AND    amyloidosis of the heart [operative/pathology report or echocardiogram report]
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with spinal cord compression	Stage 1.01-3.02 AND    collapsed vertebrae [operative/pathology report or CT scan or MRI scan report] OR    spinal cord compression [operative/pathology report or CT scan or MRI scan report]
3.04	with renal failure	Stage 1.01-3.04 AND <b>renal failure:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.05 AND    death

**Disease: HEM34 Neoplasm, Malignant: Multiple Myeloma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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**References**

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Croucher PI, Apperley JF. Bone disease in multiple myeloma. <i>British Journal of Haematology.</i> 1998;103(4):902-10.
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# Clinical Criteria for Disease Staging

HEM35

**Disease: HEM35 Neoplasm, Malignant: Waldenstrom's Macroglobulinemia**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Macroglobulinemia	Infiltration of bone marrow by plasmacytic lymphocyte [bone marrow report] AND IgM spike in the beta or gamma globulin region [immunoelectrophoresis report]
2.01	with anemia	Stage 1.01 AND <b>anemia:</b>
2.02	with coagulopathies	Stage 1.01-2.01 AND <b>coagulation defect:</b>
2.03	with severe anemia	Stage 1.01-2.02 AND hemoglobin < 6 gm/dl [hematology report]
2.04	with hyperviscosity syndrome	Stage 1.01-2.03 AND serum viscosity > 2.0 [hematology report]
2.05	with coronary artery disease	Stage 1.01-2.04 AND <b>angina:</b>
3.01	with congestive heart failure	Stage 1.01-2.05 AND <b>congestive heart failure:</b>
3.02	with cerebrovascular accidents	Stage 1.1-3.1 AND new intracerebral infarction or hemorrhage [CT scan or MRI scan report]
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

## References

Linker CA. Blood. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:479-534.

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# Clinical Criteria for Disease Staging

HEM36

**Disease: HEM36 Polycythemia Vera**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Polycythemia vera	Red blood cell mass $\geq$ 26 ml/kg in males or $\geq$ 21 ml/kg in females [hematology report] AND arterial oxygen saturation $\geq$ 92% [arterial blood gas report] AND splenomegaly [physical examination or liver-spleen scan or CT scan] OR <b>thrombocytosis:</b> OR <b>leukocytosis:</b> OR plasma erythropoetin level = 4mU/ml [chemistry report]
2.01	with peptic ulcer disease	Stage 1.01 AND peptic ulcer(s) [gastroscopy or UGI series report]
2.02	with hyperuricemia	Stage 1.01-2.01 AND <b>hyperuricemia:</b>
2.03	with gouty arthritis	Stage 1.01-2.02 AND gouty arthritis [Needle shaped negatively birefringent crystals in fluid or in phagocytes per synovial fluid report]
2.04	with renal calculi	Stage 1.01-2.03 AND renal calculi [KUB x-ray or sonogram or CT scan report]
2.05	with myelofibrosis	Stage 1.01-2.04 AND myelofibrosis [operative/pathology report]
2.06	with gastrointestinal bleeding	Stage 1.01-2.05 AND gastrointestinal bleeding [endoscopy or bleeding scan or angiogram report] OR <b>bleeding:</b>
2.07	with deep vein thrombosis	Stage 1.01-.2.06 AND <b>DVT:</b>
2.08	with Budd-Chiari syndrome	Stage 1.01-2.07 AND thrombosis of the hepatic veins [hepatic venography or liver/spleen scan report]
3.01	with pulmonary embolism	Stage 1.01-.2.07 AND <b>pulmonary embolism:</b>
3.02	with myocardial infarction	Stage 1.01-3.01 AND <b>acute myocardial infarction:</b>
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with cerebral vascular accident	Stage 1.01-3.03 AND cerebral accident [CT scan or MRI report]
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.05 AND death

**Disease: HEM36 Polycythemia Vera**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
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Tefferi A. The Philadelphia chromosome negative chronic myeloproliferative disorders: a practical overview. <i>Mayo Clinic Proceedings</i> . 1998;73(12):1177-84.

# Clinical Criteria for Disease Staging

HEM80

**Disease: HEM80 Anemia: Other**

## Etiology:

Stage	Description	Diagnostic findings
1.01	Other nutritional, hemorrhagic, sideroblastic anemias	
2.01	Moderate anemia	Hemoglobin <8
3.01	with CHF	
3.02	with shock	

## References

**Disease: HEM81 Neoplasm, Benign: Lymphatic or Hematopoietic**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of lymphatic or hematopoietic system	

References

# Clinical Criteria for Disease Staging

HEM82

**Disease: HEM82 Neoplasm, Malignant: Leukemia, Other Types**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of malignant histiocytosis, Letterer-Siwe Disease, monocytic and other types of leukemia or immunoproliferative malignancies	
1.01	Malignant histiocytosis, Letterer-Siwe Disease, monocytic and other types of leukemia or immunoproliferative malignancies	

## References

# Clinical Criteria for Disease Staging

HEM83

**Disease: HEM83 Neoplasm, Malignant: Lymphatic and Hematopoietic, Other Types**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Malignant neoplasm of spleen or thymus or other lymph node malignancy	
2.01	with lymph node metastases	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

References

# Clinical Criteria for Disease Staging

HEM84

**Disease: HEM84 Neoplasm, Malignant: Mastocytosis**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History or remission of malignant mastocytosis	
1.01	Malignant mastocytosis limited to one anatomic lymph node region	
1.02	with constitutional symptoms	
1.03	with constitutional symptoms and involvement of adjacent extranodal tissue	
2.01	of two anatomic lymph node regions	
3.01	on both sides of the diaphragm or involving the spleen	

## References



# Clinical Criteria for Disease Staging

HEM85

**Disease: HEM85 Other Disorders of Blood and Blood-Forming Organs**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Coagulation disorders, purpuras, thrombocytopenias, and other hemorrhagic conditions	

References

**Disease: HEM86 Other Lymphatic Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Lymphadenitis, lymphangitis, lymphedema, noninfectious lymphatic disorders, enlarged lymph nodes	

**References**

# Clinical Criteria for Disease Staging

HEP01

**Disease: HEP01 Cholecystitis and Cholelithiasis**

**Etiology: Idiopathic; Metabolic**

Stage	Description	Diagnostic findings
1.01	Chronic cholecystitis or cholelithiasis	Chronic cholecystitis [operative/pathology report or sonography report or HIDA scan report or oral cholecystogram report]
2.01	Chronic cholecystitis with choledocholithiasis	Stage 1.01 AND chronic cholecystitis with choledocholithiasis [endoscopic retrograde cholangiopancreatography report or intraoperative cholangiogram report or HIDA scan report or sonogram report or oral cholecystogram report or CT scan report or operative/pathology report]
2.02	Acute cholecystitis	Acute cholecystitis [operative/pathology report or sonogram report or HIDA scan report or oral cholecystogram report]
2.03	Acute cholecystitis with choledocholithiasis	Stage 2.02 AND choledocholithiasis [operative/pathology report or endoscopic retrograde cholangiopancreatography report or intraoperative cholangiogram report or HIDA scan report or sonogram report or CT scan report]
2.04	Empyema of gallbladder	Stage 1.01-2.03 AND empyema of gallbladder [operative/pathology report or plain abdomen x-ray report or sonogram report]
2.05	Cholecystitis with gangrene of gallbladder	Stage 1.01-2.04 AND gangrene of gallbladder [operative/pathology report]
2.06	Cholecystitis with localized perforation of gallbladder	Stage 1.01-2.05 AND localized perforation of the gallbladder [operative/pathology report]
2.07	Cholecystitis with gallstone ileus or with cholecystoduodenal or cholecystoenteric fistula or gallbladder obstruction	Stage 1.01-2.06 AND gallstone ileus [operative/pathology report or KUB x-ray report] OR fistula between gallbladder and intestines [operative/pathology report or UGI series report]
2.08	with ascending cholangitis	Stage 1.01-2.07 AND cholangitis [operative/pathology report] OR infected biliary tree [biliary tree culture reports growth of pathologic organism(s)]
2.09	with bile peritonitis	Stage 1.01-2.08 AND bile peritonitis [operative/pathology report]

**Disease: HEP01 Cholecystitis and Cholelithiasis**

**Etiology: Idiopathic; Metabolic**

Stage	Description	Diagnostic findings
3.01	Cholecystitis with acute Pancreatitis	Stage 1.01-2.09 AND acute pancreatitis [operative/pathology report or CT scan report or sonogram report or KUB x-ray report] OR serum amylase $\geq$ 163 u/l [chemistry report] OR serum p-type isoamylasemia [chemistry report] AND serum lipase $\geq$ 200 u/l per chemistry report OR sentinel loop [plain abdomen x-ray report] OR edema of the pancreas [sonogram or CT scan report]
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	Cholecystitis with death	Stage 1.01-3.03 AND death

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**Disease: HEP02 Cirrhosis of the Liver**

**Etiology: Idiopathic; Toxicologic**

Stage	Description	Diagnostic findings
2.01	Cirrhosis of liver	Cirrhosis of the liver [liver biopsy report]
2.02	with coagulopathies	Stage 2.01 AND <b>coagulation defect:</b>
2.03	with ascites or hypoproteinemia	Stage 2.01-2.02 AND ascites OR <b>hypoproteinemia:</b>
2.04	with esophageal variceal bleeding	Stage 2.01-2.03 AND bleeding esophageal varices [endoscopy report]
2.05	with bacterial peritonitis	Stage 2.01-2.04 AND peritonitis [operative/pathology report or peritoneal fluid culture reports growth of pathologic organism(s)]
3.01	with renal failure	Stage 2.01-2.05 AND <b>renal failure:</b>
3.02	with sepsis	Stage 2.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with hepatic encephalopathy	Stage 2.01-3.03 AND <b>hepatic coma:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

**References**

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# Clinical Criteria for Disease Staging

HEP03

**Disease: HEP03 Disorders of Bilirubin Excretion**

**Etiology: Congenital; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Familial recurrent cholestasis or cholestasis of pregnancy	Cholestasis [liver biopsy report] AND family history of cholestasis OR pregnant AND alkaline phosphatase $\geq$ 143 u/l [chemistry report]
1.02	Gilbert's syndrome	Unconjugated serum bilirubin $\geq$ 2 mg/dl [chemistry report] AND unconjugated serum bilirubin $\leq$ 5 mg/dl [chemistry report] AND SGOT $\leq$ 60 iu/l [chemistry report] AND SGPT $\leq$ 60 iu/l [chemistry report] OR GGT $\leq$ 38 u/l [chemistry report] AND serum haptoglobin $\geq$ 50 mg/dl [chemistry report]
1.03	Dubin-Johnson	Conjugated serum bilirubin $\geq$ 2 mg/dl [chemistry report] AND deeply pigmented liver [biopsy report] AND urine coproporphyrin $\geq$ 200 ug/24 hours [urine chemistry report]
1.04	Rotor's	Conjugated serum bilirubin $\geq$ 2 mg/dl [chemistry report] AND normal liver [biopsy report] AND urine coproporphyrin $\geq$ 200 ug/24 hours [urine chemistry report]
2.01	Type II Crigler-Najjar	Glucuronyl transferase deficiency [biopsy report or chemistry report] AND total serum bilirubin $\leq$ 20 mg/dl [chemistry report] AND total serum bilirubin $\geq$ 1.225 mg/dl [chemistry report] OR bile bilirubin $\geq$ 10 mg/dl [chemistry report]
2.02	Type I Crigler-Najjar	Glucuronyl transferase deficiency [biopsy report or chemistry report] OR colorless bile AND total serum bilirubin $\geq$ 20 mg/dl [chemistry report] OR bile bilirubin $\leq$ 10 mg/dl [chemistry report]
3.01	with kernicterus	Stage 1.01-2.02 AND lethargy OR poor feeding OR opisthotonos OR oculoogyric crisis OR seizures AND total serum bilirubin $\geq$ 10 mg/dl [chemistry report]
3.02	with hepatic coma	Stage 1.01-3.01 AND <b>hepatic coma:</b> OR acute hepatic necrosis [operative or pathology report]
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>

**Disease: HEP03 Disorders of Bilirubin Excretion**

**Etiology: Congenital; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
4.00	Disorders of biliary excretion with death	Stage 1.01-3.03 AND death

**References**

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Paulusma CC, Bosma PJ, Zaman GJ. Congenital jaundice in rats with a mutation in a multidrug resistance-associated protein gene. Science. 1996;271(5252):1126-8.

**Disease: HEP04 Hepatitis A**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Acute viral hepatitis A	Acute hepatitis A [serology report] AND anti-HAV IgG [serology report]
1.02	Chronic persistent hepatitis	Stage 1.01 AND chronic persistent hepatitis [operative/pathology report]
2.01	with dehydration	Stage 1.01-1.02 AND <b>dehydration:</b>
3.01	with hypotension	Stage 1.01 AND <b>hypotension:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**References**

Dienstag JL, Isselbacher K. Acute viral hepatitis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:1677-1692.

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Tepper MI, Gully PR. Viral hepatitis: know your D, E, F and Gs. CMAJ. 1997;156(12):1735-8.



**Disease: HEP05 Hepatitis B**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Carrier of viral hepatitis B	Hepatitis B surface antigen [serology report] AND hepatitis B core antibody IgG [serology report]
1.02	Acute viral hepatitis B	Acute hepatitis B [serology report] OR hepatitis B surface antigen [serology report]
1.03	Chronic persistent hepatitis	Stage 1.02 AND chronic persistent hepatitis [operative/pathology report]
1.04	Chronic active hepatitis	Stage 1.02-1.03 AND chronic active hepatitis [operative/pathology report]
2.01	with cirrhosis	Stage 1.02-1.04 AND cirrhosis [operative/pathology report or liver scan or CT scan report]
2.02	with bleeding	Stage 1.02-2.01 AND <b>bleeding:</b>
2.03	with hepatoma	Stage 1.02-2.02 AND hepatoma [operative/pathology report]
3.01	with renal failure	Stage 1.02-2.03 AND <b>renal failure:</b>
3.02	with hepatic coma	Stage 1.02-3.01 AND <b>hepatic coma:</b>
4.00	with death	Stage 1.02-3.02 AND death

**References**

Dienstag JL, Isselbacher K. Acute viral hepatitis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. *Harrison's Principles of Internal Medicine*. 14th ed. New York, NY: McGraw-Hill; 1998:1677-1692.

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**Disease: HEP06 Hepatitis C**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Acute viral hepatitis C	Acute hepatitis C [recombinant immunoblot assay or serology report] AND antibody hepatitis C [recombinant immunoblot assay or serology report]
1.02	Chronic persistent hepatitis	Stage 1.01 AND chronic persistent hepatitis [operative/pathology report]
1.03	Chronic active hepatitis	Stage 1.01-1.02 AND chronic active hepatitis [operative/pathology report]
2.01	with cirrhosis	Stage 1.01-1.03 AND cirrhosis [operative/pathology report or liver scan or CT scan report]
2.02	with bleeding	Stage 1.01-2.01 AND <b>bleeding:</b>
2.03	with hepatoma	Stage 1.01-2.02 AND hepatoma [operative/pathology report]
3.01	with renal failure	Stage 1.01-2.03 AND <b>renal failure:</b>
3.02	with hepatic coma	Stage 1.01-3.01 AND <b>hepatic coma:</b>
4.00	with death	Stage 1.01-3.02 AND death

**References**

Dienstag JL, Isselbacher K. Acute viral hepatitis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. *Harrison's Principles of Internal Medicine*. 14th ed. New York, NY: McGraw-Hill; 1998:1677-1692.

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Tepper MI, Gully PR. Viral hepatitis: know your D, E, F and Gs. *CMAJ*. 1997;156(12):1735-8.

**Disease: HEP07 Hepatitis D**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Acute viral hepatitis D	Hepatitis B surface antigen [serology report] OR hepatitis B core antibody IgM [serology report] AND Acute Delta hepatitis [IgM serology report]
1.02	Chronic persistent hepatitis	Stage 1.01 AND chronic persistent hepatitis [operative/pathology report]
1.03	Chronic active hepatitis	Stage 1.01-1.02 AND chronic active hepatitis [operative/pathology report]
2.01	with cirrhosis	Stage 1.01-1.03 AND cirrhosis [operative/pathology report or liver scan or CT scan report]
2.02	with bleeding	Stage 1.01-2.01 AND <b>bleeding:</b>
2.03	with hepatoma	Stage 1.01-2.02 AND hepatoma [operative/pathology report]
3.01	with renal failure	Stage 1.01-2.03 AND <b>renal failure:</b>
3.02	with hepatic coma	Stage 1.01-3.01 AND <b>hepatic coma:</b>
4.00	with death	Stage 1.01-3.02 AND death

**References**

Dienstag JL, Isselbacher K. Acute viral hepatitis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:1677-1692.

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Tepper MI, Gully PR. Viral hepatitis: know your D, E, F and Gs. CMAJ. 1997;156(12):1735-8.

**Disease: HEP08 Hepatitis E**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Acute viral hepatitis E	Hepatitis E [27-34 nm virus-like particles by immune electron microscopy in feces of acutely ill patients or hepatitis E serology report or hepatitis E PCR report] AND negative hepatitis A serology [serology report] AND negative anti-HAV IgM serology [serology report] AND negative acute hepatitis B serology [serology report] AND hepatitis B surface antigen [serology report] AND negative hepatitis B core antibody IgM [serology report] AND negative acute hepatitis C serology [recombinant immunoblot assay or serology report] AND negative antibody hepatitis C serology [recombinant immunoblot assay or serology report]
1.02	Chronic persistent hepatitis	Stage 1.01 AND chronic persistent hepatitis [operative/pathology report]
1.03	Chronic active hepatitis	Stage 1.01-1.02 AND chronic active hepatitis [operative/pathology report]
2.01	with dehydration	Stage 1.01-1-03 AND <b>dehydration:</b>
3.01	with hypotension	Stage 1.02-2.01 AND <b>hypotension:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**References**

Dienstag JL, Isselbacher K. Acute viral hepatitis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:1677-1692.

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**Disease: HEP09 Hepatitis G**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Acute viral hepatitis G and other or unspecified hepatitis	Acute hepatitis G [reverse-transcriptase PCR report or serology report]
1.02	Chronic persistent hepatitis	Stage 1.01 AND chronic persistent hepatitis [operative/pathology report]
3.01	with hepatic coma	Stage 1.01-1.02 AND <b>hepatic coma:</b>

**References**

Dienstag JL, Isselbacher K. Acute viral hepatitis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:1677-1692.

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Noskin GA. Prevention, diagnosis, and management of viral hepatitis. A guide for primary care physicians. Archives of Family Medicine. 1995;4(11):923-34.

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**Disease: HEP10 Hepatitis, Chemical**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Toxic chemical hepatitis	History of exposure or ingestion of chemicals or drugs AND <b>jaundice:</b>
2.01	with peliosis hepatitis	History of anabolic steroid use AND bloody cysts of the liver [operative/pathology report or CT scan or sonogram report]
2.02	with hepatic adenoma	History of oral contraceptive use AND hepatic adenoma [CT scan or biopsy report]
2.03	with hepatic vein thrombosis	History of oral contraceptive use AND hepatic vein thrombosis [liver/spleen scan report or hepatic venography report]
3.01	with coagulation defects	Stage 1.01-2.03 AND <b>coagulation defect:</b>
3.02	with renal failure	Stage 1.01-3.01 AND <b>renal failure:</b>
3.03	with hepatic coma	Stage 1.01-3.02 AND <b>hepatic coma:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

**References**

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# Clinical Criteria for Disease Staging

HEP11

**Disease:** HEP11 Neoplasm, Malignant: Pancreas

**Etiology:** Neoplasm

Stage	Description	Diagnostic findings
0.00	Hx, Ca Pancreas	History of carcinoma of the pancreas
1.01	Localized	No direct extension of primary pancreatic carcinoma beyond the pancreas [operative/pathology report] OR pancreatic carcinoma with extension to the duodenum, bile ducts or stomach with no regional lymph node extension and removal by en bloc excision with the pancreas [operative/pathology report] OR Stage I American Joint Committee on Cancer OR Stage T1 OR Stage T2
2.01	with extension beyond duodenum or bile ducts or stomach, no regional lymph nodes	Pancreatic carcinoma with extension beyond the duodenum or bile ducts or stomach and no regional lymph node extension [operative/pathology report] OR Stage II American Joint Committee on Cancer OR Stage T3
3.01	with regional lymph nodes	Regional node involvement with pancreatic carcinoma [operative/pathology report] OR Stage III American Joint Committee on Cancer
3.02	with distant or liver mets	Liver involvement with pancreatic carcinoma [operative/pathology report] OR pancreatic carcinoma involves tissue beyond the confines of the abdominal cavity [operative/pathology report] OR Stage IV American Joint Committee on Cancer
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

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Mayer RJ. Pancreatic Cancer. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. *Harrison's Principles of Internal Medicine*. 14th ed. New York, NY: McGraw-Hill; 1998:581-584.

Rosewicz S, Wiedenmann B. Pancreatic carcinoma. *Lancet*. 1997;349(9050):485-9.

# Clinical Criteria for Disease Staging

HEP12

**Disease: HEP12 Pancreatitis**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Pancreatitis with pancreatic insufficiency	History of $\geq 1$ previous episode of acute pancreatitis OR calcification in pancreas [plain abdomen x-ray report or CT scan report] AND <b>pancreatic insufficiency:</b>
1.02	with pancreatic pseudocyst	Stage 1.01 AND pancreatic pseudocyst [sonogram report or operative/pathology report]
1.03	Acute pancreatitis	Pancreatitis [operative/pathology report or CT scan report or sonogram report or KUB x-ray report] OR serum amylase $\geq 163$ u/l [chemistry report] OR serum p-type isoamylasemia [chemistry report] AND serum lipase $\geq 200$ u/l [chemistry report] OR sentinel loop [plain abdomen x-ray report] OR edema of the pancreas [sonogram or CT scan report]
1.04	Acute and Chronic pancreatitis	Stage 1.01-1.03 AND history of $\geq 1$ episode of acute pancreatitis
2.01	with ascites	Stage 1.01-1.04 AND ascites [sonogram report] OR shifting dullness
2.02	Fulminant pancreatitis	Stage 1.01-1.04 AND age $\geq 55$ years old OR serum glucose $\geq 200$ mg/dl [chemistry report] OR serum LDH $\geq 350$ mg/dl [chemistry report] OR SGOT $\geq 250$ u/l [chemistry report] OR WBC $\geq 16,000/\text{mm}^3$ [complete blood count report] OR hematocrit decrease $\geq 10\%$ within 48 hours [hematology report] OR BUN increase $\geq 5$ mg/dl within 48 hours [chemistry report] OR serum calcium $\leq 8$ mg/dl within 48 hours [chemistry report] OR <b>hypoxemia:</b> within 48 hours OR base deficit $\geq 4$ mEq/L within 48 hours [ABG report] OR estimated fluid sequestration $\geq 6$ liters within 48 hours



# Clinical Criteria for Disease Staging

HEP12

**Disease: HEP12 Pancreatitis**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
2.03	Hemorrhagic or severe pancreatitis	Stage 1.01-2.02 AND hemorrhagic pancreatitis [ operative/pathology report] OR Grey Turner's sign OR Cullen's sign OR Ranson's criteria for very high risk pancreatitis (any finding $\geq$ 3 of the following:) age $\geq$ 55 years old OR serum glucose $\geq$ 200 mg/dl [ chemistry report] OR serum LDH $\geq$ 350 mg/dl [ chemistry report] OR SGOT $\geq$ 250 u/l [ chemistry report] OR WBC $\geq$ 16,000/mm <sup>3</sup> [ complete blood count report] OR hematocrit decrease $\geq$ 10% within 48 hours [ hematology report] OR BUN increase $\geq$ 5 mg/dl within 48 hours [ chemistry report] OR serum calcium $\leq$ 8 mg/dl within 48 hours [ chemistry report] OR <b>hypoxemia</b> : within 48 hours OR base deficit $\geq$ 4 mEq/L within 48 hours [ ABG report] OR estimated fluid sequestration $\geq$ 6 liters within 48 hours
3.01	with renal failure	Stage 1.01-2.03 AND <b>renal failure</b> :
3.02	with CHF	Stage 1.01-3.01 AND <b>congestive heart failure</b> :
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis</b> :
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure</b> :
3.05	with shock	Stage 1.01-3.04 AND <b>shock</b> :
4.00	with death	Stage 1.01-3.05 AND death

**Disease: HEP12 Pancreatitis**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
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**References**

<p>Friedman LS. Liver, biliary tract, &amp; pancreas. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange; 1998:628-666.</p>
<p>Greenberger NJ, Toskes PP, Isselbacher KJ. Acute and chronic pancreatitis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:1741-1753.</p>
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<p>Mergener K, Baillie J. Chronic pancreatitis. Lancet. 1997;350(9088):1379-85.</p>

# Clinical Criteria for Disease Staging

HEP13

**Disease: HEP13 Wilson's Disease**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
1.01	Wilson's disease or hepatolenticular degeneration	urinary copper excretion $\geq$ 100mg/24 hrs [urine chemistry report] OR serum ceruloplasmin $\leq$ 200 mg/l [chemistry report] AND Kayser-Fleischer ring [slit lamp ophthalmoscopy report] OR hepatic copper $\geq$ 250ug/g dry liver weight [biopsy report] OR defect chromosome 13 ATP7B gene [genetics report]
2.01	with hepatitis or splenomegaly	Stage 1.01 AND splenomegaly OR <b>hepatitis:</b>
2.02	with CNS disorders	Stage 1.01-2.01 AND fine tremors of upper extremities OR choreoathetosis OR muscular rigidity OR dysarthria
2.03	with hemolyic anemia	Stage 1.01-2.02 AND <b>hemolysis:</b>
2.04	Chronic active hepatitis	Stage 1.01-2.03 AND chronic active hepatitis [operative/pathology report]
2.05	with coagulation defects	Stage 1.01-2.04 AND <b>coagulation defects:</b>
3.01	with renal failure	Stage 1.01-2.05 AND <b>renal failure:</b>
3.02	with hepatic coma	Stage 1.01-3.01 AND <b>hepatic coma:</b> OR acute hepatic necrosis [operative/ pathology report]
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**Disease: HEP13 Wilson's Disease**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
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**References**

Friedman LS. Liver, biliary tract, & pancreas. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:628-666.
Jones EA, Weissenborn K. Neurology and the liver. Journal of Neurology, Neurosurgery & Psychiatry. 1997;63(3):279-93.
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Walshe JM. Treatment of Wilson's disease: the historical background. QJM. 1996;89(7):553-5.

**Disease: HEP80 Budd Chiari Syndrome**

**Etiology:**

Stage	Description	Diagnostic findings
2.01	Budd-Chiari syndrome	

References

**Disease: HEP81 Neoplasm, Benign: Hepatobiliary System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm hepatobiliary system	

References

# Clinical Criteria for Disease Staging

HEP82

**Disease: HEP82 Neoplasm, Malignant: Other Hepatobiliary Tract**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of liver malignancy	
1.01	Primary malignant neoplasm of liver, gallbladder, hepatic or biliary ducts	
2.01	with abdominal or peritoneal lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

## References

**Disease: HEP83 Other Liver Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Chronic hepatitis or sequelae of chronic liver disease, cholesterolosis	
1.02	Chronic hepatitis or chronic passive liver congestion	
2.01	Hepatic infarction, liver abscess, acute necrosis, portal pyemia, or portal hypertension	
3.01	Hepatic coma, hepatorenal syndrome	

**References**



**Disease: HEP84 Other Biliary Disorders****Etiology:**

Stage	Description	Diagnostic findings
1.01	Other gallbladder disease	

**References**

**Disease: HEP85 Other Pancreatic Disorders****Etiology:**

Stage	Description	Diagnostic findings
1.01	Pancreatic cyst and other pancreatic disease	

**References**

# Clinical Criteria for Disease Staging

IMM01

**Disease: IMM01 Human Immunodeficiency Virus Type I (HIV) Infection**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Human immunodeficiency virus infection, Type I	Human immunodeficiency virus infection [Western blot assay report and ELISA report]
1.02	with significant immunosuppression	Stage 1.01 AND CD4 count < 500/mm <sup>3</sup> [hematology report] AND CD4 count > 200 /mm <sup>3</sup> [hematology report] OR bDNA < 20,000 copies/mL [hematology report] OR HIV RNA levels or viral load tests <10,000 copies/mL [hematology report] AND HIV RNA levels or viral load tests > 5000 copies/mL [hematology report]
2.01	Presumptive Acquired Immune Deficiency Syndrome	Stage 1.01-1.02 AND recent onset of retrosternal pain on swallowing AND oral candidiasis [culture report] OR Cytomegalovirus retinitis [ophthalmoscopic report] OR Mycobacteriosis [acid-fast bacilli not identified as reported by culture report] OR Erythematous or violaceous plaque-like lesion on skin or mucous membrane OR a history of dyspnea on exertion or nonproductive cough of recent onset ≤ 3 months AND diffuse bilateral interstitial infiltrates [chest x-ray report] OR diffuse bilateral pulmonary disease [gallium scan report] AND arterial oxygen partial pressure of < 70 mm Hg [blood gas report] OR respiratory diffusing capacity of < 80% of predicted values [PFT report] AND no evidence of bacterial pneumonia OR recent onset of a focal neurologic abnormality or a reduced level of consciousness AND brain lesion having a mass effect [CT scan or MRI report] OR radiographic appearance enhanced by injection of contrast medium [CT scan or MRI report] AND serum antibody to toxoplasmosis [serology report] OR apical or miliary infiltrates [chest x-ray report]

# Clinical Criteria for Disease Staging

IMM01

**Disease: IMM01 Human Immunodeficiency Virus Type I (HIV) Infection**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
2.02	AIDS with low CD4 cell count	CD4 lymphocyte count <200 cells/mm <sup>3</sup> [hematology report] OR CD4 lymphocyte percentage <14% [hematology report] AND coccidioidomycosis, disseminated OR HIV encephalopathy OR histoplasmosis, disseminated OR isosporiasis [culture report] AND diarrhea persisting > 1 month OR Kaposi's sarcoma [operative/pathology report] OR primary lymphoma of the brain [operative/pathology report] OR non-Hodgkin's lymphoma of B cell origin [hematology report] OR non-Hodgkin's lymphoma unknown immunologic phenotype [hematology report] OR mycobacterial disease other than mycobacterium tuberculosis, disseminated OR tuberculosis [culture or molecular medicine report] OR history of recurrent salmonella sepsis OR HIV wasting syndrome OR pneumonia episodes ≥ 1/year OR invasive cervical cancer [operative/pathology report]
2.03	AIDS defining diagnosis	Candidiasis of the esophagus [endoscopy report] OR candidiasis of the trachea [bronchoscopy report] OR candidiasis of the bronchi [bronchoscopy report] OR candidiasis of the lungs [bronchoscopy report] OR cryptococcosis, extrapulmonary OR cryptosporidiosis [culture report] AND diarrhea persisting > 1 month OR cytomegalovirus disease of an organ other than liver, spleen, or lymph nodes OR herpes simplex virus infection with mucocutaneous ulcer persists > 1 month OR herpes simplex virus bronchitis [bronchoscopy report] OR herpes simplex virus esophagitis [endoscopy report] OR herpes simplex pneumonitis [bronchoscopy report] OR Kaposi's sarcoma in a patient < 60 years of age [operative/pathology report] OR primary lymphoma of the brain in a patient < 60 years of age [operative/pathology report] OR mycobacterium avium complex [culture report] OR mycobacterium kansasii disease, disseminated [culture report] OR Pneumocystis carinii pneumonia [bronchoscopy report] OR progressive multifocal leukoencephalopathy [operative/pathology report] OR toxoplasmosis of the brain [operative/pathology report]

# Clinical Criteria for Disease Staging

IMM01

**Disease: IMM01 Human Immunodeficiency Virus Type I (HIV) Infection**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
3.01	with renal failure	Stage 2.01-2.03 AND <b>renal failure:</b>
3.02	with sepsis	Stage 2.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 2.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND <b>death</b>

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**Disease: IMM02 Urticaria**

**Etiology: Idiopathic; Immune**

Stage	Description	Diagnostic findings
1.01	Localized acute urticaria	Urticaria ≤ 6 weeks AND Localized urticaria [dermatology report or operative/pathology report or laboratory test and skin test]
1.02	Localized chronic urticaria	Urticaria > 6 weeks AND Localized urticaria [dermatology report or operative/pathology report or laboratory test and skin test]
2.01	Generalized chronic urticaria	Urticaria > 6 weeks AND Generalized urticaria [dermatologist report or operative/pathology report or laboratory test or skin test]
2.02	Generalized acute urticaria	Urticaria ≤ 6 weeks AND Generalized urticaria [dermatologist report or operative/pathology report or laboratory test or skin test]
3.01	with anaphylactic shock	Stage 1.01-2.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.01 AND death

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**Disease: IMM80 Other Immunodeficient Disorders****Etiology:**

Stage	Description	Diagnostic findings
1.01	Other immunodeficient disorders	

**References**

# Clinical Criteria for Disease Staging

INF01

## Disease: INF01 Aspergillosis

### Etiology: Infection

Stage	Description	Diagnostic findings
1.01	Primary localized cutaneous aspergillosis	Cutaneous Aspergillosis [culture reports] OR biopsy confirms cutaneous Aspergillus invasion
2.01	with keratitis	Infection of the cornea by Aspergillus spp. [culture report of growth of pathologic organism(s)]
2.02	with endophthalmitis	Infection of the entire eye by Aspergillus spp. [culture reports growth of pathologic organism(s)]
2.03	with orbital cellulitis	Orbital cellulitis: AND aspergillosis [culture reports growth of pathologic organism(s)]
2.04	Aspergilloma or 'fungus ball'	Stage 1.01-2.03 AND new as a dense round ball infiltrate [chest x-ray report] AND Aspergillous spp. in sputum [gram stain documents presence of many WBC AND sputum culture reports growth of Aspergillus] OR Aspergillus antibody positive [serology report]
2.05	Allergic bronchial aspergillosis	History of asthma AND <b>eosinophilia:</b> AND positive skin test to Aspergillus spp. OR IgE levels $\geq$ 506 units/ml. [serology report]
3.01	with endocarditis	Stage 1.01-2.05 AND <b>endocarditis:</b>
3.02	with meningitis	Stage 1.01-3.01 AND <b>meningitis:</b>
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with shock	Stage 2.02-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.04 AND death

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# Clinical Criteria for Disease Staging

INF02

**Disease: INF02 Botulism**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Botulism	Clostridium botulism toxin in serum [serology report] OR Clostridium botulism toxin in food [food analysis report] AND diplopia OR ptosis OR blurred vision OR fixed dilated pupils OR dry mouth OR dysphagia OR dysphonia OR nausea OR vomiting OR <b>cranial nerve palsy:</b>
2.01	with generalized muscle weakness	Stage 1.01 AND generalized muscle weakness
2.02	with bladder involvement	Stage 1.01-2.01 AND distended bladder AND unable to void OR post-voiding urine catheterization shows >50 cc of residual urine
2.03	with respiratory musculature involvement	Stage 1.01-2.02 AND dyspnea
2.04	with aspiration pneumonia	Stage 1.01-2.03 AND aspiration pneumonia
3.01	with respiratory failure	Stage 1.01-2.04 AND <b>respiratory failure:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	Botulism and death	Stage 1.01-3.02 AND death

**Disease: INF02 Botulism**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

INF03

**Disease: INF03 Candida (Monilial) Infections**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Cutaneous or oral or vaginal candidiasis	Cutaneous or oral cavity candidiasis [culture reports growth of Candida or Candida identified in potassium hydroxide wet mounts from scraping]  Presumptive Diagnostic Findings: Oral thrush OR candida paronychia OR cheesy, curd-like discharge of Candida vaginitis
2.01	Candidiasis of gastrointestinal or lower urinary or upper respiratory tract	Candidiasis of gastrointestinal tract [culture reports growth of Candida or Candida identified in potassium hydroxide wet mounts from scraping] OR dysuria AND candidiasis of urinary tract [culture reports growth of Candida] OR cough AND candidiasis of upper respiratory tract [culture reports growth of Candida]
2.02	Chronic candidiasis	Stage 1.01-2.01 AND history of recurrent Candida infections
2.03	Candida endophthalmitis or pyelonephritis or arthritis or osteomyelitis	Candida endophthalmitis [operative or pathology report] OR pyelonephritis: OR candida arthritis [culture report of joint effusion] OR candida osteomyelitis [bone culture report]
2.04	Candida fungemia	Candida fungemia [blood culture reports growth of candida]
3.01	with renal failure	Stage 2.01-2.04 AND <b>renal failure:</b>
3.02	with endocarditis	Stage 2.01-3.01 AND <b>endocarditis:</b>
3.03	with meningitis	Stage 2.01-3.02 AND <b>meningitis:</b>
3.04	with sepsis	Stage 2.01-3.02 AND <b>sepsis</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

**Disease: INF03 Candida (Monilial) Infections**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**References**

<p>Bennett JE. Candidiasis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:1154-1156.</p>
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# Clinical Criteria for Disease Staging

INF04

**Disease: INF04 Chlamydial Infection Except Trachoma or Pneumonia**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Chlamydial conjunctivitis	Mucopurulent conjunctival discharge OR conjunctival injection OR conjunctival edema AND chlamydial trachomatis [exudate culture report] OR chlamydial trachomatis [immunofluorescence antibody report or ELISA report or DNA-PCR report]
1.02	Chlamydial proctitis	Proctitis AND chlamydial trachomatis [immunofluorescence antibody report or ELISA report or DNA-PCR report]
1.03	Chlamydial urethritis	Urethritis AND chlamydial trachomatis [immunofluorescence antibody report or ELISA report or DNA-PCR report]
1.04	Chlamydial cervicitis	Cervicitis AND chlamydial trachomatis [immunofluorescence antibody report or ELISA report or DNA-PCR report]
2.01	with lymphogranuloma venereum	Stage 1.01-1.04 AND suppurative inguinal lymphadenitis
2.02	Chlamydial infection with pelvic inflammatory disease	Stage 1.01-2.01 OR pelvic inflammatory disease AND chlamydial trachomatis [immunofluorescence antibody report or ELISA report or DNA-PCR report]
2.03	Chlamydial interstitial pneumonia	Stage 1.01-2.02 AND new infiltrate [chest x-ray report]
3.01	with respiratory failure	Stage 1.01-2.03 AND <b>respiratory failure:</b>
3.02	with shock	Stage 1.02-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.02-3.02 AND death

**Disease: INF04 Chlamydial Infection Except Trachoma or Pneumonia**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**References**

<p>Chambers HF. Infectious diseases: bacterial &amp; chlamydial. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. In: Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange, 1998:1267-1304.</p>
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<p>Horner PJ, Crowley T, Leece J, et al. Chlamydia trachomatis detection and the menstrual cycle. Lancet. 351(9099):341-2, 1998 Jan 31.</p>
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**Disease: INF05 Clostridial Wound Infection**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Clostridium wound infection	Clostridial sp. grown from abscess or wound [wound culture report]
2.01	with cellulitis	Stage 1.01 AND <b>cellulitis:</b>
2.02	with hemolysis	Stage 1.01-2.01 AND <b>hemolysis:</b>
2.03	with myonecrosis or gas gangrene	Stage 1.01-2.01 AND gas in tissues [ x-ray report] OR gas palpable in tissues OR myonecrosis [muscle biopsy operative/pathology report]
3.01	with sepsis	Stage 1.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

INF06

**Disease: INF06 Coccidioidomycosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Coccidioidomycosis of the respiratory tract	Infected sputum [gram stain demonstrates Coccidioides spp. or sputum culture reports growth of Coccidioides spp.] OR Coccidioides titer $\geq$ 1:16 [serology report] OR coccidioidomycosis [IgM or IgG serology report shows $\geq$ 4 fold increase in titer from baseline]
2.01	Cutaneous coccidioidomycosis or coccidioidomycosis with lymphadenopathy	Stage 1.01 AND skin ulcerations of coccidioidomycosis [operative/pathology report] OR axillary and inguinal adenopathy
2.02	with pleural effusion	Stage 1.01-2.01 AND pleural fluid [chest x-ray report]
2.03	with pulmonary cavitation	Stage 1.01-2.02 AND pulmonary granuloma or cavitation [chest x-ray report]
2.04	with osteomyelitis or arthritis	Stage 1.01-2.03 AND <b>osteomyelitis:</b> OR coccidioidomycosis arthritis (synovial fluid reports Coccidioides spp.) OR <b>arthritis:</b>
2.05	with hepatitis or splenic involvement	Stage 1.01-2.04 AND liver mass [CT scan report or liver-spleen scan report] OR splenomegaly [CT scan report or liver-spleen scan report] OR hepatic granuloma of Coccidioides spp. [operative/pathology report] OR splenic granuloma of Coccidioides spp. [operative/pathology report]
2.06	Renal coccidioidomycosis	Stage 1.01-2.05 AND renal mass [CT scan or sonogram report] OR renal coccidioidomycosis [operative/pathology report]
3.01	with meningitis	Coccidioides titer $>$ 1:16 in CSF [CSF serology report] OR coccidioidomycosis [IgM or IgG CSF serology report shows $\geq$ 4 fold increase in titer from baseline AND <b>meningitis:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>



**Disease: INF06 Coccidioidomycosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
4.00	with death	Stage 1.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

INF07

**Disease: INF07 Coxsackie and ECHO Infections**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Exanthems caused by Coxsackie or ECHO viruses	Nonpruritic or nondesquamative or discrete rubelliform rash confined to face or neck and chest AND Coxsackie virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show $\geq 4$ increase] OR ECHO virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show $\geq 4$ increase]
1.02	Herpangina caused by Coxsackie viruses	Herpangina OR <b>fever:</b> AND sore throat AND grayish papulovesicular lesions with erythematous areola on tonsillar pillars or soft palate or tonsils or uvula and tongue which may ulcerate AND Coxsackie virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase]
1.03	Lymphonodular pharyngitis caused by Coxsackie viruses	Coxsackie virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase] AND <b>fever:</b> AND sore throat AND raised white to yellowish pharyngeal nodules
1.04	Hand-Foot-and-Mouth disease caused by Coxsackie viruses	Stage 1.01-1.03 AND vesicular exanthem over buccal mucosa or palate and over hands and feet AND Coxsackie virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase]
1.05	Epidemic pleurodynia or Bornholm disease	Severe intermittent epigastric pain or lower anterior chest pain AND <b>fever:</b> AND sore throat AND malaise AND myalgia of trunk and extremities AND Coxsackie virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase]
1.06	ECHO virus gastroenteritis	Diffuse abdominal pain AND bowel movements > 3 times a day AND diarrhea AND ECHO virus infection of stool [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase]

# Clinical Criteria for Disease Staging

INF07

**Disease: INF07 Coxsackie and ECHO Infections**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
2.01	Coxsackie or ECHO virus pneumonia	Stage 1.01-1.06 AND Coxsackie virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase] OR ECHO virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase] AND new infiltrate [chest x-ray report]
2.02	Coxsackie or ECHO virus paralysis	Stage 1.01-2.01 AND weakness of extremities unresolved after 1 month OR paralysis of extremities unresolved after 1 month
2.03	Pericarditis	Stage 1.01-2.02 AND <b>pericarditis:</b>
3.01	Myocarditis caused by Coxsackie or ECHO viruses	Stage 1.01-2.03 AND <b>myocarditis:</b> AND Coxsackie virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase] OR ECHO virus infection [tissue culture reports isolation of virus or convalescent versus acute serum antibody titers show four fold increase]
3.02	Aseptic meningitis caused by Coxsackie or ECHO viruses	Stage 1.01-3.01 AND <b>aseptic meningitis:</b>
3.03	Coxsackie or ECHO viruses myocarditis with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	Respiratory failure caused by Coxsackie or ECHO viruses	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	Shock caused by Coxsackie or ECHO viruses	Stage 1.01-3.04 AND <b>shock:</b>
4.00	ECHO or Coxsackie virus infections with death	Stage 1.01-3.05 AND death

**Disease: INF07 Coxsackie and ECHO Infections**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

INF08

**Disease: INF08 Cryptococcosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Cryptococcal infection	Cryptococcal antigen $\geq$ 1:8 [serology report] OR Cryptococcal fungemia [blood culture report]
1.02	Cryptococcal dermatitides	Stage 1.01 AND skin pustules or skin ulcers of cryptococcosis [skin culture reports growth of Cryptococcus neoformans]
2.01	Cryptococcal pneumonia	S1.01-1.02 AND new infiltrate [chest x-ray report] AND sputum culture reports growth of Cryptococcus neoformans [sputum culture report]
2.02	Cryptococcal urinary tract infection	Urine infected with > 100,000 cfu/ml of Cryptococcus neoformans growth [culture from freshly voided 'clean catch' urine] AND <b>pyuria:</b>
2.03	Cryptococcal osteomyelitis or endophthalmitis or hepatitis or endocarditis or pericarditis or pyelonephritis	Stage 1.01-2.02 AND Cryptococcal osteomyelitis [bone culture report] OR Cryptococcal endophthalmitis [eye culture report] OR Cryptococcal hepatitis [liver biopsy report] OR <b>endocarditis:</b> OR pericarditis: OR urine infected with >100,000 cfu/ml of Cryptococcus neoformans growth [culture from freshly voided 'clean catch' urine] AND <b>pyuria:</b> AND costovertebral tenderness OR kidney punch positive
3.01	Cryptococcal meningitis	Cryptococcal meningitis [India ink stain of CSF or latex agglutination test of CSF]
3.02	Cryptococcal encephalitis	Stage 1.01-3.01 AND involvement of the cerebral hemispheres with infarction or granulomas [CT scan report or MRI report]
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.05 AND death

**Disease: INF08 Cryptococcosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

INF09

**Disease: INF09 Cytomegalovirus Disease, (Acquired)**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Cytomegalovirus disease of the salivary glands	Cytomegalovirus isolated from saliva [tissue culture reports isolation of cytomegalovirus]
1.02	Cytomegalovirus retinitis	Cytomegalovirus infection [isolation of cytomegalovirus from serum or body fluids or urine from tissue cultures or convalescent/acute cytomegalovirus serum antibody titers $\geq$ 4 increase] AND retinitis [ophthalmoscopy report] OR cotton wool spots [ophthalmoscopy report]
1.03	Cytomegalovirus retinitis with retinal hemorrhages or infiltrates or disk edema	Stage 1.01-1.02 AND retinal hemorrhages [ophthalmoscopy report] OR sectoral infiltrates [ophthalmoscopy report] OR optic disk edema [ophthalmoscopy report]
1.04	Cytomegalovirus retinitis with retinal detachment	Stage 1.01-1.03 AND rhegmatogenous retinal detachment [ophthalmoscopy report] OR iris neovascularization [ophthalmoscopy report]
2.01	with hepatitis	Cytomegalovirus infection [isolation of cytomegalovirus from serum or body fluids or urine from tissue cultures or convalescent/acute cytomegalovirus serum antibody titers > 4 fold increase] AND hepatosplenomegaly [liver/spleen scan report or CT scan report or sonogram report] AND <b>hepatitis:</b>
2.02	Cytomegalovirus mononucleosis	Stage 2.01 AND <b>lymphocytosis:</b> AND atypical lymphocytes [hematology report] AND heterophil antibody test negative [hematology report]
2.03	with ulcers of the gastrointestinal tract	Duodenal ulcers [endoscopy report] OR gastric ulcers [endoscopy report] OR esophageal ulcers [endoscopy report] OR small intestinal ulcers [endoscopy report] OR colonic ulcers [endoscopy report] AND cytomegalovirus tissue infection [biopsy or operative/pathology tissue culture report]
2.04	with pneumonitis	Stage 1.02-2.03 AND new interstitial infiltrate [chest x-ray report] OR cytomegalovirus pneumonitis [biopsy or operative/pathology tissue culture report]
3.01	with glomerulopathy or renal failure	Stage 1.02-2.04 AND <b>renal failure:</b>
3.02	with meningoencephalitis	Stage 1.02-3.01 AND <b>disorientation:</b> AND <b>aseptic meningitis:</b>
3.03	with respiratory failure	Stage 1.02-3.02 AND <b>respiratory failure:</b>

# Clinical Criteria for Disease Staging

INF09

**Disease: INF09 Cytomegalovirus Disease, (Acquired)**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
3.04	with coma	Stage 1.02-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.02-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

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# Clinical Criteria for Disease Staging

INF10

**Disease: INF10 Herpes Simplex Infections**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Oral herpes simplex or cutaneous infections or primary herpes simplex or recurrent herpes simplex	Grouped papulovesiculopustular lesions on erythematous base of mucocutaneous areas AND Tzanck smear test (dermatology report) OR herpes simplex [Virus isolation tissue culture or immunofluorescent test or complement fixation test or PCR detection of HSV DNA]
1.02	Genital herpes simplex infections	Herpes simplex genitalis [Virus isolation tissue culture or immunofluorescent test or complement fixation test or PCR detection of HSV DNA]
1.03	Herpetic keratitis	Herpetic keratitis OR green dendritic ulcers [fluorescein staining of eye]
1.04	with erythema multiforme	Stage 1.01-1.03 AND symmetrical erythematous pruritic dermatitis AND macules OR papules OR bullae OR purpura OR target-like or annular lesions
2.01	Exzema herpeticum	Stage 1.01-1.04 AND multiple centrally umblicated erythematous papules vesicles and pustules with crusting AND atopic dermatitis OR seborrheic dermatitis OR Darier's disease
2.02	with Bell's Palsy or paresthesia or hypesthesia	Stage 1.01-2.01 AND Bell's Palsy OR paresthesia OR hypesthesia
2.03	with iridocyclitis or urethral strictures or labial fusion or prostatitis or cystitis	Stage 1.01-2.02 AND urethral strictures OR labial fusion OR prostate tenderness OR <b>pyuria:</b> OR dysuria AND clear discharge OR iridocyclitis [ophthalmology report]

# Clinical Criteria for Disease Staging

INF10

## Disease: INF10 Herpes Simplex Infections

### Etiology: Infection, Viral

Stage	Description	Diagnostic findings
2.04	Visceral herpetic infection or pneumonitis	Stage 1.01-2.03 AND herpetic gastrointestinal tract lesion [biopsy tissue culture results] OR Herpes sp. pneumonia [biopsy tissue culture results]  Presumptive Diagnostic Findings: <b>hepatitis:</b> OR dysphagia
3.01	with aseptic meningitis	Stage 1.01-2.04 AND <b>aseptic meningitis:</b>
3.02	Herpes simplex meningoencephalitis	Stage 1.01-3.01 AND herpes meningoencephalitis [brain biopsy virus isolation report or operative/pathology report or HSV DNA polymerase chain reaction (PCR) report or MRI report]
3.03	with respiratory failure	Stage 2.02-3.02 AND <b>respiratory failure:</b>
4.00	with death	Stage 3.01-3.03 AND death

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# Clinical Criteria for Disease Staging

INF11

**Disease: INF11 Herpes zoster**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Herpes zoster	History of previous varicella infection AND Herpes zoster rash OR unilateral pain with a maculopapular rash along a nerve distribution followed by a vesicular rash with a red base within 72 hours AND isolation of virus from lesions [virus tissue culture report or antibody rise acute/convalescent serum $\geq$ 4.0 from serology report] OR multinucleated giant cells from lesions [Tzanck smear]
1.02	with postherpetic neuralgia	Stage 1.01 AND pain on the affected side persisting after lesions have healed OR pain on the affected side persisting after 4 weeks
1.03	with involvement of the ophthalmic branch of the trigeminal nerve	History of previous varicella infection AND Herpes zoster rash along ophthalmic branch of the trigeminal nerve
1.04	with keratitis	Stage 1.01-1.03 AND epithelial pseudodendrites [fluorescein stain report] OR Herpes zoster keratitis [growth of pathologic organism(s) corneal virus culture reports] OR isolation of virus from corneal lesions [virus tissue culture report]
2.01	with keratouveitis	Stage 1.01-1.04 AND corneal hypesthesia AND stromal infiltrate [ophthalmoscopy report] OR keratic precipitates [ophthalmoscopy report] OR ciliary flush [ophthalmoscopy report]
2.02	with retinitis or optic neuritis or iridocyclitis	Stage 1.01-2.01 AND retinitis [ophthalmoscopy report] OR optic neuritis [ophthalmoscopy report] OR iridocyclitis [ophthalmoscopy report]
2.03	with facial nerve involvement	History of previous varicella infection AND Herpes zoster rash along 7 <sup>th</sup> nerve OR unilateral pain with a maculopapular rash along 7 <sup>th</sup> nerve distribution followed by a vesicular rash with a red base within 72hours AND isolation of virus from lesions [virus tissue culture report or antibody rise acute/convalescent serum $\geq$ 4.0 from serology report] OR multinucleated giant cells from lesions [Tzanck smear]

# Clinical Criteria for Disease Staging

INF11

**Disease: INF11 Herpes zoster**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
2.04	with cutaneous dissemination	History of previous varicella infection AND diffuse Herpes zoster rash OR diffuse vesicular rash with a red base AND isolation of virus from lesions [virus tissue culture report or antibody rise acute/convalescent serum $\geq$ 4.0 from serology report] OR multinucleated giant cells from lesions [Tzanck smear]
3.01	Involving the gastrointestinal or genitourinary or respiratory tracts	Stage 1.01-2.04 AND H. zoster lesions in the gastrointestinal tract [tissue culture report or Tzanck smear report] OR H. zoster lesions in the genitourinary tract [tissue culture report or Tzanck smear report] OR H. zoster lesions in the respiratory tracts [tissue culture report or Tzanck smear report]
3.02	with aseptic meningitis and disorientation	Stage 1.01-3.01 AND <b>disorientation:</b> AND <b>aseptic meningitis:</b>
4.00	with death	Stage 3.01-3.02 AND death

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# Clinical Criteria for Disease Staging

INF12

**Disease: INF12 Histoplasmosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Acute histoplasmosis	New infiltrate [chest x-ray report] AND Histoplasma infected sputum (gram stain documents presence of many WBC and Histoplasma spp. by special stain or sputum culture reports growth of Histoplasma spp.) OR histoplasmin titer $\geq$ 1:32 [RIA or ELISA serology report] OR histoplasmosis [compliment fixation serology report shows > 4 fold increase in baseline titer] OR histoplasmin urine antigen [serology report]
1.02	Histoplasma choroiditis	History of residence in endemic area OR history of systemic histoplasmosis AND yellow-white spot in macular region [ophthalmoscopy report]
1.03	Histoplasma choroiditis with reduced vision	Stage 1.01-1.02 AND vision $\leq$ 20/70 OR choroidal atrophic scars in macular region [ophthalmoscopy report] OR choroidal atrophic scars in peripapillary region [ophthalmoscopy report] OR choroidal atrophic scars in mid-peripheral region [ophthalmoscopy report]
1.04	Histoplasma choroiditis with active subretinal neovascularization	Stage 1.03 AND subretinal fluid [ophthalmoscopy report] OR retinal hemorrhage [ophthalmoscopy report] OR retinal exudates adjacent to choroidal scar [ophthalmoscopy report]
1.05	Histoplasma choroiditis with inactive subretinal neovascularization	Stage 1.04 AND atrophic chorioretinal scar [ophthalmoscopy report] OR fibrotic subretinal scar [ophthalmoscopy report]
2.01	Mucocutaneous histoplasmosis	Stage 1.01-1.05 AND skin ulcerations OR oropharyngeal lesions OR laryngeal lesions
2.02	with cavitary pneumonia	Stage 1.01-2.01 AND cavitation or granuloma [chest x-ray report]
2.03	with hepatosplenomegaly	Stage 1.01-2.02 AND hepatomegaly [physical examination or liver-spleen scan report or CT scan report or sonogram report] OR splenomegaly [physical examination or liver-spleen scan report or CT scan report or sonogram report]
2.04	with adrenal insufficiency	Stage 1.01-2.03 AND <b>adrenal insufficiency:</b>

**Disease: INF12 Histoplasmosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
3.01	with endocarditis	Stage 1.01-2.04 AND <b>endocarditis:</b>
3.02	with meningitis	Stage 1.0-3.01 AND <b>meningitis:</b>
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND <b>death</b>

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# Clinical Criteria for Disease Staging

INF13

**Disease: INF13 Infectious Mononucleosis**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
0.00	Past infection with Epstein-Barr virus	Negative IgM antibodies to Epstein-Barr VCA [serology report] AND negative antibodies to Epstein-Barr early antigen diffuse staining (EA-D) [serology report] AND antibody to Epstein-Barr virus nuclear antigen (EBNA) at a dilution of 1:10-1:40 [serology report] OR IgG antibodies to Epstein-Barr viral capsid antigen (VCA) at a dilution of 1:40-1:160 [serology report]
1.01	Acute infectious mononucleosis	Pharyngitis AND <b>fever:</b> AND lymphadenopathy AND <b>leukocytosis:</b> AND an atypical lymphocytosis $\geq 10\%$ AND a positive heterophile antibody test in patients $\geq 4$ years old [serology report] OR IgG antibodies to Epstein-Barr viral capsid antigen (VCA) at a dilution of 1:160-1:640 [serology report] OR IgM antibodies to Epstein-Barr VCA at a dilution of 1:32-1:256 [serology report] AND negative antibodies to Epstein-Barr early diffuse staining (EA-D) [serology report] AND negative antibody to Epstein-Barr virus nuclear antigen (EBNA) [serology report]
1.02	with hepatosplenomegaly	Stage 1.01 AND hepatomegaly OR splenomegaly
2.01	with hepatitis	Stage 1.01-1.02 AND <b>hepatitis:</b>
2.02	with upper airway obstruction	Stage 1.01-1.02 AND upper airway obstruction
2.03	with hemolytic anemia	Stage 1.01-2.02 AND <b>hemolysis:</b> AND cold agglutinins against red blood cell antigen i [hematology report]
2.04	with interstitial pneumonia	Stage 1.01-2.03 AND interstitial pneumonia [chest x-ray report]
2.05	with pericarditis	Stage 1.01-2.04 AND <b>pericarditis:</b>
2.06	with splenic rupture	Stage 1.01-2.05 AND splenic rupture [operative/pathology report]
3.01	with myocarditis	Stage 1.01-2.06 AND <b>myocarditis:</b>

**Disease: INF13 Infectious Mononucleosis**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
3.02	with meningoencephalitis	Stage 1.01-3.01 AND no cerebral infarction [CT or MRI scan report] AND Guillain-Barre syndrome OR <b>aseptic meningitis:</b> OR "Alice in Wonderland" syndrome OR metamorphopsia OR seizures OR acute hemiplegia OR brachial plexus neuropathy OR cerebellar ataxia OR transverse myelitis with progressive paralysis of legs OR <b>cranial nerve palsy:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
4.00	with death	Stage 1.01-3.04 AND death

**References**

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# Clinical Criteria for Disease Staging

INF14

**Disease: INF14 Leprosy (Hansen's disease)**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Indeterminate leprosy	Hypopigmented and/or erythematous macule with or without paresthesia or anesthesia [dermatology report] AND non-specific findings of skin biopsy [pathology report] AND bacteriological findings, AFB negative [laboratory report] AND Mitsuda reaction negative
1.02	Tuberculoid type	Stage 1.01 AND a few asymmetrical anesthetic annular skin lesions [dermatology report] AND tuberculoid granulomas [pathology report] AND bacteriological findings, AFB stain negative [laboratory report]
1.03	Borderline group (borderline tuberculoid, borderline borderline, borderline lepromatous)	Stage 1.01-1.02 AND multiple symmetrical and/or asymmetrical anesthetic to infiltrated lesions [dermatology report] AND predominance of tuberculoid granulomas or foamy macrophages infiltration [pathology report] AND bacteriological findings, AFB stain weakly to moderately positive [laboratory report]
1.04	Lepromatous type	Stage 1.01-1.03 AND multiple symmetrical skin lesions AND leonine facies (dermatology report) AND diffuse foamy macrophages infiltration [pathology report] AND bacteriological findings, AFB stain strongly positive [laboratory report]
2.01	Type I reaction (Downgrading or upgrading) OR Type II reaction (erythema nodosum leprosum)	Type I reaction: Stage 1.03 AND acute neuritis and/or acutely inflamed skin lesions [dermatology report] Type II reaction: Stage 1.03 (borderline lepromatous) AND Stage 1.04 AND multiple painful erythematous nodules on the face and extensor surfaces with ulceration and suppuration (dermatology report)  AND fever AND arthralgias AND lymphadenopathy AND uveitis AND neutrophil skin infiltration with vasculitis (pathology report)

**Disease: INF14 Leprosy (Hansen's disease)**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
2.02	with loss of hands or feet	Stage 1.02-2.01 AND mitten hand OR claw hand OR loss of lower extremity
3.01	with pulmonary tuberculosis	Stage 1.03-2.02 AND pulmonary tuberculosis [culture and report or PCR report]
4.00	with death	Stage 1.03-3.01 AND death

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# Clinical Criteria for Disease Staging

INF15

**Disease: INF15 Listeriosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Listeriosis	Listeriosis [culture reports growth of <i>Listeria</i> spp.]
1.02	<i>Listeria</i> conjunctivitis	<i>Listeria</i> conjunctivitis [culture reports growth of <i>Listeria</i> spp.]
2.01	Oculoglandular listeriosis	<i>Listeria</i> lymphadenitis [culture reports growth of <i>Listeria</i> spp.] OR ophthalmitis [culture reports growth of <i>Listeria</i> spp.]
2.02	<i>Listeria</i> urethritis	<i>Listeria</i> urethritis [urethral discharge culture reports growth of <i>Listeria</i> spp.]
2.03	<i>Listeria</i> pneumonia	New infiltrate [chest x-ray report] AND infected sputum [gram stain documents presence of many WBC AND a single predominant organism or sputum culture reports growth of pathologic organism]
2.04	<i>Listeria</i> lung abscess	Stage 2.03 AND lung abscess [chest x-ray report]
3.01	with endocarditis	Stage 1.02-2.04 AND <b>endocarditis:</b>
3.02	with meningitis	Stage 2.01-3.01 AND <b>meningitis:</b>
3.03	with sepsis	Stage 1.02-3.01 AND <b>sepsis:</b>
3.04	with shock	Stage 1.02-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

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# Clinical Criteria for Disease Staging

INF16

**Disease: INF16 Lyme disease (Erythema chronicum migrans)**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
0.00	History of Erythema chronicum migrans	History of previous Erythema chronicum migrans AND previous tick bite AND identification of tick (laboratory report)
1.01	Erythema chronicum migrans	Bull's eye skin eruption [dermatology report or pathology report or laboratory report or ELISA indirect immunofluorescent or Western blot test]
2.01	with fever	Stage 0.00-1.01 AND <b>fever:</b>
2.02	with lymphadenopathy	Stage 0.00-2.01 AND lymphadenopathy
2.03	with arthralgia	Stage 0.00-2.02 AND arthralgia
2.04	with hepatosplenomegaly	Stage 0.00-2.03 AND hepatosplenomegaly [liver/spleen scan report or MRI report or CT scan report or sonography report]
3.01	with myocarditis	Stage 0.00-2.04 AND <b>myocarditis:</b>
3.02	with meningitis	Stage 0.00-3.01 AND <b>meningitis:</b>
3.03	with coma	Stage 0.00-3.02 AND <b>coma:</b>
4.00	with death	Stage 0.00-3.03 AND death

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**Disease: INF17 Lymphogranuloma Venereum**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Lymphogranuloma venereum	Inguinal adenopathy AND Chlamydia trachomatis infection [complement fixation test shows $\geq 4$ fold increase in antibody titers or culture reports growth of pathologic organism(s)]
2.01	with ulcerations of inguinal lymph nodes	Stage 1.01 AND ulceration of inguinal adenopathy OR abscess formation of inguinal adenopathy
2.02	with ulcerative proctitis or sinus tract formation	Stage 2.01 AND purulent rectal discharge OR sinus tract formation
2.03	with elephantiasis	Stage 1.01-2.02 AND lymphedema of entire lower limb
2.04	with rectovaginal fistula	Stage 1.01-2.03 AND stool from vagina OR rectovaginal fistula [barium enema report]
2.05	with rectal strictures	Stage 1.01-2.04 AND rectal strictures

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# Clinical Criteria for Disease Staging

INF18

**Disease: INF18 Measles or Rubeola**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Rubeola	Measles antigen [immunofluorescent smear] OR measles [EIA serology reports $\geq$ 4 increase in IgM or IgG tier] OR Coryza OR <b>fever:</b> OR cough OR conjunctivitis AND multinucleated giant cells in nasal or pharyngeal and buccal secretions [gram stain report] AND maculopapular rash AND Koplik spots on buccal and labial mucosa OR paramyxovirus infection in secretions from nasopharyngeal, conjunctiva, blood or urine [tissue culture report]
1.02	with keratitis	Stage 1.01 AND keratitis
1.03	with otitis media	History of previous measles infection AND otitis media
1.04	with tracheolaryngobronchitis (croup)	Stage 1.01-1.03 AND croup
2.01	with pneumonitis	Stage 1.01-1.04 AND new infiltrate [chest x-ray report]
3.01	with acute encephalitis	Stage 1.01-2.01 AND <b>encephalitis:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with subacute sclerosing panencephalitis	Stage 1.01-1.03 AND behavioral and intellectual deterioration years after the original measles infection AND convulsions AND EIA serology reports $\geq$ 4 increase in measles specific-IgM or IgG titer in serum [serology report] AND CSF with measles-specific IgG and IgM antibodies $\geq$ 1:8 and normal or slightly elevated protein with $\geq$ 20 percent of total protein composed of gamma globulin AND bursts of high voltage sharp-slow waves every 3-8 seconds followed by periods of attenuated background [EEG report]
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>

**Disease: INF18 Measles or Rubeola**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
3.05	with coma	Stage 1.01-3.04 AND <b>coma:</b>
4.00	with death	Stage 2.01-3.05 AND death

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**Disease: INF19 Mucormycosis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Mucormycosis	Multiple abscess or necrotizing infection of the foot OR fistula formation of foot AND serosanguinous exudate from foot AND fungus infection [culture report of pathologic fungal organism growth] AND fungus granules [operative/pathology report]
2.01	Orbital mucormycosis	Orbital mucormycosis [sinus biopsy report] OR change in vision AND facial pain OR ocular pain AND corneal hypesthesia OR proptosis OR lid edema OR internal ophthalmoplegia OR external ophthalmoplegia AND sinus opacification [orbital x-ray report] AND fungus infection [culture reports of growth of pathologic fungus] AND fungus granules [pathology report]
3.01	with sepsis	Stage 1.01-2.01 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

INF20

**Disease: INF20 Poliomyelitis**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
0.00	Contact with or exposure to poliomyelitis	Added stage 5/8/06 cb
1.01	Abortive poliomyelitis	Polio virus throat isolation [culture report] OR polio antibody rise [acute phase antibodies/convalescent phase antibodies > 4]
1.02	with septic meningitis	Stage 1.01 AND virus isolation from CSF [culture report] OR <b>aseptic meningitis:</b>
2.01	Spinal poliomyelitis with monoplegia or paraplegia	Stage 1.02 AND monoplegia OR paraplegia
2.02	Bulbar poliomyelitis with respiratory involvement	Stage 1.02-2.01 AND <b>hypoxemia:</b>
3.01	Bulbar poliomyelitis with respiratory failure	Stage 1.02-2.02 AND <b>respiratory failure:</b>
3.02	Poliomyelitis with shock	Stage 1.02-3.01 AND <b>shock:</b>
4.00	Poliomyelitis with death	Stage 1.02-3.02 AND death

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**Disease: INF21 Post-Polio Syndrome**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
2.01	Post-Polio Syndrome	Post polio syndrome OR Past history of poliomyelitis with functional stability or recovery for $\geq$ ten years AND decreased asymmetric muscle strength distribution OR acute muscle atrophy OR acute musculoskeletal pain OR reduced exercise tolerance OR poor sleep quality with sleep disruption and/or hypersomnolence OR acute dysphagia OR acute dysphonia AND electrophysiologic features of acute denervation superimposed on chronic denervation-reinnervation
2.02	with progressive nocturnal hypoventilation or sleep apnea	Stage 1.01 AND nocturnal hypoventilation or sleep apnea [polysomnography report]
2.03	with pulmonary hypertension or cor pulmonale	Stage 2.01-2.02 AND <b>pulmonary hypertension:</b>
3.01	with respiratory failure	Stage 2.01-2.03 AND <b>respiratory failure:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>

**References**

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**Disease: INF22 Reye's Syndrome**

**Etiology: Infection; Toxicologic**

Stage	Description	Diagnostic findings
3.01	Reye's syndrome	History of recent convalescence from an upper respiratory tract infection, influenza or varicella in child aged ≤ 16 years old OR history of salicylate use AND <b>disorientation:</b> OR protracted vomiting OR lethargy AND fatty infiltration of the liver [operative or pathology report] OR serum ammonia > 50 mcg/dL [chemistry report] AND AST [SGOT] ≥ 105 u/l [chemistry report] AND ALT [SGPT] ≥ 90 u/l [chemistry report]
3.02	with hypoglycemia	Stage 3.01 AND <b>hypoglycemia:</b>
3.03	with hepatic failure	Stage 3.01-3.02 AND <b>hyperammonemia:</b>
3.04	with seizures	Stage 3.01-3.03 AND seizures
3.05	with respiratory failure	Stage 3.01-3.04 AND <b>respiratory failure:</b>
3.06	with decerebrate rigidity	Stage 3.01-3.05 AND decerebrate rigidity OR cerebral edema and herniation [CT or MRI scan report]
3.07	with coma	Stage 3.01-3.06 AND <b>coma:</b>
3.08	with shock	Stage 3.01-3.07 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.08 AND death

**References**

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# Clinical Criteria for Disease Staging

INF23

**Disease: INF23 Rheumatic Fever**

**Etiology: Immune; Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Rheumatic fever with migratory polyarthritis	History of B-hemolytic streptococcal infection AND <b>arthritis:</b> AND ASO titer ≥ 250 u/l [chemistry report] OR antihyaluronidase titer ≥ 1000 u/l [chemistry report] OR anti-DNAse B titer elevated [chemistry report] OR <b>fever:</b> OR migratory polyarthralgia OR PR interval ≥ 0.21 seconds [EKG report] OR ESR ≥ 15 mm/hr. [hematology report]
1.02	with erythema marginatum or subcutaneous nodules	History of B-hemolytic streptococcal infection AND erythema marginatum OR subcutaneous nodules AND ASO titer ≥ 250 u/l [chemistry report] OR antihyaluronidase titer ≥ 1000 u/l [chemistry report] OR anti-DNAse B titer elevated [chemistry report] OR <b>fever:</b> OR migratory polyarthralgia OR PR interval ≥ 0.21 seconds [EKG report] OR ESR ≥ 15 mm/hr. [hematology report]
1.03	with Sydenham's chorea	History of B-hemolytic streptococcal infection AND Sydenham's chorea AND ASO titer ≥ 250 u/l [chemistry report] OR antihyaluronidase titer ≥ 1000 u/l [chemistry report] OR anti-DNAse B titer elevated [chemistry report] OR <b>fever:</b> OR migratory polyarthralgia OR PR interval ≥ 0.21 seconds [EKG report] OR ESR ≥ 15 mm/hr. [hematology report]
2.01	with carditis	Stage 1.01-1.03 AND rheumatic myocarditis [myocardial biopsy reports Aschoff's lesion] OR <b>myocarditis:</b> OR <b>pericarditis:</b>

# Clinical Criteria for Disease Staging

INF23

**Disease: INF23 Rheumatic Fever**

**Etiology: Immune; Infection, Bacterial**

Stage	Description	Diagnostic findings
2.02	with valvular disease	Stage 1.01-2.01 AND mitral stenosis [echocardiogram report] OR mitral insufficiency [echocardiogram report] OR aortic stenosis [echocardiogram report] OR aortic insufficiency [echocardiogram report] OR tricuspid stenosis [echocardiogram report] OR tricuspid insufficiency [echocardiogram report] OR pulmonic stenosis [echocardiogram report] OR pulmonic insufficiency [echocardiogram report]
3.01	with endocarditis	Stage 1.01-2.02 AND <b>endocarditis:</b>
3.02	with congestive heart failure	Stage 1.03-3.01 AND <b>congestive heart failure:</b>
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

**Disease: INF23 Rheumatic Fever**

**Etiology: Immune; Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

INF24

**Disease: INF24 Rickettsioses**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Uncomplicated rickettsial infection	Rocky Mountain spotted fever (serology report) OR Q fever (serology report) OR endemic typhus (serology report) OR epidemic typhus (serology report) OR Brill-Zinsser disease or prior epidemic typhus infection and recurrence OR Rickettsial pox (by serology report) OR typhus fevers* (serology report) OR scrub typhus (serology report)  *includes: fever boutonneuse, Indian tick typhus, Kenya tick typhus, South Africal tick typhus  <u>Presumptive diagnostic findings by:</u> history of tick, louse or mite bite AND hemorrhagic maculopapular rash AND regional lymphadenitis AND malaise, headache and fever
2.01	Q fever with pneumonia or hepatitis	Q fever [serology report] AND <b>pneumonia:</b> OR <b>hepatitis:</b>
2.02	Disseminated intravascular coagulation or gangrene	Stage 1.01 AND <b>DIC:</b> OR gangrene [operative/pathology report]
3.01	Rocky Mountain spotted fever with renal failure	Rocky Mountain spotted fever[serology report] AND <b>renal failure:</b>
3.02	Q fever with disorientation	Stage 2.01 AND <b>disorientation:</b>
3.03	Q fever with endocarditis	Stage 2.01 AND <b>endocarditis:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**Disease: INF24 Rickettsioses**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

INF25

**Disease: INF25 Rubella: Acquired**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
0.00	Contact with or exposure to rubella	Added stage 5/8/06 cb
1.01	Rubella	Rubella titer shows $\geq$ 4 fold rise in titer [IgG serology report] AND coryza OR lymphadenopathy OR pinpoint "scarlatiniform" rash
1.02	with otitis media	Stage 1.01 AND otitis media
2.01	with arthralgia	Stage 1.01 AND arthralgia
2.02	with arthritis	Stage 1.01-2.01 AND <b>arthritis:</b>
2.03	with hepatitis	Stage 1.01-2.02 AND <b>hepatitis:</b>
2.04	with thrombocytopenic purpura	Stage 1.01-2.03 AND purpuric rash of the skin AND <b>thrombocytopenia:</b>
2.05	with bronchopneumonia	Stage 1.01-2.04 AND bronchopneumonia [chest x-ray report]
3.01	with myocarditis	Stage 1.01-2.04 AND <b>myocarditis:</b>
3.02	with encephalitis	Stage 1.01-3.01 AND <b>encephalitis:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: INF25 Rubella: Acquired**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

INF26

**Disease: INF26 Schistosomiasis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Schistosoma dermatitis or swimmer's itch	History of swimming in endemic area AND pruritic papular dermatitis AND schistosome dermatitis [biopsy report]
1.02	Acute schistosomiasis	Antibodies to Schistosoma [serology report] AND <b>Fever:</b> AND malaise OR myalgia OR diarrhea OR weakness
2.01	with cystitis or colitis	<b>Hematuria:</b> AND Schistosoma ova in stools [stool exam report] OR Schistosoma ova in urine [urinalysis report]
2.02	with hydroureter or hydronephrosis	Schistosoma ova in urine [urinalysis report] AND hydroureter [intravenous pyelogram report] OR hydronephrosis [intravenous pyelogram report]
2.03	with liver fibrosis	Stage 1.01-2.02 AND liver fibrosis [wedge biopsy report]
2.04	with cor pulmonale	Stage 1.01-2.03 AND <b>cor pulmonale:</b>
3.01	with renal failure	Stage 1.01-2.04 AND <b>renal failure:</b>
3.02	with central nervous system lesions	Stage 1.01-3.01 AND mass lesions in brain or spinal cord [CT scan report or MRI report]
3.03	with coma	Stage 1.01-3.02 AND <b>coma:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**Disease: INF26 Schistosomiasis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

INF27

**Disease: INF27 Syphilis: Acquired**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Primary syphilis	Chancre at point of initial contact AND spirochetes in wound or lymph nodes [immunofluorescence or hemagglutination antibody or dark field or microscopy report] OR FTA test $\geq$ 1:4 dilutions [serology report]
2.01	Secondary syphilis	Maculopapular skin rash OR mucocutaneous lesions OR generalized lymphadenopathy AND FTA test $\geq$ 1:4 dilutions [serology report]
2.02	Secondary syphilis with uveitis	Stage 2.01 AND uveitis
2.03	Asymptomatic neurosyphilis	Stage 1.01-2.02 AND FTA of spinal fluid $\geq$ 1:4 dilutions [serology report]
2.04	Syphilis with visceral crisis	Stage 1.01-2.03 AND paroxysms of pain in abdomen OR paroxysms of pain in rectum OR paroxysms of pain in bladder
2.05	Tertiary syphilis or syphilis involving the liver or spleen or kidney or joints or bones	Stage 1.01-2.04 AND mass lesion in liver demonstrates syphilis [biopsy report] OR mass lesion in spleen demonstrates syphilis [biopsy report] OR syphilis glomerulitis [biopsy report] OR <b>arthritis:</b> OR <b>osteomyelitis:</b>
3.01	Cardiovascular syphilis	Stage 1.01-2.05 AND aortitis [operative/pathology report] OR thoracic aneurysm [operative/pathology report] OR <b>myocarditis:</b> OR aortic insufficiency [echocardiogram report]
3.02	Syphilitic meningitis	Meningitis AND FTA of spinal fluid $\geq$ 1:4 dilutions [serology report]
3.03	Meningovascular syphilis	Stage 1.01-3.02 AND tabes dorsalis OR locomotor ataxia OR dementia paralytica OR generalized paresis OR <b>disorientation:</b>

**Disease: INF27 Syphilis: Acquired**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
3.04	Syphilis with congestive heart failure	Stage 1.01-3.03 AND <b>congestive heart failure:</b>
3.05	Syphilis with shock	Stage 1.03-3.04 AND <b>shock:</b>
4.00	Syphilis with death	Stage 1.01-3.05 AND death

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# Clinical Criteria for Disease Staging

INF28

**Disease: INF28 Tetanus**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Tetanus	History of wound contamination OR umbilical cord contamination AND spasticity of musculature at the area of the wound OR stiffness of the jaw OR stiffness of facial musculature OR dysphagia OR hyperactive deep tendon reflexes
1.02	with rigidity	Stage 1.01 AND rigidity of jaw OR rigidity of facial musculature OR risus sardonicus
2.01	with reflex spasms	Stage 1.01-1.02 AND spasms precipitated by deep tendon reflexes OR minimal motor stimuli
2.02	with fracture of vertebrae	Stage 1.01-2.01 AND fracture(s) of thoracic or lumbar vertebrae [spine x-ray reports]
2.03	with deep vein thrombosis	Stage 1.01-2.02 AND <b>DVT:</b>
2.04	with aspiration pneumonia	Stage 1.01-2.03 AND aspiration pneumonia
2.05	obstructive apnea or laryngospasm	Stage 1.01-2.04 AND obstructive apnea OR laryngospasm
3.01	with pulmonary emboli	Stage 1.01-2.05 AND <b>pulmonary embolism:</b>
3.02	with myocarditis	Stage 1.01-3.01 AND <b>myocarditis:</b>
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
4.00	with death	Stage 1.01-3.04 AND death

**Disease: INF28 Tetanus**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

INF29

**Disease: INF29 Toxoplasmosis: Acquired**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Asymptomatic	<b>Toxoplasmosis:</b> [IgG antibodies present against Toxoplasma gondii by Sabin-Feldman dye test $\geq$ 1:4 or indirect fluorescent antibody $\geq$ 1:10 or indirect hemagglutination test = 1:16 or complement fixation test $\geq$ 1:4 or ELISA titer $\geq$ 2 or positive tissue culture report or tachyzoites of Toxoplasma gondii in tissue or body fluids per operative/pathology report]
1.02	Acute toxoplasmosis with lymphadenitis	Enlarged lymph nodes AND antibodies present against Toxoplasma gondii in high titers [IgG Sabin-Feldman dye test $\geq$ 1:1000 or indirect fluorescent antibody $\geq$ 1:1000 or indirect hemagglutination test $\geq$ 1:1000 or complement fixation test $\geq$ 1:4 or ELISA titer $\geq$ 6] OR isolation of Toxoplasma gondii from body fluids [tissue culture report]
2.01	Acute Toxoplasma mononucleosis syndrome	Stage 1.02 AND hepatosplenomegaly OR maculopapular rash OR <b>jaundice:</b>
2.02	with chorioretinitis	Stage 1.01-2.01 AND chorioretinitis [ophthalmologist's report]
2.03	with chorioretinitis and blindness	Stage 2.02 AND <b>blindness:</b> AND macular scar [ophthalmologist's report] OR retinal detachment [ophthalmologist's report] OR optic nerve atrophy [ophthalmologist's report]
2.04	Toxoplasma pneumonia	Stage 1.02-2.03 AND <b>pneumonia:</b>
3.01	Toxoplasma myocarditis	Stage 1.02-2.04 AND <b>myocarditis:</b>
3.02	with disseminated toxoplasmosis	Stage 1.02-3.01 AND disseminated toxoplasmosis
3.03	with meningoencephalitis	Stage 1.01-3.02 AND Toxoplasma gondii in CSF or brain [tissue culture report or tachyzoites of Toxoplasma gondii in tissue operative/pathology report]  <u>Presumptive Diagnostic Findings:</u> Toxoplasma meningoencephalitis [MRI or CT scan report]
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
4.00	with death	Stage 2.02-3.04 AND death

**Disease: INF29 Toxoplasmosis: Acquired**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

INF30

**Disease: INF30 Varicella (Chickenpox)**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Varicella	Pruritic generalized vesicular rash with an erythematous base and centripetal distribution OR Varicella [Tzanck test OR skin biopsy (pathology report OR isolation of virus from lesions [tissue culture report] OR acute phase H. zoster antibodies/convalescent phase H. zoster antibodies >4.0 [serology report]
1.02	with orchitis	Stage 1.01 AND scrotal tenderness
1.03	with arthritis	Stage 1.01-1.02 AND limited range of motion of joints AND arthralgia AND swelling of joints
1.04	with neuralgia	Stage 1.03 AND neuralgia
1.05	with conjunctivitis or keratitis	Stage 1.1-1.4 AND varicella keratitis [ophthalmology report] OR conjunctivitis
2.01	with pneumonia	Stage 1.1-1.5 AND new parenchymal infiltrate (chest x-ray report)
2.02	with hepatitis	Stage 1.01-2.01 AND <b>hepatitis:</b>
2.03	with thrombocytopenia	Stage 1.01-1.03 AND 2.01-2.02 AND <b>thrombocytopenia:</b>
3.01	with myocarditis	Stage 1.01-1.03 AND 2.01-2.03 AND <b>myocarditis:</b>
3.02	with renal failure	Stage 1.01-3.01 AND <b>renal failure:</b>

# Clinical Criteria for Disease Staging

INF30

**Disease: INF30 Varicella (Chickenpox)**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
3.03	with Reye's syndrome	Reye's syndrome OR History of recent convalescence from an upper respiratory tract infection, influenza or varicella in child aged $\leq$ 16 years old AND <b>disorientation:</b> OR vomiting OR lethargy AND fatty infiltration of the liver (operative or pathology report) OR serum ammonia $>$ 50 mcg/dL (chemistry report) AND AST (SGOT) $\geq$ 105 u/l (Chemistry report) AND ALT (SGPT) $\geq$ 90 u/l (chemistry report)
3.04	with meningoencephalitis	Stage 1.01-1.03 and 2.01-3.03 AND <b>aseptic meningitis:</b> AND ataxia OR nystagmus OR paralysis
3.05	with coma	Stage 1.01-3.04 AND <b>coma:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.06 AND death

**Disease: INF30 Varicella (Chickenpox)**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
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**References**

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**Disease: INF31 Chancroid**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Soft chancre	Shallow ulcers with ragged edges AND nonindurated ulcers AND inguinal adenopathy AND Hemophilus ducreyi infection [culture reports growth of Hemophilus ducreyi]
2.01	Chancroid with phimosis	Stage 1.01 AND phimosis
2.02	with urethral stricture	Stage 1.01-2.01 AND urethral stricture [cystoscopy report]
2.03	with urethral fistula	Stage 1.01-2.02 AND urethral fistula [barium enema report] OR urine from rectum

**References**

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# Clinical Criteria for Disease Staging

INF80

**Disease: INF80 Anthrax**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
0.00	Contact with or suspected or known exposure to Anthrax	Added stage 5/8/06 cb
1.01	Cutaneous or unspecified anthrax	
2.01	Gastrointestinal anthrax	
3.01	Pulmonary anthrax	
3.02	Anthrax septicemia	

## References

**Disease: INF81 Malaria**

**Etiology: Infection**

Stage	Description	Diagnostic findings
0.00	Personal history of malaria	
1.01	Malaria, uncomplicated	
2.01	Malaria complicated by anemia, thrombocytopenia, or other non-specific condition	
2.02	Blackwater fever or malaria with jaundice, hepatomegaly, splenomegaly, hepatitis, retinal hemorrhages, or nephrosis	
3.01	with respiratory failure	
3.02	with encephalitis or shock	
3.03	with coma	

**References**



**Disease: INF82 Other Bacterial Infections**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
0.00	Contact with or exposure to E. coli	Added stage 5/8/06 cb
1.01	Other bacterial infections	
2.01	with pulmonary manifestations	
2.02	Bacteremia, yaws, or icterohemorrhagica	
2.03	Infection with endocarditis	
3.01	Leptospiral meningitis	
3.02	Septicemia	

**References**

**Disease: INF83 Other Fungal Infections****Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Dermatomycoses	

**References**

# Clinical Criteria for Disease Staging

INF84

**Disease: INF84 Other Infectious and Parasitic Infections**

**Etiology: Infection**

Stage	Description	Diagnostic findings
0.00	Contact with or exposure to other communicable diseases including unspecified venereal disease	Added stage 5/8/06 cb
1.01	Leishmaniasis, trypanosomiasis, relapsing fever, helminthiases, or other skin involvement	
1.02	Infection with drug resistant organisms	
2.01	with non-cardiac organ involvement	
2.02	with cardiac system involvement	
3.01	with central nervous system involvement	

**References**

# Clinical Criteria for Disease Staging

INF85

**Disease: INF85 Other Viral Infections**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
0.00	Contact with or exposure to smallpox or rabies	Added stage 5/8/06 cb
1.01	Other viral exanthems, fevers or minor infections or mumps or rabies	
2.01	Viral hemorrhagic conditions, respiratory involvement or mumps orchitis, pancreatitis, hepatitis, or polyneuropathy	
3.01	Mumps meningitis or encephallitis, or West Nile encephalitis	

## References

**Disease: MGS01 Benign Prostatic Hypertrophy**

**Etiology: Degenerative**

Stage	Description	Diagnostic findings
1.01	Benign prostatic hypertrophy	Benign prostatic hypertrophy [operative/pathology report or ultrasound report or physical exam report] AND PSA < 4 ng/dl [serum chemistry report]
1.02	with urinary tract infection	Stage 1.01 AND <b>UTI:</b>
2.01	with bladder outlet obstruction	Stage 1.01-1.02 AND bladder hypertrophy [excretory urogram report/operative cystoscopy report] OR elevated post void residual urine [excretory urogram, ultrasound or catheterized sample] OR American Urological Association Symptom Index ≥ 20
2.02	with hydronephrosis	Stage 1.01-2.01 AND hydronephrosis [excretory urogram or ultrasound or CT scan report]
3.01	with renal failure	Stage 1.01-2.02 AND <b>renal failure:</b>
3.02	with sepsis	Stage 1.02-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.02-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.02-3.03 AND death

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**Disease: MGS02 Cryptorchidism**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Undescended testis or cryptorchidism	Undescended testis [imaging study confirms physical examination]
1.02	with sterility	Stage 1.01 AND sterility
1.03	with indirect inguinal hernia	Stage 1.01-1.02 AND indirect inguinal hernia [operative/pathology report]
2.01	with torsion of the testis	Stage 1.01-1.03 AND torsion of the testis [operative/pathology report]
2.02	with development of testicular malignancy (see Staging of Testicular Cancer)	Stage 1.01-2.01 AND malignancy of testicle [operative/pathology report]

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# Clinical Criteria for Disease Staging

MGS03

**Disease: MGS03 Gonorrhoea: Male**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Carrier or suspected carrier of gonorrhoea	
1.02	Gonococcal urethritis or pharyngitis or proctitis or conjunctivitis	Gonococci in exudates [gram stain of exudates report] OR gonococcal infection [culture reports growth of Neisseria gonorrhoeae report] OR gonococcal conjunctivitis [gram stain of exudates report] OR gonococcal pharyngitis [gram stain of exudates report] OR gonococcal proctitis [gram stain of exudates report]
1.03	Gonococcal epididymitis	Stage 1.02 AND inguinal pain OR spermatic cord pain OR edema of scrotum AND erythema of scrotum AND tenderness of scrotum
1.04	with acute prostatitis	Stage 1.02-1.03 AND <b>prostatitis:</b>
2.01	with gonococcal skin infection	Stage 1.02-1.04 AND gonococcal skin infection [skin wound culture reports growth of Neisseria gonorrhoeae]
2.02	with peritonitis	Stage 1.02-2.01 AND peritonitis [operative/pathology report]
2.03	with arthritis	Stage 1.02-2.02 AND <b>arthritis:</b>
3.01	Gonococcal endocarditis or pericarditis	Stage 1.02-2.03 AND <b>endocarditis:</b>
3.02	Infection with meningitis	Stage 1.02-3.01 AND <b>meningitis:</b>
3.03	with congestive heart failure	Stage 3.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 1.02-3.03 AND <b>sepsis:</b>
3.05	with shock	Stage 2.02-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.05 AND death

**Disease: MGS03 Gonorrhea: Male**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

MGS04

**Disease: MGS04 Neoplasm, Malignant: Breast, Male**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of carcinoma of the breast	
1.01	in situ	Carcinoma of the breast in situ [operative/pathology report] OR American Joint Committee on Cancer Stage 0
1.02	Cystosarcoma phyllodes	Cystosarcoma phyllodes [operative/pathology report]
1.03	≤ 2 cm in diameter	Carcinoma of the breast ≤ 2.0 cm in diameter [operative/pathology report] AND no lymph node involved [operative/pathology report] OR American Joint Committee on Cancer Stage 1
1.04	> 2 cm and ≤ 5 cm in diameter or single ipsilateral node involved	Carcinoma of the breast > 2 and ≤ 5.0 cm in diameter [operative/pathology report] OR < 1 ipsilateral lymph node involved [operative/pathology report] OR American Joint Committee Stage 2a
2.01	> 5 cm in diameter	Carcinoma of the breast > 5.0 cm in diameter [operative/pathology report] OR American Joint Committee Stage 2b
3.01	Nodal involvement with fixation	> 1 ipsilateral node with fixation [operative/pathology report] OR American Joint Committee Stage 3a
3.02	Tumor extension to skin or tumor extension to chest or internal mammary node involvement	Tumor extension to skin [operative/pathology report] OR tumor extension to chest [operative/pathology report] OR internal mammary node involvement [operative/pathology report] OR American Joint Committee Stage 3b
3.03	with metastasis	Carcinoma of the breast involving the lungs [operative/pathology report or chest x-ray or CT scan] OR carcinoma of the breast involving the liver [operative/pathology report or CT scan or liver/spleen scan] OR carcinoma of the breast involving the skeletal system [operative/pathology report or bone scan or x-ray] OR American Joint Committee Stage 4
4.00	and death	Stage 1.02-3.02 AND death

## References

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# Clinical Criteria for Disease Staging

MGS05

**Disease: MGS05 Neoplasm, Malignant: Penile**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Cancer in situ of penis	Carcinoma in situ [operative/pathology report] OR Stage TIS
1.02	Localized penile cancer	Noninvasive verrucous carcinoma [operative/pathology report] OR Stage Ta
1.03	Superficially invasive	Tumor invades subepithelial connective tissue [operative/pathology report] OR Stage T1
2.01	with corporal body invasion	Tumor invades corpus spongiosum or cavernosum [operative/pathology report] OR Stage T2
2.02	with invasion of adjacent structures	Tumor invades urethra or prostate [operative/pathology report] OR Stage T3
2.03	with invasion of adjacent organs	Tumor invades other adjacent structures [operative/pathology report] OR T4
2.04	with involvement of a single lymph node	Metastasis in a single superficial inguinal lymph node [operative/pathology report] OR Stage N1
3.01	with involvement of multiple lymph nodes	Metastasis in multiple or bilateral superficial inguinal lymph nodes [operative/pathology report] OR Stage N2
3.02	with involvement of pelvic lymph nodes	Metastasis in deep inguinal or pelvic lymph node(s), unilateral or bilateral [operative/pathology report] OR Stage N3
3.03	with distant metastasis	Metastasis beyond pelvis such as lung, liver or other organs [operative/pathology report] OR M1
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

## References

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# Clinical Criteria for Disease Staging

MGS06

**Disease: MGS06 Neoplasm, Malignant: Prostate**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of carcinoma of the prostate	
1.01	Less than 3 microscopic areas of carcinoma on prostate	No palpable tumor AND ≤ 3 high power fields of carcinoma [TURP operative/pathology report] OR Stage T1a
1.02	Greater than 3 areas of microscopic carcinoma on prostate	No palpable tumor AND > 3 high power fields of carcinoma [TURP operative/pathology report] OR Stage T1b
1.03	Prostate specific antigen diagnosis for prostate carcinoma	No palpable tumor AND Prostate specific antigen elevation > 4 ng/ml [chemistry report] OR Stage T1c
2.01	Tumor 1.5 cm in greatest dimension or in more than 1 lobe	Palpable tumor nodule, confined to prostate Tumor ≤ 1.5 cm or with normal tissue on two sides [radical prostatectomy /pathology report] OR Stage 2a
2.02	Tumor > 1.5 cm in greatest dimension or in more than 1 lobe	Palpable tumor nodule, confined to prostate Tumor > 1.5 cm or in more than one prostate lobe [radical prostatectomy /pathology report] OR Stage 2b
3.01	Tumor has local extension	Palpable tumor extends beyond prostate Tumor extends through capsule on one or both sides [radical prostatectomy/pathology report] OR Stage T3a
3.02	with seminal vesicle involvement	Tumor invades seminal vesicals [radical prostatectomy/pathology report] OR Stage T3b
3.03	Tumor is fixed or invades adjacent structures	Carcinoma of the prostate with adjacent organ involvement [radical prostatectomy/pathology report] OR Stage T4
3.04	with involvement of a single node ≤ 2 cm	Carcinoma of the prostate with involvement of a single node ≤ 2 cm [operative/pathology report] OR Stage N1
3.05	with involvement of node > 2 cm and < 5 cm in diameter	Carcinoma of the prostate with involvement of node > 2 cm and < 5 cm diameter [operative/pathology report or imaging study] OR Stage N2
3.06	with nodes > 5 cm in diameter	Carcinoma of the prostate with involvement of node > 5 cm diameter [operative/pathology report or imaging study] OR Stage N3
3.07	with distant metastasis	Carcinoma of the prostate with spread beyond the confines of the abdominal cavity [operative/pathology report] OR Stage M1
3.08	with shock	Stage 2.01-3.06 AND <b>shock:</b>

# Clinical Criteria for Disease Staging

MGS06

**Disease: MGS06 Neoplasm, Malignant: Prostate**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
4.00	with death	Stage 2.01-3.07 AND death

## References

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# Clinical Criteria for Disease Staging

MGS07

**Disease: MGS07 Neoplasm, Malignant: Testicular**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of cancer of the testis	
1.01	Cancer of the testis limited to the testis and epididymis	Tumor limited to testis and epididymis without vascular/lymphatic invasion tumor may invade tunica albuginea, but not tunica vaginalis [operative/pathology report] OR Stage T1 OR Stage Tis intratubular cancer [operative/pathology report]
1.02	with extension beyond the tunica albuginea into tunica vaginalis	Tumor limited to testis and epididymis with vascular/lymphatic invasion, or tumor extending through tunica albuginea with involvement of tunica vaginalis [operative/pathology report] OR Stage T2
1.03	with involvement of the spermatic cord	Tumor invades spermatic cord with or without vascular/lymphatic invasion [operative/pathology report] OR Stage T3
2.01	with invasion of the scrotum	Tumor invades scrotum with or without vascular/lymphatic invasion. [operative/pathology report] OR Stage T4
2.02	with involvement of a single lymph node $\leq$ 2 cm	Carcinoma of the testis with a lymph node mass 2 cm or less in greatest dimension or multiple lymph nodes, none more than 2 cm in greatest dimension [operative/pathology report] OR Stage N1
3.01	with involvement of node > 2 cm and $\leq$ 5 cm in diameter	Carcinoma of the testis with involvement 2 cm but not more than 5 cm in greatest dimension, or multiple lymph nodes, any one mass more than 2 cm but not more than 5 cm in greatest dimension. [operative/pathology report] OR Stage N2
3.02	with nodes > 5 cm in diameter	Carcinoma of the testis with node > 5 cm diameter [operative/pathology report] OR Stage N3
3.03	with distant metastasis	Carcinoma of the testis with non-regional lymph nodes or pulmonary metastasis [operative/pathology report] OR Stage M1 or M1a or M1b [Note: regional lymph nodes are considered the periaortic, preaortic, interaortocaval, paracaval, precaval, retrocaval and retroaortic nodes]
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**Disease: MGS07 Neoplasm, Malignant: Testicular**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

MGS08

**Disease: MGS08 Prostatitis**

**Etiology: Idiopathic; Infection; Trauma**

Stage	Description	Diagnostic findings
1.01	Chronic abacterial prostatitis	History of irritative voiding AND negative urine cultures [urine culture report]
1.02	Chronic bacterial prostatitis	<b>Prostatitis:</b> AND <b>UTI:</b>
1.03	Acute bacterial prostatitis	<b>Prostatitis:</b> AND <b>UTI:</b> AND <b>fever:</b>
2.01	Prostatic abscess	Stage 1.02-1.03 AND prostatic abscess [operative/pathology report]
2.02	with bladder outlet obstruction	Stage 1.01-2.01 AND distended urinary bladder AND inability to void OR increasing frequency of urination OR overflow incontinence
2.03	with epididymo-orchitis	Stage 1.01-2.02 AND pain, tenderness, erythema and swelling of testis
2.04	with pyelonephritis	Stage 1.02-2.03 AND <b>pyelonephritis:</b> AND flank pain OR costovertebral tenderness
2.05	with hydronephrosis	Stage 1.01-2.04 AND dilated ureters [intravenous urogram or ultrasound or CT scan report] OR hydronephrosis [intravenous urogram or ultrasound CT scan report]
3.01	with sepsis	Stage 1.01-2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: MGS08 Prostatitis**

**Etiology: Idiopathic; Infection; Trauma**

Stage	Description	Diagnostic findings
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**References**

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**Disease: MGS80 Neoplasm, Benign: Male Reproductive System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of male genital system	

References

**Disease: MGS81 Other Disorders of Male Genital System**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Prostatic calculus, cyst or dysplasia; hydrocele, phimosis, or fertility disorders	
1.02	Orchitis	

**References**

**Disease: MUS01 Bursitis**

**Etiology: Degenerative; Trauma**

Stage	Description	Diagnostic findings
1.01	Bursitis	Shoulder bursitis [x-ray report or physical examination] OR trochanteric bursitis [femoral x-ray report or physical examination] OR prepatellar bursitis [x-ray report or physical examination] OR olecranon bursitis [x-ray report or physical examination] OR foot bursitis [x-ray report or physical examination] OR ischial bursitis [x-ray report or physical examination]
1.02	Acute calcareous tendonitis with bursitis	Stage 1.01 AND acute calcareous tendonitis [x-ray report or physical examination of affected bursa]
1.03	Supraspinatus or tensor fascia lata tendonitis with bursitis	Stage 1.01-1.02 AND supraspinatus tendonitis [shoulder x-ray report or physical examination] OR tendonitis of the tensor fascia lata [humerus x-ray report or physical examination]
1.04	Bursitis with bacterial infection	Stage 1.01-1.03 AND infected bursa [fluid culture reports growth of pathologic organism(s)]

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**Disease: MUS02 Dislocation: Elbow**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Sprains of elbow and forearm	Sprain of elbow OR sprain of forearm
1.02	Dislocation of the elbow	Dislocation of the elbow [x-ray report]
1.03	Humeroradioulnar dislocation	Humeroradioulnar dislocation [x-ray report]
1.04	Dislocation of the elbow with fracture of the coronoid process	Stage 1.02-1.03 AND fracture of the coronoid process [x-ray report]
1.05	Dislocation of the elbow with fracture of the head of the radius or epicondyle	Stage 1.02-1.03 Fracture of the head of the radius [x-ray report] OR fracture of the median epicondyle [x-ray report] OR fracture of the lateral epicondyle [x-ray report]
1.06	Dislocation of the elbow with injury to the brachialis muscle or triceps muscle	Stage 1.02-1.05 AND injury to the brachialis muscle OR injury to the triceps muscle
2.01	Dislocation of the elbow with injury to the median nerve or ulnar nerve	Stage 1.02-1.06 AND ulnar nerve palsy OR median nerve palsy
2.02	Dislocation of the elbow with injury to the brachial artery	Stage 1.02-2.01 AND brachial artery injury [angiography report]

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# Clinical Criteria for Disease Staging

MUS03

**Disease: MUS03 Dislocation: Knee**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Partial dislocation of the knee	Partial dislocation of the knee [x-ray report]
1.02	Complete dislocation of the knee	Complete dislocation of the knee [x-ray report]
2.01	with ligamentous injuries	Stage 1.01-1.02 AND ligament injuries of the knee [operative/pathology report]
2.02	with injury to the peroneal nerve	Stage 1.01-2.01 AND numbness of the lower leg OR peroneal nerve injury [EMG/nerve conduction study report]
2.03	with injury to the popliteal artery	Stage 1.01-2.02 AND injury to the popliteal artery [arteriogram report]
2.04	with osteomyelitis	Stage 1.01-2.03 AND <b>osteomyelitis:</b>
2.05	with gangrene of the lower leg	Stage 1.01-2.04 AND gangrene of the lower leg [operative/pathology report]
3.01	with sepsis	Stage 2.04-2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 2.04-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.04-3.02 AND death

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**Disease: MUS04 Eosinophilia Myalgia Syndrome**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Eosinophilia Myalgia Syndrome	Eosinophilia Myalgia Syndrome OR <b>eosinophilia:</b> AND eosinophilia persists ≥ 6mo. AND eosinophilic infiltration of heart [operative/pathology report] OR eosinophilic infiltration of liver [operative/pathology report] OR eosinophilic infiltration of spleen [operative/pathology report] OR eosinophilic infiltration of lungs [operative/pathology report]
2.01	with peripheral neuropathy	Stage 1.01 AND peripheral neuropathy [EMG report]
2.02	with deep vein thrombosis	Stage 1.01-2.01 AND <b>DVT:</b>
2.03	with cardiac conduction abnormalities	Stage 1.01-2.02 AND <b>cardiac conduction abnormalities:</b>
2.04	with aspiration pneumonia	Stage 1.01-2.03 AND aspiration pneumonia
3.01	with pulmonary embolism	Stage 2.02-2.04 AND <b>pulmonary embolism:</b>
3.02	with sepsis	Stage 2.04-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 2.02-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 2.01-.3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

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# Clinical Criteria for Disease Staging

MUS05

**Disease: MUS05 Fracture: Acetabulum**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Fracture of the acetabulum without displacement	Fracture of the acetabulum without displacement [x-ray report]
1.02	with displacement of the acetabular bone	Fracture of the acetabulum with displacement of acetabular bone [x-ray report]
1.03	Fracture of the dome of the acetabulum	Fracture of the dome of the acetabulum [x-ray report]
1.04	Fracture of the acetabulum with central displacement of the dome	Fracture of the acetabulum with central displacement of the dome [x-ray report]
2.01	Open fracture of the acetabulum	Stage 1.01-1.04 AND laceration of the overlying skin of the acetabulum exposing fractured bone
2.02	with injury to the sciatic nerve	Stage 1.01-2.01 AND weakness of the involved lower extremity OR laceration of the sciatic nerve [operative/pathology report]
2.03	with deep vein thrombosis	Stage 1.01-2.02 AND <b>DVT:</b>
3.01	with pulmonary embolism	Stage 1.01-2.03 AND <b>pulmonary embolism:</b>
3.02	with respiratory failure	Stage 3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

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**Disease: MUS06 Fracture: Calcaneus**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Fracture of the calcaneus without displacement	Fracture of the calcaneus without displacement [x-ray report]
1.02	Fracture of the calcaneus with displacement	Fracture of the calcaneus with displacement [x-ray report]
2.01	Compound fractures of the calcaneus	Stage 1.01-1.02 AND laceration of the skin with exposure of the fractured bones
2.02	with osteomyelitis	Stage 2.01 AND <b>osteomyelitis:</b>
3.01	with sepsis	Stage 2.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

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# Clinical Criteria for Disease Staging

MUS07

**Disease: MUS07 Fracture: Femur, Except Head or Neck**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Fracture of the femoral shaft without displacement	Fracture of the femoral shaft without displacement [x-ray report] OR linear fracture of the femoral shaft [x-ray report]
1.02	Simple fracture of the femoral shaft with two bony fragments	Fracture of the femoral shaft with two bony fragments [x-ray report]
2.01	Segmental fracture of the femoral shaft	Double fractures of the femoral shaft [x-ray report]
2.02	Comminuted fracture of the femoral shaft	Comminuted fracture of the femoral shaft [x-ray report]
2.03	Intercondylar or supracondylar or condylar or epiphyseal fracture of the femoral shaft	Intercondylar fracture of the femoral shaft and head [x-ray report] OR supracondylar fracture of the femoral shaft and head [x-ray report] OR condylar fracture of the femoral shaft and head [x-ray report] OR epiphyseal fracture of the femoral shaft and head [x-ray report]
2.04	Subtrochanteric fracture of the femoral shaft	Subtrochanteric fracture of the femoral shaft [x-ray report]
2.05	Open fracture of the femoral shaft	Fracture of the femoral shaft AND laceration of the skin with exposure of bony fragments
2.06	with damage to the femoral nerve or peroneal nerve or tibial nerve or reflex sympathetic dystrophy	Stage 1.01-2.05 AND damage to the femoral nerve [EMG/nerve conduction study report] OR damage to the peroneal nerve [EMG/nerve conduction study report] OR damage to the tibial nerve [EMG/nerve conduction study report] OR reflex sympathetic dystrophy
2.07	with laceration of the femoral artery or popliteal artery or femoral vein or popliteal vein or hemorrhage	Stage 1.01-2.06 AND laceration of the femoral artery [arteriogram report or operative/pathology report] OR laceration of the popliteal artery [arteriogram report or operative/pathology report] OR laceration of the femoral vein [venogram report or operative/pathology report] OR laceration of the popliteal vein [venogram report or operative/pathology report] OR <b>bleeding:</b>
3.01	with pulmonary embolism	Stage 1.01-2.07 AND <b>pulmonary embolism:</b>
3.02	with sepsis	Stage 2.03-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 3.01 AND <b>respiratory failure:</b>
3.04	with shock	Stage 2.05-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.06-3.04 AND death

**Disease: MUS07 Fracture: Femur, Except Head or Neck**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
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## References

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# Clinical Criteria for Disease Staging

MUS08

**Disease: MUS08 Fracture: Femur, Head or Neck**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Stable fracture of the head or neck of the femur	Stress fracture of the head or neck of the femur [x-ray report] OR impact fracture of the head or neck of the femur [x-ray report] OR linear fracture of the head or neck of the femur [x-ray report] OR intertrochanteric fracture of the femur [x-ray report] OR transcervical fracture of the femur [x-ray report]
2.01	Unstable fractures of the head or neck of the femur	Displaced fracture of the head or neck of the femur [x-ray report] OR comminuted fracture of the head or neck of the femur [x-ray report]
2.02	Open fracture of the head or neck of the femur	Fracture of the head or neck of the femur AND exposure of the fractured bone through a skin laceration
2.03	Fracture of the head or neck of the femur with avascular necrosis	Fracture of the head or neck of the femur AND avascular necrosis of the head or neck of the femur [operative/pathology report or x-ray report]
2.04	with deep vein thrombosis	Stage 1.01-2.03 AND <b>DVT:</b>
3.01	with pulmonary embolism	Stage 2.01-2.04 AND <b>pulmonary embolism:</b>
3.02	with respiratory failure	Stage 3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 2.02-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.03 AND death

## References

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**Disease: MUS09 Fracture: Fibula**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Linear fracture of the fibula without displacement	Linear fracture of the fibula without displacement [x-ray report]
1.02	Linear fracture of the fibula with displacement	Linear fracture of the fibula with displacement [x-ray report]
1.03	Comminuted fractures of the fibula	Comminuted fracture of the head or shaft of the fibula [x-ray report]
1.04	Segmental fracture of the fibular shaft	Segmental or double fracture of the fibular shaft [x-ray report]
2.01	Compound fracture of the fibula	Fracture of the fibula AND laceration of the skin with exposure of the fractured bones
2.02	with compartment syndrome or vascular or neurologic complications	Stage 1.01-2.01 AND compartment syndrome [physical examination or compartment pressure $\geq$ 30 mmHg] OR loss of pedal pulses OR paresthesia of the lower extremity OR Volkmann's compartment ischemia
2.03	with crush injuries to soft tissue	Stage 1.01-2.02 AND crush injury to soft tissues
2.04	with osteomyelitis	Stage 2.01-2.03 AND <b>osteomyelitis:</b>
2.05	with gangrene	Stage 2.01-2.04 AND gangrene of the fibula [operative/pathology report]
3.01	with sepsis	Stage 2.01-2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

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# Clinical Criteria for Disease Staging

MUS10

**Disease: MUS10 Fracture: Humerus (Shaft)**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Transverse or oblique fracture of the shaft of the humerus with no displacement	Transverse or oblique fracture of the shaft of the humerus with no displacement [x-ray report]
1.02	Fracture of the shaft of the humerus with simple displacement	Fracture of the shaft of the humerus with simple displacement [x-ray report]
1.03	Fracture of the shaft of the humerus with comminution and displacement	Fracture of the shaft of the humerus with comminution and displacement [x-ray report]
1.04	Segmental fracture of the shaft of the humerus with displacement	Segmental fracture of the shaft of the humerus with displacement [x-ray report]
1.05	with interposed muscle tissue	Fracture of the shaft of the humerus AND interposed soft tissue in fracture [operative/pathology report]
2.01	with soft tissue damage or open fracture	Fracture of the shaft of the humerus AND laceration of the skin with exposure of the fractured or dislocated bones OR extensive soft tissue damage
2.02	with injury to the radial nerve	Stage 1.01-2.01 AND radial nerve palsy OR wrist drop
2.03	with reflex sympathetic dystrophy	Stage 1.01-2.02 AND causalgia OR hyperesthesia OR shoulder-hand syndrome
2.04	with osteomyelitis	Stage 2.01-2.03 AND <b>osteomyelitis:</b>
2.05	with gangrene	Stage 2.01-2.04 AND gangrene
3.01	with sepsis	Stage 2.01-2.04 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: MUS10 Fracture: Humerus (Shaft)**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
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Kontakis GM, Galanakis IA, Steriopoulos KA. Dislocation of the shoulder and ipsilateral fracture of the humeral shaft: case reports and literature review. <i>Journal of Trauma</i> . 1995;39(5):990-2.
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# Clinical Criteria for Disease Staging

MUS11

**Disease: MUS11 Fracture: Humerus (Supracondylar)**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Supracondylar fracture of the humerus without displacement	Supracondylar fracture of the humerus without displacement [x-ray report]
1.02	Supracondylar fracture of the humerus with displacement	Supracondylar fracture of the humerus with displacement [x-ray report]
1.03	Supracondylar fracture of the humerus with cubitus varus deformity	Supracondylar fracture of the humerus with cubitus varus deformity or gunstock deformity [x-ray report]
1.04	Supracondylar fracture of the humerus with intercondylar displacement	Supracondylar fracture of the humerus with intercondylar displacement [x-ray report] OR supracondylar T-fracture of the humerus [x-ray report]
2.01	Open supracondylar fracture of the humerus	Supracondylar fracture of the humerus AND laceration of the skin with exposure of the fractured or dislocated bones
2.02	with injury to the radial nerve or ulnar nerve or median nerve	Supracondylar fracture of the humerus AND radial nerve palsy OR ulnar nerve palsy OR median nerve palsy
2.03	with Volkmann's ischemic contracture	Stage 1.01-2.02 AND Volkmann's ischemic contracture OR severe pain in hand and fingers AND tissue pallor AND inability to extend fingers
2.04	with osteomyelitis	Stage 2.01-2.03 AND <b>osteomyelitis:</b>
2.05	with gangrene	Stage 2.01-2.04 AND gangrene
3.01	with sepsis	Stage 2.01-2.04 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: MUS11 Fracture: Humerus (Supracondylar)**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
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**References**

Bernstein J, Adler LM, Blank JE, Dalsey RM, Williams GR, Iannotti JP. Evaluation of the Neer system of classification of proximal humeral fractures with computerized tomographic scans and plain radiographs. <i>Journal of Bone &amp; Joint Surgery - American Volume</i> . 1996;78(9):1371-5.
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Ogawa K, Ui M. Humeral shaft fracture sustained during arm wrestling: report on 30 cases and review of the literature. <i>Journal of Trauma</i> . 1997;42(2):243-6.
Swamy G, Schemitsch EH. Humeral head fracture dislocation: case report and review of the literature. <i>Journal of Trauma</i> . 1998;44(2):377-80.



# Clinical Criteria for Disease Staging

MUS12

**Disease: MUS12 Fracture: Radial Head and Neck**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Fracture of the head and neck of the radius, without displacement	Fracture of the head and neck of the radius without displacement [x-ray report]
1.02	Fracture of the head and neck of the radius, with displacement involving $\geq 1/3$ of the articular surfaces	Fracture of the head and neck of the radius with displacement involving $\geq 1/3$ of the articular surfaces [x-ray report]
1.03	Fracture of the head and neck of the radius, with comminution	Comminuted fracture of the head and neck of the radius [x-ray report]
2.01	Open fracture of the head and neck of the radius	Fracture of the head and neck of the radius AND laceration of the skin with exposure of the fractured or dislocated bones
2.02	with osteomyelitis	Stage 2.01 AND <b>osteomyelitis:</b>
2.03	with gangrene	Stage 2.01-2.02 AND gangrene
3.01	with sepsis	Stage 2.01-2.03 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

Dowling J. Musculoskeletal disease: staged for rapid comprehension. Year Book Medical Publishers Inc. 1985:217-218.

Fitch RD, Speer KP. Fractures and dislocations: fractures and dislocations of the shoulder, arm, and forearm. In: Sabiston DC, ed. Sabiston Textbook of Surgery. 15th ed. Philadelphia, PA: WB Saunders; 1998:1408-1414.

# Clinical Criteria for Disease Staging

MUS13

**Disease: MUS13 Fracture: Radial Shaft, Ulna or Olecranon**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Fracture of the radius and/or ulna or olecranon without displacement	Fracture of the radius or ulna without displacement [x-ray report]
1.02	with displacement	Fracture of the radius or ulna with displacement [x-ray report]
1.03	with dislocation of the radioulnar joint or Monteggia's fracture joint	Fracture of the radius or ulna with dislocation of the radioulnar joint [x-ray report] OR Galeazzi's fracture [x-ray report] OR Monteggia's fracture
1.04	with extensive soft tissue damage	Stage 1.01-1.03 AND extensive soft tissue damage
2.01	Open fracture of the radius and/or ulna	Fracture of the radius or ulna AND laceration of the skin with exposure of the fractured or dislocated bones
2.02	with injury to the radial nerve or median nerve or ulnar nerve	Stage 1.01-2.01 AND radial nerve palsy OR medial nerve palsy OR ulna nerve palsy
2.03	with reflex sympathetic dystrophy	Stage 1.01-2.02 AND reflex sympathetic dystrophy OR shoulder-hand syndrome OR Sudeck's atrophy OR hyperesthesia AND skin pallor AND trophic changes distal to fracture site
2.04	with Volkmann's ischemic contracture	Stage 1.01-2.03 AND Volkmann's ischemic contracture
2.05	with osteomyelitis	Stage 2.01-2.04 AND <b>osteomyelitis:</b>
2.06	with gangrene	Stage 2.01-2.05 AND gangrene
3.01	with sepsis	Stage 2.01-2.06 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: MUS13 Fracture: Radial Shaft, Ulna or Olecranon**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
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## References

Fitch RD, Speer KP. Fractures and dislocations: fractures and dislocations of the shoulder, arm, and forearm. In: Sabiston DC, ed. Sabiston Textbook of Surgery. 15th ed. Philadelphia, PA: WB Saunders; 1998:1408-1414.

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# Clinical Criteria for Disease Staging

MUS14

**Disease: MUS14 Fracture: Radius, Lower End**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Fracture of the lower end of the radius with minimal displacement	Fracture of the lower end of the radius with minimal displacement [x-ray report] OR 'reversed' Colles' fracture [x-ray report] OR linear fracture not involving articular surfaces [x-ray report] OR linear fracture without involving the radiocarpal joints [x-ray report] OR Colles' fracture [x-ray report]
1.02	Comminuted fracture of the lower end of the radius	Comminuted fracture of the lower end of the radius [x-ray report]
1.03	Comminuted fracture of the lower end of the radius, running into the joint surfaces	Comminuted fracture of the lower end of the radius running into the joint surfaces [x-ray report]
1.04	Fracture of the lower end of the radius, with anterior subluxation of the carpus	Fracture of the lower end of the radius with anterior subluxation of the carpus [x-ray report]
2.01	Open fracture of the lower end of the radius	Fracture of the lower end of the radius AND laceration of the skin with exposure of the fractured or dislocated bones
2.02	Fracture of the lower end of the radius, with entrapment neuropathy	Stage 1.01-2.01 AND median nerve palsy OR ulnar nerve palsy
2.03	with reflex sympathetic dystrophy	Stage 1.01-2.02 AND reflex sympathetic dystrophy OR shoulder-hand syndrome OR Sudeck's atrophy OR hyperesthesia AND skin pallor AND trophic changes distal to fracture site
2.04	with tendon rupture	Stage 1.01-2.03 AND rupture of the extensor pollicis longus [physical examination or operative/pathology report] OR rupture of flexor tendons [physical examination or operative/pathology report]
2.05	with Volkmann's ischemic contracture	Stage 1.01-2.04 AND Volkmann's ischemic contracture
2.06	with osteomyelitis	Stage 2.01-2.05 AND <b>osteomyelitis:</b>
2.07	with gangrene	Stage 2.01-2.06 AND gangrene
3.01	with sepsis	Stage 2.01-2.07 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>

**Disease: MUS14 Fracture: Radius, Lower End**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
4.00	with death	Stage 2.01-3.02 AND death

### References

Dowling J. Musculoskeletal disease: staged for rapid comprehension. Year Book Medical Publishers Inc. 1985:217-218.
Fitch RD, Speer KP. Fractures and dislocations: fractures and dislocations of the shoulder, arm, and forearm. In: Sabiston DC, ed. Sabiston Textbook of Surgery. 15th ed. Philadelphia, PA: WB Saunders; 1998:1408-1414.
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# Clinical Criteria for Disease Staging

MUS15

**Disease: MUS15 Fracture: Tibia**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Fracture of the tibial tuberosity	Fracture of the tibial tuberosity [x-ray report]
1.02	Fracture of the tibial eminence	Fracture of the tibial eminence [x-ray report]
1.03	Fracture of the lateral tibial condyles	Fracture of the lateral tibial condyles [x-ray report]
1.04	Fracture of the medial tibial condyles	Fracture of the medial tibial condyles [x-ray report]
1.05	Linear fracture of the tibia without displacement	Linear fracture of the tibia without displacement [x-ray report]
1.06	Linear fracture of the tibia with displacement	Linear fracture of the tibia with displacement [x-ray report]
2.01	Fracture of the lateral and medial tibial condyles	Stage 1.03 AND Stage 1.04
2.02	Comminuted fractures of the tibia	Comminuted fracture of the tibia
2.03	Segmental fracture of the tibial shaft	Segmental or double fracture of the tibial shaft [x-ray report]
2.04	Compound fracture of the tibia	Fracture of the tibia AND laceration of the skin with exposure of the fractured bones
2.05	with compartment syndrome or vascular or neurologic complications	Stage 1.01-2.04 AND compartment syndrome [physical examination or compartment pressure $\geq$ 30 mmHg] OR loss of pedal pulses OR paresthesia of the lower extremity OR Volkmann's compartment ischemia
2.06	with crush injuries to soft tissue	Stage 1.01-2.05 AND crush injury to soft tissues
2.07	with osteomyelitis	Stage 2.04-2.06 AND <b>osteomyelitis:</b>
2.08	with gangrene	Stage 2.04-2.07 AND gangrene of the tibia [operative/pathology report]
3.01	with sepsis	Stage 2.04-2.08 AND <b>sepsis:</b>
3.02	with shock	Stage 2.04-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.04-3.02 AND death

## References

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**Disease: MUS16 Fracture or Dislocation: Patella**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Patellofemoral dislocation	Patellar instability OR     hemarthrosis AND   localized tenderness over patellar retinaculum
1.02	Chronic patellofemoral dislocation	Stage 1.01 AND   history of recurrent patellofemoral dislocation
1.03	Transverse fracture of the patella	Transverse fracture of the patella [x-ray report]
1.04	Comminuted fracture of the patella	Comminuted fracture of the patella [x-ray report]
2.01	Open fracture or dislocation of the patella	Fracture or dislocation of the patella AND   laceration of the underlying skin with exposure of the fractured bones

## References

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Vail TP, McCollum DE. Fractures and dislocations: fractures of the pelvis, femur, and knee. In: Sabiston DC, ed. *Sabiston Textbook of Surgery*. 15th ed. Philadelphia, PA: WB Saunders; 1998:1432-1443.

# Clinical Criteria for Disease Staging

MUS17

## Disease: MUS17 Fracture or Sprain: Ankle

### Etiology: Trauma

Stage	Description	Diagnostic findings
1.01	Ankle sprain	Ankle sprain
1.02	Nondisplaced malleolar fractures	Nondisplaced fracture of the medial malleolus [ankle x-ray report] OR nondisplaced fracture of the lateral malleolus [x-ray report] OR nondisplaced fracture of the posterior malleolus [x-ray report]
1.03	Nondisplaced talar fractures	Nondisplaced fracture of the talus [x-ray report]
1.04	Displaced single malleolar fractures	Displaced fracture of the medial malleolus [x-ray report] OR displaced fracture of the lateral malleolus [x-ray report] OR displaced fracture of the posterior malleolus [x-ray report]
1.05	Displaced bimalleolar fractures	Fracture of any <u>two</u> of the following bones: Displaced fracture of the medial malleolus [x-ray report] OR displaced fracture of the lateral malleolus [x-ray report] OR displaced fracture of the posterior malleolus [x-ray report]
1.06	Displaced trimalleolar fractures	Fracture of any <u>three</u> of the following bones: Displaced fracture of the medial malleolus [x-ray report] OR displaced fracture of the lateral malleolus [x-ray report] OR displaced fracture of the posterior malleolus [x-ray report]
1.07	Displaced talar fractures	Displaced fracture of the talus [x-ray report]
1.08	Dislocation of the ankle	Dislocation of the ankle [x-ray report]
2.01	Fracture and dislocation of the ankle	Stage 1.02-1.07 AND Stage 1.08
2.02	Comminuted intra-articular ankle fracture	Comminuted fracture of the malleolar bones [ankle x-ray report] OR comminuted fracture of the talus bones [x-ray report]
2.03	Open fracture or dislocation of the ankle	Fracture or dislocation of the ankle AND laceration of the skin with exposure of the fractured bones
2.04	with injury to ankle tendons	Stage 1.02-2.03 AND laceration of the posterior tibial tendon [x-ray report or operative/pathology report] OR laceration of the peroneal tendon [x-ray report or operative/pathology report]
2.05	with injury to the posterior tibial nerve	Stage 1.02-2.04 AND posterior tibial nerve palsy [physical examination or EMG/nerve conduction study report] OR tarsal tunnel syndrome
2.06	with injury to the posterior or anterior tibial artery	Stage 1.02-2.05 AND posterior tibial artery laceration [angiogram report] OR anterior tibial artery laceration [angiogram report]
2.07	with osteomyelitis	Stage 2.03-2.06 AND <b>osteomyelitis:</b>



**Disease: MUS17 Fracture or Sprain: Ankle**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
3.01	with sepsis	Stage 2.03-2.07 AND <b>sepsis:</b>
3.02	with shock	Stage 2.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.02 AND death

**References**

Dowling J. Musculoskeletal disease: staged for rapid comprehension. Year Book Medical Publishers Inc. 1985:190-191.
Levin LS, Garrett WE Jr. Fractures and dislocations: fractures of the tibia, fibula, ankle, and foot. In: Sabiston DC, ed. Sabiston Textbook of Surgery. 15th ed. Philadelphia, PA: WB Saunders; 1998:1444-1451.
Michelson JD. Fractures about the ankle. Journal of Bone & Joint Surgery - American Volume. 1995;77(1):142-52.

# Clinical Criteria for Disease Staging

MUS18

**Disease: MUS18 Fracture, Dislocation, or Sprain: Facial Bones**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Sprain or dislocation, face and neck area	Sprain or dislocation, face and neck area
1.02	Fracture of facial bones without displacement of bones	Fracture of the maxilla without bony displacement [x-ray report]
1.03	Fracture of the lower third of the maxilla with displacement	Fracture of the lower third of the maxilla with displacement [x-ray report] OR LeFort type I fracture [x-ray report] OR horizontal segment fracture of the alveolar process of the maxilla where the teeth are contained in the detached bony segment [x-ray report] OR Guérin's fracture [x-ray report] OR horizontal maxillary fracture [x-ray report]
1.04	Fracture of the middle third of the maxilla with displacement	Fracture of the middle third of the maxilla with displacement [x-ray report] OR LeFort type II fracture [x-ray report] OR unilateral or bilateral fracture of the maxilla where the body of the maxilla is separated from the facial skeleton and the separated portion is pyramidal in shape and extends through the body of the maxilla to the hard palate, through the floor of the orbit and into the nasal cavity [x-ray report] OR pyramidal fracture [x-ray report]
1.05	Fracture of the upper third of the maxilla with displacement	Fracture of the upper third of the maxilla with displacement [x-ray report] OR LeFort type III fracture [x-ray report] OR the entire maxilla and facial bones are completely separated from the craniofacial skeleton [x-ray report] OR craniofacial displacement [x-ray report] OR transverse facial fracture [x-ray report]
2.01	Open dislocation or fracture of facial bones	Fracture or dislocation of facial bones [x-ray report] AND laceration of overlying skin
2.02	with ruptured ocular globe	Stage 1.02-2.01 AND ruptured ocular globe [CT scan report]
2.03	Closed fracture of larynx or trachea	Fracture of larynx or trachea [cervical x-ray, MRI or CT scan report]
2.04	Open fracture of larynx or trachea	Fracture of larynx or trachea AND laceration of overlying skin
2.05	with intracranial injury	Stage 1.02-2.04 AND cerebrospinal fluid rhinorrhea OR cerebrospinal fluid otorrhea OR intracranial bleeding [CT scan or MRI report] OR intracranial contusion [CT scan or MRI report]
2.06	with facial osteomyelitis	Stage 1.02-2.05 AND <b>osteomyelitis:</b> AND face involvement

**Disease: MUS18 Fracture, Dislocation, or Sprain: Facial Bones**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
3.01	with meningitis	Stage 1.02-2.06 AND <b>meningitis:</b>
3.02	with sepsis	Stage 2.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 1.02-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND <b>death</b>

**References**

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# Clinical Criteria for Disease Staging

MUS19

**Disease: MUS19 Fracture, Dislocation, or Sprain: Foot**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Sprain or dislocation of the foot	Sprain of foot OR dislocation of foot
1.02	Closed phalangeal fractures	Closed phalangeal fractures [x-ray report]
1.03	Linear fracture without displacement	Linear fracture of the metatarsals without displacement [x-ray report]
1.04	Fracture of the metatarsals with displacement	Fracture of the metatarsals with displacement [x-ray report]
1.05	Fracture of the metatarsals with concomitant divergent diastasis of the first and second tarsometatarsal rays	Fracture of the metatarsals with concomitant divergent diastasis of the first and second tarsometatarsal rays [x-ray report]
1.06	Fracture of the metatarsals with tarsometatarsal dislocation	Stage 1.01-1.05 AND tarsometatarsal dislocation [x-ray report]
1.07	Fracture of navicular, cuboid, cuneiform bones, closed	Fracture of the navicular bone [x-ray report] OR fracture of the cuboid bone [x-ray report] OR fracture of the cuneiform bone [x-ray report]
2.01	Open phalangeal fracture or dislocation	Fracture or dislocation of phalanges AND laceration of skin with exposure of the fractured toe(s) OR laceration of skin overlying site of dislocation of toe(s)
2.02	Open fracture or dislocation of the metatarsals	Fracture or dislocation of metatarsals AND laceration of the skin with exposure of the fractured metatarsal bones OR laceration of the skin overlying site of metatarsal dislocation
2.03	Open fracture or dislocation of navicular, cuboid or cuneiform bones	Fracture or dislocation of navicular, cuboid, or cuneiform bone AND laceration of skin with exposure of the navicular bone OR laceration of skin with exposure of the cuboid bone OR laceration of skin with exposure of the cuneiform bone OR laceration of the skin overlying the site of dislocation
2.04	Fracture or dislocation with injury to the medial or lateral plantar nerve or artery	Fracture or dislocation of phalanges, metatarsals, or tarsals AND injury to the medial or lateral plantar arteries [angiogram report] OR injury to the medial or lateral plantar nerves [physical examination or EMG nerve conduction study report]
2.05	with osteomyelitis	Stage 2.01-2.04 AND <b>osteomyelitis:</b>
3.01	with sepsis	Stage 2.01-2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: MUS19 Fracture, Dislocation, or Sprain: Foot**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
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## References

Levin LS, Garrett WE Jr. Fractures and dislocations: fractures of the tibia, fibula, ankle, and foot. In: Sabiston DC, ed. Sabiston Textbook of Surgery. 15th ed. Philadelphia, PA: WB Saunders; 1998:1444-1451.

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# Clinical Criteria for Disease Staging

MUS20

**Disease: MUS20 Fracture, Dislocation, or Sprain: Hip or Pelvis**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Sprain of pelvis, hip or thigh	Sprain of pelvis OR sprain of hip OR sprain of thigh
1.02	Fracture or dislocation of hip or pelvis without break in continuity of the pelvic ring	No break in the continuity of pelvic ring [pelvic series x-ray report] AND fracture of the ilium [x-ray report] OR fracture of the ischium [x-ray report] OR fracture of the pubis [x-ray report] OR dislocation of the symphysis pubis [x-ray report] OR dislocation of the sacroiliac joint [x-ray report]
1.03	Fracture or dislocation of the hip with a single break in pelvic ring	Single break in the continuity of pelvic ring [x-ray report] AND fracture of the ilium [x-ray report] OR fracture of the ischium [x-ray report] OR fracture of the pubis [x-ray report] OR dislocation of the symphysis pubis [x-ray report] OR dislocation of the sacroiliac joint [x-ray report]
2.01	Double break in pelvic ring	Double break in pelvic ring [x-ray report] AND fracture of the ilium [x-ray report] OR fracture of the ischium [x-ray report] OR fracture of the pubis [x-ray report] OR dislocation of the symphysis pubis [x-ray report] OR dislocation of the sacroiliac joint [x-ray report]
2.02	Malgaigne's fracture or straddle fracture	Malgaigne fracture: break in anterior and posterior pelvic ring [x-ray report, or straddle fracture: double break in the pelvic ring associated with dislocation of the symphysis pubis [x-ray report] AND fracture of the ilium [x-ray report] OR fracture of the ischium [x-ray report] OR fracture of the pubis [x-ray report] OR dislocation of the symphysis pubis [x-ray report] OR dislocation of the sacroiliac joint [x-ray report]
2.03	Multiple fractures of the pelvis including pelvic ring	Multiple fractures of the pelvis or pelvic ring [x-ray report]
2.04	Open fracture of the pelvis or hip	Fracture of hip or pelvis AND laceration of the skin and exposure of the underlying fractured bones
2.05	with thrombophlebitis	Stage 1.02-2.04 AND <b>DVT:</b>
2.06	with rupture of large pelvic veins	Stage 1.02-2.05 AND venous hemorrhage [pelvic venography report or operative/pathology report]

# Clinical Criteria for Disease Staging

MUS20

**Disease: MUS20 Fracture, Dislocation, or Sprain: Hip or Pelvis**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
2.07	with injury to uterus or ovaries or colonic perforation or neurological injury or urological injury	Stage 1.02-2.06 AND trauma to uterus [contrast hystero-graphy or operative/pathology or CT scan report] OR trauma to ovaries [contrast hystero-graphy or operative/pathology report] OR colonic perforation [contrast GI series report or operative/pathology report] OR fracture of vertebrae in the spinal column [myelogram, CT scan, x-ray or operative/pathology report] OR laceration of urinary bladder [operative/pathology report] OR ureters [operative/pathology report] OR urethra [operative/pathology report]
2.08	with rupture of major pelvic arteries	Stage 1.02-2.07 AND arterial hemorrhage [arteriogram report or operative/pathology report]
3.01	with pulmonary embolism	Stage 1.02-2.08 AND <b>pulmonary embolism:</b>
3.02	with respiratory failure	Stage 3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.02-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.02-3.03 AND death

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# Clinical Criteria for Disease Staging

MUS21

**Disease: MUS21 Fracture, Dislocation, or Sprain: Humerus (Head) or Shoulder**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Sprains of shoulder and upper arm	Sprain of shoulder OR sprain of upper arm
1.02	Closed dislocation of the head of the humerus, acromioclavicular joint or shoulder region	Dislocation of the head of humerus [x-ray report] OR dislocation of the acromioclavicular joint [x-ray report] OR dislocation of the shoulder region [x-ray report]
1.03	Anterior, subcoracoid, subglenoid, posterior or superior dislocation of the head of the humerus	Anterior, subcoracoid, subglenoid, posterior or superior dislocation [x-ray report]
1.04	Closed fracture of scapula or clavicle	Fracture of the scapula [x-ray report] OR fracture of the clavicle [x-ray report]
1.05	Closed fracture of the head or neck of humerus	Fracture of the head and neck of humerus without displacement [x-ray report] OR Neer Group I fracture
1.06	Closed fracture of greater or lesser tuberosity of humerus	Fracture of the head and neck of the humerus with fracture of the greater or lesser tuberosities [x-ray report] OR Neer Group V fracture
1.07	Fracture of the head or neck of humerus with displacement of fragments or segment	Fracture of the head and neck of the humerus and impaction with 35-45 degrees of angulation and less than 2/3 diameter of lateral displacement OR fracture of the head and neck of the humerus with displacement of the head greater than 1 cm. OR Neer Group II fracture OR fracture of the head and neck of humerus with displaced shaft segment and intact rotator cuff OR Neer Group III fracture [x-ray report]
1.08	Fracture of the head and neck of the humerus with fracture of the greater tuberosity and unimpacted fracture of the surgical neck	Fracture of the head and neck of the humerus with fracture of the greater tuberosity and unimpacted fracture of the surgical neck [ x-ray report] OR Neer Group IV fracture
2.01	Open dislocation or fracture of clavicle or scapula	Dislocation or fracture of clavicle or scapula AND laceration of skin overlying dislocation OR laceration of skin overlying fracture
2.02	Open dislocation of the shoulder	Dislocation of the shoulder AND laceration of the skin overlying the dislocation
2.03	Open fracture of the head or neck of the humerus	Fracture of the head or neck of the humerus AND laceration of the skin with exposure of the fractured bone(s)
2.04	Open fracture of the head or neck of humerus with displacement of fragments or segment	Displaced fracture of the head or neck of the humerus AND laceration of the skin with exposure of the fractured bone(s)



# Clinical Criteria for Disease Staging

MUS21

**Disease: MUS21 Fracture, Dislocation, or Sprain: Humerus (Head) or Shoulder**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
2.05	with injury to the axillary artery or vein	Stage 1.05-2.04 AND injury to the axillary artery [angiogram report] OR injury to the axillary vein [venography report]
2.06	with injury to the brachial plexus or axillary nerve	Stage 1.05-2.05 AND ulnar nerve palsy OR radial nerve palsy OR median nerve palsy OR paralysis of the deltoid muscle
2.07	with osteomyelitis	Stage 2.01-2.06 AND <b>osteomyelitis:</b>
2.08	with gangrene	Stage 2.01-2.07 AND gangrene of the upper limb [operative/pathology report]
3.01	with sepsis	Stage 2.01-2.08 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

## References

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# Clinical Criteria for Disease Staging

MUS22

## Disease: MUS22 Fracture, Dislocation, or Sprain: Wrist or Hand or Fingers

### Etiology: Trauma

Stage	Description	Diagnostic findings
1.01	Sprain or closed dislocation of wrist, hand, or fingers	Sprain of wrist OR sprain of hand OR sprain of fingers OR dislocation of wrist [x-ray report] OR dislocation of hand [x-ray report] OR dislocation of fingers [x-ray report]
1.02	Closed fracture of phalanx or phalanges	Closed fracture of one or more phalanges [x-ray report]
1.03	Closed fracture of metacarpal bone(s)	Closed fracture of metacarpal bone(s) [x-ray report]
1.04	Fracture of the carpal bone(s) without displacement	Fracture of the carpal bones without displacement [x-ray report]
1.05	Fracture of the carpal bone(s) with proximal pole fracture	Fracture of the carpal bone(s) with proximal pole fracture [x-ray report]
1.06	Fracture of the carpal navicular waist	Fracture of the carpal navicular waist [x-ray report]
1.07	Fracture of the carpal bone(s) with lunate bone subluxation or dislocation	Stage 1.04-1.06 AND fracture of the carpal bone(s) with lunate bone subluxation or dislocation [x-ray report]
2.01	Open phalangeal dislocation or fracture	Fracture or dislocation of phalanges AND laceration of the skin with exposure of the dislocated or fractured bone(s)
2.02	Open dislocation or fracture of metacarpal bone(s)	Fracture or dislocation of metacarpals AND laceration of the skin with exposure of the dislocated or fractured bone(s)
2.03	Open fracture of the carpal bone(s)	Fracture or dislocation of carpals AND laceration of the skin with exposure of the fractured or dislocated bone(s)
2.04	Fracture of the carpal bone(s) with damage to the median nerve	Fracture of carpals AND median nerve palsy
2.05	with osteomyelitis	Stage 2.01-2.04 AND <b>osteomyelitis:</b>
3.01	with sepsis	Stage 2.01-2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

### References

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**Disease: MUS23 Gout**

**Etiology: Metabolic**

Stage	Description	Diagnostic findings
1.01	Hyperuricemia	<b>Hyperuricemia:</b> Acute gouty arthritis [Needle shaped negatively birefringent crystals in fluid or in phagocytes per synovial fluid report]
1.02	Acute gouty arthritis	
2.01	Chronic gouty arthritis	History of acute gouty arthritis of the involved joint AND punched out lesion of subchondral bone [x-ray report] OR destruction of involved joint [x-ray report]
2.02	with renal urate stones	Stage 1.01-2.01 AND renal urate stones [pathology report]
2.03	with pyelonephritis	Stage 1.01-2.02 AND <b>pyelonephritis:</b>
3.01	with renal failure	Stage 2.02-2.03 AND <b>renal failure:</b>
3.02	with shock	Stage 2.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.03 AND death

**References**

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**Disease: MUS24 Hallux Deformities**

**Etiology: Congenital; Degenerative; Trauma**

Stage	Description	Diagnostic findings
1.01	Hallux valgus or bunion	Hallux valgus [x-ray report]
1.02	Hallux valgus encroaching upon adjacent toes	Hallux valgus encroaching upon adjacent toes [x-ray report]
1.03	Hallux valgus with inflamed overlying bursa	Hallux valgus with inflamed overlying bursa [x-ray report]
1.04	Hallux valgus with infection	Hallux valgus with skin infection [wound discharge culture reports growth of pathologic organism(s)]
1.05	Hallux rigidus	Hallux rigidus [x-ray report]
1.06	Hallux varus	Hallux varus [x-ray report]
1.07	Hallux malleus	Hallux malleus [x-ray report]

**References**

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Dowling J. Musculoskeletal disease: staged for rapid comprehension. Year Book Medical Publishers Inc. 1985:119-121.

**Disease: MUS25 Herniated Intervertebral Disc**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Asymptomatic prolapse of the intervertebral disc	Herniated intervertebral disc [spine x-ray or MRI or myelogram report]
1.02	Symptomatic prolapse of the intervertebral disc	Stage 1.01 AND pain radiating to leg(s) or arm(s) OR weakness of arm(s) or leg(s) OR cervical radiculopathy [physical examination or EMG report] OR lumbar radiculopathy [EMG report]
2.01	with loss of bladder or bowel control	Stage 1.01-1.02 AND incontinence of urine OR incontinence of bowels
2.02	with cauda equina syndrome or conus medullaris syndrome	Stage 1.01-2.01 AND <b>cauda equina syndrome:</b> OR <b>conus medullaris syndrome:</b>
2.03	with paraplegia	Stage 1.01-2.02 AND paraplegia
2.04	with quadriplegia	Stage 1.01-2.03 AND quadriplegia
2.05	with pneumonia (aspiration or bacterial)	Stage 1.01-2.04 AND <b>pneumonia:</b>
3.01	with sepsis	Stage 2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 2.05-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.05-3.02 AND death

**References**

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**Disease: MUS26 Infectious Arthritis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
2.01	Acute infectious arthritis	<b>Infectious arthritis:</b> Stage 2.01 AND <b>osteomyelitis:</b>
2.02	with contiguous osteomyelitis	
3.01	with sepsis	Stage 2.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

MUS27

**Disease: MUS27 Injury, Chest Wall**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Closed trauma to the chest wall or closed trauma to the breast or chest wall sprain or dislocation of sternum or ribs	Closed trauma to the chest wall OR closed trauma to the breast OR sprain of sternum OR sprain of ribs OR closed dislocation of sternum OR closed dislocation of ribs
1.02	Closed fracture of chest wall, ribs or sternum without displacement	Closed fracture of the chest wall without displacement [x-ray report] OR closed fracture of rib without displacement [x-ray report] OR closed fracture of sternum without displacement [x-ray report]
1.03	Open wound of chest wall, ribs or sternum	Open wound of chest wall OR open wound of rib OR open wound of sternum
2.01	Open fracture or dislocation of the chest wall or rib or sternum	Fracture or dislocation of the chest wall, rib, or sternum AND chest wall fracture with exposure of bones OR rib fracture with exposure of bones OR sternal fracture with exposure of bones
2.02	Fracture of the ribs or sternum with displacement of bone or flail chest	Fracture of the chest wall with displacement of bone [x-ray report] OR fracture of the rib or sternum with displacement of bone [x-ray report] OR fracture of the rib or sternum with flail chest [x-ray report]
2.03	with subcutaneous emphysema	Stage 1.01-2.02 AND subcutaneous emphysema [x-ray report or physical examination]
2.04	with pneumothorax or hemothorax	Stage 1.01-2.03 AND pneumothorax [x-ray report] OR hemothorax [x-ray or thoracentesis report]
2.05	with tension pneumothorax	Stage 1.01-2.04 AND tension pneumothorax [x-ray report]
2.06	with laceration of the thoracic duct	Stage 1.01-2.05 AND lacerated thoracic duct [operative/pathology report] OR chylous effusion [thoracentesis report]
2.07	with laceration of the diaphragm	Stage 1.01-2.06 AND laceration of the diaphragm [operative/pathology report or endoscopy report]
2.08	with laceration of trachea, bronchi, lung or esophagus	Stage 1.01-2.07 AND laceration of the trachea [bronchoscopy report] OR laceration of the bronchus [bronchoscopy report] OR injury to the lung OR laceration of the esophagus [operative/pathology report or endoscopy report]

**Disease: MUS27 Injury, Chest Wall**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
2.09	with laceration of the heart, great vessels or cardiac tamponade	Stage 1.01-2.08 AND    laceration of the heart [operative/pathology report] OR    laceration of the aorta[operative/pathology report] OR    laceration of the vena cava [operative/pathology report] OR    laceration of the pulmonary artery [operative/pathology report] OR    laceration of the pulmonary vein [operative/pathology report] OR    cardiac tamponade
3.01	with respiratory failure	Stage 1.01-2.09 AND <b>respiratory failure:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND    death

**References**

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**Disease: MUS28 Injury, Knee, Ligamentous**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Partial tear of knee ligament	Medial collateral ligament [stress x-ray report or physical examination] OR lateral collateral ligament [stress x-ray report or physical examination] OR anterior cruciate ligament [stress x-ray report or physical examination] OR posterior cruciate ligament [stress x-ray report or physical examination]
1.02	Complete rupture of the lateral collateral ligament	Complete rupture of the lateral collateral ligament [arthroscopy or stress x-ray report or physical examination]
1.03	Complete rupture of the medial collateral ligament	Complete rupture of the medial collateral ligament [arthroscopy or arthrotomy report or operative/pathology report or stress x-ray report or physical examination]
1.04	Complete rupture of the anterior cruciate ligament	Complete rupture of the anterior cruciate ligament [arthroscopy or arthrotomy report or operative/pathology report or stress x-ray report or physical examination]
1.05	Complete rupture of the posterior cruciate ligament	Complete rupture of the posterior cruciate ligament [arthroscopy or arthrotomy report or operative/pathology report or stress x-ray report or physical examination]
2.01	Collateral ligamentous tear with meniscus tear	Medial collateral ligament tear [arthroscopy or arthrotomy report or operative/pathology report or stress x-ray report or physical examination] OR lateral collateral ligament tear [arthroscopy or arthrotomy report or operative/pathology report or stress x-ray report or physical examination] AND medial meniscus tear [arthroscopy or arthrotomy report or operative/pathology report or stress x-ray report or physical examination] OR lateral meniscus tear [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
2.02	Cruciate ligamentous tear with meniscus tear	Anterior cruciate ligament tear [arthroscopy or arthrotomy report or operative/pathology report or stress x-ray report or physical examination] OR posterior cruciate ligament tear [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination] AND medial meniscus tear [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination] OR lateral meniscus tear [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
2.03	Ligamentous tear and meniscus tear and torn knee capsule	Stage 2.01-2.02 AND torn knee capsule [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]

**References**

Clasby L, Young MA. Management of sports-related anterior cruciate ligament injuries. AORN Journal. 1997;66(4):609-30.

Vail TP, McCollum DE. Fractures and dislocations: fractures of the pelvis, femur, and knee. In: Sabiston DC, ed. Sabiston Textbook of Surgery. 15th ed. Philadelphia, PA: WB Saunders; 1998:1432-1443.

# Clinical Criteria for Disease Staging

MUS29

## Disease: MUS29 Injury, Knee, Semilunar Cartilages

### Etiology: Trauma

Stage	Description	Diagnostic findings
1.01	Isolated peripheral tear of the medial or lateral meniscus	Isolated peripheral tear of the medial or lateral meniscus [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
1.02	Torn discoid medial or lateral meniscus	Isolated discoid tear of the medial or lateral meniscus [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
1.03	Torn cystic medial or lateral meniscus	Isolated cystic tear of the medial or lateral meniscus [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
1.04	Tear of the medial or lateral meniscus with displacement of the internal fragment	Tear of the medial or lateral meniscus with displacement of the internal fragment [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
1.05	Tear of the anterior horn of the lateral or medial meniscus	Tear of the anterior horn of the lateral or medial menisci [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
1.06	Tear of the posterior horn of the lateral or medial meniscus	Tear of the posterior horn of the lateral or medial menisci [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
2.01	Tear of the medial or lateral meniscus with tear of the medial collateral ligament	Tear of the medial or lateral meniscus with tear of the medial collateral ligament [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
2.02	Tear of the medial or lateral meniscus with tear of the cruciate ligament	Tear of the medial or lateral meniscus with tear of the medial collateral ligament [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]
2.03	Ligamentous tear and meniscus tear and torn knee capsule	Stage 2.01-2.02 AND torn knee capsule [arthroscopy, arthrotomy, operative/pathology or stress x-ray report or physical examination]

### References

Clasby L, Young MA. Management of sports-related anterior cruciate ligament injuries. AORN Journal. 1997;66(4):609-30.

Vail TP, McCollum DE. Fractures and dislocations: fractures of the pelvis, femur, and knee. In: Sabiston DC, ed. Sabiston Textbook of Surgery. 15th ed. Philadelphia, PA: WB Saunders; 1998:1432-1443.

# Clinical Criteria for Disease Staging

MUS30

## Disease: MUS30 Injury, Open Wound, or Blunt Trauma: Lower Extremity

### Etiology: Trauma

Stage	Description	Diagnostic findings
1.01	Superficial injury or contusion of the lower extremity not penetrating beyond the subcutaneous tissue	Incision or stab wound of the lower extremity not penetrating beyond the subcutaneous tissue [operative/pathology report]
1.02	Avulsion wound of the lower extremity not penetrating beyond the subcutaneous tissue	Avulsion wound of the lower extremity not penetrating beyond the subcutaneous tissue [operative/pathology report]
1.03	with infection	Stage 1.01-1.02 AND infected wound [wound culture reports growth of pathologic organism(s)]
1.04	with cellulitis	Stage 1.01-1.03 AND <b>cellulitis:</b> AND involvement of lower extremity
2.01	Open wound of the lower extremity extending into the deep fascia or crush injury of the lower extremity	Open wound or trauma of the lower extremity extending into the deep fascia [operative/pathology report] OR crush injury of the lower extremity
2.02	with abscess formation	Stage 1.01-2.01 AND abscess formation [operative/pathology report]
2.03	with laceration of muscles or tendons	Stage 1.01-2.02 AND laceration of muscle tissue OR laceration of tendons
2.04	with injury or laceration of the nerves of the lower extremity	Stage 1.01-2.03 AND sciatic nerve laceration or trauma [operative/pathology report] OR femoral nerve laceration or trauma [operative/pathology report] OR tibial nerve laceration or trauma [operative/pathology report] OR peroneal nerve laceration or trauma [operative/pathology report] OR sural nerve laceration or trauma [operative/pathology report] OR plantar nerve laceration or trauma [operative/pathology report] OR saphenous nerve laceration or trauma [operative/pathology report]
2.05	with trauma to blood vessels of the lower extremity	Stage 2.01-2.04 AND laceration or trauma of the femoral artery [operative/pathology report] OR laceration or trauma of the femoral vein [operative/pathology report] OR laceration or trauma of the popliteal artery [operative/pathology report] OR laceration or trauma of the popliteal vein [operative/pathology report] OR laceration or trauma of the iliac artery [operative/pathology report] OR laceration or trauma of the iliac vein [operative/pathology report] OR laceration or trauma of the tibial artery [operative/pathology report] OR laceration or trauma of the saphenous vein [operative/pathology report]
2.06	Traumatic amputation involving the lower extremity	Amputation of the lower extremity [operative/pathology report]

**Disease: MUS30 Injury, Open Wound, or Blunt Trauma: Lower Extremity**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
2.07	with osteomyelitis	Stage 1.03-2.06 AND <b>osteomyelitis:</b>
2.08	with gangrene	Stage 1.03-2.07 AND gangrene
3.01	with sepsis	Stage 1.03-2.08 AND <b>sepsis:</b>
3.02	with shock	Stage 1.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.03-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

MUS31

## Disease: MUS31 Injury, Open Wound, or Blunt Trauma: Upper Extremity

### Etiology: Trauma

Stage	Description	Diagnostic findings
1.01	Superficial injury or contusion of the upper extremity not penetrating beyond the subcutaneous tissue	Incision or stab wound of the upper extremity not penetrating beyond the subcutaneous tissue [operative/pathology report]
1.02	Avulsion wound of the upper extremity not penetrating beyond the subcutaneous tissue	Avulsion wound of the upper extremity not penetrating beyond the subcutaneous tissue [operative/pathology report]
1.03	with infection	Stage 1.01-1.02 AND infected wound [wound culture reports growth of pathologic organism(s)]
1.04	with cellulitis	Stage 1.01-1.03 AND <b>cellulitis:</b> AND involvement of extremity
2.01	Open wound of the upper extremity extending into the deep fascia or crush injury of upper extremity	Open wound of the upper extremity extending into the deep fascia [operative/pathology report] OR crush injury of upper extremity
2.02	with abscess formation	Stage 1.01-2.01 AND abscess formation [operative/pathology report]
2.03	with laceration of muscles or tendons	Stage 1.01-2.02 AND laceration of muscle tissue OR laceration of tendons
2.04	with trauma to the upper extremity nerves	Stage 1.01-2.03 AND axillary nerve laceration or trauma [operative/pathology report] OR radial nerve laceration or trauma [operative/pathology report] OR median nerve laceration or trauma [operative/pathology report] OR ulnar nerve laceration or trauma [operative/pathology report]
2.05	with trauma to the blood vessels of the upper extremity	Stage 2.01-2.04 AND laceration or trauma of the brachial artery [operative/pathology report] OR laceration or trauma of the brachial vein [operative/pathology report] OR laceration or trauma of the axillary artery [operative/pathology report] OR laceration or trauma of the axillary vein [operative/pathology report] OR laceration or trauma of the radial artery [operative/pathology report] OR laceration or trauma of the ulnar artery [operative/pathology report]
2.06	Traumatic amputation involving upper extremity	Amputation of upper extremity [operative/pathology report]
2.07	with osteomyelitis	Stage 1.03-2.06 AND <b>osteomyelitis:</b>
2.08	with gangrene	Stage 1.03-2.07 AND gangrene
3.01	with sepsis	Stage 1.03-2.08 AND <b>sepsis:</b>

**Disease: MUS31 Injury, Open Wound, or Blunt Trauma: Upper Extremity**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
3.02	with shock	Stage 1.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.03-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

MUS32

**Disease: MUS32 Muscular Dystrophy**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Distal muscular dystrophy	Distal muscular dystrophy [physical examination or genetic analysis report]
1.02	Becker muscular dystrophy or limb-girdle dystrophy	Becker muscular dystrophy [physical examination or genetic analysis report or Western Blot analysis report] OR limb-girdle dystrophy [physical examination or Western Blot analysis report or genetic analysis reports limb-girdle dystrophy subtype]
1.03	Myotonic dystrophy or ocular muscular dystrophy or fascioscapulohumeral dystrophy or congenital muscular dystrophy or oculopharyngeal muscular dystrophy	Myotonic dystrophy [physical examination or genetic analysis report an unstable expansion of a CTG trinucleotide repeat sequence in a gene at 19q13.3] OR ocular muscular dystrophy [physical examination] OR facioscapulohumeral dystrophy [physical examination or genetic analysis report defect at chromosome 4q35] OR congenital muscular dystrophy [physical examination or laminin $\alpha$ 2 deficiency by muscle biopsy or defect in chromosome 6q22-23 by genetic analysis report] OR oculopharyngeal muscular dystrophy [physical examination or genetic defect in chromosome 14q]
2.01	Duchennic type muscular dystrophy	Duchennic type muscular dystrophy [physical examination or dystrophin in muscle tissue by Western Blot analysis report or dystrophin gene at short arm of the X chromosome at Xp21 by genetics report]
2.02	with hypertension	Stage 1.01-2.01 AND <b>hypertension:</b>
2.03	with mental retardation	Stage 1.01-2.02 AND <b>mental retardation:</b>
2.04	with pneumonia	Stage 1.01-2.03 AND <b>pneumonia:</b>
2.05	with cardiomyopathy or cardiac conduction abnormalities	Stage 1.01-2.04 Cardiomyopathy [echocardiogram report] OR <b>cardiac conduction abnormalities:</b>
3.01	with congestive heart failure	Stage 1.01-2.05 AND <b>congestive heart failure:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND <b>death</b>

**Disease: MUS32 Muscular Dystrophy**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

MUS33

**Disease: MUS33 Neoplasm, Malignant: Primary Bone**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of primary malignant neoplasm of bone	
1.01	Osteosarcoma or osteogenic sarcoma or ossifying parosteal sarcoma or peripheral chondrosarcoma or medullary fibrosarcoma or osteoclastoma or Ewing's sarcoma of the long bones or reticulum cell sarcoma or lymphosarcoma or clasmocytoma or monocytoma	Osteosarcoma [operative/pathology report] OR osteogenic sarcoma [operative/pathology report] OR ossifying parosteal sarcoma [operative/pathology report] OR chondrosarcoma of the long bones [operative/pathology report] OR medullary fibrosarcoma [operative/pathology report] OR osteoclastoma [operative/pathology report] OR Ewing's sarcoma of the long bones [operative/pathology report] OR reticulum cell sarcoma [operative/pathology report] OR lymphosarcoma [operative/pathology report] OR clasmocytoma [operative/pathology report] OR monocytoma [operative/pathology report]
1.02	Chondrosarcoma or Ewing's sarcoma of the axial skeleton or endothelial myeloma	Chondrosarcoma of the axial skeleton [operative/pathology report] OR Ewing's sarcoma of the axial skeleton [operative/pathology report] OR endothelial myeloma [operative/pathology report]
2.01	Osteosarcoma with Paget's disease of the bones or parosteal osteosarcoma Grade III or chondrosarcoma with skeletal enchondromatosis or diffuse fibrosarcoma or giant cell tumor in soft tissues	Osteosarcoma with Paget's disease of the bones [operative/pathology report] OR parosteal osteosarcoma Grade III [operative/pathology report] OR chondrosarcoma with skeletal enchondromatosis [operative/pathology report] OR diffuse fibrosarcoma [operative/pathology report] OR giant cell tumor in soft tissues [operative/pathology report]
2.02	Primary malignant bone tumors with tumor involving regional lymph nodes	Stage 1.01-2.01 AND tumor involving regional lymph nodes [operative/pathology report]
3.01	Primary malignant bone tumors with metastasis to other bones	Stage 1.01-2.02 AND metastasis to other bones
3.02	Primary malignant bone tumors with metastasis to the lungs	Stage 1.01-3.01 AND pulmonary metastasis [operative/pathology report]
3.03	Primary malignant bone tumors with metastasis to the central nervous system	Stage 1.01-3.02 AND metastasis to the central nervous system [operative/pathology report]
3.04	Primary malignant bone tumors with shock	Stage 2.02-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.04 AND death

**Disease: MUS33 Neoplasm, Malignant: Primary Bone**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
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## References

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# Clinical Criteria for Disease Staging

MUS34

**Disease: MUS34 Osteoarthritis**

**Etiology: Degenerative; Immune; Metabolic; Trauma**

Stage	Description	Diagnostic findings
1.01	Osteoarthritis of the hands	Osteoarthritis of the hands [x-ray report] OR Heberden's nodes OR Bouchard's nodes
1.02	Osteoarthritis of the lumbar spine	Osteoarthritis of the lumbar spine [x-ray report or CT scan report]
1.03	Osteoarthritis of the cervical or thoracic spine	Osteoarthritis of the cervical spine [x-ray or CT scan report] OR osteoarthritis of the thoracic spine [x-ray or CT scan report]
1.04	Osteoarthritis of the ankle and foot	Osteoarthritis of the ankle [x-ray report] OR osteoarthritis of the foot [x-ray report]
1.05	Osteoarthritis of the elbow	Osteoarthritis of the elbow [x-ray report]
1.06	Osteoarthritis of the shoulder area	Osteoarthritis of the shoulder [x-ray report]
2.01	with cervical radiculopathy	Stage 1.03 AND cervical radiculopathy [EMG report] OR no history of trauma to areas of pain AND pain in either arm OR pain in shoulders
2.02	with lumbar radiculopathy	Stage 1.02 AND pain on straight leg raise OR lumbar radiculopathy [EMG report]
2.03	with compression of the metacarpophalangeal joints or compression of the interphalangeal joints	Stage 1.01 AND no range of motion of fingers OR compression of the metacarpophalangeal joints [x-ray report] OR compression of the interphalangeal joints [x-ray report]
2.04	with compression of the knee joints or hip joints	Stage 1.01-2.03 AND no range of motion of the lower extremities OR compression of the knee joints [knee x-ray report] OR compression of the hip joints [pelvic x-ray report or CT scan report]

**Disease: MUS34 Osteoarthritis**

**Etiology: Degenerative; Immune; Metabolic; Trauma**

Stage	Description	Diagnostic findings
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## References

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Lane NE, Thompson JM. Management of osteoarthritis in the primary-care setting: an evidence-based approach to treatment. <i>American Journal of Medicine</i> . 1997;103(6A):25S-30S.

**Disease: MUS35 Osteochondrodysplasia**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Osteochondrodysplasia	Achondroplasia [ physical examination or genetic analysis report defect in chromosome 4p] OR hypochoondroplasia [physical examination or genetic analysis report] OR pseudoachondroplasia [physical examination or genetic analysis report] OR diastrophic dysplasia [physical examination or genetic analysis report] OR multiple epiphyseal dysplasia [physical examination or genetic analysis report] OR spondyloepiphyseal dysplasia [physical examination or genetic analysis report] OR metaphyseal chondrodysplasia [physical examination or genetic analysis report] OR mesomelic dysplasia [physical examination or genetic analysis report] OR chondrodysplasia punctata, rhizomelic form [physical examination or genetic analysis report] OR chondrodysplasia punctata, Conradi-Hünemann form [physical examination or genetic analysis report] OR chondroectodermal dysplasia [physical examination or genetic analysis report]
2.01	with hydrocephalus	Stage 1.01 AND hydrocephalus [physical examination or CT scan report]
2.02	with mental retardation	Stage 1.01-2.01 AND <b>mental retardation:</b>
3.01	with respiratory failure	Stage 1.01-2.02 AND <b>respiratory failure:</b>
3.02	with coma	Stage 1.01-3.01 AND <b>coma:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**References**

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**Disease: MUS36 Osteomalacia**

**Etiology: Metabolic; Nutritional**

Stage	Description	Diagnostic findings
1.01	Osteomalacia	Osteomalacia [x-ray report]
2.01	with pathologic fracture	Pathological fracture [x-ray report]

## References

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# Clinical Criteria for Disease Staging

MUS37

**Disease: MUS37 Osteomyelitis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Intervertebral disc infection	Disk space narrowing with endplate blurring [spine x-ray report or MRI report or CT scan report or physical examination] OR Intervertebral Disc Infection [changes include decreased enhancement on T1 and increased intensity on T2 weighted images with characteristic enhancement with gadolinium administration on MRI report]
1.02	Vertebral osteomyelitis	Vertebral osteomyelitis [growth of pathologic organism(s) by bone culture report or bone scan or areas of hypodensity and trabecular, cortical or endplate destruction by CT report or changes include decreased enhancement on T1 and increased intensity on T2 weighted images with characteristic enhancement with gadolinium administration by MRI report]
2.01	Osteomyelitis	Growth of pathologic organism(s) in bone other than vertebra [bone culture report] OR involved area of bone consistent with osteomyelitis [bone scan, MRI or x-ray report]
2.02	with extension into soft tissues	Stage 2.01 AND soft tissue abscess OR sinus tract formation between overlying skin and bone lesion
2.03	with sequestrum formation	Stage 2.01-2.02 AND sequestrum formation [skeletal x-ray report]
2.04	with epidural abscess	Stage 2.01-2.03 AND epidural abscess [MRI report]
2.05	with paraspinal abscess	Stage 2.01-2.04 AND paraspinal abscess [MRI report or cultures sensitivity report]
2.06	with pathologic fracture	Stage 2.01-2.05 AND pathologic fracture [x-ray report]
2.07	involving the spinal column	Stage 2.01-2.06 AND extension into spinal column
2.08	with paraplegia or paraparesis	Stage 2.01-2.07 AND paraplegia OR paraparesis
3.01	with sepsis	Stage 2.01-2.08 AND <b>sepsis:</b>
3.02	with respiratory failure	Stage 2.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: MUS37 Osteomyelitis**

**Etiology: Infection**

Stage	Description	Diagnostic findings
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## References

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**Disease: MUS38 Osteoporosis**

**Etiology: Degenerative; Genetic (or hereditary); Metabolic; Nutritional**

Stage	Description	Diagnostic findings
1.01	Osteopenia	<b>osteopenia:</b> [bone density analysis, DEXA scan, reports ≤ 2.5 standard deviation below standard adult mean value]
1.02	Osteoporosis	<b>osteoporosis:</b> [bone density analysis, DEXA scan, reports > 2.5 standard deviation below standard adult mean value]
2.01	Osteoporosis with fracture of the lumbar vertebra or hip or extremities	Stage 1.02 AND    compression fracture of the lumbar vertebra [x-ray report] OR    compression fracture of the hip [x-ray report] OR    fracture of the extremities [x-ray report]
2.02	Osteoporosis with fracture of the thoracic vertebra	Stage 1.02-2.01 AND    compression fracture of the thoracic vertebra [x-ray report]
2.03	Osteoporosis with fracture of the cervical vertebra	Stage 1.02-2.02 AND    compression fracture of the cervical vertebra [x-ray report]
3.01	with renal failure	Stage 1.02-2.03 AND <b>renal failure:</b>
3.02	with shock	Stage 1.02-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.02-3.02 AND    death

**References**

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# Clinical Criteria for Disease Staging

MUS39

**Disease: MUS39 Progressive Systemic Sclerosis**

**Etiology: Immune**

Stage	Description	Diagnostic findings
1.01	Progressive systemic sclerosis, scleroderma or CREST syndrome	Scleroderma [skin biopsy report] OR CREST syndrome: OR calcinosis AND Raynaud's phenomenon AND dysphagia AND sclerodactyly AND telangiectasias  Presumptive Diagnostic Findings: Raynaud's phenomenon AND thickening of the skin proximal to the metacarpal-phalangeal joints OR swelling of acral portions of the digits
1.02	with flexion contractures of the hands or arthralgias	Stage 1.01 AND flexion contractures of one or both hands OR polyarthralgia
2.01	with trophic ulcers of the hands	Stage 1.01-1.02 AND trophic skin ulcers of the hand
2.02	with gastroesophageal reflux or pneumatosis intestinalis	Stage 1.01-2.01 AND reflux esophagitis [endoscopy report or UGI series report] OR pneumatosis cystoides intestinalis [abdominal x-ray report]
2.03	with biliary cirrhosis or jaundice	Stage 1.01-2.02 AND biliary cirrhosis [liver biopsy report] OR <b>jaundice:</b>
2.04	with lung fibrosis	Stage 1.01-2.03 AND lung fibrosis [x-ray report or CT scan report]
2.05	with cardiac conduction abnormalities	Stage 1.01-2.04 AND <b>cardiac conduction abnormalities:</b>
2.06	with hypertension	Stage 1.01-2.05 AND <b>hypertension:</b>
3.01	with renal failure	Stage 1.01-2.06 AND <b>renal failure:</b>
3.02	with pulmonary hypertension	Stage 1.01-3.01 AND pulmonary artery pressure > 30.5 mmHg [cardiac catheterization report]
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>

**Disease: MUS39 Progressive Systemic Sclerosis**

**Etiology: Immune**

Stage	Description	Diagnostic findings
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.05 AND death

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# Clinical Criteria for Disease Staging

MUS40

**Disease: MUS40 Rheumatoid Arthritis**

**Etiology: Immune**

Stage	Description	Diagnostic findings
1.01	Rheumatoid arthritis	<p><b>rheumatoid arthritis:</b>                      Any 4 of the <u>1987</u> criteria of the American College of Rheumatology:                      history of morning stiffness <math>\geq</math> 6 weeks                      AND <math>\geq</math> 3 joints with swelling or effusion for <math>\geq</math> 6 weeks: elbow, knee, ankle or metatarsalphalangeal joints                      OR swelling or effusion of the hand or wrist joints for <math>\geq</math> 6 weeks                      OR symmetrical bilateral joint swelling <math>\geq</math> 6 weeks                      OR subcutaneous nodules                      OR rheumatoid arthritis [x-ray report of any joint]                      OR rheumatoid factor titer <math>\geq</math> 1:160 [chemistry report]</p>
1.02	with uveitis	<p>Stage 1.01                      AND uveitis [ophthamologist's report]</p>
1.03	with fusion of metacarpophalangeal or interphalangeal joint spaces	<p>Stage 1.01-1.02                      AND fusion of metacarpophalangeal or interphalangeal joint spaces [x-ray report]</p>
1.04	with carpal tunnel syndrome	<p>Stage 1.01-1.03                      AND carpal tunnel syndrome [operative/pathology report]                      OR atrophy of thenar muscles                      OR Tinel's sign</p>
2.01	Juvenile onset rheumatoid arthritis	<p>Age <math>\leq</math> 16 years old                      AND Still's disease                      OR <b>fever:</b>                      AND splenomegaly                      AND generalized lymphadenopathy                      AND serositis                      AND <b>leukocytosis:</b></p>
2.02	with anemia	<p>Stage 1.01-2.01                      AND <b>anemia:</b></p>
2.03	with Felty's syndrome	<p>Stage 1.01-2.02                      AND splenomegaly                      AND <b>leukopenia:</b></p>
2.04	with pneumoconiosis or interstitial fibrosis	<p>Stage 1.01-2.03                      AND interstitial fibrosis [chest x-ray report]                      OR pulmonary nodules [x-ray report]                      OR pneumoconiosis or Caplan's syndrome [x-ray report]</p>

**Disease: MUS40 Rheumatoid Arthritis**

**Etiology: Immune**

Stage	Description	Diagnostic findings
2.05	with cardiac conduction abnormalities or pericarditis or cardiomyopathy	Stage 1.01-2.04 AND <b>pericarditis:</b> OR cardiomyopathy [echocardiogram report] OR <b>cardiac conduction abnormalities:</b>
3.01	with vasculitides	Stage 1.01-2.05 AND vasculitis [operative/pathology report]
3.02	with amyloidosis	Stage 1.01-3.01 AND amyloidosis [operative/pathology report]
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

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# Clinical Criteria for Disease Staging

MUS41

**Disease: MUS41 Scoliosis of the Lumbar Spine**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
1.01	Dysplastic scoliosis	Scoliosis < 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND Neurofibromatosis Type I [genetic analysis report] OR cutaneous neurofibromatosis [operative/pathology report] OR subcutaneous neurofibromatosis [operative/pathology report] OR Autosomal dominant, chromosome 17, gene codes for neurofibromin [genetic analysis report] OR Two or more of the following must be present: cafe-au-lait spot ≥ 1.5 cm in diameter for age > 13 years old OR cafe-au-lait spot ≥ 0.5 cm in diameter for < age 13 years old AND total of ≥ 6 cafe-au-lait spots OR ≥ two neurofibromas of any type OR ≥ 1 plexiform neurofibroma OR freckling in the axillary and inguinal regions OR ≥ 1 optic pathways glioma OR ≥ 2 Lisch nodules (iris amartomas) OR osseous lesion, such as sphenoid wing dysplasia or thinning of the cortex of long bones OR a first-degree relative with NF1 by the above criteria
1.02	Marfan's Scoliosis	Scoliosis < 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND Marfan's Scoliosis
1.03	with skeletal dysplasia	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND diastrophic dysplasia OR mucopolysaccharidosis OR pseudoachondroplasia OR spondyloepiphyseal dysplasia OR chondroplasia
1.04	with osteogenesis imperfecta	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND osteogenesis imperfecta [pathology report]
1.05	with familial dysautonomia	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND Riley-Tay syndrome or familial dysautonomia
1.06	Congenital scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND Type I: Failure of formation OR Type II: Failure of segmentation OR Type III: Mixture with rib abnormalities
1.07	Infantile and juvenile scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND infantile scoliosis present from birth to three years of age OR juvenile scoliosis present from four to ten years of age

**Disease: MUS41 Scoliosis of the Lumbar Spine**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
1.08	Adolescent idiopathic scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND adolescent idiopathic scoliosis between ten and twenty years of age
1.09	Paralytic scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND neuromuscular scoliosis OR cerebral palsy OR Friedreich's ataxia OR syringomyelia OR Charcot-Marie Tooth Disease OR spinal muscular atrophy OR secondary to spinal cord injury OR Duchenne's muscular dystrophy OR arthrogyposis
1.10	Degenerative scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND degenerative scoliosis
2.01	Scoliosis of the lumbar spine of ≥ 30 degrees and ≤50 degrees	Scoliosis of the lumbar spine of ≥ 30 degrees and < 50 degrees [x-ray report]
2.02	Scoliosis of the lumbar spine of ≥ 50 degrees [x-ray report]	Scoliosis of the lumbar spine of ≥ 50 degrees [x-ray report]
2.03	Scoliosis of the lumbar spine with cauda equina syndrome	Stage 1.01-2.02 AND <b>cauda equina syndrome:</b>

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Anonymous. Screening for adolescent idiopathic scoliosis. Review article. US Preventive Services Task Force. JAMA. 1993;269(20):2667-72.
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# Clinical Criteria for Disease Staging

MUS42

**Disease: MUS42 Scoliosis of the Thoracic Spine**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
1.01	Dysplastic scoliosis	Scoliosis < 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND neurofibromatosis Type I [genetic analysis report] OR cutaneous neurofibromatosis [operative/pathology report] OR subcutaneous neurofibromatosis [operative/pathology report] OR autosomal dominant, chromosome 17, gene codes for neurofibromin [genetic analysis report] OR two or more of the following must be present: cafe-au-lait spot ≥ 1.5 cm in diameter for age > 13 years old OR cafe-au-lait spot ≥ 0.5 cm in diameter for < age 13 years old AND total of ≥ 6 cafe-au-lait spots OR ≥ two neurofibromas of any type OR ≥ 1 plexiform neurofibroma OR freckling in the axillary and inguinal regions OR ≥ 1 optic pathways glioma OR ≥ 2 Lisch nodules (iris amartomas) OR osseous lesion, such as sphenoid wing dysplasia or thinning of the cortex of long bones OR a first-degree relative with NF1 by the above criteria
1.02	Marfan's scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND Marfan's syndrome
1.03	with skeletal dysplasia	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND dystrophic dysplasia OR mucopolysaccharidosis OR pseudoachondroplasia OR spondyloepiphyseal dysplasia OR chondroplasia
1.04	with osteogenesis imperfecta	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND osteogenesis imperfecta [pathology report]
1.05	with familial dysautonomia	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND Riley-Day syndrome or familial dysautonomia
1.06	Congenital scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND Type I: Failure of formation OR Type II: Failure of segmentation OR Type III: Mixture with rib abnormalities



# Clinical Criteria for Disease Staging

MUS42

**Disease: MUS42 Scoliosis of the Thoracic Spine**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
1.07	Infantile and juvenile scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND infantile scoliosis present from birth to three years of age OR juvenile scoliosis present from four to ten years of age
1.08	Adolescent idiopathic scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND adolescent idiopathic scoliosis between ten and twenty years of age
1.09	Paralytic scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND Neuromuscular scoliosis OR cerebral palsy OR Friedreich's ataxia OR syringomyelia OR Charcot-Marie Tooth Disease OR spinal muscular atrophy OR secondary to spinal cord injury OR Duchenne's muscular dystrophy OR arthrogyposis
1.10	Degenerative scoliosis	Scoliosis ≥ 30 degrees [spine x-ray report or MRI report or CT scan report or physical examination] AND degenerative scoliosis
2.01	Scoliosis of the thoracic spine of ≥ 30 degrees and < 50 degrees	Scoliosis of the thoracic spine of ≥ 30 degrees and < 50 degrees [x-ray report]
2.02	Scoliosis of the thoracic spine of ≥ 50 degrees	Scoliosis of the thoracic spine of ≥ 50 degrees [x-ray report] OR kyphoscoliosis [x-ray report]
2.03	with cauda equina syndrome	Stage 1.01-2.02 AND <b>cauda equina syndrome:</b>
2.04	with hypoxemia	Stage 1.01-2.03 AND <b>hypoxemia:</b>
3.01	with cor pulmonale	Stage 1.01-2.04 AND <b>cor pulmonale:</b>
3.02	with shock	Stage 2.04-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.04-3.02 AND death

**Disease: MUS42 Scoliosis of the Thoracic Spine**

**Etiology: Congenital; Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
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## References

Anonymous. Screening for adolescent idiopathic scoliosis. Review article. US Preventive Services Task Force JAMA. 1993;269(20):2667-72.
Dowling J. Musculoskeletal disease: staged for rapid comprehension. Year Book Medical Publishers Inc. 1985:97-99.
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# Clinical Criteria for Disease Staging

MUS43

**Disease: MUS43 Spondylitis, Ankylosing**

**Etiology: Immune**

Stage	Description	Diagnostic findings
1.01	Ankylosing spondylitis	Sacroiliitis [sacroiliac x-ray report or axial skeleton report describes 'bamboo' appearance of spine x-ray report] OR New York criteria (1984): a history of inflammatory back pain OR back pain onset ≤ 40 years old AND insidious onset AND ≥ 3 months before medical attention is sought AND morning stiffness improves with exercise OR limitation of motion of the lumbar spine in both the sagittal and frontal planes OR positive Schober test OR ≤ 4 cm separation of horizontal line markers between the posterosuperior iliac spines OR limited chest expansion OR maximal inspiration and maximal forced expiration at 4 <sup>th</sup> intercostal space < 5 cm
2.01	with cervical fusion or atlantoaxial subluxation	Stage 1.01 AND cervical fusion [x-ray report] OR atlantoaxial subluxation [x-ray report]
2.02	with uveitis	Stage 1.01-2.01 AND uveitis [ophthalmologist's report]
2.03	with pulmonary fibrosis	Stage 1.01-2.02 AND pulmonary fibrosis [x-ray report]
2.04	with cardiac conduction abnormalities	Stage 1.01-2.03 AND <b>cardiac conduction abnormalities:</b>
2.05	with cauda equina syndrome	Stage 1.01-2.04 AND <b>cauda equina syndrome:</b>
2.06	with quadriparesis	Stage 1.01-2.05 AND quadriparesis
3.01	with renal failure	Stage 1.01-2.06 AND <b>renal failure:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**Disease: MUS43 Spondylitis, Ankylosing**

**Etiology: Immune**

Stage	Description	Diagnostic findings
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**References**

Archer JR. Ankylosing spondylitis, IgA, and transforming growth factors. <i>Annals of the Rheumatic Diseases</i> . 1995;54(7):544-6.
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# Clinical Criteria for Disease Staging

MUS44

**Disease: MUS44 Systemic Lupus Erythematosus**

**Etiology: Immune**

Stage	Description	Diagnostic findings
1.01	Systemic lupus erythematosus	Systemic lupus erythematosus OR Four or more of the following criteria: Malar rash OR Discoid rash OR Photosensitivity OR Oral ulcers OR <b>arthritis:</b> OR Serositis OR 0.5 g/d proteinuria [urinalysis report] OR 3 + dipstick proteinuria [urinalysis report] OR Cellular casts [urinalysis report] OR Seizures [EEG report] OR Psychosis OR <b>hemolysis:</b> OR <b>leukopenia:</b> OR <b>lymphocytopenia:</b> OR <b>thrombocytopenia:</b> OR Positive LE cell preparation [chemistry report] OR Double stranded anti-DNA antibody titer $\geq$ 1:40 [chemistry report] OR Smith antigen titer $\geq$ 1:40 [chemistry report] OR positive serologic test for syphilis [chemistry report] OR antiphospholipid antibodies OR ANA antibody titer $\geq$ 1:40[chemistry report]
2.01	with lupus anticoagulant or deep vein thrombosis	Stage 1.01 AND anticardiolipin antibodies positive [serology report] OR history of recurrent deep vein thrombosis OR <b>DVT:</b>
2.02	with pneumonia or lupus pneumonitis	Stage 1.01-2.01 AND <b>pneumonia:</b> OR lupus pneumonitis
2.03	with pleural effusion	Stage 1.01-2.02 AND pleural effusion [x-ray report or thoracentesis report]
2.04	with lupus nephritis	Stage 1.01-2.03 AND lupus nephritis [renal biopsy report]
2.05	with peritonitis	Stage 1.01-2.04 AND peritonitis [operative/pathology report]

**Disease: MUS44 Systemic Lupus Erythematosus**

**Etiology: Immune**

Stage	Description	Diagnostic findings
2.06	with pericarditis	Stage 1.01-2.05 AND <b>pericarditis:</b>
3.01	with renal failure	Stage 1.01-2.06 AND <b>renal failure:</b>
3.02	with endocarditis or myocarditis	Stage 1.01-3.01 AND <b>endocarditis:</b> OR <b>myocarditis:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND <b>death</b>

**References**

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Hahn BH. Systemic lupus erythematosus. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. *Harrison's Principles of Internal Medicine.* 14th ed. New York, NY: McGraw-Hill; 1998:1874-1880.

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# Clinical Criteria for Disease Staging

MUS45

**Disease: MUS45 Vasculitis**

**Etiology: Idiopathic; Immune**

Stage	Description	Diagnostic findings
1.01	Vasculitis	Unspecified disorder of coccyx OR Unspecified disorder of cervical region OR Unspecified disorder of other back region
2.01	with myositis	Stage 1.01 AND myositis [operative/pathology report]
2.02	with neuropathy	Stage 1.01-2.01 AND neuropathy [EMG report]
2.03	with pulmonary involvement	Stage 1.01-2.02 AND pulmonary involvement [operative/pathology report]
2.04	with cardiac conduction abnormalities	Stage 1.01-2.03 AND <b>cardiac conduction defects:</b>
2.05	with gastrointestinal involvement	Stage 1.01-2.04 AND ileus [abdominal x-ray report] OR heme positive stools OR bowel obstruction [abdominal x-ray report]
3.01	with renal failure	Stage 1.01-2.05 AND <b>renal failure:</b>
3.02	with cerebrovascular accident	Stage 1.01-3.01 AND cerebrovascular accident [MRI scan report or CT scan report]
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

## References

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Hellmann DB. "Arthritis & Musculoskeletal Disorders." In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. *Current Medical Diagnosis & Treatment*. Stamford, CT: Appleton & Lange, 1998:774-824.

**Disease: MUS80 Anomaly: Musculoskeletal System**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Congenital dislocations and anomalies of bone, soft tissue anomalies, spondylolisthesis	

References



**Disease: MUS81 Injury: Other and Ill-Defined Musculoskeletal Sites**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Closed nonspecific fracture, sprain or multiple fractures, internal injury, or late effects of musculoskeletal trauma	
2.01	Nonspecific open fracture or injury	

**References**

# Clinical Criteria for Disease Staging

MUS82

**Disease: MUS82 Neoplasm, Benign: Musculoskeletal System or Connective Tissue**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of musculoskeletal system	

References

# Clinical Criteria for Disease Staging

MUS83

**Disease: MUS83 Other Arthropathies, Bone and Joint Disorders**

## Etiology:

Stage	Description	Diagnostic findings
1.01	Crystal arthropathies, Kaschin-Beck disease, allergic, climacteric, transient, and polyarthritis, polymyalgia rheumatica	
2.01	Pathological or recurrent dislocation or derangement of multiple joints or infections of bone and joints	

## References

**Disease: MUS84 Other Disorders of Connective Tissue**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Polymyositis, ganglion cysts, synovial and tendon ruptures	

**References**

**Disease: MUS85 Other Spinal and Back Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Lumbago, sciatica, torticollis, other back symptoms and disorders, curvatures of spine	
1.02	Spinal stenosis	

**References**

# Clinical Criteria for Disease Staging

NEU01

**Disease: NEU01 Amyotrophic Lateral Sclerosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Early lumbar amyotrophic lateral sclerosis	Weakness of calves OR asymmetric ankle reflexes OR asymmetric toe reflexes OR asymmetric "footdrop" OR muscle wasting of the lower extremities AND lower extremity muscular fibrillation [EMG report] OR lower extremity muscular fasciculations [EMG report] OR lower extremity giant motor unit potentials [EMG report] OR lower extremity positive waves [EMG report] OR familial amyotrophic lateral sclerosis, mutation in the copper-zinc superoxide dismutase gene on the long arm of chromosome 21 [genotype report]
1.02	Cervicothoracic amyotrophic lateral sclerosis	Asymmetric weakness of hands OR asymmetric weakness of forearms OR muscle wasting of upper extremities AND upper extremity muscular fibrillation [EMG report] OR upper extremity muscular fasciculations [EMG report] OR upper extremity giant motor unit potentials [EMG report] OR upper extremity positive waves [EMG report]
2.01	Advanced lumbar amyotrophic lateral sclerosis	Asymmetric weakness of the hamstring group of muscles OR asymmetric weakness of the quadriceps group of muscles
2.02	with early craniobulbar involvement	Stage 1.01-2.01 AND dysphagia OR regurgitation OR dysarthria
3.01	with pneumonia	Stage 1.01-2.02 AND <b>pneumonia:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
4.00	with death	Stage 1.01-3.03 AND death

**Disease: NEU01 Amyotrophic Lateral Sclerosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
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**References**

Aminoff MJ. Nervous system. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:916-973.
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Wokke J. Riluzole. Lancet. 1996;348(9030):795-9.

**Disease: NEU02 Carpal Tunnel Syndrome**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Carpal tunnel syndrome	Carpal tunnel syndrome OR median nerve sensory and motor conduction delay [EMG report] OR Tinel's sign positive OR tingling or shock-like pain on volar wrist percussion OR Phalen's sign positive OR pain or paresthesia in the distribution of the median nerve when the patient flexes both wrists to 90 degrees with the dorsal aspects of the hands held in apposition for 60 seconds. OR carpal compression test positive OR pain or paresthesia on direct pressure on the carpal tunnel for 60 seconds
1.02	with abductor pollicis brevis muscle or thenar eminence weakness or atrophy	Stage 1.01 AND abductor pollicis brevis muscle weakness or atrophy OR eminentia thenar weakness or atrophy

**References**

Dawson DM. Entrapment neuropathies of the upper extremities. <i>N Engl J Med.</i> 1993;329(27):2013-8.
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Yassi A. Repetitive strain injuries. <i>Lancet.</i> 1997;349(9056):943-7.



# Clinical Criteria for Disease Staging

NEU03

**Disease: NEU03 Cerebral Palsy**

**Etiology: Congenital; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Cerebral palsy manifested as spastic monoplegia	Cerebral palsy manifested as spastic monoplegia
2.01	manifested as choreoathetosis	Cerebral palsy manifested as choreoathetosis
2.02	manifested as spastic hemiplegia	Cerebral palsy manifested as spastic hemiplegia
2.03	manifested as spastic diplegia	Cerebral palsy manifested as spastic diplegia
2.04	manifested as spastic quadriplegia	Cerebral palsy manifested as spastic quadriplegia
2.05	with spastic and dyskinetic features	Stage 1.01-2.04 AND spasticity and choreoathetosis
2.06	with mental retardation	Stage 1.01-2.05 AND <b>mental retardation:</b>
2.07	with grand mal seizures	Stage 1.01-2.06 AND Grand mal seizure [EEG report] OR tonic-clonic contraction of the muscles of the extremities OR tonic seizures OR clonic seizures OR atonic seizures OR myoclonic seizures OR infantile spasms AND loss of consciousness
2.08	with aspiration pneumonia	Stage 1.01-2.07 AND aspiration pneumonia
3.01	with sepsis	Stage 1.01-2.08 AND <b>sepsis:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**Disease: NEU03 Cerebral Palsy**

**Etiology: Congenital; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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**References**

Eicher PS, Batshaw ML. Cerebral palsy. <i>Pediatric Clinics of North America</i> . 1993;40:537-551.
Haslam RHA. The nervous system/cerebral palsy. In: Behrman RE, Kliegman RM, Arvin AM, Nelson WE, eds. <i>Nelson Textbook of Pediatrics</i> , 15th ed. Philadelphia, PA: WB Saunders; 1996:1713-1714.
Kuban KC, Levitan A. Cerebral palsy. <i>N Engl J Med</i> . 1994;330:188-95.
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Russman BS. Disorders of motor execution I: cerebral palsy. In: David RB, ed. <i>Child and Adolescent Neurology</i> . St. Louis, MO: Mosby; 1998:453-468.

# Clinical Criteria for Disease Staging

NEU04

**Disease: NEU04 Cerebrovascular Disease**

**Etiology: Degenerative; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Cerebral atherosclerosis or cerebral aneurysm or vascular malformation	Cerebral atherosclerosis [CT scan or MRI report or cranial angiography report] OR cerebral or precerebral aneurysm [CT scan or MRI report or cranial angiography report] OR vascular malformation [CT scan or MRI report or cranial angiography report] OR carotid artery dissection [CT scan or MRI report or cranial angiography report] OR vertebral artery dissection [CT scan or MRI report or cranial angiography report] OR fibromuscular dysplasia [CT scan or MRI report or cranial angiography report]
2.01	Transient ischemic attack or occlusion or stenosis of precerebral arteries	No new infarct [CT scan report] AND acute paralysis resolving in ≤ 24 hours OR acute inability to communicate verbally resolving in ≤ 24 hours OR > 50% occlusion or stenosis of precerebral arteries [CT scan or MRI report or cranial angiography report] OR (the following new findings occur and persist ≤ 24h): <b>cranial nerve palsy:</b>
3.01	Intracranial hemorrhage or intracranial infarction or nonpyogenic thrombosis of intracranial venous sinus or Moyamoya disease	Intracranial infarction [CT scan or MRI report] OR intracranial hemorrhage [CT scan or MRI report] OR nonpyogenic thrombosis of intracranial sinus [angiography report] OR Moyamoya disease [angiography report]
3.02	Cerebrovascular accident with cranial nerve involvement	Stage 3.01 AND (the following new findings occur and persist beyond 3 days after therapy): <b>cranial nerve palsy:</b>
3.03	Cerebrovascular accident with cerebellar or pyramidal tract signs	Stage 3.01-3.02 AND acute loss of balance unresolved ≥ 24 hours OR acute nystagmus unresolved ≥ 24 hours OR acute spasticity unresolved ≥ 24 hours OR acute poor finger-to-nose or heel-to-shin tests unresolved ≥ 24 hours
3.04	Cerebrovascular accident with hemiparesis or hemiplegia	Stage 3.01-3.03 AND acute hemiparesis unresolved ≥ 24 hours OR acute hemiplegia unresolved ≥ 24 hours
3.05	Cerebrovascular accident with quadriplegia	Stage 3.01-3.04 AND acute quadriplegia unresolved ≥ 24 hours
3.06	with respiratory failure	Stage 3.01-3.05 AND <b>respiratory failure:</b>
3.07	Cerebrovascular accident with coma	Stage 3.01-3.06 AND <b>coma:</b>

**Disease: NEU04 Cerebrovascular Disease**

**Etiology: Degenerative; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
4.00	Cerebrovascular accident with death	Stage 3.01-3.07 AND death

**References**

Abram HS, Lenn NJ and Haas RJ. Vascular disease. In: David RB, ed. Child and Adolescent Neurology. 1998:271-293.
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# Clinical Criteria for Disease Staging

NEU05

**Disease: NEU05 Dementia: Primary Degenerative (Alzheimer's or Pick's Disease)**

**Etiology: Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
1.01	Primary degenerative dementia (Alzheimer's disease or Pick's disease)	Alzheimer or Picks' Disease [neuropsychiatrist report] OR Loss of recent memory AND able to maintain employment routines AND maintains personal hygiene AND senile plaques and neurofibrillary tangles [operative/pathology report] OR amyloid angiopathy with lobar hemorrhage [operative/pathology report] OR circumscribed convolitional atrophy of the frontal and temporal lobes [operative/pathology report] OR diffuse Lewy body disease [operative/pathology report]
1.02	Early dementia	Substantial loss of recent memory AND slowed brain wave activity [EEG report] OR inability to remember names OR inability to recall new information
2.01	Midstage dementia	Stage 1.01-1.02 AND become lost on > 1 occasion while driving a car OR become lost on > 1 occasion as a pedestrian in familiar city AND unresolved impairment of remote memory AND unresolved aphasia AND <b>disorientation:</b>
2.02	with invalidism	Stage 1.01-2.01 AND difficulty feeding self OR unable to maintain personal hygiene OR has become lost within own dwelling
2.03	with decubitus ulcer	Stage 1.01-2.02 AND decubitus ulcer
3.01	with sepsis	Stage 1.01-2.03 AND <b>sepsis:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with coma	Stage 1.01-3.02 AND <b>coma:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

**Disease: NEU05 Dementia: Primary Degenerative (Alzheimer's or Pick's Disease)**

**Etiology: Degenerative; Idiopathic**

Stage	Description	Diagnostic findings
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**References**

Aminoff MJ. Huntington's disease. In: Tierney Jr LM, McPhee SJ Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:946.
Bird TD. Alzheimer's disease and other primary dementias. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo, DL, eds. Harrison's Principles of Internal Medicine, 14th ed. New York, NY: McGraw-Hill; 1998:2348-2356.
Lendon CL, Ashall F, Goate AM. Exploring the etiology of Alzheimer disease using molecular genetics. JAMA. 1997;277(10):825-831.
Selkoe DJ. Alzheimer's disease: genotypes, phenotypes, and treatments. Science. 1997;275(5300):630-631.

# Clinical Criteria for Disease Staging

NEU06

**Disease: NEU06 Disease of the Nervous System Secondary to Implants or Grafts**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Disease of the nervous system secondary to implanted devices or grafts	Disease of the nervous system secondary to implanted devices or grafts
1.02	Reaction to spinal or lumbar puncture or from surgically implanted device	Reaction to spinal or lumbar puncture or from surgically implanted device
2.01	with infection due to nervous system device implantation or graft	Infection of the nervous system secondary to implanted devices or grafts
3.01	with sepsis	Stage 1.01-2.01 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**References**

# Clinical Criteria for Disease Staging

NEU07

**Disease: NEU07 Epilepsy**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Partial seizures with elementary symptomatology	Partial seizures [EEG report] AND no loss of consciousness at time of seizures OR no <b>disorientation</b> :
1.02	Partial seizures with complex symptomatology	Partial seizures [EEG report] AND loss of consciousness at time of seizures OR loss of "contact with environment" OR <b>disorientation</b> :
2.01	Absence seizures	Petit mal seizures [EEG report] OR atypical absence seizures
2.02	Tonic clonic seizures	Grand mal seizure [EEG report] OR tonic-clonic contraction of the muscles of the extremities OR tonic seizures OR clonic seizures OR atonic seizures OR myoclonic seizures OR infantile spasms AND loss of consciousness
3.01	Status epilepticus	Stage 1.01-2.02 AND loss of consciousness for ≥ 24 hours AND seizures recurring < 24 hour period
3.02	with respiratory failure	Stage 1.02-3.01 AND <b>respiratory failure</b> :
4.00	with death	Stage 1.02-3.02 AND death

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**Disease: NEU08 Guillain-Barre Syndrome**

**Etiology: Idiopathic; Infection**

Stage	Description	Diagnostic findings
2.01	Guillain-Barre syndrome	Guillain-Barre syndrome OR progression of paresis or paresthesia ceases ≤ 4 weeks AND progressive symmetric paresis within 6 weeks of a viral infection or vaccination or surgical procedure OR progressing symmetric paresthesias of lower extremities within 6 weeks of a viral infection or vaccination or surgical procedure OR nerve conduction slowing or block [EMG report] AND CSF proteins > 50 mg/dl AND CSF lymphocytes < 50/mm <sup>3</sup>
2.02	with ascending paralysis	Stage 2.01 AND progressing weakness leading to monoplegia or paraplegia within 6 weeks AND no cerebral infarction [CT scan report or MRI report]
2.03	with cranial nerve palsy	Stage 2.01-2.02 AND <b>cranial nerve palsy:</b>
3.01	with arrhythmias or bundle branch block	Stage 2.01-2.03 AND <b>arrhythmias:</b> OR <b>bundle branch block:</b>
3.02	with respiratory failure	Stage 2.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

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# Clinical Criteria for Disease Staging

**Disease: NEU09 Headache**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Muscle tension headache	Band-like constriction around head or feeling of tightness of the head, neck and occiput
1.02	Migraine headache	Migraine OR history of five attacks of the following symptoms: spreading unilateral or bilateral headache AND headache is throbbing or pulsatile AND headache is aggravated by activities of daily living AND headache duration ≤ 72 hrs OR headache duration is ≤ 48 hours in children AND history of prior migraine 'aura' OR nausea OR dizziness OR vomiting OR photophobia OR phonophobia OR family history of migraine OR diarrhea AND no coexisting intracranial disease
1.03	Cluster headache	Severe unilateral throbbing headache around entire half of face and head AND periorbital edema OR conjunctival injection OR ipsilateral Horner's syndrome OR rhinorrhea OR unilateral lacrimation AND daily attacks for ≤ 90 minutes for ≤ 6 weeks
2.01	Acute confusional or dysphoric migraine	Stage 1.02-1.03 AND agitation AND <b>disorientation:</b> AND amnesia of the event
2.02	Vertebrobasilar migraine	Stage 1.02-2.01 AND vertigo resolves when headache remits OR Romberg's sign resolves when headache remits OR dysarthria resolves when headache remits
2.03	Migraine headache with retinal ischemia	Stage 1.02-2.02 AND visual disturbance in one eye
2.04	Migraine headache with ophthalmoplegia	Stage 1.02-2.03 AND ophthalmoplegia remits when headache remits

# Clinical Criteria for Disease Staging

NEU09

**Disease: NEU09 Headache**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
2.05	Migraine headache with transient hemiparesis or monoparesis	Stage 1.02-2.04 AND hemiparesis which remits when headache remits OR monoparesis which remits when headache remits OR familial hemiplegic migraine gene on chromosome 19
2.06	Alternating hemiplegic migraine syndrome	Stage 1.02-2.05 AND Alternating hemiplegic migraine syndrome OR recurrent alternating episodes of hemiplegia at < 3 years of age AND progressive intellectual and motor impairment

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# Clinical Criteria for Disease Staging

NEU10

**Disease: NEU10 Huntington's Chorea**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Huntington's Chorea	CAG sequences $\geq 38$ in the Huntington's disease gene, chromosome 4p16.3 [laboratory report] OR Family history of Huntington's disease AND orofacial dyskinesia OR choreoathetosis OR rigidity or dystonia in children OR dysphagia OR motor impersistence OR <b>clinical depression:</b> OR atrophy of the caudate nucleus and putamen [operative/pathology report or MRI report] AND enlargement of lateral ventricles [operative/pathology report or MRI report] AND cerebellar atrophy in children [operative/pathology report or MRI report] OR with degeneration of medium sized spiny neurons of the caudate nucleus [operative/pathology report]
2.01	with seizures	Stage 1.01 AND seizures [EEG report]
2.02	with dementia	Stage 1.01-2.01 AND <b>dementia:</b>
2.03	with invalidism or cachexia	Stage 1.01-2.02 AND activities of daily living require 100% supervision OR <b>cachexia:</b> ideal body weight < 85% of body weight
2.04	with decubitus ulcer	Stage 1.01-2.03 AND decubitus ulcer
2.05	aspiration pneumonia	Stage 1.01-2.04 AND aspiration pneumonia
3.01	with sepsis	Stage 1.01-2.05 AND <b>sepsis:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with coma	Stage 1.01-3.02 AND <b>coma:</b>

**Disease: NEU10 Huntington's Chorea**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

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# Clinical Criteria for Disease Staging

NEU11

**Disease: NEU11 Injury: Craniocerebral**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Head injury with or without intracranial involvement	Injury to the head with or without intracranial involvement
1.02	with or without intracranial involvement and cellulitis	Stage 1.01 AND <b>cellulitis:</b>
1.03	with concussion	Head injury AND transient loss of consciousness
2.01	Linear or basilar skull fracture	linear skull fracture [skull x-ray report or CT scan report] OR basilar skull fracture [skull x-ray report or CT scan report]
2.02	Crushing injury to the head and neck	Crushing injury to the head and neck
2.03	Depressed or compound skull fracture	Depressed or compound skull fracture [skull x-ray report or CT scan report]
2.04	with cranial nerve involvement	Stage 1.01 -2.03 AND (the following new findings occur and persist beyond 3 days after therapy): <b>cranial nerve palsy:</b>
2.05	with carotid or vertebral artery dissection	Stage 1.01 -2.04 AND carotid artery dissection [MRI angiography report or angiography report] OR vertebral artery dissection [MRI angiography report or angiography report]
2.06	with intracranial hemorrhage or cerebral laceration	Stage 1.01-2.05 AND epidural hemorrhage, blood at or above the dura mater [CT or MRI report] OR subdural hemorrhage, blood at or below the dura mater [CT or MRI report] OR cerebral laceration [CT or MRI report]
2.07	with hyponatremia or syndrome of inappropriate antidiuretic hormone secretion	Stage 1.01 -2.06 AND <b>hyponatremia:</b> OR <b>SIADH:</b>
3.01	with cerebral infarction	Stage 1.01-2.07 AND <b>cerebral infarction:</b> [CT or MRI reports]
3.02	with paraparesis or quadriparesis	Stage 1.01-3.01 AND paraparesis OR quadriparesis
3.03	with Glasgow coma scale rating ≥ 11	Stage 1.01-3.02 AND Glasgow coma scale rating ≥ 11*
3.04	with Glasgow coma scale rating ≥ 4 and < 11*	Stage 1.01-3.03 AND Glasgow coma scale rating ≥ 4 and < 11*
3.05	with pulmonary embolism	Stage 1.01-3.04 AND <b>pulmonary embolism:</b>
3.06	with bacterial meningitis	Stage 1.01-3.05 AND <b>meningitis:</b>

**Disease: NEU11 Injury: Craniocerebral**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
3.07	with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>
3.08	with respiratory failure	Stage 1.01-3.07 AND <b>respiratory failure:</b>
3.09	with Glasgow coma scale rating <4	Stage 1.01-3.08 AND Glasgow coma scale rating < 4*
3.10	with shock	Stage 1.01-3.09 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.10 AND death

## References

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# Clinical Criteria for Disease Staging

NEU12

**Disease: NEU12 Injury: Spine and spinal cord**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Sprain of back	Back pain
1.02	Spinal cord concussion	
1.03	Dislocations(s) or fracture(s) of the vertebrae without injury to the cord	Fracture(s) or dislocation(s) of vertebrae [CT or MRI or spine x-ray report]
2.01	Open fracture or dislocation of vertebrae without injury to the cord	Stage 1.02 AND open fracture
2.02	Trauma to spine and spinal cord with paresis	Stage 1.02-2.01 AND quadriparesis OR paraparesis OR monoparesis OR hemiparesis
2.03	with monoplegia or cauda equina syndrome or conus medullaris syndrome	Stage 2.02 AND monoplegia OR <b>cauda equina syndrome:</b>
2.04	with paraplegia or hemiplegia	Stage 2.02 AND paraplegia OR hemiplegia
2.05	with segmental sensory loss	Stage 2.02 AND sensory loss distributed to a spinal segment [neurological exam report]
2.06	with Brown-Sequard Syndrome	Stage 2.02 AND Brown-Sequard Syndrome [neurological exam report]
2.07	with cellulitis	Stage 2.01-2.06 AND <b>cellulitis:</b>
2.08	with urinary tract infections	Stage 2.03-2.07 AND <b>UTI:</b>
2.09	with osteomyelitis	Stage 2.01-2.08 AND <b>osteomyelitis:</b>
2.10	with deep vein thrombosis	Stage 2.01-2.09 AND <b>DVT:</b>
2.11	with quadriplegia	Stage 2.01-2.10 AND quadriplegia
3.01	with pulmonary embolism or fat embolism	Stage 2.01-2.11 AND <b>pulmonary embolism:</b>
3.02	with renal failure	Stage 2.01-3.01 AND <b>renal failure:</b>



**Disease: NEU12 Injury: Spine and spinal cord**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
3.03	with sepsis	Stage 2.01-3.02 AND <b>sepsis:</b>
3.04	with respiratory failure	Stage 2.01-3.04 AND <b>respiratory failure:</b>
3.05	with shock	Stage 2.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.06 AND death

## References

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# Clinical Criteria for Disease Staging

NEU13

**Disease: NEU13 Meningitis, Encephalitis, and Myelitis: Viral**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Viral meningitis or aseptic meningitis	Viral meningitis [virus isolated from CSF tissue cultures or CSF virus specific antibody titers with convalescent/acute phase serum > 4.0 OR <b>aseptic meningitis:</b>
2.01	Viral meningoencephalitis	Stage 1.01 AND lethargy OR delirium OR seizures OR <b>encephalopathy:</b>
2.02	with acute cerebellar ataxia	Stage 1.01-2.01 AND acute cerebellar ataxia
2.03	with cranial nerve involvement	Stage 1.01-2.02 AND [the following new findings occur and persist beyond 3 days after therapy]: <b>cranial nerve palsy:</b>
2.04	with acute hemiplegia	Stage 1.01-2.03 AND acute hemiplegia
2.05	with viral pneumonia	Stage 1.01-2.04 AND new infiltrate [chest x-ray report] AND infected sputum [microbiology gram stain report] AND no pathologic bacterial organisms in sputum [microbiology report]
2.06	with aspiration pneumonia	Stage 1.01-2.05 AND aspiration pneumonia
2.07	with syndrome of inappropriate diuretic hormone secretion	Stage 1.01-2.06 AND <b>SIADH:</b>
3.01	with myocarditis	Stage 1.01-2.07 AND <b>myocarditis:</b>
3.02	with myelitis	Stage 1.01-3.01 AND asymmetric flaccid paralysis of any limb
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	with coma	Stage 1.01-3.04 AND <b>coma:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>

# Clinical Criteria for Disease Staging

NEU13

**Disease: NEU13 Meningitis, Encephalitis, and Myelitis: Viral**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
4.00	with death	Stage 1.01-3.06 AND death

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# Clinical Criteria for Disease Staging

NEU14

**Disease: NEU14 Meningitis: Bacterial**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
0.00	Observation for suspected mental condition	Added stage 5/8/06 cb
3.01	of hematogenous origin or primary meningitis	
3.02	with syndrome of inappropriate antidiuretic hormone secretion	Stage 3.01 AND SIADH, syndrome of inappropriate anti-diuretic hormone secretion OR water load test positive for SIADH OR <b>hyponatremia:</b> AND urine osmolality > 300 mmol/kg [urine chemistry report] AND lethargy
3.03	with obstructive hydrocephalus or subdural effusion	Stage 3.02 AND papilledema OR hydrocephalus [CT scan of head or MRI of the head report] OR subdural effusion [CT scan of head or MRI of the head report]
3.04	with lateralizing neurological deficits	Stage 3.01-3.03 AND cerebral infarction [CT scan of the head or MRI of the head report] OR (the following new physical findings occur and persist beyond 3 days): OR focal seizure OR <b>cranial nerve palsy:</b>
3.05	with disseminated intravascular coagulation	Stage 3.01-3.03 AND DIC, or disseminated intravascular coagulation OR hypofibrinogenemia [hematology report] AND <b>thrombocytopenia:</b> AND elevated fibrin degradation split products [hematology report] AND elevated D-Dimer [hematology report] AND INR > 1.0 [hematology report]
3.06	with adrenal insufficiency or Waterhouse-Friderichsen syndrome	Stage 3.01-3.05 AND <b>hypoadrenalism:</b>
3.07	with sepsis	Stage 3.01-3.06 AND <b>sepsis:</b>
3.08	with hypoventilation syndrome	Stage 3.01-3.07 AND <b>hypoxemia:</b> OR <b>hypercarbia:</b>
3.09	with cerebellar or temporal lobe uncal herniation or respiratory failure	Stage 3.01-3.08 AND cerebellar herniation [CT of the head or MRI of head report] OR temporal lobe herniation [CT of the head or MRI of head report] OR <b>respiratory failure:</b>

**Disease: NEU14 Meningitis: Bacterial**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
3.10	with coma	Stage 3.01-3.09 AND <b>coma:</b>
3.11	with shock	Stage 3.01-3.10 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.11 AND death

**References**

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**Disease: NEU15 Mental Retardation**

**Etiology: Congenital; Genetic (or hereditary); Toxicologic; Trauma**

Stage	Description	Diagnostic findings
1.01	Borderline mental retardation	Wechsler I.Q. $\geq$ 70 AND $\leq$ 85
1.02	Mild	Wechsler I.Q. $\geq$ 55 AND $\leq$ 69
2.01	Moderate	Wechsler I.Q. $\geq$ 40 AND $\leq$ 54
2.02	Severe	Wechsler I.Q. $\geq$ 25 AND $\leq$ 39
2.03	Profound	Wechsler I.Q. $<$ 25
3.01	with vegetative existence	Stage 1.01-2.03 AND complete inability to provide self-care

**References**

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# Clinical Criteria for Disease Staging

NEU16

**Disease: NEU16 Multiple Sclerosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Relapsing-remitting multiple sclerosis	Relapsing-remitting multiple sclerosis [MRI report] OR oligoclonal bands in CSF OR myelin basic protein elevated in CSF OR sheathing of the retinal veins AND involvement of two or more areas of the CNS by history and examination: OR optic neuritis [ophthalmologist's report] OR abnormal visual evoked response [neurology report] OR diplopia [ophthalmologist's report] OR extremity weakness OR parasthesias OR hypesthesias OR incontinence OR ataxia AND two separate episodes ≥ 24 hours apart, one month from initial onset
2.01	with optic atrophy	Stage 1.01 AND pale white disc [ophthalmoscopy report]
2.02	with vision limited to light perception	Stage 1.01-2.01 AND <b>blindness:</b> AND intact light perception
2.03	with memory loss or impaired attention or problem-solving difficulties or slowed information processing	Stage 1.01-2.02 AND memory loss OR impaired attention OR problem-solving difficulties OR slowed information processing
2.04	Secondary progressive multiple sclerosis	Secondary progressive multiple sclerosis
2.05	Primary progressive multiple sclerosis	Primary progressive multiple sclerosis
2.06	Progressive-relapsing multiple sclerosis	Progressive-relapsing multiple sclerosis
2.07	with decubitus ulcer	Stage 1.01-2.06 AND decubitus ulcer
2.08	with pneumonia	Stage 1.01-2.07 AND <b>pneumonia:</b>

**Disease: NEU16 Multiple Sclerosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
3.01	with permanent neurological deficits	Stage 1.01-2.08 AND    monoparesis OR    monoplegia OR    paraplegia OR    paraparesis OR    hemiparesis OR    hemiplegia OR    incontinence OR <b>cranial nerve palsy:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND    death

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# Clinical Criteria for Disease Staging

NEU17

**Disease: NEU17 Myasthenia Gravis**

**Etiology: Immune**

Stage	Description	Diagnostic findings
1.01	Localized myasthenia gravis	Acetylcholine receptor antibodies [chemistry report] OR positive response to edrophonium test OR positive response to anti-cholinesterase agent OR decline in height of muscle action potential [EMG report] AND ptosis OR diplopia OR easy fatigability of ocular muscles OR dysarthria OR dysphonia
2.01	with dysphagia or thymoma	Stage 1.01 AND dysphagia OR thymoma OR thymic hyperplasia
2.02	with generalized weakness	Stage 1.01-2.01 AND weakness in any extremity
3.01	with myasthenic crisis or respiratory failure	Stage 1.01-2.02 AND <b>respiratory failure:</b>
3.02	with shock	Stage 3.01 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.02 AND death

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# Clinical Criteria for Disease Staging

NEU18

**Disease: NEU18 Neoplasm: Central Nervous System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of Central Nervous System Neoplasia	History of central nervous system neoplasia
1.01	Central Nervous System Neoplasia	Meningiomas [operative/pathology report] OR gliomas [operative/pathology report] OR schwannomas [operative/pathology report] OR glioblastoma multiforme [operative/pathology report] OR astrocytoma [operative/pathology report] OR oligodendroglioma [operative/pathology report] OR ependymoma [operative/pathology report] OR medulloblastoma [operative/pathology report] OR craniopharyngioma [operative/pathology report] OR pituitary adenoma [operative/pathology report]  <u>Presumptive Diagnostic Findings:</u> Central nervous system neoplasia [ CT scan or MRI report]
1.02	with ataxia	Stage 1.01 AND ataxia
2.01	with cranial nerve deficits	Stage 1.01 AND (the following new findings occur and persist beyond 3 days after therapy): <b>cranial nerve palsy:</b>
2.02	with hydrocephalus or papilledema	Stage 1.01-2.01 AND hydrocephalus [CT Scan or MRI report] OR papilledema
3.01	with grand mal (or simple or complex partial) seizures	Stage 1.01-3.01 AND seizure disorder [EEG report or physical examination] OR tonic-clonic convulsions OR simple seizures [EEG report or physical examination] OR complex partial seizures [EEG report or physical examination]
3.02	with hemiparesis or hemiplegia or paraplegia or paraparesis	Stage 1.01-2.02 AND hemiparesis OR hemiplegia OR paraplegia OR paraparesis
3.03	with decerebrate rigidity	Stage 1.01-3.02 AND decerebrate rigidity OR flaccid generalized paralysis

# Clinical Criteria for Disease Staging

NEU18

**Disease: NEU18 Neoplasm: Central Nervous System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.04	with cerebral herniation or respiratory failure	Stage 1.01-3.03 AND cerebral herniation [CT scan or MRI report] OR <b>respiratory failure:</b>
3.05	with coma	Stage 1.01-3.04 AND <b>coma:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.06 AND death

## References

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# Clinical Criteria for Disease Staging

NEU19

**Disease: NEU19 Neurofibromatosis Type I [Von Recklinghausen's Disease]**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Nuerofibromatosis Type I	Neurofibromatosis Type I [genetic analysis report] OR cutaneous neurofibromatosis [operative/pathology report] OR subcutaneous neurofibromatosis [operative/pathology report] OR Autosomal dominant, chromosome 17, gene codes for neurofibromin [genetic analysis report] OR <b>Two</b> or more of the following must be present: cafe-au-lait spot $\geq$ 1.5 cm in diameter for age > 13 years old OR cafe-au-lait spot $\geq$ 0.5 cm in diameter for < age 13 years old AND total of $\geq$ 6 cafe-au-lait spots OR $\geq$ two neurofibromas of any type OR $\geq$ 1 plexiform neurofibroma OR freckling in the axillary and inguinal regions OR $\geq$ 1 optic pathways glioma OR $\geq$ 2 Lisch nodules (iris amartomas) OR osseous lesion, such as sphenoid wing dysplasia or thinning of the cortex of long bones OR a first-degree relative with NF1 by the above criteria
2.01	with paresthesias or hypesthesia	Stage 1.01 AND paresthesias OR hypesthesia
2.02	with macroencephaly or learning disability	Stage 1.01-2.01 AND learning disability OR head diameter $\geq$ 95th percentile
2.03	with pheochromocytoma or medullary thyroid carcinoma or dysplastic scoliosis or rhabdomyosarcoma or sarcomatous degeneration	Stage 1.01-2.02 AND sarcomatous degeneration [operative/pathology report] OR neurofibrosarcoma [operative/pathology report] OR malignant schwannomma [operative/pathology report] OR pheochromocytoma [operative/pathology report] OR medullary thyroid carcinoma [operative/pathology report] OR dysplastic scoliosis [operative/pathology report] OR rhabdomyosarcoma [operative/pathology report]
3.01	with hemiparesis or paraparesis	Stage 1.01-2.03 AND hemiparesis OR paraparesis

# Clinical Criteria for Disease Staging

NEU19

**Disease: NEU19 Neurofibromatosis Type I [Von Recklinghausen's Disease]**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
3.02	with hemiplegia or paraplegia	Stage 1.01-3.01 AND hemiplegia OR paraplegia
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
4.00	with death	Stage 1.01-3.03 AND death

## References

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# Clinical Criteria for Disease Staging

NEU20

**Disease: NEU20 Parkinson's Disease**

**Etiology: Degenerative; Idiopathic; Infection; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Parkinson's disease	'Pill rolling' resting tremors involving a single upper extremity
1.02	with rigidity or tremor involving both lower or upper extremities	Resting tremor involving both arms OR Resting tremor involving both legs OR rigidity involving both arms OR rigidity involving both legs OR hemilateral rigidity
1.03	with bradykinesia	Stage 1.01-1.02 AND slowness of movement OR shuffling gait OR difficulty initiating movement OR akinesia OR masklike facies
2.01	with gait disturbances	Stage 1.01-1.03 AND festination, tendency to quicken steps or run when initiating walking OR retropulsion, tendency to fall backwards with shift in patient's center of gravity OR propulsion, tendency to fall forwards with shift in patient's center of gravity OR loss of postural reflexes
2.02	with impairment of dexterity	Stage 1.01-2.01 AND loss of capacity to use hands
2.03	with midstage dementia	Stage 1.01-2.02 AND <b>dementia:</b> AND become lost on > 1 occasion while driving a car OR become lost on > 1 occasion as a pedestrian in familiar city AND unresolved impairment of remote memory AND unresolved aphasia AND disorientation
2.04	with decubitus ulcer	Stage 1.01-2.03 AND decubitus ulcer
2.05	with pneumonia	Stage 1.01-2.04 AND <b>pneumonia:</b>
3.01	with sepsis	Stage 1.01-2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**Disease: NEU20 Parkinson's Disease**

**Etiology: Degenerative; Idiopathic; Infection; Toxicologic**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

NEU21

**Disease: NEU21 Tuberos Sclerosis**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Asymptomatic tuberous sclerosis	Tuberous sclerosis gene on chromosome 9q and 16p [genetics report] OR cerebral cortical focal dysplastic island [MRI report] OR subependymal nodule [CT scan report] OR giant cell astrocytoma [CT scan report] OR retinal astrocytic hamartoma [ultrasonography report] OR facial angiofibroma ("adenoma sebaceum") OR unguial fibroma OR pulmonary lymphangiomyomatosis OR a "shagreen patch" OR hypopigmented ash-leaf shaped macules
2.01	with seizures	Stage 1.01 AND seizures
2.02	with mental retardation	Stage 1.01-2.01 AND <b>mental retardation:</b>
2.03	with renal cysts	Stage 1.01-2.02 AND renal cysts [ultrasonography report]
2.04	with renal angiomyolipomas	Stage 1.01-2.03 AND renal angiomyolipomas [operative/pathology report]
2.05	with rhabdomyomas of the heart	Stage 1.01-2.04 AND rhabdomyomas of the heart [ultrasonography report or cardiac catheterization report or operative/pathology report]
2.06	with rhabdomyomas of the heart and ventricular premature contractions or atrial premature contractions or atrial premature contractions or supraventricular tachycardias or ectopic atrial rhythm or atrial fibrillation or atrial flutter	Stage 2.05 AND ventricular premature contractions [EKG report] OR atrial premature contractions [EKG report] OR supraventricular tachycardia [EKG report] OR ectopic atrial rhythm [EKG report] OR atrial fibrillation [EKG report] OR atrial flutter [EKG report]
2.07	with Wolff-Parkinson-White syndrome	Stage 1.01-2.06 AND Wolff-Parkinson-White syndrome[EKG report]
3.01	with renal failure	Stage 1.01-2.07 AND <b>renal failure:</b>
3.02	with hydrocephalus	Stage 1.01-3.01 AND hydrocephalus [CT scan or MRI report]



**Disease: NEU21 Tuberos Sclerosis**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
3.03	with renal carcinoma or sarcoma	Stage 1.01-3.02 AND renal carcinoma [operative/pathology report] OR renal sarcoma [operative/pathology report]
3.04	with rhabdomyomas of the heart and congestive heart failure	Stage 2.05 -S2.07 AND <b>congestive heart failure:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

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# Clinical Criteria for Disease Staging

**Disease: NEU80 Other CNS Inflammation, Infection, or Disorder**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Tremor or dystonias	
2.01	Extrapyramidal conditions, cerebral degeneration, narcolepsy or cataplexy	
2.02	Intraspinal abscess and late effects of CNS infections	
2.03	Paraplegia	
3.01	Intracranial abscess, thrombus of intracranial sinus, communicating hydrocephalus or quadriplegia	

**References**

**Disease: NEU81 Other Cranial Nerve Disorders****Etiology:**

Stage	Description	Diagnostic findings
1.01	Other cranial nerve disorders	

**References**

**Disease: NEU82 Other Neurological Conditions**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Neuropathies; abnormal movement; gait, coordination, sensory disturbances, meningismus, transient paralysis, clubbing	
1.02	Neuropathy due to drugs, tetany	

**References**

**Disease: NEU83 Other Peripheral Nerve Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Other mononeuritis, polyneuropathy, or myoneural disorders or late effect of nerve injury	
1.02	Familial periodic paralysis	

**References**

**Disease: NEU84 Other Spinal Lesions**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Other spinal lesions	

**References**

# Clinical Criteria for Disease Staging

NUT01

**Disease: NUT01 Beriberi, Thiamine Deficiency**

**Etiology: Nutritional**

Stage	Description	Diagnostic findings
1.01	Thiamine deficiency	Urinary thiamine excretion $\leq$ 50 ug/24 hours [urine chemistry report] AND serum pyruvate $\geq$ 1 mg/dl [chemistry report] OR thiamine deficiency [RBC transketolase assay report] AND bilateral lower extremity paresthesias OR loss of bilateral patellar reflexes OR loss of vibratory sense on bilateral lower extremities OR loss of bilateral lower extremity position sense
1.02	with toxic amblyopia	Stage 1.01 AND central scotomas AND visual acuity $\leq$ 20/50 [Snellen test report]
1.03	with nystagmus or ophthalmoplegia	Stage 1.01-1.02 AND gaze evoked nystagmus OR ophthalmoplegia
2.01	with peripheral edema	Stage 1.01-1.03 AND bilateral lower extremity edema
2.02	with pleural effusion	Stage 1.01-2.01 AND pleural effusion [thoracentesis report or chest x-ray report]
3.01	with Wernicke-Korsakoff syndrome	Stage 1.03 AND confabulation AND <b>disorientation:</b> AND ataxia
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with coma	Stage 1.01-3.02 AND <b>coma:</b>
4.00	with death	Stage 2.01-3.03 AND death

## References

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# Clinical Criteria for Disease Staging

NUT02

**Disease: NUT02 Obesity**

**Etiology: Genetic (or hereditary); Metabolic; Nutritional**

Stage	Description	Diagnostic findings
1.01	Simple obesity, overweight and other hyperalimantation	Body weight $\geq$ 1.2 times ideal body weight AND body weight < 1.4 times ideal body weight OR Body mass index $\geq$ 7.5 kg/m <sup>2</sup> AND Body mass index < 30 kg/m <sup>2</sup>
1.02	Moderate obesity	Body weight $\geq$ 1.4 times ideal body weight AND body weight < 2.0 times ideal body weight OR Body Mass Index $\geq$ 30 kg/m <sup>2</sup> AND Body Mass Index < 40 kg/m <sup>2</sup>
2.01	Severe obesity	Body weight $\geq$ 2.0 times ideal body weight OR Body mass index > 40 kg/m <sup>2</sup>
2.02	with dyslipidemia	Stage 1.01-2.01 AND <b>hypercholesterolemia:</b> OR <b>hypertriglyceridemia:</b> OR <b>low high density lipoprotein, HDL, cholesterol:</b> OR <b>high low density lipoprotein, LDL, cholesterol:</b>
2.03	with the Pickwickian syndrome	Stage 1.01-2.02 AND Pickwickian syndrome OR obesity hypoventilation syndrome OR sleep apnea
3.01	with respiratory failure	Stage 2.03 AND <b>respiratory failure:</b>
3.02	with shock	Stage 2.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.02 AND death

## References

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# Clinical Criteria for Disease Staging

NUT03

**Disease: NUT03 Pellagra**

**Etiology: Nutritional**

Stage	Description	Diagnostic findings
1.01	Pellagra	History of dietary intake of American corn or maize as staple food OR history of alcoholism or gastrointestinal disease or psychiatric disturbance OR Hartnup disease OR 'neutral' aminoaciduria (urinary chemistry report) OR carcinoid syndrome OR 5-HIAA $\geq$ 25 mg/dl (chemistry report) OR urinary N-methylnicotinamide < 1.5 mg/d (urinary chemistry report) AND symmetrically reddened and roughened skin when exposed to light
2.01	with dermatitis or mucositis	Stage 1.01 AND acute sunburn type skin when exposed to light (butterfly eruption on face and Casal's necklace) OR proctitis OR vaginitis OR diarrhea OR abdominal distention OR peripheral neuritis and myelitis OR atrophy of papillae of the tongue OR dementia
3.01	with renal failure	Stage 1.01-2.01 AND <b>renal failure:</b>
3.02	with coma	Stage 1.01-3.01 AND <b>coma:</b>
4.00	with death	Stage 3.01-3.02 AND death

## References

Baron RB. Nutrition. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:1150-1180.

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**Disease: NUT80 Other Electrolyte Disorders**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Hyposmolality, alkalosis, hypovolemia, hyper- or hypopotassemia, or fluid overload	
3.01	Hyperosmolality or acidosis	

**References**

**Disease: NUT81 Other Nutritional and Metabolic Disorders**

**Etiology: Metabolic; Nutritional**

Stage	Description	Diagnostic findings
1.01	Other malnutrition and dietary deficiencies or disorders of lipid, amino-acid or other metabolism	

References

# Clinical Criteria for Disease Staging

OTH80

**Disease: OTH80 Abnormal Lab, X-ray and Clinical Findings**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Abnormal lab, X-ray or clinical findings	

References

# Clinical Criteria for Disease Staging

OTH81

## Disease: OTH81 Complications of Surgical and Medical Care

### Etiology:

Stage	Description	Diagnostic findings
1.01	Malfunction of or reaction to implanted genitourinary, gastric, vascular, ocular, skin or orthopedic device	
2.01	Malfunction of or reaction to implanted cardiac or neurologic device, dialysis catheter, iatrogenic cardiac events, hemorrhage, infection, embolism	
2.02	Complications of transplanted organs	
3.01	Postoperative shock	

### References

**Disease: OTH82 Encounter for Chemotherapy**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Encounter for chemotherapy or immunotherapy	
1.02	with nausea, vomiting, volume depletion or diarrhea	

**References**

**Disease: OTH83 Encounter for Dialysis****Etiology:**

Stage	Description	Diagnostic findings
1.01	Dialysis related encounters	

**References**

# Clinical Criteria for Disease Staging

OTH84

## Disease: OTH84 Encounter for Other Administrative Reasons

### Etiology:

Stage	Description	Diagnostic findings
0.00	Observation for suspected exposure to unspecified biological agent	Added stage 5/8/06 cb
1.01	Administrative encounters	

### References



# Clinical Criteria for Disease Staging

OTH85

**Disease: OTH85 Encounter for Preventive Health Services**

**Etiology:**

Stage	Description	Diagnostic findings
0.00		
1.01	Encounter for vaccination, examinations, or screening for disease conditions	

**References**

# Clinical Criteria for Disease Staging

OTH86

**Disease: OTH86 Encounter for Radiation Therapy**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Encounter for radiation therapy	
1.02	with nausea, vomiting, volume depletion or diarrhea	

**References**

# Clinical Criteria for Disease Staging

OTH87

## Disease: OTH87 Encounter Related to Other Treatment

### Etiology:

Stage	Description	Diagnostic findings
0.00	Preoperative examinations or desensitization to allergens	Added stage 5/8/06 cb
1.01	Elective surgery, physical therapy, rehabilitation, or other aftercare encounters, procreative treatment and management, artificial opening status, donor	
1.02	Organ transplant status or joint replacement status	

### References

# Clinical Criteria for Disease Staging

OTH88

## Disease: OTH88 Factors Influencing Health Status

### Etiology:

Stage	Description	Diagnostic findings
0.00	Supervision of healthy child or constitutional states in development	Added stage 5/8/06 cb
1.01	Tobacco use, infectious disease carrier, personal or family history of disease, allergy, abuse, exposure, dialysis status, other post-operative status, respirator dependent	

### References

**Disease: OTH89 Neoplasm, Benign: Other Sites**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of other and unspecified sites	

References

# Clinical Criteria for Disease Staging

OTH90

**Disease: OTH90 Neoplasm, Malignant: Nonspecific Sites**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of malignancy, nonspecific site or observation for suspected malignancy	
1.01	Primary malignant neoplasm of other and nonspecific sites	
2.01	with lymph node involvement	
2.02	with anemia or neuropathy of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

## References

# Clinical Criteria for Disease Staging

OTH91

**Disease: OTH91 Neoplasm, Malignant: Unspecified Primary Site**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Primary malignant neoplasm of body area with unspecified tissue involved	
2.01	Secondary malignant neoplasm of lymph nodes with unstated primary	
2.02	with anemia of neoplastic disease	
3.01	Secondary malignant neoplasm of other sites with unstated primary	
3.02	with shock	

**References**

# Clinical Criteria for Disease Staging

OTH92

## Disease: OTH92 General Signs, Symptoms, and Ill-Defined Conditions

### Etiology:

Stage	Description	Diagnostic findings
0.00	Obersvation for unspecified suspected conditions	Added stage 5/8/06 cb
1.01	General signs, symptoms and ill-defined conditions	
2.01	Jaundice or edema	
2.02	Alteration of consciousness, persistent vegetative state, hallucinations, convulsions	
3.01	Coma, asphyxia, cyanosis or respiratory arrest	
4.00	Death	

### References



**Disease: PED01 Anomaly: Adrenal Hyperplasia**

**Etiology: Congenital; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	21-Hydroxylase deficiency	Urinary 17-hydroxyprogesterone $\geq$ normal value/24 hrs. [chemistry report] OR positive urine pregnanediol [chemistry report] AND clitoral hypertrophy in females OR macrogenitosomia in males
1.02	11-Beta hydroxylase deficiency	Serum elevations of 11-deoxycorticosterone [chemistry report] AND serum elevations of 11-deoxycortisol [chemistry report] OR urine elevations of tetrahydro 11-deoxycorticisol [chemistry report]
1.03	3-Beta hydroxysteroid dehydrogenase deficiency	Serum elevations of dehydroepiandrosterone [chemistry report] OR serum elevation of DHEA-sulfate [chemistry report] AND normal 17-hydroxyprogesterone level [chemistry report] OR low 17-hydroxyprogesterone level [chemistry report]
2.01	Salt losing congenital adrenal hyperplasia	Stage 1.01-1.03 AND <b>hyponatremia:</b>
3.01	with shock	Stage 1.01-2.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.01 AND death

**References**

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# Clinical Criteria for Disease Staging

PED02

**Disease: PED02 Anomaly: Atrial Septal Defect**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Atrial septal defect secundum	Atrial septal defect secundum [cardiac catheterization report or cardiac surgery report or echocardiogram report]
1.02	Atrial septal defect primum	Atrial septal defect primum [cardiac catheterization report or cardiac surgery report or echocardiogram report]
2.01	with atrial fibrillation or atrial flutter or reentrant atrial tachycardia	Stage 1.01-1.02 AND atrial fibrillation [EKG report] OR atrial flutter [EKG report] OR re-entrant atrial tachycardia [EKG report]
2.02	with mitral regurgitation	Stage 1.01-2.01 AND mitral regurgitation [echocardiogram report or cardiac catheterization report or cardiac surgery report]
3.01	with pulmonary hypertension	Stage 1.01-2.02 AND <b>pulmonary hypertension:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

**Disease: PED02 Anomaly: Atrial Septal Defect**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
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**Disease: PED03 Anomaly: Atrioventricular Defects**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
2.01	Endocardial cushion defect	Contiguous atrial and ventricular defects with a single atrioventricular valve [cardiac catheterization report or cardiac surgery report or echocardiogram report]
2.02	Endocardial cushion defect with pneumonia	Stage 2.01 AND <b>pneumonia:</b>
3.01	Endocardial cushion defect with pulmonary hypertension	Stage 2.01-2.02 AND <b>pulmonary hypertension:</b>
3.02	Endocardial cushion defect with infectious endocarditis	Stage 2.02-3.01 AND <b>infectious endocarditis:</b>
3.03	Endocardial cushion defect with congestive heart failure	Stage 2.02-3.02 AND <b>congestive heart failure:</b>
3.04	Endocardial cushion defect with sepsis	Stage 2.02-3.03 AND <b>sepsis:</b>
3.05	Endocardial cushion defect with respiratory failure	Stage 2.02-3.04 AND <b>respiratory failure:</b>
3.06	Endocardial cushion defect with shock	Stage 2.02-3.05 AND <b>shock:</b>
4.00	Endocardial cushion defect with death	Stage 2.02-3.06 AND <b>death</b>

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# Clinical Criteria for Disease Staging

**Disease: PED04 Anomaly: Coarctation of the Aorta**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Asymptomatic post-ductal coarctation of the aorta	Post-ductal coarctation of the aorta [cardiac catheterization report or MRI report or echocardiogram report] OR absent femoral pulses AND upper extremity <b>hypertension:</b> AND rib notching [x-ray report]
1.02	Asymptomatic pre-ductal coarctation of the aorta	Pre-ductal coarctation of the aorta [cardiac catheterization report or MRI report or echocardiogram report] OR absent femoral pulses AND upper extremity <b>hypertension:</b> AND rib notching [x-ray report]
1.03	with intermittent claudication	Stage 1.01 AND intermittent claudication
2.01	with aortic insufficiency	Stage 1.01-1.02 AND aortic valve insufficiency [cardiac catheterization report or echocardiogram report]
3.01	with endocarditis	Stage 1.01-2.01 AND <b>endocarditis:</b>
3.02	with acute myocardial infarction	Stage 1.01-3.01 AND <b>acute myocardial infarction:</b>
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with new cerebrovascular accident	Stage 1.01-3.03 AND new cerebrovascular accident [MRI report or CT scan report]
3.05	with sepsis	Stage 1.01-3.04 AND <b>sepsis:</b>
3.06	with aortic dissection	Stage 1.01-3.05 AND aortic dissection [CT scan or MRI report]
3.07	with respiratory failure	Stage 3.01-3.06 AND <b>respiratory failure:</b>
3.08	with shock	Stage 1.01-3.07 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.08 AND death

**Disease: PED04 Anomaly: Coarctation of the Aorta**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
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**References**

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**Disease: PED05 Anomaly: Congenital Megacolon**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Congenital megacolon	Congenital megacolon [rectal biopsy report or barium enema report] OR absence of colonic ganglion cells [operative/pathology report]
2.01	with toxic enterocolitis or dehydration or electrolyte imbalance	Stage 1.01 AND watery stools with movements $\geq$ 5 times a day OR <b>dehydration:</b> OR <b>hypernatremia:</b> OR <b>hyperkalemia:</b>
2.02	with peritonitis	Stage 1.01-2.01 AND peritonitis [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

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# Clinical Criteria for Disease Staging

PED06

**Disease: PED06 Anomaly: Defects of Kidney**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Unilateral renal agenesis or unilateral renal hypoplasia	Renal agenesis [intravenous urography report or CT scan report or sonogram report] OR renal hypoplasia [intravenous urography report or CT scan or sonogram report]
2.01	Horseshoe kidney or supernumerary kidney or fusion of the kidney	Horseshoe kidney [intravenous urography report or CT scan or sonogram report] OR supernumerary kidney [intravenous urography report or CT scan or sonogram report] OR fusion of the kidney [intravenous urography report CT scan or sonogram report]
2.02	Renal dysplasia or juvenile polycystic kidney, or medullary cystic or sponge kidney or juvenile nephronophthisis	Renal dysplasia [intravenous urography report or CT scan or sonogram report or operative/pathology report] OR polycystic kidney [intravenous urography report or CT scan or sonogram report or operative/pathology report] OR medullary cystic or sponge kidney [intravenous urography report or CT scan or sonogram report or operative/pathology report] OR juvenile nephronophthisis [intravenous urography report or CT scan or sonogram report or operative/pathology report]
2.03	Segmental renal hypoplasia or Ask-Upmark syndrome	Segmental renal hypoplasia [operative/pathology report]
2.04	Adult polycystic kidney	Adult polycystic kidney [intravenous urography report or CT scan or sonogram report or operative/pathology report]
2.05	Hydronephrosis	Hydronephrosis [intravenous urography report or CT scan or sonogram report]
2.06	Hypoplastic kidneys	Hypoplastic kidneys [intravenous urography report or CT scan or sonogram report]
2.07	with pyelonephritis	Stage 1.01-2.06 AND <b>pyelonephritis:</b>
3.01	with renal failure	Stage 1.01-2.07 AND <b>renal failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 3.02 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.03 AND death



**Disease: PED06 Anomaly: Defects of Kidney**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
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**Disease: PED07 Anomaly: Defects of Lower Genitourinary Tract**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Congenital hydrocele	Congenital hydrocele
1.02	Hypospadias	Hypospadias
1.03	Epispadias	Epispadias
1.04	Posterior urethral valves	Posterior urethral valves [voiding cystourethrogram report]
1.05	with urinary tract infection	Stage 1.01-1.04 AND <b>UTI:</b>
2.01	Hydronephrosis	Hydronephrosis [intravenous urography report or CT scan or sonogram report]
2.02	Ectopic bladder	Ectopic bladder [intravenous urography report or CT scan or sonogram report]
2.03	with pyelonephritis	Stage 1.01-2.02 AND <b>pyelonephritis:</b>
3.01	with renal failure	Stage 1.01-2.03 AND <b>renal failure:</b>
3.02	with sepsis	Stage 1.02-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 3.01 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.02 AND <b>death</b>

**References**

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**Disease: PED08 Anomaly: Integument (Genodermatoses)**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Congenital dermatoses, Ichthyosis, Keratosis palmaris et plantaris, Pachyonychia congenita, Dyskeratosis congenita, Porokeratosis, Xeroderma pigmentosum, Ectodermal dysplasia, Focal dermal hypoplasia syndrome, Aplasia cutis congenita, Poikiloderma congenitale, Bloom's syndrome, Ataxia-telangiectasia, Epidermolysis bullosa, Familial benign pemphigus, Keratosis follicularis, Acrokeratosis verruciformis of hopf, Psuedoxanthoma elasticum, Connective tissue nevus, Ehlers-danlos syndrome, Cutis laxa, Urticaria pigmentosa, Incontinentia pigmenti, or Hypomelanosis of ito	Congenital dermatoses [operative/pathology report] OR Ichthyosis [operative/pathology report] OR Keratosis palmaris et plantaris [operative/pathology report] OR Pachyonychia congenita [operative/pathology report] OR Dyskeratosis congenita [operative/pathology report] OR Porokeratosis [operative/pathology report] OR Xeroderma pigmentosum [operative/pathology report] OR Ectodermal dysplasia [operative/pathology report] OR Focal dermal hypoplasia syndrome [operative/pathology report] OR Aplasia cutis congenita [operative/pathology report] OR Poikiloderma congenitale [operative/pathology report] OR Bloom's syndrome [operative/pathology report] OR Ataxia-telangiectasia [operative/pathology report] OR Epidermolysis bullosa [operative/pathology report] OR Familial benign pemphigus [operative/pathology report] OR Keratosis follicularis [operative/pathology report] OR Acrokeratosis verruciformis of hopf [operative/pathology report] OR Pseudoxanthoma elasticum [operative/pathology report] OR Connective tissue nevus [operative/pathology report] OR Ehlers-danlos syndrome [operative/pathology report] OR Cutis laxa OR Urticaria pigmentosa [operative/pathology report] OR Incontinentia pigmenti [operative/pathology report] OR Hypomelanosis of ito [operative/pathology report]
2.01	Bullous congenital ichthyosiform erythroderma, Harlequin ichthyosis, Epidermolysis bullosa dystrophicans, recessive type	Bullous congenital [operative/pathology report] OR ichthyosiform erythroderma [operative/pathology report] OR Harlequin ichthyosis [operative/pathology report] OR Epidermolysis bullosa dystrophicans, recessive type [operative/pathology report]

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# Clinical Criteria for Disease Staging

PED09

**Disease: PED09 Anomaly: Neural Tube Defects**

**Etiology: Congenital; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Dermal sinus	Dermal sinus, lumbosacral defect with connection to the subarachnoid [operative/pathology report]
1.02	Spina bifida occulta	Spina bifida occulta, failure of fusion of vertebral laminae without protrusion of the spinal cord or meninges [operative/pathology report or lumbosacral x-ray report or CT scan or MRI or myelogram report]
1.03	Spina bifida occulta with tethered umbilical cord	Stage 1.02 AND tethered umbilical cord
1.04	Spinal bifida occulta with diastematomyelia	Stage 1.02-1.03 AND diastematomyelia
2.01	Meningocele	Meningocele, failure of fusion of vertebral laminae with protrusion of the meninges [operative/pathology report or lumbosacral x-ray report or CT scan or MRI or myelogram report]
2.02	Defects of the neural tube with hemiparesis or paraparesis	Stage 1.01-2.01 AND hemiparesis OR paraparesis
2.03	Defects of the neural tube with bladder dysfunction	Stage 1.01-2.02 AND bladder dysfunction [urology report]
2.04	Defects of the neural tube with urinary tract infection	Stage 1.01-2.03 AND <b>UTI:</b>
2.05	Syringomyelia	Syringomyelia [operative/pathology report]
2.06	Defects of the neural tube with paralysis	Stage 1.01-2.05 AND quadriplegia OR hemiplegia OR paraplegia
3.01	Myelomeningocele	Myelomeningocele, failure of fusion of vertebral laminae with protrusion of the meninges and spinal cord [operative/pathology report or lumbosacral x-ray report or CT scan or MRI report]
3.02	Encephalocele	Encephalocele, cyst or cavity in the cerebral hemispheres with a ventricle connection [CT scan report]
3.03	with meningitis	Stage 1.01-3.02 AND <b>meningitis:</b>
3.04	with hydrocephalus	Stage 1.01-3.03 AND hydrocephalus, ventricular dilatation [CT scan report or operative/pathology report]
3.05	Hydrocephalus with herniation of the medulla and cerebellar tonsils ("Chiari crisis") or respiratory failure	Stage 1.01-3.03 AND hydrocephalus, ventricular dilatation [CT scan report or operative/pathology report]
3.06	Defects of the neural tube with renal failure	Stage 1.01-3.05 AND <b>renal failure:</b>
3.07	Defects of the neural tube with sepsis	Stage 1.01-3.06 AND <b>sepsis:</b>

**Disease: PED09 Anomaly: Neural Tube Defects**

**Etiology: Congenital; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
3.08	Anencephaly	Anencephaly, absence of the cerebral hemispheres [CT scan report]
3.09	Defects of the neural tube with shock	Stage 2.01-3.08 AND <b>shock:</b>
4.00	Defects of the neural tube with death	Stage 2.01-3.09 AND death

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# Clinical Criteria for Disease Staging

**Disease: PED10 Anomaly: Other Congenital Heart Disease**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Tricuspid atresia or truncus arteriosus or single ventricle or Ebstein's anomaly or hypoplastic left heart	Tricuspid atresia [cardiac catheterization report or cardiac surgery report or echocardiogram report] OR truncus arteriosus [cardiac catheterization report or cardiac surgery report or echocardiogram report] OR single ventricle [cardiac catheterization report or cardiac surgery report or echocardiogram report] OR Ebstein's anomaly OR hypoplastic left ventricle [cardiac catheterization report or cardiac surgery report or echocardiogram report]
2.01	with hypoxemia	Stage 1.01 AND <b>hypoxemia:</b>
3.01	with congestive heart failure	Stage 1.01-2.01 AND <b>congestive heart failure:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

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# Clinical Criteria for Disease Staging

**Disease: PED11 Anomaly: Pulmonary Valve Stenosis**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Pulmonary valve stenosis	Pulmonary valve stenosis with an intact ventricular septum [echocardiogram report or cardiac catheterization report or cardiac surgery report] AND ≤ 30 mm Hg gradient across the valve [echocardiogram report or cardiac catheterization report] AND > 10 mm Hg gradient across the valve [echocardiogram report or cardiac catheterization report]
1.02	Moderate pulmonary valve stenosis	Pulmonary valve stenosis with an intact ventricular septum [echocardiogram report or cardiac catheterization report or cardiac surgery report] AND ≤ 60 mm Hg gradient across the valve [echocardiogram report or cardiac catheterization report] AND > 30 mm Hg gradient across the valve [echocardiogram report or cardiac catheterization report]
1.03	Severe pulmonary valve stenosis	Pulmonary valve stenosis with an intact ventricular septum [echocardiogram report or cardiac catheterization report or cardiac surgery report] AND > 60 mm Hg gradient across the valve [echocardiogram report or cardiac catheterization report]
2.01	with hypoxemia	Stage 1.01-1.03 AND <b>hypoxemia:</b>
3.01	with infectious endocarditis	Stage 1.01-2.01 AND <b>infectious endocarditis:</b>
3.02	with congestive heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.05 AND death

**Disease: PED11 Anomaly: Pulmonary Valve Stenosis**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

PED12

**Disease: PED12 Anomaly: Tetralogy of Fallot**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Tetralogy of Fallot	Tetralogy of Fallot [cardiac catheterization report or cardiac surgery report]
2.01	with hypercarbia	Stage 1.01 AND <b>hypercarbia:</b>
2.02	with anemia	Stage 1.01-2.01 AND <b>anemia:</b>
2.03	with polycythemia	Stage 1.01-2.02 AND <b>polycythemia:</b>
2.04	with aortic stenosis	Stage 1.01-2.03 AND aortic stenosis [echocardiogram report or cardiac surgery report]
2.05	with aortic regurgitation	Stage 1.01-2.04 AND aortic regurgitation [echocardiogram report or cardiac surgery report]
3.01	with brain abscess	Stage 1.01-2.05 AND brain abscess [CT report or MRI report or op/.path report]
3.02	with infectious endocarditis	Stage 1.01-3.01 AND <b>infectious endocarditis:</b>
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with cerebrovascular accident	Stage 1.01-3.01 AND cerebrovascular accident [CT report or MRI report or op/path report]
3.05	with sepsis	Stage 1.01-3.04 AND <b>sepsis:</b>
3.06	with respiratory failure	Stage 1.01-3.05 AND <b>respiratory failure:</b>
3.07	with shock	Stage 1.01-3.06 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.07 AND death

**Disease: PED12 Anomaly: Tetralogy of Fallot**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
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**Disease: PED13 Anomaly: Tracheoesophageal Malformations**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Esophageal atresia	Tracheoesophageal atresia [operative/pathology report or esophagoscopy report]
1.02	Tracheoesophageal fistula with or without esophageal atresia	Tracheoesophageal fistula [operative/pathology report or esophagoscopy report]
2.01	with reactive airways disease	Stage 1.01-1.02 AND paroxysms of wheezing or bronchoconstriction
2.02	with pneumonia	Stage 1.01-2.01 AND <b>pneumonia:</b>
2.03	with chemical pneumonitis	Stage 1.01-2.02 AND aspiration of gastric contents via distal fistula with pneumonitis [chest x-ray report]
2.04	with lung abscess	Stage 1.01-2.03 AND lung abscess [chest x-ray report]
3.01	with sepsis	Stage 1.01-2.04 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

**Disease: PED14 Anomaly: Transposition of the Great Arteries**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Transposition of the great arteries	Transposition of the great arteries [cardiac catheterization report or cardiac surgery report or echocardiogram report]
2.01	with ventricular septal defect	Stage 1.01 AND ventricular septal defect [cardiac catheterization report or cardiac surgery report or echocardiogram report]
2.02	with pulmonary stenosis	Stage 1.01-2.01 AND pulmonic stenosis [cardiac catheterization report or cardiac surgery report or echocardiogram report]
2.03	with polycythemia	Stage 1.01-2.02 AND <b>polycythemia:</b>
3.01	with pulmonary hypertension	Stage 1.01-2.03 AND pulmonary hypertension
3.02	with infectious endocarditis	Stage 1.01-3.01 AND <b>infectious endocarditis:</b>
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 1.01-3.03 AND <b>sepsis:</b>
3.05	with respiratory failure	Stage 1.01-3.04 AND <b>respiratory failure:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.06 AND death

**References**

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# Clinical Criteria for Disease Staging

**Disease: PED15 Anomaly: Ventricular Septal Defects**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Ventricular septal defect < 1.0 sq. cm.	Ventricular septal defects < 1.0 cm <sup>2</sup> [echocardiogram report or Doppler report or cardiac catheterization report or cardiac surgery report]
2.01	Ventricular septal defect ≥ 1.0 sq. cm	Ventricular septal defects ≥ 1.0 cm <sup>2</sup> [echocardiogram report or Doppler report or cardiac catheterization report or cardiac surgery report]
2.02	with aortic insufficiency	Stage 1.01-2.01 AND aortic insufficiency [echocardiogram report or Doppler report or cardiac catheterization report or cardiac surgery report]
3.01	with pulmonary hypertension	Stage 1.01-2.02 AND <b>pulmonary hypertension:</b>
3.02	with Eisenmenger syndrome	Stage 1.01-3.01 AND Eisenmenger syndrome
3.03	with infectious endocarditis	Stage 1.01-3.02 AND <b>infectious endocarditis:</b>
3.04	with congestive heart failure	Stage 1.01-3.03 AND <b>congestive heart failure:</b>
3.05	with sepsis	Stage 1.01-3.04 AND <b>sepsis:</b>
3.06	with respiratory failure	Stage 1.01-3.05 AND <b>respiratory failure:</b>
3.07	with shock	Stage 1.01-3.06 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.07 AND death

**Disease: PED15 Anomaly: Ventricular Septal Defects**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

**Disease: PED16 Bacterial and Fungal Infections of the Newborn**

**Etiology: Infection**

Stage	Description	Diagnostic findings
0.00	Newborn born to mother with suspected infection at time of parturition	Newborn AND mother with temperature $\leq$ 100.4 OR delivery at < 37 weeks gestation OR previous infant with invasive GBS disease OR Group B Streptococcus in mother's rectum or vagina [culture report without adequate treatment] OR rupture of membranes $\geq$ 18 hours before delivery of infant
1.01	Candidal infection of the newborn	Newborn AND vesicopustules in the intertriginous areas of the skin OR generalized scaling of the skin OR white, friable plaques on an erythematous base over the tongue, palate, buccal mucosa and palate AND <i>Candida albicans</i> seen in scraping from lesion OR <i>Candida albicans</i> [report of culture of lesion]
1.02	Conjunctivitis of the newborn	Newborn AND purulent discharge from eyes with conjunctival hyperemia and chemosis AND eye culture reports growth of pathologic bacterial organism(s) [culture report]
1.03	Staphylococcal pustulosis in the newborn	Newborn AND pustular lesions on skin AND <i>Staphylococcus aureus</i> reported on culture of material from pustules [culture report]
1.04	Mastitis of the newborn	Newborn AND localized swelling of breast tissue with erythema and warmth of overlying skin AND aspirate culture reports growth of pathologic bacterial organism(s) [culture report]
1.05	Omphalitis of the newborn	Newborn AND malodorous, wet umbilical stump with inflammation of the surrounding skin AND umbilical stump culture reports growth of pathologic bacterial organism(s) [culture report]
1.06	Scalded skin syndrome of the newborn	Newborn AND bullous lesions of the skin AND <i>Staphylococcus aureus</i> [culture report] OR scalded skin syndrome [report of skin biopsy]
2.01	Bacteremia or fungemia in the newborn	Newborn AND <b>bacteremia:</b> OR <b>fungemia:</b>
2.02	Septic arthritis in the newborn	Newborn AND septic arthritis [synovial fluid culture report]

**Disease: PED16 Bacterial and Fungal Infections of the Newborn**

**Etiology: Infection**

Stage	Description	Diagnostic findings
2.03	Osteomyelitis in the newborn	Newborn AND <b>osteomyelitis:</b>
2.04	Urinary tract infection in the newborn	Newborn AND <b>UTI:</b>
2.05	Pneumonia in the newborn	Newborn AND <b>pneumonia:</b> OR infected tracheal aspirate [Gram's stain report or culture reports]
2.06	Peritonitis in the newborn	Newborn AND <b>peritonitis:</b>
3.01	with Infective endocarditis	Newborn AND <b>endocarditis:</b>
3.02	Meningitis in the newborn	Newborn AND <b>meningitis, pediatric:</b>
3.03	Sepsis of the newborn	Newborn AND <b>sepsis, infant:</b>
3.04	with disseminated intravascular coagulation	Newborn AND <b>DIC:</b>
3.05	with shock	Newborn AND <b>shock:</b>
4.00	with death	Stage 0.0-3.05 AND death

**References**

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# Clinical Criteria for Disease Staging

**Disease: PED17 Cytomegalovirus Disease (Congenital)**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Asymptomatic congenital cytomegalovirus infection	Newborn AND isolation of cytomegalovirus from maternal amniotic fluid or infant's urine or saliva at < 2 weeks of age [virology culture report] OR detection of IgM-specific cytomegalovirus virus antibody in the serum [serology report] AND no signs or symptoms of infection
2.01	Congenital cytomegalovirus infection with preterm delivery	Newborn AND Isolation of cytomegalovirus from maternal amniotic fluid or infant's urine or saliva [virology culture report] OR detection of IgM or IgG-specific cytomegalovirus antibody in the serum [serology report] AND delivery at < 37 weeks gestation
2.02	Congenital cytomegalovirus infection with intrauterine growth retardation	Newborn AND Isolation of cytomegalovirus from maternal amniotic fluid or infant's urine or saliva [virology culture report] OR detection of IgM or IgG -specific cytomegalovirus antibody in the serum [serology report] AND weight ≤ 10 <sup>th</sup> percentile for gestational age
2.03	Cytomegalovirus retinitis	Stage 2.01-2.02 AND retinitis [ophthalmology report]
2.04	Cytomegalovirus retinitis with retinal hemorrhages or infiltrates or disk edema	Stage 2.01-2.03 AND retinal hemorrhages [ophthalmology report] OR sectoral infiltrates [ophthalmology report] OR optic disk edema [ophthalmology report]
2.05	Cytomegalovirus retinitis with retinal detachment	Stage 2.01-2.04 AND retinal detachment [ophthalmology report] OR iris neovascularization [ophthalmology report]
2.06	with hepatosplenomegaly and jaundice	Stage 2.01-2.05 AND hepatosplenomegaly [sonography report or CT scan report or MRI report] AND <b>hyperbilirubinemia:</b>
2.07	with sensorineural hearing loss	Stage 1.01-2.06 AND sensorineural hearing loss [audiology report of BAEP report]
2.08	with anemia	Stage 2.01-2.07 AND <b>anemia:</b>
2.09	with thrombocytopenia	Stage 2.01-2.08 AND <b>thrombocytopenia:</b>

**Disease: PED17 Cytomegalovirus Disease (Congenital)**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
2.10	with microcephaly	Stage 1.01-2.09 AND head circumference < 10 <sup>th</sup> percentile for gestational age
2.11	with seizures	Stage 2.01-2.10 AND seizures [EEG report]
2.12	with mental retardation	Stage 1.01-2.11 AND <b>mental retardation:</b>
3.01	with glomerulopathy or renal failure	Stage 2.01-2.13 AND <b>renal failure:</b>
3.02	with meningoencephalitis	Stage 2.01-3.01 AND <b>aseptic meningitis:</b>
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 1.02-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.02-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

**References**

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# Clinical Criteria for Disease Staging

**Disease: PED18 Drug Withdrawal Syndromes in Neonates**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Newborn infant with maternal drug addiction	Newborn AND maternal addiction to narcotics OR maternal addiction to cocaine OR maternal addiction to barbiturates OR positive urine drug screen of the newborn as [toxicology report]
2.01	Newborn infant with maternal drug addiction, small for gestational age, with asymmetric intrauterine growth retardation	Stage 1.01 AND birth weight < 10th percentile for gestational age AND head circumference ≥ 10th percentile for gestational age
2.02	Newborn infant with maternal drug addiction, small for gestational age, with symmetric inatruerine growth retardation	Stage 1.01 AND birth weight < 10th percentile for gestational age AND head circumference < 10th percentile for gestational age
2.03	with acute withdrawal syndrome	Stage 1.01-2.02 AND irritability AND increased tone AND tremors AND feeding difficulty AND abnormal sleep patterns
2.04	with apnea	Stage 1.01-2.03 AND respiratory pause > 20 seconds OR respiratory pause < 20 seconds AND cyanosis AND pallor AND hypotonia AND heart rate < 100 bpm
2.05	with seizures	Stage 1.01-2.04 AND seizures
3.01	with cerebral vascular accident	Stage 1.01-2.05 AND Perinatal cerebral infarction, usually in the distribution of the middle cerebral artery [CT or MRI report]
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>

**Disease: PED18 Drug Withdrawal Syndromes in Neonates**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
3.03	with asphyxia	Stage 1.01-3.02 AND asphyxia AND ph < 7.0 on umbilical artery sample [chemistry report] AND Apgar score 0-3 for > 5 minutes AND seizures OR hypotonia OR Stage 3.2 AND multiple organ dysfunction (cardiovascular, GI, hematologic, pulmonary or renal)
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.05 AND death

**References**

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# Clinical Criteria for Disease Staging

**Disease: PED19 Full Term Infant with Abnormal Birth Weight**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Full term infant, large for gestational age	Infant ≥ 38 weeks and ≤ 42 weeks gestational age AND birth weight ≥ 90th percentile for gestational age
1.02	Full term infant, small for gestational age, with asymmetric intrauterine growth retardation	Infant ≥ 38 weeks and ≤ 42 weeks gestational age AND birth weight < 10th percentile for gestational age AND head circumference ≥ 10th percentile for gestational age
1.03	Full term infant, small for gestational age, with symmetric intrauterine growth retardation	Infant ≥ 38 weeks and ≤ 42 weeks gestational age AND birth weight < 10th percentile for gestational age AND head circumference < 10th percentile for gestational age
2.01	with hypocalcemia	Stage 1.01-1.03 AND <b>hypocalcemia:</b>
2.02	with hypoglycemia	Stage 1.01-2.01 AND <b>hypoglycemia:</b>
2.03	with hyperbilirubinemia	Stage 1.01-2.02 AND Infants < 1 day old total serum bilirubin 8.0 mg/dl [chemistry report] OR Infants 1-2 days old total serum bilirubin ≥ 12mg/dl [chemistry report] OR Infants 2-5 days old total serum bilirubin ≥ 16mg/dl [chemistry report] OR Infants > 5 days old total serum bilirubin ≥ 2mg/dl [chemistry report]
2.04	with polycythemia	Stage 1.01-2.03 AND Central hematocrit > 65%
2.05	with seizures	Stage 1.01-2.04 AND seizures
3.01	with persistent pulmonary hypertension	Stage 1.01-2.05 AND Right to left shunting through a patent ductus arteriosus or patent foramen ovale [ultrasound report] AND PaO <sub>2</sub> < 60mmHg unresponsive to 100% O <sub>2</sub> OR PaO <sub>2</sub> gradient between the radial artery and the umbilical artery > 20mmHg [ABG report] AND normal pCO <sub>2</sub> [ABG report]
3.02	with heart failure	Stage 1.01-3.01 <b>congestive heart failure:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>

**Disease: PED19 Full Term Infant with Abnormal Birth Weight**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
3.04	with asphyxia	Stage 1.01-3.03 AND asphyxia AND ph < 7.0 on umbilical artery sample [chemistry report] AND Apgar score 0-3 for > 5 minutes AND seizures OR hypotonia OR <b>congestive heart failure:</b> AND multiple organ dysfunction (cardiovascular, GI, hematologic, pulmonary or renal)
3.05	with coma	Stage 1.01-3.04 AND <b>coma:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.06 AND death

**References**

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# Clinical Criteria for Disease Staging

PED20

## Disease: PED20 Hyaline Membrane Disease/Respiratory Distress Syndrome

### Etiology: Congenital

Stage	Description	Diagnostic findings
2.01	Newborn infant with respiratory distress syndrome	Newborn AND RR $\geq$ 60 within several hours of birth AND grunting, flaring or retractions AND lung parenchyma with a reticular granularity ("ground glass" appearance) with air bronchograms [chest x-ray report]
2.02	Respiratory distress syndrome with interstitial emphysema or pneumothorax or pneumomediastinum	Stage 2.01 AND Interstitial emphysema [x-ray report] OR pneumothorax [x-ray report] OR pneumomediastinum [x-ray report]
3.01	with respiratory failure	Stage 2.01-2.02 AND <b>respiratory failure:</b>
3.02	with asphyxia	Stage 2.01-3.01 AND asphyxia AND ph < 7.0 on umbilical artery sample [chemistry report] AND Apgar score 0-3 for > 5 minutes AND seizures OR hypotonia OR Stage 3.2 AND multiple organ dysfunction (cardiovascular, GI, hematologic, pulmonary or renal)
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

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# Clinical Criteria for Disease Staging

**Disease: PED21 Injury: To Newborn During Delivery**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Nonspecific trauma to newborn or fetus	Newborn AND trauma not specified below
1.02	Caput succedaneum	Newborn AND caput succedaneum (edema of the presenting portion of the scalp)
1.03	Cephalohematoma of the newborn	Newborn AND cephalohematoma OR localized cranial periosteal hemorrhage
1.04	Soft tissue injuries of the newborn	Newborn AND bruises on face OR bruises on torso
1.05	Linear skull fracture of the newborn	Newborn AND linear skull fracture [x-ray report] AND no associated neurological findings on physical examination
1.06	Midclavicular, humeral or femoral fractures of the newborn	Newborn AND fracture of the clavicle [x-ray report] OR fracture of the humerus [x-ray report] OR fracture of the femur [x-ray report]
1.07	Subgaleal hemorrhage of the newborn	Newborn AND subgaleal hemorrhage OR boggy feeling over the entire scalp and temporal regions
2.01	Facial nerve palsy of the newborn	Newborn AND drooping of the mouth OR flattened nasolabial fold OR widening of the palpebral fissure AND decreased movement of one side of the face
2.02	Brachial plexus injuries of the newborn	Newborn AND adduction and internal rotation of the shoulder with pronation of the forearm (Erb-Duchenne paralysis) OR paralysis of either hand(s) (Klumpke paralysis) OR ipsilateral ptosis and miosis
2.03	Phrenic nerve paralysis of the newborn	Newborn AND Stage 2.02 AND phrenic nerve paralysis determined by absence of diaphragm movements [fluoroscopic or ultrasonic x-ray reports]
2.04	Depressed skull fracture of the newborn	Newborn AND depressed skull fracture [x-ray report]



# Clinical Criteria for Disease Staging

**Disease: PED21 Injury: To Newborn During Delivery**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
2.05	Gastrointestinal hemorrhage or intestinal perforation of the newborn	
2.06	Rupture of the liver or spleen	Newborn AND rupture of the liver [ultrasound or operative or pathology report] OR rupture of the spleen [ultrasound or operative or pathology report]
2.07	Adrenal hemorrhage	Newborn AND bleeding into one or both of the adrenals [ultrasound or operative or pathology report]
2.08	Intracranial bleeding of the newborn	Newborn AND intracranial hemorrhage [CT scan report]
2.09	Trauma to the spinal cord of the newborn	Newborn AND total flaccidity OR paralysis of intercostal muscles AND incontinence of stools and urine AND grossly bloody cerebrospinal fluid
3.01	with respiratory failure	Stage 1.01-2.08 AND <b>respiratory failure:</b>
3.02	with coma	Stage 1.01-3.01 AND <b>coma:</b>
3.03	with asphyxia	Stage 1.01-3.02 AND asphyxia AND ph < 7.0 on umbilical artery sample [chemistry report] AND Apgar score 0-3 for > 5 minutes AND seizures OR hypotonia OR <b>coma:</b> AND multiple organ dysfunction (cardiovascular, GI, hematologic, pulmonary or renal)
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.04 AND death

**Disease: PED21 Injury: To Newborn During Delivery**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
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# Clinical Criteria for Disease Staging

**Disease: PED22 Meconium Aspiration Syndrome**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Meconium stained amniotic fluid with no signs of respiratory distress	Newborn AND Meconium stained amniotic fluid with no signs of respiratory distress
1.02	Meconium aspiration with no complications	Newborn AND Presence of meconium below the vocal cords at the time of delivery AND Tachypnea AND Normal blood pH [ABG report] AND <b>hypocarbica:</b> AND Resolution of symptoms in 2-3 days
2.01	Meconium aspiration with pneumonitis	Newborn AND Presence of meconium below the vocal cords at the time of delivery AND Patchy infiltrates and coarse streaking in both lung fields, increased AP diameter and flattened diaphragm [x-ray report]
2.02	with pneumothorax or pneumomediastinum	Stage 2.01 AND Pneumothorax or pneumomediastinum [x-ray report]
2.03	with secondary bacterial pneumonia	Stage 2.01-2.02 AND <b>pneumonia:</b> OR tracheal aspirate culture reports growth of pathologic organism(s) [culture report]
3.01	with persistent pulmonary hypertension	Stage 2.01-2.03 AND Right to left shunting through a patent ductus arteriosus or patent foramen ovale [ultrasound report] AND PaO <sub>2</sub> < 60mmHg unresponsive to 100% O <sub>2</sub> OR PaO <sub>2</sub> gradient between the radial artery and the umbilical artery > 20mmHg [ABG report] AND normal pCO <sub>2</sub> [ABG report]
3.02	with heart failure	Stage 2.01-3.01 AND <b>congestive heart failure:</b>
3.03	with sepsis	Stage 2.01-3.02 AND <b>sepsis, infant:</b>
3.04	with DIC	Stage 2.01-3.03 AND <b>DIC:</b>
3.05	with respiratory failure	Stage 2.01-3.04 AND <b>respiratory failure:</b>

**Disease: PED22 Meconium Aspiration Syndrome**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
3.06	with asphyxia	Stage 2.01-3.05 AND asphyxia AND ph < 7.0 on umbilical artery sample [chemistry report] AND Apgar score 0-3 for > 5 minutes AND seizures OR hypotonia OR Stage 3.2 AND multiple organ dysfunction (cardiovascular, GI, hematologic, pulmonary or renal)
3.07	with coma	Stage 2.01-3.06 AND <b>coma:</b>
3.08	with shock	Stage 2.01-3.07 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.08 AND death

**References**

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# Clinical Criteria for Disease Staging

**Disease: PED23 Neonatal Necrotizing Enterocolitis**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Necrotizing enterocolitis	Neonate AND temperature instability OR <b>apnea:</b> OR <b>bradycardia:</b> AND feeding problems AND abdominal distention and absent bowel sounds OR ileus [x-ray report] AND abdominal tenderness AND blood in the stool AND pneumatosis intestinalis [x-ray report of abdomen]
2.01	with localized peritonitis	Stage 1.01 AND abdominal cellulitis AND RLQ mass AND portal vein gas [x-ray report of ultrasound of the abdomen]
2.02	with stricture of the bowel	Stage 1.01-2.01 AND abdominal distention 2-3 weeks after recovery from acute necrotizing enterocolitis AND stricture of bowel [report of barium enema]
2.03	with generalized peritonitis	Stage 1.01-2.02 AND <b>peritonitis:</b>
2.04	with bowel perforation	Stage 1.01-2.03 AND pneumoperitoneum [x-ray report]
3.01	with sepsis	Stage 1.01-2.04 AND <b>sepsis, infant:</b>
3.02	with DIC	Stage 1.01-3.01 AND <b>DIC:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**Disease: PED23 Neonatal Necrotizing Enterocolitis**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
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**References**

Berseth CL, Abrams SA. Special gastrointestinal concerns. In: Taeusch HW and Ballard RA, eds. Avery's Diseases of the Newborn. 7th ed. Philadelphia, PA: WB Saunders; 1998:965-978.
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**Disease: PED24 Perinatal Jaundice**

**Etiology: Genetic (or hereditary); Idiopathic; Infection; Nutritional; Trauma**

Stage	Description	Diagnostic findings
1.01	Unspecified fetal and neonatal jaundice	
2.01	Perinatal jaundice from excessive hemolysis, Kernicterus not due to isoimmunization, Neonatal jaundice associated with preterm delivery or unspecified or other delayed conjugation	
2.02	Perinatal jaundice due to hepatocellular damage	

**References**

# Clinical Criteria for Disease Staging

**Disease: PED25 Postmaturity**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Postmature infant	Infant born > 42 week gestation
1.02	with large for gestational age	Stage 1.01 AND birthweight greater than 90th percentile for gestational age
1.03	with small for gestational age (intrauterine growth retardation)	Stage 1.01-1.02 AND birthweight less than 10th percentile for gestational age
2.01	with hypocalcemia	Stage 1.01-1.03 AND <b>hypocalcemia:</b>
2.02	with hypoglycemia	Stage 1.01-2.01 AND <b>hypoglycemia:</b>
2.03	with hyperbilirubinemia	Stage 1.01-2.02 AND Infants < 1 day old total serum bilirubin ≥ 8.0mg/dl [chemistry report] OR Infants 1-2 days old total serum bilirubin ≥ 12mg/dl [chemistry report] OR Infants 2-5 days old total serum bilirubin ≥ 16mg/dl [chemistry report] OR Infants >5 days old total serum bilirubin ≥ 2mg/dl [chemistry report]
2.04	with polycythemia	Stage 1.01-2.03 AND Central hematocrit > 65%
2.05	with seizures	Stage 1.01-2.04 AND seizures
3.01	with persistent pulmonary hypertension	Stage 1.1-2.5 AND right to left shunting through a patent ductus arteriosus or patent foramen ovale [ultrasound report] AND PaO <sub>2</sub> < 60mmHg unresponsive to 100% O <sub>2</sub> OR PaO <sub>2</sub> gradient between the radial artery and the umbilical artery > 20mmHg [ABG report] AND normal pCO <sub>2</sub> [ABG report]
3.02	with heart failure	Stage 1.01-3.01 AND <b>congestive heart failure:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>



**Disease: PED25 Postmaturity**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
3.04	with asphyxia	Stage 1.01-3.03 AND asphyxia AND ph < 7.0 on umbilical artery sample [chemistry report] AND Apgar score 0-3 for > 5 minutes AND seizures OR hypotonia OR <b>congestive heart failure:</b> AND multiple organ dysfunction (cardiovascular, GI, hematologic, pulmonary or renal)
3.05	with coma	Stage 1.01-3.04 AND <b>coma:</b>
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.06 AND death

**References**

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# Clinical Criteria for Disease Staging

**Disease: PED26 Prematurity: Extremely Low Birthweight**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
2.01	Premature infant with extremely low birthweight	Infant born at < 38 weeks gestation AND birthweight of < 1000g
2.02	with intrauterine growth retardation	Stage 2.01 AND birthweight less than 10 <sup>th</sup> percentile for gestational age
2.03	with hypocalcemia	Stage 2.01-2.02 AND <b>hypocalcemia:</b>
2.04	with hypoglycemia	Stage 2.01-2.03 AND <b>hypoglycemia:</b>
2.05	with hyperbilirubinemia	Stage 2.01-2.04 AND Infants < 1 day old total serum bilirubin ≥ 8.0mg/dl [chemistry report] OR Infants 1-2 days old total serum bilirubin ≥ 12mg/dl [chemistry report] OR Infants 2-5 days old total serum bilirubin ≥ 16mg/dl [chemistry report] OR Infants > 5 days old total serum bilirubin ≥ 2mg/dl [chemistry report]
2.06	with anemia	Stage 2.01-2.05 AND <b>anemia:</b>
2.07	with apnea of prematurity	Stage 2.01-2.06 AND <b>apnea:</b> respiratory pause > 20 seconds OR respiratory pause < 20 seconds AND cyanosis AND pallor AND hypotonia AND heart rate < 100 bpm
2.08	with seizures	Stage 2.01-2.07 AND seizures
3.01	with intraventricular hemorrhage	Stage 2.01-2.08 AND intraventricular hemorrhage [ultrasound report]
3.02	with posthemorrhagic hydrocephalus	Stage 2.01-3.01 AND hydrocephalus [ultrasound report]
3.03	with heart failure	Stage 2.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 2.01-3.03 AND <b>sepsis, infant:</b>
3.05	with disseminated intravascular coagulation	Stage 2.01-3.04 AND <b>DIC:</b>
3.06	with respiratory failure	Stage 2.01-3.05 AND <b>respiratory failure:</b>

**Disease: PED26 Prematurity: Extremely Low Birthweight**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
3.07	with coma	Stage 2.01-3.06 AND <b>coma:</b>
3.08	with shock	Stage 2.01-3.07 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.08 AND death

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Volpe JJ. Brain injury in the premature infant. *Clinics in Perinatology*. 1997;24(3)567-587.

# Clinical Criteria for Disease Staging

PED27

**Disease: PED27 Prematurity: Low Birthweight**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Premature infant with low birthweight	Infant born at < 38 weeks gestation AND birthweight of < 2500g and ≥ 1500g
2.01	and small for gestational age (intrauterine growth retardation)	Stage 1.01 AND birthweight less than 10 <sup>th</sup> percentile for gestational age
2.02	with hypocalcemia	Stage 1.01-2.01 AND <b>hypocalcemia:</b>
2.03	with hypoglycemia	Stage 1.01-2.02 AND <b>hypoglycemia:</b>
2.04	with hyperbilitubinemia	Stage 1.01-2.03 AND Infants < 1 day old total serum bilirubin ≥ 8.0mg/dl [chemistry report] OR Infants 1-2 days old total serum bilirubin ≥ 12mg/dl [chemistry report] OR Infants 2-5 days old total serum bilirubin ≥ 16mg/dl [chemistry report] OR Infants >5 days old total serum bilirubin ≥ 2mg/dl [chemistry report]
2.05	with anemia	Stage 1.01-2.04 AND <b>anemia:</b>
2.06	with apnea of prematurity	Stage 1.01-2.05 AND <b>apnea:</b> respiratory pause > 20 seconds OR respiratory pause < 20 seconds AND cyanosis AND pallor AND hypotonia AND heart rate < 100 bpm
2.07	with seizures	Stage 1.01-2.06 AND seizures
3.01	with intraventricular hemorrhage	Stage 1.01-2.07 AND intraventricular hemorrhage [ultrasound report]
3.02	with posthemorrhagic hydrocephalus	Stage 1.01-3.01 AND hydrocephalus [ultrasound report]
3.03	with heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 1.01-3.03 AND <b>sepsis, infant:</b>
3.05	with disseminated intravascular coagulation	Stage 1.01-3.04 AND <b>DIC:</b>

**Disease: PED27 Prematurity: Low Birthweight**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
3.06	with respiratory failure	Stage 1.01-3.05 AND <b>respiratory failure:</b>
3.07	with coma	Stage 1.01-3.06 AND <b>coma:</b>
3.08	with shock	Stage 1.01-3.07 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.08 AND <b>death</b>

**References**

Bone RC et al. Definitions for sepsis and organ failure and guidelines for the use of innovative therapies in sepsis. *Chest*. 1992;101(6):1644-1655.

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Volpe JJ. Brain injury in the premature infant. *Clinics in Perinatology*. 1997;24(3)567-587.

# Clinical Criteria for Disease Staging

PED28

**Disease: PED28 Prematurity: Very Low Birthweight**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
2.01	Premature infant with very low birthweight	Infant born at < 38 weeks gestation AND birthweight of < 1500g and ≥ 1000g
2.02	and small for gestational age (intrauterine growth retardation)	Stage 2.01 AND birthweight less than 10 <sup>th</sup> percentile for gestational age
2.03	with hypocalcemia	Stage 2.01-2.02 AND <b>hypocalcemia:</b>
2.04	with hypoglycemia	Stage 2.01-2.03 AND <b>hypoglycemia:</b>
2.05	with hyperbilirubinemia	Stage 2.01-2.04 AND Infants < 1 day old total serum bilirubin ≥ 8.0mg/dl [chemistry report] OR Infants 1-2 days old total serum bilirubin ≥ 12mg/dl [chemistry report] OR Infants 2-5 days old total serum bilirubin ≥ 16mg/dl [chemistry report] OR Infants >5 days old total serum bilirubin ≥ 2mg/dl [chemistry report]
2.06	with anemia	Stage 2.01-2.05 AND <b>anemia:</b>
2.07	with apnea of prematurity	Stage 2.01-2.06 AND <b>apnea:</b> respiratory pause > 20 seconds OR respiratory pause < 20 seconds AND cyanosis AND pallor AND hypotonia AND heart rate < 100 bpm
2.08	with seizures	Stage 2.01-2.07 AND seizures
3.01	with intraventricular hemorrhage	Stage 2.01-2.08 AND intraventricular hemorrhage [ultrasound report]
3.02	with posthemorrhagic hydrocephalus	Stage 2.01-3.01 AND hydrocephalus [ultrasound report]
3.03	with heart failure	Stage 2.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 2.01-3.03 AND <b>sepsis, infant:</b>
3.05	with disseminated intravascular coagulation	Stage 2.01-3.04 AND <b>DIC:</b>
3.06	with respiratory failure	Stage 2.01-3.05 AND <b>respiratory failure:</b>

**Disease: PED28 Prematurity: Very Low Birthweight**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
3.07	with coma	Stage 2.01-3.06 AND <b>coma:</b>
3.08	with shock	Stage 2.01-3.07 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.08 AND death

### References

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Volpe JJ. Brain injury in the premature infant. *Clinics in Perinatology*. 1997;24(3)567-587.

# Clinical Criteria for Disease Staging

PED29

**Disease: PED29 Rubella: Congenital**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
2.01	Congenital rubella infections	Newborn AND Isolation of cytomegalovirus from maternal amniotic fluid or infant's urine or saliva [virology culture report] OR detection of IgM or IGG-specific cytomegalovirus antibody in the serum [serology report]
2.02	with intrauterine growth retardation	Newborn AND Isolation of cytomegalovirus from maternal amniotic fluid or infant's urine or saliva [virology culture report] OR detection of IgM or IGG-specific cytomegalovirus antibody in the serum [serology report] AND birthweight ≤ 10 <sup>th</sup> percentile for gestational age
2.03	with hepatosplenomegaly and jaundice	Stage 2.01-2.02 AND hepatosplenomegaly [sonography report or CT scan report or MRI report] AND <b>hyperbilirubinemia:</b>
2.04	with sensorineural hearing loss	Stage 2.01-2.03 AND sensorineural hearing loss [audiology report or BAEP report]
2.05	with microcephaly	Stage 2.01-2.04 AND head circumference < 10 <sup>th</sup> percentile for gestational age
2.06	with retinopathy, glaucoma or cataracts	Stage 2.01-2.05 AND retinopathy [ophthalmoscopy report] OR glaucoma OR cataracts
2.07	with mental retardation	Stage 2.01-2.06 AND <b>mental retardation:</b>
2.08	with interstitial pneumonitis	Stage 2.01-2.07 AND interstitial pneumonitis [radiology report]
2.09	with congenital heart disease	Stage 2.01-2.08 AND pulmonary artery stenosis [cardiac catheterization report or echocardiography report] OR patent ductus arteriosus [cardiac catheterization report or echocardiography report] OR ventricular septal defect [cardiac catheterization report or echocardiography report]
2.10	with seizures	Stage 2.01-2.09 AND seizures [EEG report]
3.01	with meningoencephalitis	Stage 2.01-2.10 AND <b>aseptic meningitis:</b>



**Disease: PED29 Rubella: Congenital**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
3.02	with congestive heart failure	Stage 2.01-3.01 AND <b>congestive heart failure:</b>
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 2.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 2.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND <b>death:</b>

**References**

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# Clinical Criteria for Disease Staging

**Disease: PED30 Syphilis: Congenital**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Congenital syphilis	Newborn AND    Maculopapular skin rash OR    mucocutaneous lesions OR    generalized lymphadenopathy OR    syphilitic pemphigus OR    snuffles OR    osteochondritis OR    osteitis AND    FTA test > 1:4 dilutions.[serology report] OR    Treponema pallidum isolated from lesions [op/path report]
2.01	Congenital syphilis with malformations or late congenital syphilis	Osteochondritis OR    interstitial keratitis OR    sensorineural deafness OR    Hutchinson's triad OR    Hutchinson's incisors OR    saddle nose OR    knee effusions or Clutton's joints AND    2 years after birth FTA test > 1:4 dilutions [serology report] OR    Treponema pallidum isolated from lesions [op/path report]
2.02	Congenital syphilis involving the liver or spleen or kidney or joints or bones	Stage 2.01 AND    mass lesion in liver demonstrates treponema pallidum [biopsy report] OR    mass lesion in spleen demonstrates treponema pallidum [biopsy report] OR    treponema pallidum glomerulitis [biopsy report] OR <b>osteomyelitis:</b>
3.01	Cardiovascular congenital syphilis	Stage 2.01-2.02 AND    aortitis [op/path report] OR    thoracic aneurysm [op/path report] OR <b>myocarditis:</b> OR    aortic insufficiency [echocardiogram report]
3.02	Congenital neurosyphilis	<b>Aseptic meningitis:</b> AND    FTA of spinal fluid > 1:4 dilutions (serology report). AND    tabes dorsalis OR    locomotor ataxia OR    dementia paralytica OR    generalized paresis

**Disease: PED30 Syphilis: Congenital**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
3.03	with congestive heart failure	Stage 2.01-3.02 AND <b>congestive heart failure:</b>
3.04	with shock	Stage 2.03-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

## References

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# Clinical Criteria for Disease Staging

**Disease: PED31 Toxoplasmosis: Congenital**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Asymptomatic congenital toxoplasmosis	Congenital toxoplasma gondii [Toxoplasma gondii from placenta fetal blood or Toxoplasma gondii from amniotic fluid or Toxoplasma gondii from infant's cord blood or Toxoplasma gondii from peripheral blood] OR B1 gene [amniotic fluid PCR report, infant's blood PCR report or CSF PCR report] OR detection of Toxoplasma-specific IgM, IgA or IgE [double sandwich ELISA or ISAGA report] OR persistence of Toxoplasma-IgG beyond one year of life
1.02	with lymphadenitis	Enlarged lymph nodes AND antibodies present against Toxoplasma gondii in high titers [IgG Sabin-Feldman dye test $\geq$ 1:1000 or indirect fluorescent antibody $\geq$ 1:1000 or indirect hemagglutination test $\geq$ 1:1000 or complement fixation test $\geq$ 1:4 or ELISA titer $\geq$ 6] OR isolation of Toxoplasma gondii from body fluids [tissue culture report]
2.01	Generalized congenital toxoplasmosis	Stage 1.01-1.02 AND hepatosplenomegaly OR generalized lymphadenopathy OR <b>jaundice:</b> OR <b>anemia:</b>
2.02	with chorioretinitis	Stage 1.01-2.01 AND chorioretinitis [ophthalmologist's report]
2.03	with chorioretinitis and blindness	Stage 2.02 AND <b>blindness</b> AND macular scar [ophthalmologist's report] OR retinal detachment [ophthalmologist's report] OR optic nerve atrophy [ophthalmologist's report]
2.04	Toxoplasma pneumonia	Stage 1.02-2.03 AND <b>pneumonia:</b>
2.05	with hemolytic anemia of the newborn or erythroblastosis fetalis	Stage 1.01-2.04 AND erythroblastosis fetalis OR Rh-negative antibody in mother AND Rh-positive antibody in father AND Rh-positive antibody in newborn AND cord blood hematocrit < 40% [hematology report] AND cord blood bilirubin > 5mg/dl [hematology report] AND cord blood reticulocytes > 15% [hematology report]

**Disease: PED31 Toxoplasmosis: Congenital**

**Etiology: Infection**

Stage	Description	Diagnostic findings
3.01	with meningoencephalitis	Abnormal CSF (pleocytosis and elevated protein) AND Intracerebral calcifications OR microcephaly OR hydrocephalus OR seizures OR mental retardation OR deafness
3.02	Toxoplasma myocarditis	Stage 1.02-3.01 AND <b>myocarditis:</b>
3.03	with hydrops fetalis	Stage 1.01-3.02 AND hydrops fetalis [fetal ultrasound report] OR newborn scalp edema AND newborn cardiomegaly [chest x-ray report] AND newborn hepatomegaly AND newborn pleural effusions [chest x-ray report] AND newborn ascites AND newborn generalized edema AND newborn hepatosplenomegaly
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
4.00	with death	Stage 2.02-3.04 AND death

**References**

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Remington, JS, McLeod, R and Desmonts, G. Toxoplasmosis. In: Remington JS, Klein JO, eds. Infectious Diseases of the Fetus and Newborn Infant. 4th ed. Philadelphia, PA: WB Saunders; 1995:180-222.

Weinberg A and Levin MJ. Parasitic and mycotic infections/toxoplasmosis. In: Hay WW, Groosthus JR, Hayward AR, Levin MJ, eds. Current Pediatric Diagnosis and Treatment. 13th ed. Stamford, CT: Appleton & Lange; 1997: 1074-76.

**Disease: PED80 Anomaly: Other Circulatory System**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Peripheral and visceral vessel anomalies	
1.02	Great vessel anomalies	
2.01	with hypoxemia	
3.01	with CHF	
3.02	with sepsis	
3.03	with respiratory failure	
3.04	with shock	
4.00	Death, including SIDS	

**References**

**Disease: PED81 Anomaly: Other Digestive or Hepatobiliary System**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Gastrointestinal, hepatobiliary or pancreatic anomaly, Meckel's diverticulum, intestinal fixation or congenital cystic liver	
2.01	Atresia of intestine or colon	

**References**

**Disease: PED82 Anomaly: Other Genitalia**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Congenital chordee, micropenia, indeterminate sex	

References



**Disease: PED83 Anomaly: Other Nervous System**

**Etiology: Congenital**

Stage	Description	Diagnostic findings
1.01	Unspecified anomalies of nervous system	
2.01	Craniorachischisis or iniencephaly	

References

**Disease: PED84 Other Maternal Conditions Affecting Newborn**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Maternal or labor and delivery conditons affecting the newborn, weeks of gestation	

**References**

**Disease: PED85 Other Neonatal Conditions**

**Etiology:**

Stage	Description	Diagnostic findings
0.00	Health supervision of foundling or observation and evaluation of infant for suspected condition not found	Added stage 5/8/06 cb
1.01	Newborn with blood loss, cutaneous hemorrhage, anemia, hypothermia, integumentary conditions	
2.01	Newborn with intraventricular hemorrhage, meconium obstruction, inspissated milk, cerebral irritation, periventricular leukomalacia	
3.01	Newborn with DIC, hydrops fetalis, convulsions, CNS dysfunction, cardiac arrest, or terminated pregnancy	

**References**

**Disease: PED86 Live Newborns**

**Etiology:**

Stage	Description	Diagnostic findings
0.00	Newborn	

References

**Disease: PSY01 Antisocial Personality Disorder**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Antisocial behavior	Antisocial behavior which meets DSM-IV criteria [psychiatrist report]
2.01	with major crimes	Stage 1.01 AND history of felony conviction OR history of voluntary manslaughter OR history of first or second degree murder conviction
3.01	with coma	Stage 1.01-2.01 AND <b>coma:</b>
3.02	with shock	Stage 3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:645-650.

Gunderson JG, Phillips KA. Personality disorders. In.: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:1441-1444.

# Clinical Criteria for Disease Staging

**Disease: PSY02 Bipolar Disorder - Major Depressive Episode**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
0.00	Bipolar Disorder - major depression in full remission	Major depressive episode which met DSM-IV criteria [psychiatrist report] AND absence of significant signs or symptoms in < two months
1.01	Bipolar Disorder - major depression in partial remission	Major depressive episode which meets DSM-IV criteria [psychiatrist report] AND four (or less) of the following symptoms depressed mood OR loss of pleasure or interest OR significant weight loss OR insomnia OR hypersomnia OR psychomotor agitation OR psychomotor retardation OR fatigue OR feelings of worthlessness OR feelings of excessive guilt OR decreased ability to think OR recurrent thoughts of death AND one of the following symptoms: impaired ability to maintain employment OR impaired ability to care for self OR reduced capability for social relationships

# Clinical Criteria for Disease Staging

**Disease: PSY02 Bipolar Disorder - Major Depressive Episode**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
2.01	Bipolar Disorder - major depression	Major Depressive Episode which meets DSM- IV criteria [psychiatrist report] Depressed Mood AND loss of interest or pleasure in usual activities AND five or more of the following symptoms in the same 2 week period: depressed mood most of the day, nearly daily OR marked loss of interest and pleasure OR significant weight loss (5% body weight in a month) OR insomnia or hypersomnia almost daily OR psychomotor agitation or retardation, almost daily OR fatigue or loss of energy, nearly daily OR feelings of worthlessness OR feelings of excessive guilt OR decreased ability to think OR recurrent thoughts of death AND one of the following symptoms: impaired ability to maintain employment OR impaired ability to care for self OR reduced capability for social relationships
2.02	Major depression severe	Stage 1.01- 2.01 AND > 5 criteria necessary for DSM-IV diagnosis of major depression [psychiatrist report] AND marked impairment of occupational functioning OR marked impairment of self care OR marked impairment of social relationships
2.03	Major depression severe with psychotic features	Stage 2.02 AND delusions, mood congruent or incongruent OR hallucinations, mood congruent or incongruent

# Clinical Criteria for Disease Staging

**Disease: PSY02 Bipolar Disorder - Major Depressive Episode**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
3.01	with suicidal attempt	Stage 1.01 - 2.03 AND Suicide attempt OR self-inflicted injuries AND loss of consciousness OR self-inflicted injury penetrating the pleural space [chest x-ray report] OR self-inflicted injury lacerating any artery [operative/pathology report] OR self-inflicted injury lacerating any nerve [operative/pathology report] OR self-inflicted injury penetrating the peritoneal space [operative/pathology report] OR fracture of the spinal column [x-ray report] OR fracture of the tibia or fibula [x-ray report] OR fracture of the femur [x-ray report]
3.02	with renal failure	Stage 3.01 AND <b>renal failure:</b>
3.03	with intracranial injury	Stage 3.01-3.02 AND intracranial injury [CT scan report or MRI report]
3.04	with respiratory failure	Stage 3.01-3.03 AND <b>respiratory failure:</b>
3.05	with coma	Stage 3.01-3.04 AND <b>coma:</b>
3.06	with shock	Stage 3.03-3.05 AND <b>shock:</b>
4.00	with death	Stage 3.06 AND death

## References

Akiskal HS. Mood disorders: clinical features. In Kaplan HI, Sadock BJ. eds., Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:1123-1152.

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:317-391.



# Clinical Criteria for Disease Staging

**Disease: PSY03 Bipolar Disorder - Manic Episode**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
0.00	Manic episode in full remission	Manic episode which met DSM-IV criteria [psychiatrist report] AND absence of significant signs or symptoms in past 2 months
1.01	Hypomanic episode	Hypomanic episode which meets DSM-IV criteria [psychiatrist report] persistently elevated, expansive, or irritable mood for at least 4 days AND during the mood disturbance, 3 (or more) or the following (4, if mood is only irritable): inflated self-esteem or grandiosity OR decreased need for sleep OR more talkative than usual OR flight of ideas, or racing thoughts OR distractibility OR increased activity or psychomotor agitation OR excessive involvement in pleasurable, risk - taking activities AND no impairment in functioning AND absence of necessity for hospitalization AND absence of psychotic features
2.01	Manic episode	Manic episode which meets DSM-IV criteria [psychiatrist report] abnormally elevated, expansive or irritable mood, for at least one week AND during the mood disturbance, 3 (or more) of the following, (4, if mood is only irritable): inflated self-esteem or grandiosity OR decreased need for sleep OR more talkative than usual OR flight of ideas or racing thoughts OR distractibility OR increased activity or psychomotor agitation OR excessive involvement in pleasurable, risk-taking activities AND one of the following: marked impairment in occupational functioning OR marked impairment in social activities OR marked impairment in interpersonal relationships
2.02	Manic episode, severe	Stage 2.01 AND almost continual supervision necessary to prevent physical harm to self or others OR threats to harm self or others OR attempted assaults on others
2.03	Manic episode, severe with psychotic features	Stage 2.02 AND delusions, mood congruent or incongruent OR hallucinations, mood congruent or incongruent

# Clinical Criteria for Disease Staging

**Disease: PSY03 Bipolar Disorder - Manic Episode**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
3.01	with suicide attempt	Stage 2.01-2.03 AND Suicide attempt OR self-inflicted injuries AND loss of consciousness OR self-inflicted injury penetrating the pleural space [chest x-ray report] OR self-inflicted injury lacerating any artery [operative/pathology report] OR self-inflicted injury lacerating any nerve [operative/pathology report] OR self-inflicted injury penetrating the peritoneal space [operative/pathology report] OR fracture of the spinal column [x-ray report] OR fracture of the tibia or fibula [x-ray report] OR fracture of the femur [x-ray report]
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.02 AND death

**References**

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:393–444.

Papp LA, Gorman JM. Generalized anxiety disorder. In.: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:1236–1249.

# Clinical Criteria for Disease Staging

**Disease: PSY04 Depression**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
1.01	Adjustment disorder with depressed mood (loss of interest or pleasure in usual activities)	Depressed mood OR loss of interest or pleasure AND life stress situation occurring within 3 months prior to onset AND distress in excess of expected degree OR significant social or occupational or academic dysfunction
1.02	Depression with loss of interest or pleasure in usual activities	Depressed Mood OR loss of interest or pleasure AND absence of life stress situation OR life stress situation occurred $\geq$ 3 months ago AND at least two (but < 5) of the following, while depressed: poor appetite and weight loss OR over eating and weight gain OR insomnia OR hypersomnia OR low energy or fatigue OR low self esteem OR poor concentration or difficulty making decisions OR feelings of hopelessness
1.03	Depression with substance abuse	Stage 1.01- 1.02 AND drug abuse OR alcohol abuse

# Clinical Criteria for Disease Staging

**Disease: PSY04 Depression**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
2.01	Major Depression	Depressed Mood OR loss of interest or pleasure in usual activities AND five (or more) of the following symptoms in the same 2 week period: depressed mood most of day, nearly daily OR marked loss of interest or pleasure OR significant weight loss (5% body weight in a month) OR insomnia or hypersomnia almost daily OR psychomotor agitation or retardation, nearly daily OR fatigue or loss of energy, nearly daily OR feelings of worthlessness OR feelings of excessive guilt OR decreased ability to think OR recurrent thoughts of death AND one of the following symptoms: impaired ability to maintain employment OR impaired ability to care for self OR reduced capability for social relationships
2.02	with psychotic features	Stage 2.01 AND impairment in reality testing OR delusions OR auditory hallucinations OR visual hallucinations

**Disease: PSY04 Depression**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
3.01	with suicide attempt	Stage 1.01-2.02 AND Suicide attempt OR self-inflicted injuries AND loss of consciousness OR self-inflicted injury penetrating the pleural space [chest x-ray report] OR self-inflicted injury lacerating any artery [operative/pathology report] OR self-inflicted injury lacerating any nerve [operative/pathology report] OR self-inflicted injury penetrating the peritoneal space [operative/pathology report] OR fracture of the spinal column [x-ray report] OR fracture of the tibia or fibula [x-ray report] OR fracture of the femur [x-ray report]
3.02	with respiratory failure	Stage 1.02-3.01 AND <b>respiratory failure:</b>
3.03	with intracranial injury	Stage 1.02-3.02 AND intracranial injury [CT scan report or MRI report]
3.04	with coma	Stage 1.02-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.02-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

## References

Akiskal HS. Mood disorders: clinical features. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:1123–1152.  
 American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:317-349.

# Clinical Criteria for Disease Staging

**Disease: PSY05 Drug Abuse, Dependence, Intoxication: Alcohol**

**Etiology: Genetic (or hereditary); Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Alcohol abuse	Alcohol use which meets DSM-IV criteria for abuse [psychiatrist report] history of use AND failure to fulfill major role obligations OR recurrent alcohol use in physically dangerous situations OR recurrent alcohol related legal problems OR continued alcohol use despite social or interpersonal use related problems
1.02	Alcohol dependence	Depressed Mood OR loss of interest or pleasure AND absence of life stress situation OR life stress situation occurred $\geq$ 3 months ago AND at least two (but < 5) of the following, while depressed: poor appetite and weight loss OR over eating and weight gain OR insomnia OR hypersomnia OR low energy or fatigue OR low self esteem OR poor concentration or difficulty making decisions OR feelings of hopelessness
2.01	Alcohol intoxication	Stage 1.01 - 1.02 AND recent ingestion of alcohol AND 1 (or more) of the following during of after use: slurred speech OR incoordination OR unsteady gait OR nystagmus OR impaired attention or memory OR stupor or coma
2.02	Alcoholism with hepatomegaly or alcoholic polyneuropathy or chronic pancreatitis	Stage 1.01-1.02 AND <b>hepatomegaly:</b> OR <b>hepatitis:</b> OR <b>coagulation defect:</b> OR polyneuropathy [EMG report] OR chronic pancreatitis
2.03	with gastritis or anemia	Stage 1.01-2.02 AND gastritis [endoscopy report] OR <b>anemia:</b>

# Clinical Criteria for Disease Staging

**Disease: PSY05 Drug Abuse, Dependence, Intoxication: Alcohol**

**Etiology: Genetic (or hereditary); Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
2.04	with acute pancreatitis	Stage 1.01-2.03 AND <b>pancreatitis:</b>
2.05	with cirrhosis	Stage 1.01-2.04 AND cirrhosis [sonogram report or liver biopsy report]
3.01	with Wernicke-Korsakoff's syndrome	Stage 1.01-2.05 AND ophthalmoplegia OR Korsakoff's psychosis OR confabulation
3.02	with cardiomegaly or congestive heart failure	Stage 1.01-3.01 AND alcoholic cardiomyopathy [operative pathology report or echocardiogram report] OR <b>congestive heart failure:</b>
3.03	Delirium tremens	Stage 1.1-3.2 AND history of alcohol abstinence for $\geq 24$ hours AND seizure disorder [physical examination or EEG report] OR visual hallucinations OR auditory hallucinations OR nausea and vomiting OR insomnia
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:194-204.

Schuckit MA. Alcohol- related disorders. In.: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:775–791.

# Clinical Criteria for Disease Staging

**Disease: PSY06 Drug Abuse, Dependence, Overdose: Amphetamine**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Amphetamine abuse	Amphetamine use which meets DSM- IV criteria for abuse [Psychiatrists report] OR history of use AND failure to fulfil major role obligations OR recurrent use in physically dangerous situations OR recurrent amphetamine related legal problems OR continued use despite related social or interpersonal use related problems
1.02	Amphetamine dependence	Stage 1.01 AND Amphetamine use which meets DSM-IV criteria for dependence (3 or more criteria in a 12 month period) [Psychiatrists report]: tolerance OR withdrawal OR increased use OR desire or efforts to decrease use OR increased time spent obtaining amphetamines OR reduced social or occupational activities OR recurrent use despite negative physical OR psychological or social effects
2.01	Amphetamine intoxication	Stage 1.01-1.02 AND two of following develop > one hour after ingestion of dose and not due to other disorder: psychomotor excitement OR elation OR grandiosity OR psychomotor agitation or retardation OR hypervigilance OR resistance to fatigue OR <b>tachycardia:</b> OR <b>bradycardia:</b> OR pupillary dilation OR perspiration or chills OR nausea or vomiting OR anorexia OR insomnia OR <b>hypertension:</b> OR <b>hypotension:</b>



# Clinical Criteria for Disease Staging

**Disease: PSY06 Drug Abuse, Dependence, Overdose: Amphetamine**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
3.01	with suicide attempt	Stage 1.01-2.01 AND Suicide attempt OR self-inflicted injuries AND loss of consciousness OR self-inflicted injury penetrating the pleural space [chest x-ray report] OR self-inflicted injury lacerating any artery [operative/pathology report] OR self-inflicted injury lacerating any nerve [operative/pathology report] OR self-inflicted injury penetrating the peritoneal space [operative/pathology report] OR fracture of the spinal column [x-ray report] OR fracture of the tibia or fibula [x-ray report] OR fracture of the femur [x-ray report]
3.02	with disorientation or seizure disorder	Stage 1.01-3.01 AND <b>disorientation:</b> OR seizures [EEG report or physical examination]
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.03-3.03 AND death

## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association, 1994:204–212.

Jaffe JH. Amphetamine (or Amphetamine-like) – related disorder. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:791–799.

# Clinical Criteria for Disease Staging

PSY07

**Disease: PSY07 Drug Abuse, Dependence, Overdose: Barbiturate**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Barbiturate abuse	Barbiturate use which meets DMS-IV criteria for abuse [psychiatrist report] OR History of use AND failure to fulfill major role obligations OR recurrent use in physically dangerous situations OR recurrent barbiturate related legal problems OR continued use despite related social or interpersonal use related problems
1.02	Barbiturate dependence	Stage 1.01 AND Barbiturate use which meets DSM-IV criteria for dependence [psychiatrist report] [3 or more criteria in a 12 month period]: Tolerance OR withdrawal OR increased use OR desire or efforts to decrease use OR increased time spent obtaining barbiturates OR reduced social or occupational activities OR recurrent use despite negative physical OR psychological or social effects.
2.01	Barbiturate dependence with withdrawal syndrome	Stage 1.01 - 1.02 AND two (or more) of the following on cessation of drug: autonomic hyperactivity OR increased hand tremor OR insomnia OR nausea or vomiting OR hallucinations or illusions: visual, tactile, or auditory OR psychomotor agitation OR anxiety
2.02	Barbiturate dependence with electrolyte imbalance or dehydration	Stage 1.02 - 2.01 AND <b>dehydration:</b> OR <b>hypernatremia:</b> OR <b>hyponatremia:</b> OR <b>hypokalemia:</b> OR <b>hyperkalemia:</b>
2.03	Barbiturate intoxication	Stage 1.01 - 2.02 AND barbiturate serum drug level $\geq$ normal [chemistry report] OR phenobarbital level > 50 ug/ml [chemistry report]

# Clinical Criteria for Disease Staging

**Disease: PSY07 Drug Abuse, Dependence, Overdose: Barbiturate**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
3.01	with seizures	Stage 1.02-2.03 AND seizures [EEG report or physical examination]
3.02	with disorientation	Stage 1.02 - 3.01 AND <b>disorientation:</b>
3.03	with respiratory failure	Stage 2.03 -3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 2.03 - 3.03 AND <b>coma:</b>
3.05	with shock	Stage 2.03 - 3.04 AND <b>shock:</b>
4.00	with death	Stage 2.03 -3.05 AND death

## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:261-270.

Ciraulo DA, Greenblatt DJ. Sedative, hypnotic -, or anxiolytic – related disorders. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:872-887.

# Clinical Criteria for Disease Staging

**Disease: PSY08 Drug Abuse, Dependence, Overdose: Cannabis**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Cannabis abuse	Cannabis use which meets DSM-IV criteria for abuse [psychiatrist report] OR history of use AND failure to fulfill major role obligations OR recurrent cannabis use in physically dangerous situations OR recurrent cannabis related legal problems OR continued cannabis use despite social or interpersonal use related problems
1.02	Cannabis dependence	Stage 1.01 AND cannabis use which meets DSM-IV criteria for dependence (3 or more criteria in a 12 month period) [psychiatrist report]: tolerance OR withdrawal OR increased use OR desire or efforts to decrease use OR increased time spent obtaining cannabis OR reduced social or occupational activities OR recurrent use despite negative physical OR psychological or social effects
1.03	with panic reaction	Stage 1.01 - 1.02 AND panic reaction ≥ 10 minutes after ingestion of cannabis
2.01	with schizophrenia	History of schizophrenia AND exacerbation of schizophrenia after use of cannabis
2.02	with reckless behavior	Stage 1.01-2.01 AND involvement in a life-threatening situation while intoxicated with cannabis
2.03	with drug related injury	Stage 1.01-2.02 AND injury during period of drug effect
3.01	with coma	Stage 2.03 AND <b>coma:</b>
3.02	with shock	Stage 2.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease: PSY08 Drug Abuse, Dependence, Overdose: Cannabis**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
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## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:215–221.

Woody GE, MacFadden W. Cannabis – related disorders. In. : Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:810–817.

# Clinical Criteria for Disease Staging

**Disease: PSY09 Drug Abuse, Dependence, Overdose: Cocaine**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Cocaine abuse	Cocaine use which meets DSM-IV criteria for abuse [psychiatrist report] OR history of use AND failure to fulfill major role obligations OR recurrent cocaine use in physically dangerous situations OR recurrent cocaine related legal problems OR continued cocaine use despite social or interpersonal use related problems
1.02	Cocaine dependence	Stage 1.01 AND Cocaine use which meets DSM-IV criteria for dependence (3 or more criteria in a 12 month period) [psychiatrist report]: tolerance OR withdrawal OR increased use OR desire or efforts to decrease use OR increased time spent obtaining cocaine OR reduced social or occupational activities OR recurrent use despite negative physical psychological or social effects
2.01	Cocaine intoxication	Stage 1.01 - 1.02 AND recent use of cocaine AND two (or more) or the following, during or after use <b>tachycardia:</b> OR <b>bradycardia:</b> OR pupillary dilation OR <b>hypotension:</b> OR <b>hypertension:</b> OR perspiration or chills OR nausea or vomiting OR psychomotor agitation or retardation OR muscular weakness OR chest pain OR <b>cardiac arrhythmias:</b> OR dyskinesias OR dystonias

# Clinical Criteria for Disease Staging

PSY09

**Disease: PSY09 Drug Abuse, Dependence, Overdose: Cocaine**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
2.02	with hallucinations or psychosis	Stage 1.01 - 2.01 AND no history of schizophrenia prior to cocaine abuse AND no history of bipolar illness prior to cocaine abuse AND visual hallucinations OR auditory hallucinations OR psychosis
2.03	with suicidal ideation	Stage 1.01-2.02 AND suicidal ideation
3.01	with suicide attempt	Stage 1.01-2.03 AND Suicide attempt OR self-inflicted injuries AND loss of consciousness OR self-inflicted injury penetrating the pleural space [chest x-ray report] OR self-inflicted injury lacerating any artery [operative/pathology report] OR self-inflicted injury lacerating any nerve [operative/pathology report] OR self-inflicted injury penetrating the peritoneal space [operative/pathology report] OR fracture of the spinal column [x-ray report] OR fracture of the tibia or fibula [x-ray report] OR fracture of the femur [x-ray report]
3.02	with seizures	Stage 1.01-3.01 AND seizures [EEG report or physical examination]
3.03	with myocardial infarction	Stage 1.01-3.02 AND <b>acute myocardial infarction:</b>
3.04	with cerebrovascular accident	Stage 1.01-3.03 AND intracranial hemorrhage [CT scan report or MRI report] OR intracranial infarction [CT scan report or MRI report]
3.05	with respiratory failure	Stage 1.01-3.04 AND <b>respiratory failure:</b>
3.06	with shock	Stage 2.01-3.05 AND <b>shock:</b>

# Clinical Criteria for Disease Staging

PSY09

**Disease: PSY09 Drug Abuse, Dependence, Overdose: Cocaine**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
4.00	with death	Stage 2.01-3.06 AND death

## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association, 1994:221–229.

Jaffe JH. Cocaine – related disorders. In.: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:817–831.



# Clinical Criteria for Disease Staging

**Disease: PSY10 Drug Abuse, Dependence, Overdose: Hallucinogen**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Hallucinogen abuse	Hallucinogen use which meets DMS-IV criteria for abuse [psychiatrist report] OR History of use AND failure to fulfill major role obligations OR recurrent use in physically dangerous situations OR recurrent hallucinogen related legal problems OR continued use despite use related social or interpersonal problems
1.02	Hallucinogen dependence	Stage 1.01 AND hallucinogen use which meets DSM-IV criteria for dependence (3 or more criteria in a 12 month period) [psychiatrist report] tolerance OR craving OR increased use OR desire or efforts to decrease use OR increased time spent using and recovering from hallucinogen OR reduced social or occupational activities OR recurrent use despite negative physical OR psychological or social effects
2.01	Hallucinogen intoxication	Stage 1.01 - 1.02 AND perceptual changes, in a state of full alertness, ≤ 1 hour after ingestion (depersonalization, derealization, illusions, hallucinations) AND two (or more) of the following, ≤ 1 hour after ingestion pupillary dilation OR <b>tachycardia:</b> OR sweating OR palpitations OR blurred vision OR tremors OR uncoordinated
2.02	with psychotic reaction	Stage 1.01 - 2.01 History of hallucinogen abuse AND paranoia OR persistent personality changes OR persistent psychotic state OR "flashback" phenomenon
2.03	with drug related injury	Stage 1.01-2.02 AND injury during period of drug effect

# Clinical Criteria for Disease Staging

**Disease: PSY10 Drug Abuse, Dependence, Overdose: Hallucinogen**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
3.01	with suicide attempt	Stage 1.01-2.03 AND Suicide attempt OR self-inflicted injuries AND loss of consciousness OR self-inflicted injury penetrating the pleural space [chest x-ray report] OR self-inflicted injury lacerating any artery [operative/pathology report] OR self-inflicted injury lacerating any nerve [operative/pathology report] OR self-inflicted injury penetrating the peritoneal space [operative/pathology report] OR fracture of the spinal column [x-ray report] OR fracture of the tibia or fibula [x-ray report] OR fracture of the femur [x-ray report]
3.02	with seizure	Stage 1.01-3.01 AND seizure [EEG report or physical examination]
3.03	with coma	Stage 1.01-3.02 AND <b>coma:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:229-242, 255-261.

Crowley TJ. Hallucinogen – related disorders, inhalant – related disorders, Phencyclidine or Phencyclidine-like – related disorders. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:831–872.

# Clinical Criteria for Disease Staging

**Disease: PSY11 Drug Abuse, Dependence, Overdose: Opioid**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Opioid abuse	Opioid use which meets DSM -IV criteria for abuse [psychiatrist report]: OR history of use AND failure to fulfill major role obligations OR recurrent use in physically dangerous situations OR recurrent opioid related legal problems OR continued use despite social or interpersonal use-related problems
1.02	Opioid dependence	Stage 1.01 AND opioid use which meets DSM-IV criteria for dependence (3 or more criteria in a 12 months period) [psychiatrist report]: tolerance OR withdrawal OR increased use OR desire or efforts to decrease use OR increased time spent obtaining opioids OR reduced social or occupational activities OR recurrent use despite negative physical OR psychological or social effects
2.01	with cellulitis	Stage 1.01-1.02 AND <b>cellulitis:</b>
2.02	with pulmonary complications	Stage 1.01-2.01 AND pulmonary fibrosis [chest x-ray report] OR <b>COPD:</b> OR <b>pneumonia:</b>
2.03	with osteomyelitis	Stage 1.01-2.02 AND <b>osteomyelitis:</b>
3.01	with endocarditis	Stage 1.01-2.03 AND <b>endocarditis:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>

# Clinical Criteria for Disease Staging

PSY11

**Disease: PSY11 Drug Abuse, Dependence, Overdose: Opioid**

**Etiology: Psychogenic; Toxicologic**

Stage	Description	Diagnostic findings
4.00	with death	Stage 2.01-3.05 AND death

## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:247–255.

Jaffe JH. Opioid – related disorders. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:842–864.

# Clinical Criteria for Disease Staging

**Disease: PSY12 Drug Abuse, Dependence, Overdose: Other**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Other drug abuse	
1.02	Other drug dependence	
2.01	Other drug dependence with withdrawal	
2.02	Other drug dependence with eletrolyte imbalance or dehydration	
2.03	with intoxication	
3.01	with seizures	
3.02	with disorientation	
3.03	with respiratory failure	
3.04	with coma	
3.05	with shock	
4.00	with death	

**References**

# Clinical Criteria for Disease Staging

**Disease: PSY13 Eating disorders: Anorexia Nervosa**

**Etiology: Psychogenic**

Stage	Description	Diagnostic findings
1.01	Anorexia nervosa	Refusal to maintain 85% of minimally normal body weight for age and height AND intense fear of becoming fat or gaining weight AND inability to perceive body size
2.01	with anemia	Stage 1.01 AND <b>anemia:</b>
2.02	with hypokalemia	Stage 1.01-2.01 AND <b>hypokalemia:</b>
2.03	with hypernatremia	Stage 1.01-2.02 AND <b>hypernatremia:</b>
2.04	with hypoadrenalism	Stage 1.01-2.03 AND <b>hypoadrenalism:</b>
3.01	with severe malnutrition	Stage 1.01-2.04 AND weight loss $\geq$ 50% of ideal body weight AND pitting pedal edema AND <b>hypoproteinemia:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

## References

American Psychiatric Association. Diagnostic and Statistic Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:539–545.

Garfinkel PE. Eating disorders. In.: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:1361–1371.

# Clinical Criteria for Disease Staging

**Disease: PSY14 Eating disorders: Bulimia Nervosa**

**Etiology: Psychogenic**

Stage	Description	Diagnostic findings
1.01	Bulimia nervosa	Recurrent episodes of binge eating as defined in DSM-IV AND recurrent inappropriate efforts to prevent weight gain (laxatives, diuretics, enemas, fasting, excessive exercise) AND binge eating and weight control efforts both occur $\geq$ twice weekly for three months
1.02	with self induced vomiting	Stage 1.01 AND self induced vomiting as a significant method to control weight
2.01	with fluid and electrolyte disturbances	Stage 1.01 - 1.02 AND <b>hypokalemia:</b> OR <b>hypernatremia:</b> OR <b>dehydration:</b> OR <b>alkalosis:</b>
2.02	with cardiac arrhythmia	Stage 1.01 - 2.01 AND <b>cardiac arrhythmias:</b>
2.03	with esophageal tears	Stage 1.01 - 2.02 AND esophageal tear [operative/pathology report]
2.04	with gastric rupture	Stage 1.01 - 2.03 AND gastric rupture [operative/pathology report]
3.01	with shock	Stage 1.01 - 2.04 AND <b>shock:</b>
4.00	with death	Stage 1.01 - 3.01 AND Death

## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:545-550.
Berkow R, Beers MH, eds. In. Merck Manual. 17th ed. Rahway, NJ: Merck & Co., Inc.; 1999:1597–1598.
Garfinkle PE. Eating disorders. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:1361–1371.

**Disease: PSY15 Generalized Anxiety Disorder**

**Etiology: Psychogenic**

Stage	Description	Diagnostic findings
1.01	Generalized anxiety disorder	Generalized anxiety disorder which meets DSM-IV criteria [psychiatrist report] AND < 6% change in body weight > 1 year
2.01	with interference of normal function	Stage 1.01 AND history of ≥ 2 days of absence from employment a year AND ≥ 6% change in body weight > 1 year
2.02	wth severe impairment of normal function	Stage 1.01-2.01 AND history of ≥ 5 days of absence from employment a year AND unable to maintain housing

**References**

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:393–444.

Papp LA, Gorman JM. Generalized anxiety disorder. In.: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:1236–1249.



**Disease: PSY16 Obsessive-Compulsive Neurosis**

**Etiology: Psychogenic**

Stage	Description	Diagnostic findings
1.01	Obsessive-compulsive disorder	Obsessive-compulsive disorder which meets DSM-IV criteria [psychiatrist report] Obsessions, defined by: recurrent, intrusive, inappropriate thoughts that cause marked distress AND thoughts that are not simply excessive worries about real life problems AND attempts to suppress or neutralize such thoughts with other thoughts AND recognition that obsessive thoughts are a product of one's own mind OR Compulsions defined by: repetitive behaviors or mental acts one is driven to perform AND repetitive behaviors or mental acts to prevent distress or a dreaded situation AND recognition that the obsessions and/or compulsions are excessive or unrealistic AND symptoms cause marked distress OR take more than one hour daily OR significantly interfere with occupational or social activities
2.01	with somatic manifestations	Stage 1.1 AND obsessive-compulsive behavior significantly interferes with usual normal activities AND dermatological problems due to excessive washing, body cleansing, or hair pulling OR anorexia OR development of tics OR excessive use of alcohol, sedatives, hypnotics or anxiolytic medications OR marked fatigue
2.02	Obsessive-compulsive disorder with marked impairment of social, occupational or academic function	Stage 1.01-2.01 AND inability to maintain household OR inability to maintain job AND compulsion becomes the major life activity

**References**

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:417-423.

Jenike MA. Obsessive-compulsive disorder. In.: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:1218-1226.

# Clinical Criteria for Disease Staging

**Disease: PSY80 Schizophrenia**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
1.01	Schizophrenia - Residual Type	Schizophrenia which has met DSM-IV criteria at some time in the past [psychiatrist report] AND absence of prominent psychotic symptoms AND presence of negative symptoms. (Affective flattening, poverty of speech, avolition, anhedonia) OR major symptoms present in mild form (odd beliefs, unusual perceptions)
1.02	Schizophreniform Disorder	A condition meeting DSM-IV criteria for Schizophrenia, but lasting > 1 month and < 6 months
1.03	Schizophrenia	Schizophrenia which meets DSM-IV criteria [psychiatrist report] AND two (or more) of the following symptoms delusions OR hallucinations OR disorganized speech OR grossly disorganized or catatonic behavior OR negative symptoms AND symptoms present for at least 6 months
2.01	Schizophrenia, Moderate	Stage 1.03 AND unable to maintain employment OR unable to maintain household OR unable to care for self OR unable to maintain prior level of relationships OR history of threats of bodily injury to self of others
2.02	Severe Schizophrenia	Stage 2.01 AND attempted physical injury to others OR catatonic excitement OR catatonia
2.03	with history of assault or murder conviction	Stage 2.01-2.02 AND inflicted physical injury to individuals OR convicted of murder

# Clinical Criteria for Disease Staging

**Disease: PSY80 Schizophrenia**

**Etiology: Genetic (or hereditary); Psychogenic**

Stage	Description	Diagnostic findings
3.01	with suicide attempt or convicted of murder or assault	Stage 2.01-2.03 AND Suicide attempt OR self-inflicted injuries AND loss of consciousness OR self-inflicted injury penetrating the pleural space [chest x-ray report] OR self-inflicted injury lacerating any artery [operative/pathology report] OR self-inflicted injury lacerating any nerve [operative/pathology report] OR self-inflicted injury penetrating the peritoneal space [operative/pathology report] OR fracture of the spinal column [x-ray report] OR fracture of the tibia or fibula [x-ray report] OR fracture of the femur [x-ray report] OR convicted of murder or assault
3.02	with shock	Stage 2.02-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.02-3.02 AND death

## References

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. American Psychiatric Association. 1994:273–296.

Lipton AA, Cancro R. Schizophrenia: clinical features. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry. 6th ed. Baltimore, MD: Williams & Wilkins; 1995:968–987.

**Disease: PSY81 Autism**

**Etiology:**

<b>Stage</b>	<b>Description</b>	<b>Diagnostic findings</b>
1.01	Infantile autism	
2.01	with seizures or convulsions	
3.01	with IQ < 50	

**References**

**Disease: PSY82 Other Neuroses**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Other neuroses, personality disorders and psychogenic disorders	

References

**Disease: PSY83 Other Psychoses**

**Etiology:**

Stage	Description	Diagnostic findings
0.00	Observation for suspected mental condition	Added stage 5/8/06 cb
1.01	Organic delusions, hallucinosis, transient organic mental disorders and other psychoses	
3.01	Delirium	

**References**

**Disease: RES01 Asbestosis**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Asymptomatic pulmonary asbestosis	History of exposure to asbestos dust > 10 years AND small irregular or linear lung opacities consistent with asbestosis [chest x-ray report or CT scan report] OR pleural plaques [chest x-ray report or CT Scan report] OR pleural thickening [chest x-ray report or CT Scan report]
1.02	with symptomatic pulmonary fibrosis	Stage 1.01 AND <b>COPD:</b> OR pulmonary fibrosis [chest x-ray report]
2.01	with progressive pulmonary fibrosis	Stage 1.01 AND forced expiratory volume in 1 second (FEV <sub>1</sub> ) ≤ 60% of predicted value [pulmonary function tests]
3.01	with cor pulmonale	Stage 1.01-2.01 AND <b>cor pulmonale:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.02-3.03 AND death

**References**

Madan I. ABC of work related disorders. occupational asthma and other respiratory diseases. <i>BMJ</i> . 1996;313(7052):291-4.
Rudd RM. New developments in asbestos-related pleural disease. <i>Thorax</i> . 1996;51(2):210-6.
Speizer FE. Environmental lung diseases. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. <i>Harrison's Principles of Internal Medicine</i> . 14th ed. New York, NY: McGraw-Hill; 1998:1429-1437.
Stauffer JL. Lung. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. <i>Current Medical Diagnosis &amp; Treatment</i> . Stamford, CT: Appleton & Lange; 1998:251-333.
Wagner GR. Asbestosis and silicosis. <i>Lancet</i> . 1997;349(9061):1311-5.

# Clinical Criteria for Disease Staging

RES02

**Disease: RES02 Asthma**

**Etiology: Idiopathic; Immune**

Stage	Description	Diagnostic findings
1.01	Asymptomatic bronchial asthma	History of bronchial asthma OR history of paroxysms of wheezing or bronchoconstriction that resolve with treatment OR $\geq 15\%$ increase in forced expiratory volume in 1 second, FEV1, following two puffs of a beta-adrenergic agonist
2.01	Mild intermittent bronchial asthma	Stage 1.01 AND diffuse bilateral expiratory or inspiratory wheezing AND peak expiratory flow rate or forced expiratory volume/min $\geq 80\%$ predicted value [PEFR report] AND $\leq 2$ days/week with asthma symptoms
2.02	Mild persistent bronchial asthma	Stage 1.01 AND diffuse bilateral expiratory or inspiratory wheezing AND peak expiratory flow rate or forced expiratory volume/min $\geq 80\%$ predicted value [PEFR report] AND 3-6 days/week with asthma symptoms
2.03	Moderate persistent bronchial asthma	Stage 1.01 AND diffuse bilateral expiratory or inspiratory wheezing AND peak expiratory flow rate or forced expiratory volume/min $\leq 80\%$ predicted value [PEFR report] AND peak expiratory flow rate or forced expiratory volume/min $> 60\%$ predicted value [PEFR report] OR daily asthma symptoms
3.01	Severe persistent bronchial asthma	Stage 1.01 AND diffuse bilateral expiratory or inspiratory wheezing AND peak expiratory flow rate or forced expiratory volume/min $\leq 60\%$ predicted value [PEFR report] OR continuous asthma symptoms
3.02	Status asthmaticus or severe asthma	Stage 2.01-3.01 AND <b>hypoxemia:</b> AND peak expiratory flow rate or forced expiratory volume/min $< 30\%$ predicted value [PEFR report] OR PEFr $< 100$ L/min [PEFR report] OR status asthmaticus
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>



**Disease: RES02 Asthma**

**Etiology: Idiopathic; Immune**

Stage	Description	Diagnostic findings
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

### References

Bone RC. Goals of asthma management. a step-care approach. <i>Chest</i> . 1996;109(4):1056-65.
McFadden Jr ER. Asthma. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. <i>Harrison's Principles of Internal Medicine</i> . 14th ed. New York, NY: McGraw-Hill; 1998:1419-1426.
National Institutes of Health Consensus Development Conference Consensus Statement. Practical guide for the diagnosis and management of asthma. October 1, 1997.
Niederman MS, Peters SP. Update in pulmonary medicine. <i>Annals of Internal Medicine</i> . 1998;128(3):208-15.
Sly RM. Asthma. In: Behrman RE, Kliegman RM, Arvin AM, Nelson WE, eds. <i>Nelson Textbook of Pediatrics</i> . 15th ed. Philadelphia, PA: WB Saunders; 1996:628-641.
Stauffer JL. Lung. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. <i>Current Medical Diagnosis &amp; Treatment</i> . Stamford, CT: Appleton & Lange; 1998:251-333.

**Disease: RES03 Berylliosis**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Berylliosis	History of exposure to beryllium dust or fumes OR beryllium toxicity [toxicology report] AND noncaseating pulmonary granuloma [operative/pathology report] OR hilar adenopathy [chest x-ray report] AND diffuse pulmonary infiltrates [chest x-ray report]
2.01	with pulmonary impairment	Stage 1.01 AND <b>restrictive lung disease:</b>
2.02	with spontaneous pneumothorax	Stage 1.01-2.01 AND pneumothorax [chest x-ray report]
3.01	with cor pulmonale	Stage 1.01-2.02 AND <b>cor pulmonale:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

Kreiss K, Mroz MM, Zhen B, Wiedemann H, Barna B. Risks of beryllium disease related to work processes at a metal, alloy, and oxide production plant. *Occupational & Environmental Medicine*. 1997;54(8):605-12.

Newman LS. Immunology, genetics, and epidemiology of beryllium disease. *Chest*. 1996;109(3 Suppl):40S-43S.

Speizer FE. Environmental lung diseases. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. *Harrison's Principles of Internal Medicine*. 14th ed. New York, NY: McGraw-Hill; 1998:1429-1437.

Stauffer JL. Lung. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. *Current Medical Diagnosis & Treatment*. Stamford, CT: Appleton & Lange; 1998:251-333.

# Clinical Criteria for Disease Staging

RES04

**Disease: RES04 Byssinosis**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Early byssinosis	History of current employment in areas with cotton, flax and hemp dust AND history of dyspnea recurring on return to work after $\geq$ 48hour exposure free period OR Forced expiratory volume in 1 second (FEV <sub>1</sub> ) diminished from baseline within 8 hours of return to work after 48 hour exposure free period [pulmonary function tests]
1.02	Symptomatic byssinosis	History of current employment in areas with cotton, flax and hemp dust AND wheezing that resolves $\geq$ 48 hours after cessation of exposure OR peak expiratory flow rate improves from baseline $\geq$ 48 hour exposure free period [pulmonary function tests] AND no new infiltrates [chest x-ray report]
2.01	with chronic bronchitis	Stage 1.01-1.02 AND productive cough for $\geq$ 3 months of the year for $\geq$ 2 consecutive years
2.02	with early chronic obstructive pulmonary disease	Stage 1.01-2.01 AND <b>COPD:</b>
3.01	with cor pulmonale	Stage 1.01-2.02 AND <b>cor pulmonale:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

## References

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McL Niven R. Pickering CA. Byssinosis: a review. Thorax. 1996;51(6):632-7.

Speizer FE. Environmental lung diseases. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:1429-1437.

Stauffer JL. Lung. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1998:251-333.

# Clinical Criteria for Disease Staging

RES05

**Disease: RES05 Chronic Obstructive Pulmonary Disease**

**Etiology: Toxicologic; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
1.01	Chronic bronchitis	History of a recurrent productive cough occurring for a minimum of three months during a year for two successive years
1.02	Acute exacerbation of chronic bronchitis	Stage 1.01 AND history of malaise OR history of chills OR history of myalgia OR history of sore throat OR fever AND productive or nonproductive cough AND rhonchi AND no rales OR no lung parenchymal infiltrates (chest x-ray documents no infiltrate)
2.01	Chronic obstructive pulmonary disease, mild	Forced expiratory ventilation in 1 second (FEV <sub>1</sub> ) < 75% of predicted value [pulmonary function tests] AND maximal voluntary ventilation (MVV) < 80% of predicted value [pulmonary function tests] AND residual volume (RV) > 120% of predicted value [pulmonary function tests]
2.02	Chronic obstructive pulmonary disease, moderate	Forced expiratory ventilation in 1 second (FEV <sub>1</sub> ) < 60% of predicted value [pulmonary function tests] AND maximal voluntary ventilation (MVV) < 65% of predicted value [pulmonary function tests] AND residual volume (RV) > 150% of predicted value [pulmonary function tests]
2.03	Chronic obstructive pulmonary disease, severe	Forced expiratory ventilation in 1 second (FEV <sub>1</sub> ) < 40% of predicted value [pulmonary function tests] AND maximal voluntary ventilation (MVV) < 45% of predicted value [pulmonary function tests] AND residual volume (RV) > 200% of predicted value [pulmonary function tests]
3.01	Chronic obstructive pulmonary disease with pulmonary hypertension	Stage 2.01-2.03 AND peak systolic pulmonary artery pressure > 30 mmHg [pulmonary artery catheter report]
3.02	Chronic obstructive pulmonary disease with cor pulmonale	Stage 2.01-3.01 AND <b>cor pulmonale:</b>
3.03	Chronic obstructive pulmonary disease with acute respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 2.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**Disease: RES05 Chronic Obstructive Pulmonary Disease**

**Etiology: Toxicologic; Genetic (or hereditary)**

Stage	Description	Diagnostic findings
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**References**

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<p>Niederma MS, Peters SP. Update in pulmonary medicine. Annals of Internal Medicine. 1998;128(3):208-15.</p>
<p>Stauffer JL. Lung. In: Tierney Jr LM, McPhee SJ, papadakis MA, eds. Current Medical Diagnosis &amp; Treatment. Stamford, CT: Appleton &amp; Lange; 1998:251-333.</p>

# Clinical Criteria for Disease Staging

RES06

## Disease: RES06 Coal Miner's Pneumoconiosis

### Etiology: Toxicologic

Stage	Description	Diagnostic findings
1.01	Coal miner's pneumoconiosis	History of exposure to coal dust > 10 years AND multiple small rounded opacities ≤ 1 cm. in diameter throughout lung fields [chest x-ray report]
2.01	with progressive "massive" fibrosis	Stage 1.01 AND radiopacity ≥ 1 cm. in diameter in a background of coal miner's pneumoconiosis [chest x-ray report]
2.02	with chronic bronchitis	Stage 1.01-2.01 AND <b>chronic bronchitis:</b> productive cough ≥ 3 months/ year for ≥ 2 consecutive years
2.03	with chronic obstructive pulmonary disease	Stage 1.01-2.02 AND <b>COPD:</b>
3.01	with cor pulmonale	Stage 1.01-2.03 AND <b>cor pulmonale:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

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# Clinical Criteria for Disease Staging

RES07

**Disease: RES07 Croup**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Croupy cough or acute laryngotracheobronchitis	History of upper respiratory tract infection OR parainfluenza virus infection [respiratory culture] OR Hemophilus influenza infection [respiratory culture report] OR influenza A virus infection [respiratory culture] OR pertussis AND 'barking' raspy cough of croup OR subglottic narrowing [anteroposterior neck x-ray report] AND prolonged inspiration
1.02	with hoarseness	Stage 1.01 AND hoarseness
1.03	with inspiratory stridor	AND inspiratory stridor
2.01	Pneumonia with croup	Stage 1.01 AND <b>pneumonia:</b>
2.02	with pneumothorax or subcutaneous emphysema	Stage 1.01-2.01 AND pneumothorax [chest x-ray report] OR subcutaneous emphysema [chest x-ray report]
3.01	with hypoxemia	Stage 1.01-2.01 AND <b>hypoxemia:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

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# Clinical Criteria for Disease Staging

RES08

**Disease: RES08 Cystic Fibrosis**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
0.00	Cystic fibrosis genetic carrier	Added stage 5/8/06 cb
1.01	Cystic fibrosis	History of Mendelian inheritance pattern, autosomal recessive, for cystic fibrosis OR linkage markers for cystic fibrosis on chromosome 7 [chromosome study report] AND Sweat chloride concentration above > 80 meq/L ≥ age 20 on two occasions [quantitative pilocarpine iontophoresis sweat test] AND Sweat chloride concentration above > 60 meq/L ≤ age 20 on two occasions [quantitative pilocarpine iontophoresis sweat test]
1.02	with chronic Pseudomonas aeruginosa or Staphylococcus aureus bronchitis	Stage 1.01 AND loss of cilia and destruction and fibrosis of bronchial walls [operative/pathology report] OR bronchiectasis [bronchogram x-ray report or CT scan report] OR hyperinflation [chest x-ray report] Stage 1.01 AND productive cough which ≥ 3 months/ year ≥ 2 consecutive years AND Pseudomonas aeruginosa in sputum [culture report] OR Staphylococcus aureus in sputum [culture report]
1.03	with bronchiectasis or hyperinflation	Stage 1.01-1.02 AND loss of cilia and destruction and fibrosis of bronchial walls [operative/pathology report] OR bronchiectasis [bronchogram x-ray report or CT scan report] OR hyperinflation [chest x-ray report]
2.01	with chronic obstructive pulmonary disease or chronic restrictive lung disease	Stage 1.01-1.03 AND <b>COPD:</b> OR <b>restrictive lung disease:</b>
2.02	with pancreatic insufficiency	Stage 1.02-2.01 AND <b>pancreatic insufficiency:</b>
2.03	with diabetes mellitus	Stage 1.02-2.02 AND <b>diabetes mellitus:</b>
2.04	with meconium ileus	Stage 1.02-2.03 AND abnormally thick, tenacious and stringy meconium OR undigested albumin in stool (meconium/water, 1:1, mixture with trichloroacetic acid test yields precipitate) AND ileus pattern [KUB x-ray report]
2.05	with pneumonia	Stage 1.02-2.04 AND <b>pneumonia:</b>
2.06	with cirrhosis of the liver	Stage 1.02-2.05 AND cirrhosis of the liver [operative/pathology report or biopsy report or sonogram report or liver/spleen scan report]



**Disease: RES08 Cystic Fibrosis**

**Etiology: Genetic (or hereditary)**

Stage	Description	Diagnostic findings
2.07	with volvulus or intestinal obstruction	Stage 1.02-2.06 AND   volvulus [KUB x-ray report or operative/path report] OR    large bowel obstruction [KUB x-ray report]
2.08	with pneumothorax	Stage 1.02-2.07 AND   pneumothorax [chest x-ray report]
3.01	with cor pulmonale	Stage 1.02-2.08 AND <b>cor pulmonale:</b>
3.02	with sepsis	Stage 1.02-3.01 AND <b>sepsis:</b>
3.03	with respiratory failure	Stage 1.02-3.02 AND <b>respiratory failure:</b>
3.04	with coma	Stage 1.02-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.02-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.02-3.05 AND   death

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**Disease: RES09 Emphysema**

**Etiology: Genetic (or hereditary); Toxicologic**

Stage	Description	Diagnostic findings
1.01	Emphysema	Emphysema OR chronic obstruction of airways without bronchodilator response [pulmonary function test report] AND hyperinflation [chest x-ray report] AND reduced diffusing capacity [pulmonary function test report]
2.01	Moderately severe emphysema	Stage 1.01 AND FEV <sub>1</sub> < 65% predicted [pulmonary function test report]
2.03	Severe emphysema	Stage 1.01 AND FEV <sub>1</sub> < 50% predicted [pulmonary function test report]
3.01	with cor pulmonale	Stage 2.01-2.02 AND <b>cor pulmonale:</b>
3.02	with acute respiratory failure	Stage 2.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

RES10

**Disease: RES10 Hypersensitivity Pneumonitis**

**Etiology: Immune; Toxicologic**

Stage	Description	Diagnostic findings
1.01	Acute hypersensitivity pneumonitis or farmer's lung or bagassosis or bird-fancier's lung or suberosis or malt worker's lung or mushroom worker's lung or maple bark-stripper's lung or other extrinsic allergic alveolitis	History of exposure to allergen AND precipitating antibody to allergen [serology report] AND diffuse granulomatous interstitial pneumonitis [operative/pathology report or biopsy report or chest x-ray report] AND improvement in pneumonia with cessation of allergen exposure
1.02	with subacute hypersensitivity pneumonitis	Stage 1.01 AND subacute hypersensitivity pneumonitis OR <b>chronic time span:</b> symptoms or signs persists $\geq$ 3months/ year AND cough AND malaise AND dyspnea AND sputum production
2.01	with restrictive lung disease	Stage 1.01 AND <b>restrictive lung disease:</b>
2.02	with diffuse interstitial fibrosis	Stage 1.01-2.01 AND diffuse interstitial fibrosis [chest x-ray report]
3.01	with cor pulmonale	Stage 1.01-2.02 AND <b>cor pulmonale:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

RES11

**Disease: RES11 Influenza**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Influenza	Influenza [tissue culture reports isolation of influenza virus or convalescent versus acute antibody titer shows $\geq$ four fold increase] AND epidemic coryza OR <b>fever:</b> AND malaise AND productive cough AND myalgia
1.02	with acute sinusitis or otitis media or purulent bronchitis	Stage 1.01 AND acute sinusitis OR otitis media OR purulent bronchitis
2.01	with pneumonia	Stage 1.01-1.02 AND <b>pneumonia:</b>
2.02	with rhabdomyolysis	Stage 1.01-2.01 AND <b>rhabdomyolysis:</b>
3.01	with Reye's syndrome	Stage 1.01-2.02 AND <b>hypoglycemia:</b> AND <b>hyperammonemia:</b> AND <b>coagulation defect:</b> OR <b>jaundice:</b>
3.02	with aseptic meningitis	Stage 1.01-2.03 AND <b>aseptic meningitis:</b>
3.03	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.04	with coma	Stage 1.01-3.03 AND <b>coma:</b>
3.05	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.03-3.05 AND death

**Disease: RES11 Influenza**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

RES12

**Disease: RES12 Mycoplasma pneumoniae Infection**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Mycoplasma pharyngitis or bullous myringitis or otitis media or sinusitis	Mycoplasma pneumoniae titer increase 4 fold [microbiology/serology report] OR cold hemagglutinins > 1:32 [microbiology/serology report] AND pharyngitis OR bullous myringitis OR otitis media OR sinusitis [physical examination or sinus x-ray report] OR air/fluid level in tympanic membrane
1.02	Mycoplasma bronchopneumonia	Stage 1.01 AND new infiltrate [chest x-ray report]
2.01	with pleural effusion	Stage 1.02 AND pleural effusion [chest x-ray report]
2.02	with polyarthritis	Stage 1.01-2.01 AND polyarthritis
2.03	with hemolytic anemia	Stage 1.01-2.02 AND <b>hemolysis:</b> AND <b>anemia:</b>
2.04	with Guillain-Barre syndrome	Stage 1.01-2.03 AND progressive monoparesis or paraparesis within 6 weeks of a viral infection OR progressing paresthesia of lower extremities within 6 weeks of a viral infection
2.05	with Stevens-Johnson syndrome	Stage 1.01-2.04 AND erythema multiforme involving the skin and mucosae
2.06	with cardiac arrhythmias	Stage 1.01-2.05 AND <b>arrhythmias:</b>
3.01	with myocarditis or pericarditis	Stage 1.01-2.05 AND <b>myocarditis:</b> OR <b>pericarditis:</b>
3.02	with aseptic meningitis	Stage 1.01-3.01 AND <b>aseptic meningitis:</b>
3.03	with respiratory failure	Stage 2.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04

**Disease: RES12 Mycoplasma pneumoniae Infection**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

RES13

**Disease: RES13 Neoplasm, Malignant: Lungs, Bronchi, or Mediastinum**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of cancer of the lungs, bronchi or mediastinum	History of cancer of the lungs, bronchi or mediastinum
1.01	Early carcinoma of the lungs or bronchi or mediastinum	Stage 1 of the American Joint Committee on staging of non-small cell lung cancer OR Stage T1N0M0 of the American Joint Committee on staging of lung cancer OR Stage T2N0M0 of the American Joint Committee on staging of lung cancer
2.01	Extension of carcinoma of the lungs or bronchi or mediastinum	Stage 2 of the American Joint committee on staging non-small cell of lung cancer OR Stage T2N1M0 of the American Joint Committee on staging of lung cancer OR Stage T1N1M0 of the American Joint Committee on staging of lung cancer OR Stage 1.1 AND non-small cell metastasis to lymph nodes in the peribronchial or the ipsilateral hilar region, or both, including direct extension [operative/pathology report]
3.01	Advanced carcinoma of the lung or bronchi or mediastinum	Stage 3A of the American Joint Committee on staging non-small cell of lung cancer OR Stage T3 of the American Joint Committee on staging of lung cancer OR Stage T3N1 of the American Joint Committee on staging of lung cancer OR Stage T1N2 of the American Joint Committee on staging of lung cancer OR Stage T2N2 of the American Joint Committee on staging of lung cancer OR Stage T3N2 of the American Joint Committee on staging of lung cancer OR Stage 1.1-2.1 AND non-small cell tumor with direct extension into the chest wall , the diaphragm, the mediastinal pleura, or the parietal pericardium; or a tumor in the main bronchus < 2 cm distal to the carina without involving the carina; or associated atelectasis or obstructive pneumonitis of the entire lung [operative/pathology report] OR non-small cell metastasis to ipsilateral mediastinal lymph nodes and/or subcarinal lymph nodes [operative/pathology report] OR limited small cell carcinoma [operative/pathology report] OR small cell carcinoma confined to one hemithorax and hilar, mediastinal, and supraclavicular nodes [operative/pathology report]



# Clinical Criteria for Disease Staging

**Disease: RES13 Neoplasm, Malignant: Lungs, Bronchi, or Mediastinum**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	with distant metastasis	Stage 3B of the American Joint Committee on staging of lung cancer OR Stage 4 of the American Joint Committee on staging of lung cancer OR Stage T4 of the American Joint Committee on staging of lung cancer OR Stage N3 of the American Joint Committee on staging of lung cancer OR Stage M1 of the American Joint Committee on staging of lung cancer OR Stage 1.01-3.01 AND non-small cell metastasis to contralateral mediastinal lymph nodes, contralateral hilar lymph nodes, ipsilateral or contralateral scalene or supraclavicular lymph nodes [operative/pathology report] OR non-small cell a tumor of any size with invasion of the mediastinum, heart, great vessels, trachea, esophagus, vertebral body, or carina; or with a malignant pleural or pericardial effusion; or with satellite tumor nodules within the ipsilateral lobe of the lung containing the primary tumor [operative/pathology report] OR non-small cell distant metastasis [operative/pathology report] OR extensive small cell carcinoma [operative/pathology report] OR small cell carcinoma spread to more distant sites[operative/pathology report]
3.03	with shock	Stage 2.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

RES14

**Disease: RES14 Parainfluenza Virus Infection**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Parainfluenza virus infection	Parainfluenza virus infection [tissue culture reports isolation of influenza virus or convalescent versus acute antibody titer shows >four fold increase] AND coryza AND productive cough AND fever AND malaise AND myalgia  <u>Presumptive Diagnostic Findings:</u> Parainfluenza virus infection >4 rise in antibody titer [hemagglutination inhibition or by complement-fixation or neutralization tests in acute-and convalescent-phase serology reports] OR immunofluorescence of viral antigens in exfoliated cells from the respiratory tract [serology report]
1.02	with acute otitis media	Stage 1.01 AND otitis media
1.03	with croup	Stage 1.01 AND barking cough of croup OR laryngotracheobronchitis
1.04	with bronchiolitis	Stage 1.01 AND prolonged expiratory phase with wheezing on physical examination AND hyperexpansion and increased peribronchial markings [chest x-ray report]
2.01	with pneumonia	Stage 1.01-1.04 AND <b>pneumonia:</b>
2.02	with bacterial tracheitis	Stage 1.01-2.01 AND dyspnea and tachypnea AND purulent airway secretions AND infected tracheal aspirate [Gram's stain [presence of many WBCs AND a single predominant organism OR tracheal aspirate [culture reports growth of pathologic organism(s)]
2.03	with hypoxemia	Stage 1.03-2.02 AND <b>hypoxemia:</b>
3.01	with acute upper airway obstruction	Stage 1.03-2.03 AND acute obstruction of the upper airway
3.02	with respiratory failure	Stage 1.03-3.01 AND <b>respiratory failure:</b>

**Disease: RES14 Parainfluenza Virus Infection**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
3.03	with shock	Stage 1.03-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.03-3.03 AND death

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# Clinical Criteria for Disease Staging

RES15

**Disease: RES15 Pneumonia: Bacterial**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Pneumonia in one lobe	<b>Pneumonia:</b>
2.01	with bacteremia	Stage 1.01 AND <b>bacteremia:</b>
2.02	with epiglottitis	Stage 1.01-2.01 AND H. influenza pneumonia [sputum c/s report or blood c/s report] AND epiglottitis
2.03	with empyema	Stage 1.1-2.2 AND empyema [thoracentesis report or effusion culture reports growth of pathologic organism(s)]
2.04	with lung abscess or bronchopleural fistula or bronchopleural cutaneous fistula	Stage 1.01-2.03 AND lung abscess [operative/pathology report] OR air/fluid level [chest x-ray report] OR air/fluid levels in pleural space [chest x-ray report] OR cutaneous fistula [chest x-ray report and physical exam]
2.05	with diffuse involvement of multiple lobes	Stage 1.01-2.04 AND lobular pneumonia in ≥ 2 lobes [chest x-ray report]
2.06	with septic arthritis	Stage 1.01-2.05 AND <b>septic arthritis:</b>
2.07	with osteomyelitis	Stage 1.01-2.06 AND <b>osteomyelitis:</b>
2.08	with peritonitis or subphrenic abscess	Stage 1.01-2.07 AND peritonitis [operative/pathology report or peritoneal fluid culture reports growth of same organism as pneumonia] OR subphrenic abscess [operative/pathology report]
2.09	with pericarditis	Stage 1.01-2.08 AND <b>pericarditis:</b>
3.01	with endocarditis	Stage 1.01-2.08 AND <b>endocarditis:</b>
3.02	with meningitis	Stage 1.01-3.01 AND <b>meningitis:</b>
3.03	with congestive heart failure	Stage 1.01-3.02 AND <b>congestive heart failure:</b>
3.04	with sepsis	Stage 1.01-3.03 AND <b>sepsis:</b>
3.05	with respiratory failure	Stage 1.01-3.04 AND <b>respiratory failure:</b>

# Clinical Criteria for Disease Staging

RES15

**Disease: RES15 Pneumonia: Bacterial**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
3.06	with shock	Stage 1.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.06 AND death

**Disease: RES15 Pneumonia: Bacterial**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**Disease: RES15 Pneumonia: Bacterial**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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	Wilson R. The role of infection in COPD. Chest. 1998;113(4 Suppl):242S-248S.	
	Yinnon AM, Butnaru A, Raveh D, Jerassy Z, Rudensky B. Klebsiella bacteraemia: community versus nosocomial infection. QJM. 1996;89(12):933-41.	

**Disease: RES16 Pneumonia: Chlamydial**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Chlamydia Pneumonia	<b>pneumonia:</b> AND Chlamydia psittaci titer increase 4 fold [complement fixation or microimmunofluorescent antibody microbiology/serology report] OR Chlamydia sp.titer increase 4 fold [complement fixation antibody microbiology/serology report]
2.01	with involvement of multiple lobes	Stage 1.01 AND lobular pneumonia in ≥ 2 lobes [chest x-ray report]
2.02	with hepatomegaly or splenomegaly	Stage 1.01-2.01 AND hepatomegaly [physical examination or ultrasound or CT scan report] splenomegaly [physical examination or ultrasound or CT scan report]
2.03	with pericarditis	Stage 1.01-2.02 AND <b>pericarditis:</b>
3.01	with endocarditis	Stage 1.01-2.03 AND <b>endocarditis:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND <b>shock:</b>

**References**

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# Clinical Criteria for Disease Staging

RES17

**Disease: RES17 Pneumonia: Legionella**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Legionella pneumonia	<b>pneumonia:</b> OR Legionella titer increase 4 fold $\geq$ 1:128 [microbiology/serology report] OR Legionella by direct fluorescent antibody stain of exudate [microbiology/serology report] OR Legionella soluble urinary antigen [urine chemistry report] OR Legionella by PCR DNA probe [molecular medicine or genetic analysis report]
1.02	with multiple lobe involvement	Stage 1.01 AND multilobular infiltrate [chest x-ray report]
1.03	with atelectasis	Stage 1.01-1.02 AND atelectasis [chest x-ray report]
2.01	with diarrhea or hyponatremia	Stage 1.01-1.03 AND diarrhea OR <b>hyponatremia:</b>
2.02	with empyema	Stage 1.01-2.01 AND empyema [thoracentesis report or effusion culture reports growth of pathologic organism(s)]
2.03	with lung abscess or cavitation	Stage 1.01-2.02 AND lung abscess [operative/pathology report or CT scan report] OR air/fluid level [chest x-ray report or CT scan report]
2.04	with pericarditis	Stage 1.01-2.02-03 AND <b>pericarditis:</b>
3.01	with endocarditis	Stage 1.01-2.04 AND <b>endocarditis:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with acute respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**Disease: RES17 Pneumonia: Legionella**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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**Disease: RES18 Pneumonia: Moraxella catarrhalis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Moraxella catarrhalis pneumonia in one lobe	<b>Pneumonia:</b> Stage 1.01 AND small multilobular infiltrate [chest x-ray report] OR bronchopneumonia [chest x-ray report]
1.02	with small areas in multiple lobes of bronchopneumonia	
2.01	with diffuse involvement of multiple lobes	Stage 1.01-1.02 AND lobular pneumonia in ≥ 2 lobes [chest x-ray report]
3.01	with endocarditis	Stage 1.01-2.02 AND <b>endocarditis:</b>
3.02	with meningitis	Stage 1.01-3.01 AND <b>meningitis:</b>
3.03	with sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND death

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**Disease: RES19 Pneumonia: Pneumocystis carinii**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Pneumocystis carinii pneumonia	Pneumocystis carinii pneumonia [sputum or bronchial washings stain document cysts or trophozoites of Pneumocystis carinii or biopsy reports infection with Pneumocystis carinii]
2.01	with hypoxemia	Stage 1.01 AND <b>hypoxemia:</b>
3.01	with respiratory failure	Stage 1.01-2.01 AND <b>respiratory failure:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

## References

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**Disease: RES20 Pulmonary Alveolar Proteinosis**

**Etiology: Genetic (or hereditary); Idiopathic**

Stage	Description	Diagnostic findings
1.01	Pulmonary alveolar proteinosis, sporadic or adult type	Alveolar proteinosis [lung biopsy report or segmental bronchoalveolar lavage report]
1.02	Congenital pulmonary alveolar proteinosis	Alveolar proteinosis [immunostaining of lung biopsy or PCR of infant's blood, lung tissue of lavage of lung AND genetic deficiency of the lung surfactant apoprotein B (SP-B) due to a defect in a two base pair insertion (121 ins 2) in codon 121 or deletion of exon 4 preventing the translation of SB protein and generation of a restriction fragment length polymorphism
2.01	with hypoxemia	Stage 1.01-1.02 AND <b>hypoxemia:</b>
2.02	with restrictive lung disease pattern	Stage 1.01-2.01 AND <b>restrictive lung disease:</b>
3.01	with cor pulmonale	Stage 1.01-2.01 AND <b>cor pulmonale:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**References**

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**Disease: RES21 Pulmonary Embolism**

**Etiology: Genetic (or hereditary); Metabolic; Trauma**

Stage	Description	Diagnostic findings
3.01	Pulmonary embolism	Pulmonary embolism [high probability nuclear ventilation/perfusion scan or pulmonary angiogram report]  <u>Presumptive Diagnostic Findings:</u> Low to moderate probability pulmonary embolism [nuclear ventilation/perfusion scan ] AND plasma D-dimer enzyme-linked immunosorbent assay (ELISA) >500 ng/mL [chemistry report] AND right ventricular dyskinesia [echocardiogram report]
3.02	with pulmonary infarction	Stage 3.01 AND pulmonary infarction [chest x-ray reports]
3.03	with right ventricular hypokinesia	Stage 3.01-3.02 AND right ventricular hypokinesia [echocardiogram report]
3.04	with pulmonary hypertension	Stage 3.01-3.03 AND <b>pulmonary hypertension:</b>
3.05	with cor pulmonale	Stage 3.01-3.04 AND <b>cor pulmonale:</b>
3.06	with shock	Stage 2.01-3.05 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.06 AND death

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**Disease: RES22 Radiation Pneumonitis**

**Etiology: Toxicologic; Trauma**

Stage	Description	Diagnostic findings
1.01	Asymptomatic radiation pneumonitis	History of ionizing radiation exposure > 25 Gy in ≤ 6 months AND ground glass opacification [chest x-ray report] OR hazy infiltrates [chest x-ray report] OR lymphocytic interstitial pneumonitis [operative/pathology report]
2.01	with pulmonary impairment	Stage 1.01 AND <b>restrictive lung disease:</b>
3.01	with cor pulmonale	Stage 1.01-2.01 AND <b>cor pulmonale:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

**Disease: RES23 Respiratory Syncytial Virus Infections**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
1.01	Coryza, or acute nasopharyngitis, or common cold	Nasal congestion and discharge AND malaise AND infection by respiratory syncytial virus [tissue culture isolation report or immunofluorescent or enzyme immunoassay for direct detection of viral antigen]
1.02	with conjunctivitis	Stage 1.01 AND inflammation of the conjunctiva
1.03	with pharyngitis	Stage 1.01-1.02 AND sore throat AND inflammation of the pharynx
1.04	with bronchitis	Stage 1.01-1.03 AND productive cough
1.05	with bronchiolitis	Stage 1.01-1.04 AND prolonged expiratory phase with wheezing on PE AND hyperexpansion and increased peribronchial markings [chest x-ray report]
1.06	with bronchopneumonia	Stage 1.01-1.05 AND bronchopneumonia [chest x-ray report]
1.07	with pneumonia	Stage 1.01-1.06 AND <b>pneumonia:</b>
2.01	with hypoxemia	Stage 1.01-1.07 AND <b>hypoxemia:</b>
3.01	with respiratory failure	Stage 1.01-2.02 AND <b>respiratory failure:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.07-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

RES24

**Disease: RES24 Rhino, Adeno, and Corona Virus Infections**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
0.00	Exposure to SARS associated corona virus	Added stage 5/8/06 cb
1.01	Coryza by rhinovirus or adenovirus or corona virus or acute nasopharyngitis or common cold	Nasal congestion and discharge AND malaise AND infection by rhinovirus [tissue culture report]
1.02	with conjunctivitis or keratoconjunctivitis	Stage 1.01 AND inflammation of the conjunctiva OR inflammation of the conjunctiva and cornea
1.03	with pharyngitis	Stage 1.01-1.02 AND sore throat AND inflammation of the pharynx
1.04	with acute sinusitis or otitis media	Stage 1.01-1.03 AND acute sinusitis OR otitis media
1.05	Bronchitis	Stage 1.01-1.04 AND productive cough
1.06	with bronchiolitis	Stage 1.01-1.05 AND prolonged expiratory phase with wheezing on physical exam AND hyperexpansion and increased peribronchial markings [chest x-ray report]
1.07	with bronchopneumonia	Stage 1.01-1.06 AND bronchopneumonia [chest x-ray report]
1.08	with pneumonia	Stage 1.01-1.08 AND <b>pneumonia:</b>
2.01	with hypoxemia	Stage 1.01-1.08 AND <b>hypoxemia:</b>
3.01	with aseptic meningitis	Stage 1.01-2.01 AND <b>aseptic meningitis</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.06-3.03 AND death

**Disease: RES24 Rhino, Adeno, and Corona Virus Infections**

**Etiology: Infection, Viral**

Stage	Description	Diagnostic findings
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**References**

Hayden FG, Gwaltney Jr JM. Viral infections. In: Murray JF, Nadel JA, eds. Textbook of Respiratory Medicine. Vol. 1, 2nd ed. Philadelphia, PA: WB Saunders; 1988:977-1035.
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# Clinical Criteria for Disease Staging

RES25

**Disease: RES25 Sarcoidosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Sarcoidosis	Noncaseating epithelioid granulomas [operative/pathology report] OR Kveim reaction (Kveim skin-test positive)  Presumptive Diagnostic Findings: Bililar adenopathy [chest x-ray report AND angiotensin converting enzyme > 2 standard deviations of normal range* *(normal value varies widely with different laboratories)
1.02	Sarcoidosis with involvement of the skin or sicca syndrome or arthritis	Stage 1.01 AND skin lesions containing noncaseating epithelioid granulomas [operative/pathology report] OR sicca syndrome (dryness of eyes or buccal mucosa) OR nonspecific arthritis OR joint WBC > 200 [arthrocentesis report] AND joint culture reports no growth AND joint glucose > 25 mg/dl [arthrocentesis report]
2.01	Sarcoidosis with nephrolithiasis	Stage 1.01-1.02 AND nephrolithiasis [intravenous urography report or nuclear renogram or sonography report or KUB report] OR dilated ureters [intravenous urography report or nuclear renogram or sonography report or KUB report]
2.02	Sarcoidosis with cranial nerve palsy	Stage 1.01-2.01 AND Cranial nerve palsy AND no new cerebral infarction [CT report or MRI report]
2.03	Sarcoidosis with blindness	Stage 1.01-2.02 AND <b>blindness:</b>
2.04	Sarcoidosis with diabetes insipidus	Stage 1.01-2.03 AND urine output of > 6.0 liters/24 hours AND urine specific gravity < 1.006 AND urine < 200 mOsm/l
2.05	Sarcoidosis with involvement of the pulmonary parenchyma	Stage 1.01-2.04 AND diffuse, bilateral reticulonodular infiltrates [chest x-ray report]
3.01	Sarcoidosis with pulmonary hypertension	Stage 1.01-2.05 AND pulmonary artery peak systolic pressure > 30 mmHg [pulmonary artery catheter report]

**Disease: RES25 Sarcoidosis**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
3.02	Sarcoidosis meningitis	Stage 1.01-3.01 AND <b>meningitis:</b>
3.03	Sarcoidosis with cor pulmonale	Stage 1.01-3.01 AND <b>cor pulmonale:</b>
3.04	Sarcoidosis with cardiac abnormalities	Stage 1.01-3.02 AND low cardiac output (echocardiogram reports ejection fraction < 50% or nuclear ejection fraction reports ejection fraction < 50% or cardiac catheterization shows cardiac output < 4.0 l/min) OR new onset bundle branch blocks or hemiblocks [EKG report or nuclear phase study report] OR new onset second degree heart block [EKG report] OR new onset third degree heart block [EKG report]
3.05	Sarcoidosis with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.06	with shock	Stage 1.1-3.4 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.05 AND <b>death</b>

**References**

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**Disease: RES26 Silicosis**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Simple nodular silicosis	History of exposure to free silica for $\geq$ 10 years AND round, small regular radiopacities $\leq$ 1 cm in diameter compatible with pneumoconiosis [chest x-ray report] AND 'eggshell' calcification of hilar and mediastinal nodes [chest x-ray report]
2.01	Conglomerate silicosis	Stage 1.01 AND finding of > 1 cm diameter round regular radiopacities in a background of pneumoconiosis [chest x-ray report]
2.02	with early chronic obstructive pulmonary disease or restrictive lung disease	Stage 1.01-2.01 AND <b>COPD:</b> OR <b>restrictive lung disease:</b>
3.01	with cor pulmonale	Stage 1.01-2.02 AND <b>cor pulmonale:</b>
3.02	with respiratory failure	Stage 1.01-3.02 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**References**

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# Clinical Criteria for Disease Staging

RES27

**Disease: RES27 Tuberculosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
0.00	Observation for suspected tuberculosis	Added stage 5/8/06 cb
1.01	M. Tuberculosis exposure	History of previously negative tuberculin skin test $\geq$ 1 yr. ago AND positive tuberculin skin test $<$ 1 yr. ago
1.02	Symptomatic primary tuberculosis	New infiltrate [chest x-ray report] AND sputum infected with AFB [gram stain report or culture report or DNA probe analysis or ELISA serology report]
1.03	Tuberculosis of the head and neck	Stage 1.01 AND cervical tuberculous lymphadenitis with ulceration [ulcer biopsy culture report or DNA probe analysis or ELISA serology or ELISA serology report growth of Mycobacterium tuberculosis] OR tuberculous oral ulcerations [oral ulcer culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis] OR tuberculous otitis media [effusion culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis]
1.04	Advanced primary tuberculosis	Stage 1.01-1.03 AND new infiltrate involves $\geq$ 1/3 of the lung volume [chest xray report]
2.01	Cavitary primary tuberculosis or tuberculosis pleural effusion	Stage 1.01-1.04 AND cavitation or abscess formation [chest x-ray report] OR pleural effusion [chest x-ray report] OR pleural tuberculosis [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report]
2.02	Miliary tuberculosis	Stage 1.01-2.01 AND miliary tuberculosis [chest x-ray report] OR bilateral pulmonary infiltrates [chest x-ray report]
2.03	Tuberculosis of the bones and joints	Stage 1.01-2.02 AND <b>arthritis:</b> OR tuberculous spondylitis [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report]

# Clinical Criteria for Disease Staging

RES27

**Disease: RES27 Tuberculosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
2.04	Tuberculosis urethritis, epididymo-orchitis, or prostatitis	Stage 1.01-2.03 AND <b>pyuria:</b> AND 'sterile' urine [urine culture report no growth] OR tuberculosis of urethra [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report] OR tuberculosis of the epididymis or testis [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report] OR tuberculosis of the prostate [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report]
2.05	Tuberculous pyelonephritis or pelvic inflammatory disease	Stage 1.01-2.04 AND pyelonephritis [intravenous pyelogram report or ultrasound report] OR tuberculosis of the ovary [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report] OR tuberculosis of the uterus [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report] OR tuberculosis of the oviducts [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report]
2.06	Tuberculosis of the GI tract	Stage 1.01-2.05 AND superficial mucosal ulcerations infected with M. tuberculosis [biopsy culture report or DNA probe analysis or ELISA serology or ELISA serology report growth or operative/pathology report] OR intestinal tuberculoma [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report] OR small bowel obstruction [KUB xray report] OR large bowel obstruction [KUB xray report]

# Clinical Criteria for Disease Staging

RES27

**Disease: RES27 Tuberculosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
2.07	Tuberculosis of the liver	Stage 1.01-2.06 AND tuberculosis of the liver [biopsy culture report or DNA probe analysis or ELISA serology or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report]  Presumptive Diagnostic Findings: Stage 1.1-2.4 AND liver mass [CT scan report or MRI report] AND <b>jaundice:</b>
2.08	Tuberculous peritonitis	Stage 1.01-2.07 AND tuberculous peritonitis [biopsy culture report or DNA probe analysis or ELISA serology report growth of Mycobacterium tuberculosis or operative/pathology report]
2.09	Adrenal tuberculosis	Stage 1.01-2.08 AND adrenal mass [CT scan report] OR <b>hypoadrenalism:</b>
3.01	Tuberculous pericarditis	Stage 1.01-2.09 AND <b>pericarditis:</b> OR tuberculous pericarditis [culture report or DNA probe analysis or ELISA serology report growth pathologic organism(s)]
3.02	Tuberculous meningitis	Stage 1.02-3.01 AND tuberculous meningitis [CSF culture report or DNA probe analysis or ELISA serology report growth of M. tuberculosis] OR tuberculoma [CT scan report intracranial mass] AND <b>meningitis:</b>
3.03	Tuberculous sepsis	Stage 1.01-3.02 AND <b>sepsis:</b>
3.04	with respiratory failure	Stage 1.01-3.03 AND <b>respiratory failure:</b>
3.05	with shock	Stage 1.01-3.04 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.05 AND death



**Disease: RES27 Tuberculosis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
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**References**

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<p>Chambers HF. Infectious diseases: bacterial &amp; chlamydial. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. <i>Current Medical Diagnosis &amp; Treatment</i>. Stamford, CT: Appleton &amp; Lange; 1998:1267-1304.</p>
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<p>Raviglione MC, O'Brien RJ. Tuberculosis. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. <i>Harrison's Principles of Internal Medicine</i>. 14th ed. New York, NY: McGraw-Hill; 1998:1004-1014.</p>
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**Disease: RES28 Pertussis**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Pertussis (whooping cough) without complications	
1.02	with otitis media	
2.01	with bronchopneumonia	
2.02	with interstitial and subcutaneous emphysema	
2.03	with pneumothorax	
2.04	with bronchiectasis	
3.01	with cerebrovascular hemorrhage	
3.02	with encephalitis	
3.03	with cerebral edema	
4.00	with death	

**References**

**Disease: RES80 Complications of Tracheostomy**

**Etiology:**

<b>Stage</b>	<b>Description</b>	<b>Diagnostic findings</b>
1.01	Mechanical complication of tracheostomy	
2.01	Infection of tracheostomy	

**References**

**Disease: RES81 Neoplasm, Benign: Respiratory System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm respiratory system	

References

# Clinical Criteria for Disease Staging

RES82

**Disease: RES82 Neoplasm, Malignant: Other Respiratory System**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of other respiratory malignancy	
1.01	Primary malignant neoplasm of trachea or other respiratory system sites	
2.01	with local lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastases	
3.02	with shock	

## References

**Disease: RES83 Other Disorders of Respiratory System**

**Etiology:**

<b>Stage</b>	<b>Description</b>	<b>Diagnostic findings</b>
1.01	Upper respiratory tract hypersensitivity reaction, pneumonopathy, congenital anomalies of respiratory system	
2.01	Bronchiectasis, pneumothorax, empyema, or pleurisy; pulmonary congestion, collapse, or insufficiency; or agenesis of lung	
3.01	Respiratory failure	

**References**

# Clinical Criteria for Disease Staging

RES84

**Disease: RES84 Other Respiratory Disease Due to External Agents**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Pneumoconiosis, bronchitis, or pneumonitis due to fumes and vapors	
3.01	Acute pulmonary edema	

**References**

**Disease: RES85 Other Respiratory Infections**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Plague, tularemia, glanders, melioidosis, pasturellosis, pertussis, actinomycosis, rhinoscleroma, or necrobacillosis	
2.01	Pneumonic plague or pulmonary tularemia or hantavirus	
3.01	Septicemic plague or other infection with septicemia	

**References**



**Disease: RES86 Other Respiratory Symptoms**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Hyperventilation, apnea, dyspnea, shortness of breath, chest pain, hemoptysis, hiccough	

**References**

**Disease: RES87 Pneumonia: Aspiration**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Aspiration pneumonia	
2.01	with bacteremia	
2.02	with empyema	
2.03	with lung abscess or bronchopleural fistula or bronchopleural cutaneous fistula	
2.04	with septic arthritis	
2.05	with osteomyelitis	
2.06	with peritonitis or subphrenic abscess	
2.07	with pericarditis	
3.01	with endocarditis	
3.02	with meningitis	
3.03	with congestive heart failure	
3.04	with sepsis	
3.05	with respiratory failure	
3.06	with shock	
4.00	with death	

**References**

# Clinical Criteria for Disease Staging

RES99

**Disease: RES99 DELETED - Bronchial Foreign Body - Overlapped with ENT04**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Foreign body in trachea or bronchus	Foreign body in bronchus [bronchoscopy report or chest x-ray report]
2.01	with localized atelectasis or foreign body in lung or bronchioles	Stage 1.01 AND atelectasis [chest x-ray report] OR foreign body in lung or bronchioles [chest x-ray or bronchoscopy report]
2.02	with pulmonary abscess	Stage 1.01-2.01 AND pulmonary abscess [bronchoscopy report or chest x-ray report]
3.01	with sepsis	Stage 1.01-2.02 AND <b>sepsis:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.03 AND death

**References**

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**Disease: SKN01 Decubitus Ulcers**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Decubitus ulcer, Grade I	Erythema, induration, pain, fever, and brownish discoloration due to hemosiderin (dermatology report) OR decubitus ulcer, grade 1 [operative/pathology report]
1.02	Decubitus ulcer, Grade II	Stage 1.01 AND blister formation and/or minor ulceration (dermatology report) OR decubitus ulcer, grade 2 [operative/pathology report]
2.01	Decubitus ulcer, Grade III	Stage 1.01-1.02 AND damaged involvement of tendons, ligaments, and muscles (myonecrosis) (dermatology report) OR decubitus ulcer, grade 3 [operative/pathology report]
2.02	Decubitus ulcer, Grade IV	Stage 1.01-2.01 AND deep fistula formation AND exposure of bone on wound OR <b>osteomyelitis:</b>
3.01	with sepsis	Stage 1.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

SKN02

**Disease: SKN02 Erythema Multiforme**

**Etiology: Idiopathic; Immune**

Stage	Description	Diagnostic findings
1.01	Erythema multiforme, minor	Pruritic erythematous polymorphic eruptions and iris or target lesions [dermatology report or operative/pathology report] AND analysis for virus DNA suggestive of erythema multiforme [polymerase chain reaction report] OR Erythema annulare centrifugum [operative/pathology report] OR erythema gyratum [operative/pathology report] OR erythema perstans [operative/pathology report] OR erythema figuratum perstans, pruritic papules in an erythematous and edematous base with central clearing mostly on lower extremities [operative/pathology report]
2.01	Erythema multiforme, major	Stage 1.01 AND generalized pruritic polymorphic eruptions with bulla formation [dermatology report] AND Erythema multiforme iris (pruritic erythematous lesions with multiple concentricities similar to a target) [operative/pathology report]
2.02	Stevens-Johnson Syndrome	Stage 1.01 - 2.01 AND Erythema multiforme, major with mucosal involvement [dermatology report] AND Stevens-Johnson syndrome [operative/pathology report]
3.01	Toxic epidermal necrolysis	History of medication use AND severe scolding like desquamation [dermatology report] AND epidermal necrosis > 30 % body surface area [operative/pathology report]
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**Disease: SKN02 Erythema Multiforme**

**Etiology: Idiopathic; Immune**

Stage	Description	Diagnostic findings
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**References**

Berger TG. Skin & appendages. In: Tierney Jr LM, McPhee SJ, Papadakis MA eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange; 1999: 153-154.
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**Disease: SKN03 Erythroderma**

**Etiology: Idiopathic**

Stage	Description	Diagnostic findings
1.01	Generalized erythema with exfoliation	Erythroderma with exfoliation with more than 90% involvement of skin [dermatology report or pathology report]
2.01	Generalized erythema with exfoliation and fever	Stage 1.01 AND loss of hairs and nails AND pigmentary disturbance AND <b>fever:</b>
2.02	with dehydration or hypothermia or hypoalbuminemia	Stage 1.01-2.01 AND <b>dehydration:</b> OR <b>hypothermia:</b> OR <b>hypoalbuminemia:</b>
3.01	with shock	Stage 1.01-2.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.01 AND death

**References**

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# Clinical Criteria for Disease Staging

SKN04

**Disease: SKN04 Immunologically Mediated Blistering Skin Diseases**

**Etiology: Immune**

Stage	Description	Diagnostic findings
1.01	Cicatricial pemphigoid	Whitish eroded and scarred lesions or blistering lesions of mucosa (dermatology report) AND subepithelial and subepidermal blistering (pathology report) AND perilesional tissue with deposits of IgG IgA and C3 in basement membranes (direct and indirect immunofluorescence report)
1.02	Epidermolysis bullosa ecquisita	Blisters on hands and feet OR blisters on elbows OR blisters on knees OR blisters on oral mucosa with erosion OR blisters on the sites exposed to minor trauma AND healed with scarring milia and hyperpigmentation (dermatology report) AND subepidermal blister (pathology report) AND perilesional tissue with deposits of IgG, IgA, IgM and C3 in basement membrane zone (immunofluorescent test report)
1.03	Linear IgA bullous dermatosis	Linear IgA disease childhood and adult type [operative/pathology report] OR Pruritic and burning papulovesicular, hemorrhagic, urticarial, and erosive lesions on perineum, trunk, face, extremities and mucosa (dermatology report) OR linear deposits of IgA in the epidermal basement membrane zone (direct immunofluorescent microscopy report of normal perilesional skin) AND circulating IgA autoantibodies against 285 Kda and 97/120 kDa antigens in normal epidermal basement membrane [operative/pathology report]
1.04	Dermatitis herpetiformis	Symmetric grouped papulovesicular and urticarial lesion on extensor surface of extremities, buttocks, trunk and scalp AND No mucosal involvement (dermatology report) OR Dermatitis herpetiformis [operative/pathology report] OR granular deposits of IgA in the papillary dermis and along the epidermal basement membrane zone (direct immunofluorescent test report) OR gluten enteropathy [operative/pathology report] AND lymphoma [operative/pathology report]
1.05	Pemphigoid gestationis or herpes gestationis	Pruritic polymorphic skin lesions beginning around umbilicus and spreading to abdomen and legs (dermatology report) OR pregnancy AND 48 hours after delivery with linear deposits of C3 in the epidermal basement membrane zone (direct and indirect immunofluorescent tests)
1.06	Bullous pemphigoid	Blister formation of flexor surfaces of arms, legs, trunk and oral mucosa (dermatology report) OR eosinophil rich blisters in supraepidermal regions (pathology report) OR linear deposits of IgG and C3 in the subepidermal basement membrane zone (direct and indirect immunofluorescent tests)



# Clinical Criteria for Disease Staging

SKN04

**Disease: SKN04 Immunologically Mediated Blistering Skin Diseases**

**Etiology: Immune**

Stage	Description	Diagnostic findings
1.07	Pemphigus vulgaris	Flaccid bullae and erosions on oral mucosa, scalp, face, sternum and groins AND Nikolsky's sign (dermatology report) OR suprabasal blister formation with acantholysis (pathology report) OR Pemphigus vulgaris [direct and indirect immunofluorescent tests or anti-desmoglein I and III IgG by immuno-precipitation and immuno-absorption assays]
1.08	Pemphigus foliaceus or fogo selvagem or Brazilial pemphigus	Crusting superficial erosions and blistering lesions (dermatology report) OR subcorneal blister formation with acantholysis (pathology report) OR Pemphigus foliaceus [direct and indirect immunofluorescent tests or anti-desmoglein I IgG by immuno-precipitation and immuno-absorption assays]
2.01	Paraneoplastic Pemphigus	Mucosal bullous lesions and polymorphous cutaneous lesions (dermatology report) AND non-Hodgkins lymphoma OR chronic lymphocytic leukemia OR Castleman's disease OR thymoma OR spindle cell neoplasms AND necrosis of keratinocytes, vacuolar interface dermatitis, and suprabasal acantholysis (pathology report) AND paraneoplastic pemphigus [direct and indirect immunofluorescent tests]
2.02	with dehydration and electrolyte imbalance	Stage 1.07-2.01 AND <b>dehydration:</b> AND hypernatremia OR hypokalemia
3.01	with sepsis	Stage 1.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.02 AND death

**Disease: SKN04 Immunologically Mediated Blistering Skin Diseases**

**Etiology: Immune**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

SKN05

**Disease: SKN05 Infections of Skin and Subcutaneous Tissue**

**Etiology: Infection, Bacterial**

Stage	Description	Diagnostic findings
1.01	Impetigo contagiosa	Vesiculopustule formation with honey colored crust (dermatology report) AND subcorneal pustule (pathology report) AND Staphylococcus species and Streptococcus species (laboratory report) AND <b>cellulitis:</b>
1.02	Superficial folliculitis	small pustules, pierced by hairs (dermatology report) AND subcorneal pustule in the opening of hair follicle (pathology report) AND Staphylococcus spp. and Streptococcus spp. isolation (laboratory report)
2.01	Erysipelas (superficial cellulitis)	Well demarcated, indurated and dusky red lesion with advancing palpable border (dermatology report) AND marked edema of dermis, diffusely infiltrated with neutrophils and dilatation of capillaries and lymphatics (pathology report) AND Streptococcal isolation (laboratory report)
2.02	Deep folliculitis or acute deep folliculitis or furunculosis or carbunculosis or chronic deep folliculitis	Deep, tender, warm, and erythematous swelling of hair follicle (dermatology report) AND peri-follicular necrosis and abscess formation with neutrophil, lymphoid cell, histiocyte, and plasma cell infiltration (pathology report)
2.03	Necrotizing fasciitis	Ill-defined erythema, progression to painless ulceration and necrosis along fascial planes (dermatology report) AND acute or chronic inflammation of dermis with necrosis in subcutaneous fat, fascia and muscle (pathology report) AND Staphylococcus sp. and Streptococcus spp. isolation (laboratory report)
3.01	with sepsis	Stage 2.03 AND <b>sepsis:</b>
3.02	with shock	Stage 2.03-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

SKN06

**Disease: SKN06 Neoplasm, Malignant: Carcinoma, Basal Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Basal cell carcinoma or nodular ulcerative type or pigmented type or morphoeic type or superficial type or fibroepithelioma type	Pearly to erythematous and telangiectatic nodule (dermatology report) AND basalioma cells showing a palisade arrangement of the nuclei at the periphery of the tumor (pathology report)
1.02	Basal cell nevus syndrome	Stage 1.1 AND basal cell nevus syndrome OR Bazex syndrome OR linear, unilateral basal cell nevus syndrome
2.01	Baso-squamous cell carcinoma	Stage 1.1-1.2 AND meta typical basal cell carcinoma (pathology report)
2.02	with lymph node involvement	Basal cell carcinoma with regional lymph node involvement (pathology report)
3.01	with distant metastasis	Stage 1.1-2.2 AND metastasis to bone [bone scan or CT scan report] OR brain metastasis [CT scan or MRI report]
4.00	with death	Stage 1.01-3.01 AND death

## References

Berger TG. Skin & appendages. In: Tierney Jr LM, McPhee SJ, Papadakis MA, eds. Current Medical Diagnosis & Treatment. Stamford, CT: Appleton & Lange' 1998:111-180.
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# Clinical Criteria for Disease Staging

SKN07

**Disease: SKN07 Neoplasm, Malignant: Carcinoma, Squamous Cell**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Bowen's disease or actinic keratosis or arsenic keratosis or squamous cell carcinoma in situ or leukoplakia	Solitary to multiple erythematous keratotic lesions (dermatology report) AND squamous cell carcinoma in situ (pathology report)
2.01	Squamous carcinoma of lip, oral cavity, external genitalia or ear	Stage 1.01 AND an erythematous, eroded to ulcerated, indulated or nodular lesions (dermatology report) AND squamous cell carcinoma of the lip (pathology report) OR squamous cell carcinoma of the oral cavity (pathology report) OR squamous cell carcinoma of the external genitalia (pathology report) OR squamous cell carcinoma of the ear (pathology report)
2.02	with lymph node involvement	Stage 2.01 AND Palpable lymph nodes (dermatology report) AND carcinoma with lymph node involvement (pathology report or CT scan report)
3.01	with distant metastasis	Stage 1.01-2.02 AND metastasis to bone [ liver/spleen scan or CT scan or gallium scan or bone scan report] OR liver metastasis [liver/spleen scan or CT scan or gallium scan or bone scan report] OR lung metastasis [liver/spleen scan or CT scan or gallium scan or bone scan report] OR brain metastasis [liver/spleen scan or CT scan or gallium scan or bone scan report]
4.00	with death	Stage 1.01-3.01 AND death

## References

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# Clinical Criteria for Disease Staging

SKN08

**Disease: SKN08 Neoplasm, Malignant: Melanoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of melanoma	History of prior melanoma OR dysplastic nevus syndrome
1.01	Melanoma in situ	Irregularly shaped brown lesion with variation in brown or black pigmentation (dermatology report) AND intraepidermal melanoma [operative/pathology report or S-100 and HMB-45 tests or electron microscopy (pathology report)] AND Melanoma not within the papillary dermis [operative/pathology report] OR Clark Level 1
2.01	Lentigo maligna melanoma or superficial spreading melanoma or nodular melanoma or acral lentiginous melanoma	Stage 0.00-1.01 AND melanoma ≤ 0.75 mm. depth within the papillary dermis [operative/pathology report] OR American Joint Cancer Commission Stage T1 OR Clark Level 2 OR melanoma ≤ 1.5 mm. depth within the papillary dermis [operative/pathology report] OR American Joint Cancer Commission Stage T2 OR Clark Level 3 OR melanoma ≤ 3.00 mm. depth of invasion into the dermis [operative/pathology report] OR American Joint Cancer Commission T3A OR Clark Level 4
3.01	with regional lymph node involvement	Stage 1.01-2.01 AND melanoma with regional lymph node involvement [pathology report or sentinel lymph node biopsy report AND CT scan report] OR melanoma within the subcutaneous fat [operative/pathology report] OR melanoma ≤ 3.99mm. depth of invasion through the skin [operative/pathology report] OR American Joint Cancer Commission Stage T3B OR Clark Level 4

**Disease: SKN08 Neoplasm, Malignant: Melanoma**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
3.02	with distant metastasis	Stage 1.01-3.01 AND metastasis to lung (chest x-ray, CT scan or gallium scan) OR metastasis to liver (liver/spleen scan or CT scan or gallium scan) OR metastasis to bone (bone x-ray or bone scan) OR metastasis to brain (brain CT scan or MRI) OR melanoma ≥ 4.0 mm. depth of invasion through the skin [operative/pathology report] OR American Joint Cancer Commission Stage T4A or T4B OR Clark Level 5
4.00	with death	Stage 3.01-3.02 AND death

## References

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**Disease: SKN09 Neoplasm: Atypical Nevus**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
0.00	History of atypical nevus syndrome	Sporadic atypical nevus or family history of multiple atypical nevi
1.01	Sporadic atypical nevus	Asymmetric, irregularly marginated, and irregularly pigmented lesion (dermatology report) AND architectural atypia and cytological atypia of nevus cells (pathology report)
1.02	Atypical nevus syndrome (Familial atypical mole/malignant melanoma syndrome)	AND multiple asymmetric, irregularly marginated, and irregularly pigmented lesions (dermatology report) AND architectural atypia and cytological atypia of nevus cells (pathology report)

## References

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**Disease: SKN10 Pilonidal Cyst**

**Etiology: Congenital; Trauma**

Stage	Description	Diagnostic findings
1.01	Pilonidal cyst	Pilonidal cyst [operative/pathology report] OR a hair-containing sacrococcygeal cyst lined with epithelium
1.02	with multiple sinuses	Pilonidal cyst with multiple sinuses [operative/pathology report]
2.01	with cellulitis	Stage 1.01-1.02 AND <b>cellulitis:</b>
2.02	with abscess	Stage 1.01-2.01 AND abscess
3.01	with sepsis	Stage 1.01-2.02 AND <b>sepsis:</b>
3.02	with shock	Stage 3.01 AND <b>shock:</b>
4.00	with death	Stage 3.01-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

SKN11

**Disease: SKN11 Psoriasis Vulgaris**

**Etiology: Genetic (or hereditary); Immune**

Stage	Description	Diagnostic findings
1.01	Psoriasis vulgaris	Parakeratosis, hypogranulosis, regular acanthosis, and Monroe's abscess (pathology report) OR Silvery white scaly erythematous and well demarcated lesions, which bleed if removed AND lesions involve scalp areas OR lesions involve elbows OR lesions involve knees OR lesions involve lumbosacral areas AND fingernail involvement with pittings, onycholysis, thickening, or thinning and yellowish discoloration (dermatology report)
1.02	Localized pustular psoriasis	Macroscopic pustules on palms and soles (dermatology report and pathology report)
1.03	Generalized pustular psoriasis	Generalized involvement of macroscopic pustules with fever (dermatology report and pathology report)
2.01	Distal interphalangeal joint psoriatic arthritis	Stage 1.01-1.03 AND distal inflammation of interphalangeal joints AND rheumatoid factor negative [synovial fluid report]
2.02	Psoriatic oligoarthritis	Stage 1.01-2.01 AND nonspecific inflammation of knee AND nonspecific inflammation of elbows AND nonspecific inflammation of ankles AND nonspecific inflammation of wrists AND rheumatoid factor negative [synovial fluid report]
2.03	Psoriatic sacroiliitis or spinal arthritis or arthritis mutilans	Stage 1.01-2.02 AND sacroiliitis [ pelvic x-ray report] OR severe destructive arthritis [x-ray report of affected area]
2.04	with spondylitis	Stage 1.01-2.03 AND spondylitis (x-ray report)
3.01	Erythrodermic psoriasis	Stage 1.01-2.04 Generalized exfoliative dermatitis AND <b>fever:</b>
3.02	with sepsis	Stage 1.01-3.01 AND <b>sepsis:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 1.01-3.03 AND death

**Disease: SKN11 Psoriasis Vulgaris**

**Etiology: Genetic (or hereditary); Immune**

Stage	Description	Diagnostic findings
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## References

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**Disease: SKN12 Scabies**

**Etiology: Infection**

Stage	Description	Diagnostic findings
1.01	Scabies	Nocturnal itching, burrows formation and erythematous papules on external genitalia (dermatology report) AND mites and eggs [microbiology report]
1.02	Norwegian scabies	Patients with Down syndrome or under immuno suppression therapy AND heavily crusted and eczematoid lesions (dermatology report) AND mites and eggs [microbiology report]
2.01	Scabies with bacterial infection (pyoderma)	Stage 1.01-1.02 AND excoriated lesions with pustule and abscess formation (dermatology report)

**References**

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# Clinical Criteria for Disease Staging

SKN80

**Disease: SKN80 Neoplasm, Benign: Skin or Subcutaneous Tissue**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Benign neoplasm of skin or subcutaneous tissue	

References

# Clinical Criteria for Disease Staging

SKN81

**Disease: SKN81 Neoplasm, Malignant: Other Skin and Soft Tissue**

**Etiology: Neoplasm**

Stage	Description	Diagnostic findings
1.01	Kaposi's sarcoma or other malignancy of skin or soft tissue	
2.01	with lymph node involvement	
2.02	with anemia of neoplastic disease	
3.01	with distant metastasis	
3.02	with shock	

References

# Clinical Criteria for Disease Staging

SKN82

## Disease: SKN82 Other Inflammations and Infections of Skin and Subcutaneous Tissue

### Etiology:

Stage	Description	Diagnostic findings
1.01	Local skin infections, dermatitis, pruritis, scars, ingrown nails, alopecia	
1.02	Pyoderma, pyogenic granuloma, pustular dermatoses, pityriasis, systemic inflammatory response	
2.01	Gangrene	

### References

**Disease: TRA01 Acetaminophen Toxicity**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Acetaminophen Toxicity	Acetaminophen ingestion of $\geq 150$ mg/kg/24 hours for age $\leq 12$ years old OR Acetaminophen ingestion of $\geq 7$ gm/24 hours for age $> 13$ years old
2.01	with hepatitis	Stage 1.01 AND <b>jaundice:</b>
3.01	with hepatic coma	Stage 1.01-2.01 AND <b>hepatic coma:</b>
3.02	with shock	Stage 1.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**References**

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# Clinical Criteria for Disease Staging

TRA02

**Disease: TRA02 Adverse Drug Reactions**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Adverse drug reaction with cutaneous manifestations	History of ingestion of drug(s) in therapeutic doses OR history of contact with any drug(s) in therapeutic doses AND contact dermatitis OR skin rash OR urticaria
1.02	with fever	Stage 1.01 AND <b>fever:</b>
2.01	with hemolytic anemia	Stage 1.01-1.02 AND <b>hemolysis:</b>
2.02	with hepatitis or pancreatitis	Stage 1.01-2.01 AND <b>hepatitis:</b> OR <b>pancreatitis:</b>
2.03	with coagulation defects	Stage 1.01-2.02 AND <b>coagulation defect:</b>
2.04	with angioneurotic edema	Stage 1.01-2.03 AND angioneurotic edema
2.05	with hypotension	Stage 1.01-2.04 AND <b>hypotension:</b>
3.01	with renal failure	Stage 1.01-2.05 AND <b>renal failure:</b>
3.02	with hepatic encephalopathy	Stage 1.01-3.01 AND <b>hepatic coma:</b>
3.03	with respiratory failure	Stage 3.01-3.04 AND <b>coma:</b>
3.04	with ventricular flutter or ventricular fibrillation or "anaphylactic" shock	Stage 2.01-3.03 AND ventricular fibrillation OR ventricular flutter OR <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**Disease: TRA02 Adverse Drug Reactions**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

TRA03

**Disease: TRA03 Adverse Effects of Salicylates**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Salicylism	Serum salicylate level $\geq 60$ mg/dl $\leq 1$ hour after ingestion [chemistry report] OR toxic levels up to 48 hours post ingestion [serum salicylate level $\geq \{60 \text{ mg/dl} - (\text{hours post ingestion} \times 1.25)\}$ ] e.g., serum salicylate level of 56 four hours post ingestion is toxic: $60 - (4 \times 1.25) = 55$
2.01	with respiratory alkalosis	Stage 1.01 AND <b>alkalosis:</b> AND <b>hypocarbica:</b>
2.02	with metabolic derangements or dehydration	Stage 1.01-2.01 AND <b>dehydration:</b> OR <b>hypernatremia:</b> OR <b>hyperkalemia:</b> OR <b>hypokalemia:</b> OR <b>hyponatremia:</b>
2.03	with acidosis	Stage 1.01-2.02 AND <b>acidosis:</b>
2.04	with hemorrhagic gastritis or diathesis	Stage 1.01-2.03 AND hemorrhagic gastritis [endoscopy report] OR petechiae OR bleeding time prolonged [bleeding time report] OR INR $> 1.5$ [hematology report]
3.01	with renal failure	Stage 1.01-2.03 AND <b>renal failure:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with coma	Stage 1.01-3.02 AND <b>coma:</b>
3.04	with shock	Stage 1.01-3.03 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.04 AND death

**Disease: TRA03 Adverse Effects of Salicylates**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
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**References**

Linden CH, Lovejoy Jr FH. Poisoning and drug overdosage. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hauser SL, Longo DL, eds. Harrison's Principles of Internal Medicine. 14th ed. New York, NY: McGraw-Hill; 1998:2523-2544.
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**Disease: TRA04 Burns**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	First degree burn	Erythema of burned area
2.01	Second degree burn	Blistering of burned area OR vesicle formation of burned area
2.02	Third degree burn or late effects of burns	Charred appearance of burned area OR waxy appearance of burned area AND burned area is anesthetic
2.03	Extensive surface area burn	Stage 2.01-2.02 AND third degree burn involving 2% or greater of body surface area OR second degree burn involving 10% or greater of body surface area
2.04	Infection of burned area(s)	Stage 2.01-2.03 AND infection of burned with growth of pathologic organisms [ culture report of wound exudate]
2.05	with urinary tract infection	Burn involving perineum [operative/pathology report] AND <b>UTI:</b>
2.06	with laryngeal edema	Stage 1.01-2.05 AND stridor OR laryngeal edema [direct laryngoscopy report]
2.07	with pneumonia	Stage 1.01-2.06 AND <b>pneumonia:</b>
3.01	with sepsis	Stage 1.01-2.07 AND <b>sepsis:</b>
3.02	with respiratory failure	Stage 1.01-3.01 AND <b>respiratory failure:</b>
3.03	with shock	Stage 1.01-3.02 AND <b>shock:</b>
4.00	with death	Stage 2.03-3.04 AND death

**References**

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# Clinical Criteria for Disease Staging

TRA05

**Disease: TRA05 Burns, Chemical: Esophagus, Stomach, or Small Intestine**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Caustic esophagitis or gastritis or caustic burn of small intestines	Mucosal erythema and edema [esophagoscopy report, upper endoscopy report or upper gastrointestinal series report]
2.01	with ulcerations	Stage 1.01 AND ulcerations [esophagoscopy report, upper endoscopy report or upper gastrointestinal series report]
2.02	with strictures	Stage 1.01-2.01 AND strictures [esophagoscopy report, upper endoscopy report or upper gastrointestinal series report]
2.03	with necrosis of muscle	Stage 1.01-2.02 AND muscle necrosis [esophagoscopy report, upper endoscopy report or upper gastrointestinal series report]
2.04	with perforation of esophagus or stomach	Stage 1.01-2.03 AND subcutaneous emphysema OR free air in the peritoneal cavity [KUB x-ray or chest x-ray report] OR perforation (UGI series reports spilling of contrast into the peritoneal cavity or thoracic cavity) OR <b>bleeding:</b>
2.05	with mediastinitis or mediastinal abscess	Stage 1.01-2.04 AND mediastinitis [operative/pathology report] OR mediastinal abscess [operative/pathology report or CT scan report]
2.06	with peritonitis or abscess	Stage 1.01-2.05 AND peritonitis [operative/pathology report] OR abscess [operative/pathology report]
3.01	with sepsis	Stage 1.01-2.05 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

**Disease:** TRA05 Burns, **Chemical:** Esophagus, Stomach, or Small Intestine

**Etiology:** Toxicologic

Stage	Description	Diagnostic findings
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**References**

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# Clinical Criteria for Disease Staging

TRA06

## Disease: TRA06 Injury, Open Wound, or Blunt Trauma: Abdomen or Trunk

### Etiology: Trauma

Stage	Description	Diagnostic findings
1.01	Superficial trauma or contusion of the back or abdomen not penetrating beyond the subcutaneous tissue	Open wound of the back or abdomen not penetrating beyond the subcutaneous tissue [operative/pathology report]
1.02	Avulsion wound of the back or abdomen not penetrating beyond the subcutaneous tissue	Avulsion wound of the back or abdomen not penetrating beyond the subcutaneous tissue [operative/pathology report]
1.03	with infection	Stage 1.01-1.02 AND infected wound [wound culture reports growth of pathologic organism(s)]
1.04	with cellulitis	Stage 1.01-1.03 AND <b>cellulitis:</b>
2.01	Open wound of the back or abdomen extending into the deep fascia or crush injury	Laceration or stab wound of the back or abdomen extending into the deep fascia [operative/pathology report] OR crush injury to the back or abdomen
2.02	with abscess formation	Stage 1.01-2.01 AND abscess formation [operative/pathology report]
2.03	with gangrene	Stage 1.01-2.02 AND gangrene
2.04	with trauma or laceration of internal organs	Stage 2.01-2.03 AND laceration or trauma of the liver [operative/pathology report] OR laceration or trauma of the spleen [operative/pathology report] OR laceration or trauma of the pancreas [operative/pathology report] OR laceration or trauma of the small intestines [operative/pathology report] OR laceration or trauma of the stomach [operative/pathology report] OR laceration or trauma of the large intestines [operative/pathology report] OR laceration or trauma of the gallbladder [operative/pathology report]
2.05	with peritonitis	Stage 2.01-2.04 AND peritonitis [operative/pathology report]
2.06	with retroperitoneal hemorrhage	Stage 2.01-2.05 AND retroperitoneal hemorrhage [operative/pathology report]
2.07	with laceration of the abdominal aorta or laceration of the inferior vena cava or iliac vessels	Stage 2.01-2.06 AND laceration of the abdominal aorta [operative/pathology report] OR laceration of the inferior vena cava [operative/pathology report] OR laceration of the iliac arteries [operative/pathology report] OR laceration of the iliac veins [operative/pathology report]
3.01	with sepsis	Stage 2.01-2.07 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>



# Clinical Criteria for Disease Staging

TRA06

**Disease: TRA06 Injury, Open Wound, or Blunt Trauma: Abdomen or Trunk**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
4.00	with death	Stage 2.01-3.02 AND death

## References

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**Disease: TRA07 Laceration: Esophagus**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
1.01	Laceration of the esophagus	Laceration of the esophagus [upper endoscopy report]
2.01	with acute bleeding	Stage 1.01 AND <b>bleeding:</b> OR Mallory-Weiss syndrome [tear distal esophagus by upper endoscopy report]
2.02	with perforation including spontaneous perforation (Boerhaave's syndrome)	Stage 1.01-2.01 AND subcutaneous or mediastinal emphysema [physical exam or chest x-ray report] OR free air in the peritoneal cavity [KUB x-ray or chest x-ray report] OR perforation (UGI series reports spilling of contrast into the peritoneal cavity or thoracic cavity)
2.03	with mediastinitis or mediastinal abscess or pleurisy or hydropneumothorax	Stage 2.01-2.02 AND mediastinitis [operative/pathology report] OR mediastinal abscess [operative/pathology report or sonogram or CT scan report] OR pleurisy (pleural effusion culture reports growth of pathologic organism(s)) OR hydropneumothorax [chest x-ray report]
3.01	with sepsis	Stage 2.01-2.03 AND <b>sepsis:</b>
3.02	with shock	Stage 2.01-3.01 AND <b>shock:</b>
4.00	with death	Stage 2.01-3.02 AND death

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# Clinical Criteria for Disease Staging

TRA08

**Disease: TRA08 Lead Poisoning**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Lead poisoning	Blood lead level > 10mcg/dl [chemistry report] AND Blood lead level ≤ 19mcg/dl [chemistry report]
1.02	with blood lead level 20-44 mcg/dl	Blood lead level ≥ 20mcg/dl [chemistry report] AND Blood lead level ≤ 44mcg/dl [chemistry report]
1.03	with blood lead level 45-69 mcg/dl	Blood lead level ≥ 45mcg/dl [chemistry report] AND Blood lead level ≤ 69mcg/dl [chemistry report]
1.04	with blood lead level ≥70 mcg/dl	Blood lead level ≥ 70mcg/dl [chemistry report]
2.01	Symptomatic lead poisoning	Stage 1.01-1.04 AND abdominal pain OR constipation OR peripheral neuropathy at age ≥ 16 years
2.02	with permanent neurologic deficits	Stage 1.01-2.01 AND <b>mental retardation:</b> OR persistence of seizure disorder with normalization of blood lead levels OR developmental regression
3.01	with encephalopathy	Stage 1.01-2.02 AND persistent vomiting OR seizures OR <b>disorientation:</b> OR <b>coma:</b>
4.00	with death	Stage 1.01-3.01 AND death

**Disease: TRA08 Lead Poisoning**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
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**References**

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**Disease: TRA09 Toxic Effects of Nonmedicinal Agents**

**Etiology:**

Stage	Description	Diagnostic findings
1.01	Toxic effects of specified alcohols, petroleum products, solvents, corrosive agents, metals, excluding lead and beryllium, toxic effects of carbon monoxide and other gases, noxious substances eaten as food and other nonmedicinal substances, late effects of toxic effects of nonmedicinal substances	Late effects of toxic effects of nonmedicinal substances, toxic effects of specified alcohols, petroleum products, solvents, corrosive agents, metals, excluding lead and beryllium, toxic effects of carbon monoxide and other gases, noxious substances eaten as food and other nonmedicinal substances

**References**

# Clinical Criteria for Disease Staging

TRA80

## Disease: TRA80 Effects of Environment and Other External Causes

### Etiology:

Stage	Description	Diagnostic findings
1.01	Effects of radiation, temperature, elevation, motion, unspecified allergy	
3.01	Anaphylactic or anesthetic shock	

### References

# Clinical Criteria for Disease Staging

TRA81

**Disease: TRA81 Injury: Other**

**Etiology: Trauma**

Stage	Description	Diagnostic findings
0.00	Observation following accident, rape, abuse, neglect or other inflicted injury	Added stage 5/8/06 cb
1.01	Periocular burns, open wounds, abrasions, blisters, foreign bodies, contusions, abuse, adverse food reactions	
2.01	Open wounds with infection, crush injuries, or late effects of internal injuries or other external causes	
2.02	Traumatic embolism	
3.01	Traumatic shock	
3.02	Traumatic anuria	

## References

# Clinical Criteria for Disease Staging

TRA82

**Disease: TRA82 Poisoning: Drugs Other Than Antidepressants or Tranquilizers**

**Etiology: Toxicologic**

Stage	Description	Diagnostic findings
1.01	Poisoning by anti-infectives, hormones and other drugs	

References



## GLOSSARY OF DIAGNOSTIC TERMS

The following list of diseases, conditions and diagnostic tests is provided to assist in identifying secondary or complicating aspects of a primary disease. They are listed here because they may occur under more than one primary disease heading. For increases or decreases in quantitative data, the figure listed indicates 3 standard deviations from the mean value for the analyte. This has been done to avoid minor deviations from the reference range that might be due merely to chance rather than representing a significant deviation due to a pathological process. For some analytes, particularly enzyme measurements, the limits for “increased” or “decreased” are set further from the mean values on the basis of published information. When appropriate, separate adult and pediatric laboratory values are noted.

Bold printing indicates a reference to another citation within the glossary. These citations may be consulted for reference ranges if they are not given in the primary citation.

Reference Ranges are from Tietz (1). Significant increased or decreased values are based on data given for individual diseases listed in this volume or on information in references 2 and 3.

### References

1. Tietz NW. Clinical Guide to Laboratory Tests. 3<sup>rd</sup> ed. 1995, W. B. Saunders Company, Philadelphia.
2. Speicher CE. The Right Test. 3<sup>rd</sup> ed. 1998, W. B. Saunders Company, Philadelphia.
3. Conn RB, Borer WZ, Snyder JW. Current Diagnosis. 9<sup>th</sup> ed. 1997, W. B. Saunders Company, Philadelphia.

### **Acetaminophen toxicity:**

Acetaminophen, serum or plasma: [chemistry report]

Therapeutic concentration: 10 - 30 µg/mL

Toxic concentration: > 200 µg/mL (4 h post ingestion)

### **Acidosis (measured blood pH):**

Decreased: Blood pH < 7.325 [chemistry report]

Reference range: 7.35 - 7.45

### **Acute:**

Occurs within 1 week

**Acute myocardial infarction:** *See Myocardial infarction, acute*

**Acute renal failure:**

- Onset within one week
- AND creatinine  $\geq 3.0$  mg/dl [chemistry report]
- AND BUN/creatinine ratio  $\leq 20.0$ , as calculated from simultaneously drawn serums for this test
- OR  $FENa \leq 1.0$
- OR Renal Failure Index  $\leq 1.0$

**AH Titer:** *See Antihyaluronidase titer*

**Adrenal insufficiency:** *See Hypoadrenalism*

**AIDS-Defining diseases:**

These are diseases that indicate a patient has the Acquired Immunodeficiency Syndrome (AIDS) when present in a patient who tests positive for infection with the Human Immunodeficiency Virus (HIV):

- |                                 |                                 |
|---------------------------------|---------------------------------|
| Burkitt's lymphoma              | Kaposi sarcoma                  |
| Chronic cryptosporidiosis       | Mycobacterium avium complex     |
| Chronic herpes simplex          | Other disseminated              |
| Chronic isosporiasis            | Mycobacterium                   |
| Cytomegalovirus disease         | Pneumocystis carinii pneumonia  |
| Cytomegalovirus retinitis       | Primary brain lymphoma          |
| Disseminated coccidioidomycosis | Progressive multifocal          |
| Disseminated histoplasmosis     | leukoencephalopathy             |
| Esophageal candidiasis          | Pulmonary candidiasis           |
| Extrapulmonary cryptococcosis   | Pulmonary tuberculosis          |
| Extrapulmonary tuberculosis     | Recurrent pneumonia             |
| HIV encephalopathy              | Recurrent Salmonella septicemia |
| Immunoblastic lymphoma          | Toxoplasmosis of brain          |
| Invasive cervical cancer        | Wasting syndrome                |

**Alanine aminotransferase, serum (ALT):**

- Increased: Males  $\geq 48$  U/L [chemistry report]
- Females  $\geq 42$  U/L [chemistry report]
- Reference ranges: Males 10 - 40 U/L
- Females 7 - 35 U/L

**Alcohol (ethanol), blood:**

- No intake: blood ethanol  $< 0.05$  mg/dL [chemistry report]
- Intoxication:  $> 100$  mg/dL ( $> 0.1$  %)
- Marked intoxication: 300 - 400 mg/dL (0.3 - 0.4 %)
- Alcoholic stupor: 400 - 500 mg/dL (0.4 - 0.5 %)
- Coma:  $> 500$  mg/dL ( $> 0.5$  %)

**Alkaline phosphatase, serum (ALP):**

Reference ranges vary with age, sex and method of analysis.

Kodak (4-NPP, AMP) reference method at 37° C  
Increased:  $\geq 148$  U/L  
Reference Range: Male 38 - 126 U/L

**Alkalosis (measured blood pH):**

Increased: Blood pH  $>7.475$  [chemistry report]  
Reference Range: 7.35 - 7.45

**ALP:** *See Alkaline phosphatase*

**ALT:** *See Alanine aminotransferase*

**Alveolar-arterial gradient:**

The difference in  $pO_2$  (partial pressure of oxygen) between the lung (alveoli) and arterial blood.

$(693 \times F_{IO_2}) - (1.2 \times pCO_2) - pO_2 > 15$  mm Hg

Where 693 is barometric pressure without water vapor

$F_{IO_2}$  is the fractional concentration of  $O_2$  in inspired gas

$pCO_2$  is the partial pressure of carbon dioxide in blood

$pO_2$  is the partial pressure of oxygen in blood

Reference range:  $\leq 10$  mmHg

**Amylase, serum or urine:**

Kodak Ektachem Slide, 37° C

Serum: Increased  $\geq 500$  U/L [chemistry report]

Reference range: 30 - 110 U/L

Urine (2 to 4 h specimen):

Increased  $\geq 1000$  U/L [urine chemistry report]

Reference range: 32 - 641 U/L

**Amylase/creatinine clearance ratio:**

The ratio between renal clearance of amylase and creatinine; It is calculated as follows:

$$\frac{\text{Urine amylase}}{\text{Serum amylase}} \times \frac{\text{Serum creatinine}}{\text{Urine creatinine}} \times 100$$

Increased:  $\geq 4.8$  % Clearance

Reference range: 1 - 4 % Clearance

**Anemia: Hemoglobin**

Decreased:	Cord Blood $\leq 11.8$ g/dL [CBC report]
	$\leq 1$ y $\leq 8.2$ g/dL [CBC report]
	1 - 12 y $\leq 10.0$ g/dL [CBC report]
	12 - 17 y Male $\leq 10.5$ g/dL [CBC report]
	Female $\leq 10.5$ g/dL [CBC report]
	18 - 44 y Male $\leq 12.2$ g/dL [CBC report]
	Female $\leq 10.8$ g/dL [CBC report]
	45 - 64 y Male $\leq 12.6$ g/dL [CBC report]
	Female $\leq 10.6$ g/dL [CBC report]
	$\geq 65$ y Male $\leq 11.4$ g/dL [CBC report]
	Female $\leq 10.6$ g/dL [CBC report]
Reference ranges:	Cord Blood 13.5 - 20.5 g/dL
	$\leq 1$ y 9.4 - 14.1 g/dL
	1 - 12 y 11.0 - 15.0 g/dL
	12 - 17 y Male 11.7 - 16.6 g/dL
	Female 11.5 - 15.3 g/dL
	18 - 44 y Male 13.2 - 17.3 g/dL
	Female 11.7 - 15.5 g/dL
	45 - 64 y Male 13.1 - 17.2 g/dL
	Female: 11.7 - 16.0 g/dL
	$\geq 65$ y Male 12.6 - 17.4 g/dL
	Female 11.7 - 16.1 g/dL

**Anion gap:**

Increased:  $(\text{Serum Na}^+) - (\text{Serum Cl}^- + \text{Serum HCO}_3^-) \geq 16$  mEq/L [chemistry report]  
Reference Range: 7 - 14 mEq/L

**Antihyaluronidase titer (AH Titer):**

Antibody titer for Group A  $\beta$ -hemolytic Streptococci. Titer rises in second week of infection and falls after 3 - 5 weeks. [serology report]  
Increased:  $> 128$  units/mL  
Reference range:  $\leq 128$  units/mL

**Antinuclear antibodies (ANA):**

Increased: Positive at  $\geq 1:20$  dilution [chemistry report]  
Reference range: Negative at 1:20 dilution

**Antistreptolysin-O titer (ASO Titer):**

Antibody titer for Group A

$\beta$ -hemolytic Streptococci. Titer rises in 1 week, peaks at 3 - 5 weeks and returns to baseline in 6 months to 1 year. [serology report]

Increased: > 166 Todd Units

Reference range:  $\leq$  166 Todd Units

 **$\alpha_1$ -Antitrypsin:**

Decreased: Newborn  $\leq$  114 mg/dL [chemistry report]

Adult  $\leq$  48 mg/dL [chemistry report]

> 60 y  $\leq$  94 mg/dL [chemistry report]

Reference Ranges: Newborn 145 - 270 mg/dL

Adult (M-phenotype) 78-200 mg/dL

> 60 y 115 - 200 mg/dL

**Anuria:**

Urine output  $\leq$  100 mL/24 hr

OR  $<$  1mL/kg/24h for children  $\leq$  16 years old

**Arrhythmias, Cardiac:**

Any cardiac rhythm other than the normal sinus rhythm. [ECG Report]

OR atrial premature contraction [ECG Report]

OR ventricular premature contraction [ECG Report]

OR junctional premature contraction [ECG Report]

OR atrial fibrillation [ECG Report]

OR supraventricular tachycardia [ECG Report]

OR atrial flutter [ECG Report]

OR ectopic atrial rhythm [ECG Report]

**Arthritis:**

**Infectious arthritis:** Also known as **Septic arthritis.**

Synovial fluid neutrophils  $\geq$  50% of total leukocytes [chemistry report]

OR Micro-organisms identified on Gram stain [chemistry report]

OR Pathogenic micro-organisms grown on culture [chemistry report]

**Non-infectious arthritis:**

Usually polyarticular.

Synovial culture report: No growth of pathologic organism(s) [culture report]

**Aseptic meningitis:** *See Meningitis, viral*

**ASO Titer:** *See Antistreptolysin-O titer*

**Aspartate aminotransferase, serum (AST):**

Increased: Male  $\geq 46$  U/L [chemistry report]  
Female  $\geq 41$  U/L [chemistry report]  
Reference ranges: Male 15 - 40 U/L  
Female 13 - 35 U/L

**AST:** *See Aspartate aminotransferase*

**Azotemia:**

Serum Urea Nitrogen  $\geq 24$  mg/dL [chemistry report]  
Reference range 6 - 20 mg/dL [chemistry report]

**Bacteremia:**

Blood culture reports growth of bacterial organism [blood culture report after 48 hours]

**Band neutrophils:**

Increased: White  $\geq 1250/\mu\text{L}$  [CBC report]  
Black  $\geq 750/\mu\text{L}$  [CBC report]  
Reference ranges: White 0 - 1000/ $\mu\text{L}$   
Black 0 - 600/ $\mu\text{L}$

**Bleeding:**

Hemoglobin decreases  $> 1\text{g/dL}$  in 8 hours [CBC report]  
OR  $> 500$  mL blood loss

**Blindness:**

Visual acuity  $\leq 20/200$  Snellen notation, in one or both eyes

**Bradycardia:**

Resting heart rate  $\leq 60/\text{min}$

**Bundle branch block:** *See Cardiac conduction abnormalities*

**Cachexia:**

Body weight  $< 85\%$  of ideal body weight

**Cardiac output (CO):**

Decreased:  $< 4$  L/min/ $1.73\text{ m}^2$   
Reference range: 2.5 - 3.6 L/min/ $\text{m}^2$   
4.33 - 6.23 L/min/ $1.73\text{ m}^2$

[Doppler echocardiography, radionuclide ventriculography or indicator dilution test during cardiac catheterization]

**Cardiac conduction abnormalities:**

May accompany or be caused by other myocardial disorders. [ECG Report]

Left bundle branch block [ECG Report]

OR Right bundle branch block [ECG Report]

OR Left anterior hemiblock [ECG Report]

OR Left posterior hemiblock [ECG Report]

OR Nonspecific intraventricular conduction defect [ECG Report]

OR First degree heart block [ECG Report]

OR Second degree heart block [ECG Report]

OR Third degree heart block [ECG Report]

**Ceruloplasmin, serum:**

Decreased: < 12 mg/dL [chemistry report]

Reference range: 18 - 45 mg/dL

Also see *Copper, serum*

**Central venous pressure:**

Increased: > 15 cm H<sub>2</sub>O

Reference range: 0 - 6 mm Hg

0 - 7.0 cm H<sub>2</sub>O

**CFU:** See *Colony forming unit*

**Child:**

Individual <15 years of age

**Chronic obstructive pulmonary disease (COPD):**

[pulmonary function tests]

Mild: **FEV<sub>1</sub>** < 75 % of predicted value

AND **MVV** < 80 % of predicted value

AND **RV** > 120 % of predicted value

Moderate: **FEV<sub>1</sub>** < 60 % of predicted value

AND **MVV** < 65 % of predicted value

AND **RV** > 150 % of predicted value

Severe: **FEV<sub>1</sub>** < 40 % of predicted value

AND **MVV** < 45 % of predicted value

AND **RV** > 200 % of predicted value

**Chronic renal failure:**

- Small kidneys [abdominal ultrasound report]
- AND renal osteodystrophy [x-ray report]
- AND creatinine  $\geq 3.0$  mg/dl [chemistry report]
- AND BUN/creatinine ratio  $\leq 20.0$ , as calculated from simultaneously drawn serums for this test
- OR  $FE_{Na} \leq 1.0$
- OR Renal Failure Index  $\leq 1.0$

**Chronic Time Span of Illness:**

Symptoms persist three months or longer per year and occur during two or more successive years.

**Coagulation Defect:**

- International normalized ratio (INR)  $\geq 1.5$  [hematology report]
  - OR Prothrombin time (PT)  $\geq 1.5$  x control time [hematology report]
  - OR Partial thromboplastin time (PTT)  $\geq 1.5$  x control time [hematology report]
  - OR Bleeding time  $\geq 8$  minutes
- Reference ranges: INR 1.0
- Prothrombin time 11 - 15 s
  - Partial thromboplastin time  $< 35$  s
  - Bleeding time (template) 2.5 - 9.5 min

**Cold agglutinins:**

Increased:  $\geq 4$  fold rise in titer, acute and convalescent samples [serology report]

**Coma:**

- Glasgow coma scale rating  $< 8$
- OR unresponsive to pain
- AND unresponsive to verbal stimuli
- AND unresponsive to tactile stimuli



**Congenital adrenal hyperplasia:**

Urine 17-ketosteroids > 20 mg/24hr [urine chemistry report]

Reference ranges: 1 - 4 Y < 1 mg/d

5 - 9 y < 3 mg/d

10 - 15 y 1 - 6 mg/d

15 - 16 y Male 3 - 13 mg/d

Female 2 - 8 mg/d

Adult Male 10 - 25 mg/d

Female 6 - 14 mg/d

Due to 21-Hydroxylase deficiency

AND Urinary 17-hydroxyprogesterone increased [urine chemistry report]

OR 11-Beta hydroxylase deficiency

AND Urinary tetrahydro-17-deoxycorticosterol increased [urine chemistry report]

AND Serum 11-deoxycorticosterone increased [urine chemistry report]

AND Serum 11-deoxycortisol increased [urine chemistry report]

OR 3-Beta hydroxysteroid dehydrogenase deficiency [urine chemistry report]

AND Serum dehydroepiandrosterone increased [urine chemistry report]

**Congestive heart failure (CHF):**

Initial central venous pressure  $\geq 15$  cm H<sub>2</sub>O [central venous pressure report or pulmonary artery catheter report]

OR Initial peak systolic right ventricular pressure  $\geq 25$  mmHg

OR Initial pulmonary wedge pressure  $\geq 18$  mmHg

OR Low cardiac output measured by ejection fraction  $\leq 50\%$  [echocardiogram or nuclear ejection fraction report]

OR Cardiac output  $\leq 4$  L/min [cardiac catheterization report]

Presumptive Diagnostic Findings:

Jugular venous distention

OR Pedal edema 3+

OR S<sub>3</sub> gallop

OR Bibasilar rales

OR Congestive heart failure [chest x-ray report]

Infants:

Congestive heart failure [chest x-ray report]

AND Tachycardia

AND Tachypnea

AND Rales on auscultation of the lungs

AND Capillary refill > 2 seconds

AND Hepatomegaly

**Congestive heart failure (CHF) acute:**

**CHF and duration  $\leq 7$  days**

**Convalescent/Acute Phase serology:**

To demonstrate an immunological response to an infectious agent a blood sample is taken during the acute illness and stored for several weeks. A second blood sample is taken during convalescence, and both are analyzed in the same batch. A rise in antibody titer ratio of  $\geq 4$  which represents two successive dilutions is interpreted as an immunological response.

**COPD:** *See Chronic obstructive pulmonary disease*

**Copper, serum:**

Increased: Male  $> 160 \mu\text{g/dL}$  [chemistry report]

Female  $> 175 \mu\text{g/dL}$  [chemistry report]

Reference range: Adult Male 70 - 140  $\mu\text{g/dL}$

Female 80 - 155  $\mu\text{g/dL}$

**Coproporphyrin, urine:**

Increased:  $> 200 \mu\text{g}/24 \text{ h}$  [chemistry report]

Reference range: 52 - 163  $\mu\text{g}/24 \text{ h}$

**Cor pulmonale:**

Initial central venous pressure  $\geq 15 \text{ cm H}_2\text{O}$  [central venous catheter report or pulmonary artery catheter report]

OR Initial peak systolic right ventricular pressure  $\geq 25 \text{ mmHg}$   
[pulmonary artery catheter report]

OR Pulmonary artery pressure  $\geq 30/15 \text{ mmHg}$   
[pulmonary artery catheter report]

AND Jugular venous distention

OR  $S_3$  gallop

OR Ascites

OR Hepatomegaly

**CK:** *See Creatine kinase*

**CPK:** *See Creatine kinase*

**C-Reactive protein (CRP):**

Increased:  $> 1 \text{ mg/dL}$  [chemistry report]

Reference range: 6.8 - 820  $\mu\text{g/dL}$

**Cranial nerve palsy:**

- OR blindness in one or both eyes
- OR loss of sense of smell
- OR paralysis of one or both eye's musculature
- OR facial numbness
- OR facial paralysis
- OR deafness in any ear
- OR difficulty swallowing
- OR loss of taste

**Creatine kinase, total, serum (CK):**

Increased: Male CK  $\geq$  208 U/L [chemistry report]  
Female CK  $\geq$  169 U/L [chemistry report]  
Reference ranges: Male 38 - 174 U/L  
Female 26 - 140 U/L

**Creatine kinase isoenzymes, serum:**

Increased: total CK and CK-MB increase above reference values within 3 - 4 h following myocardial infarction. Peak values are seen at 24 - 36 h, with return to normal within 3 d.  
Reference ranges: CK-MB 4 - 6 % of total CK [chemistry report]  
0 - 10 U/L  
0 - 9  $\mu$ g/L

**Creatine kinase isoforms:**

Measured by high voltage electrophoresis. Formed in the blood by action of proteolytic enzymes.  
Increased: CK3c/CK3a ratio  $>$  3.0  
Increases within 1 - 2 h after myocardial infarction (earlier than CK-MB) and peaks at 10 - 12 h  
Reference ranges: CK-3a 42 - 75 % of total CK  
CK-3b 18 - 51 % of total CK  
CK-3c 2 - 14 % of total CK  
CK3c/CK3a ratio 0.31 - 2.5

**Creatine kinase relative index:**

Useful in diagnosis of myocardial infarction when skeletal muscle trauma causes increase in CK-MM

$$\frac{\text{CK-MB } \mu\text{g/L}}{\text{Total CK U/L}} \times 100$$

Increased: CK relative index  $>$  4.5  
Reference range: CK relative index  $<$  3.9 %

**Creatine phosphokinase (CPK):** *See Creatine kinase*

**CSF Reference values:**

**CSF Cell counts:** < 5/μL, all mononuclear [chemistry report]

**CSF Pressure:** (Opening) 15 - 45 mm H<sub>2</sub>O

**CSF Glucose:** 50 - 75 mg/dL (20 mg/dL less than in serum) [chemistry report]

**CSF Protein, total:** (Lumbar) 15 - 45 mg/dL [chemistry report]

**CSF Protein electrophoresis:** Albumin predominant  
No oligoclonal bands

**CSF IgG:** Children under 14 y < 8 % of total protein

Adults < 14 % of Total protein

**CSF IgG Index:** 0.3 - 0.6

$$\text{Calculated as: IgG Index} = \left[ \frac{\text{IgG}_{\text{csf}} / \text{IgG}_{\text{serum}}}{\text{Albumin}_{\text{csf}} / \text{Albumin}_{\text{serum}}} \right] \times 100$$

**Cushing's Disease:**

Urinary hydroxycorticosteroids

Increased: > 10 mg/24h [chemistry report]

Reference ranges: Child 0.5 - 5.6 mg/24h

Adult Male 3.0 - 10 mg/24h

Female 2.0 - 8.0 mg/24h

Plasma Adrenocorticotrophic Hormone (A.C.T.H.)

Increased at 9:00 pm > 35 pg/mL [chemistry report]

Reference range: < 10 pg/mL (Patient supine)

**Cystic fibrosis:**

Sweat test with pilocarpine iontophoresis:

**Sweat chloride test:** Sweat chloride > 60 mEq/L [chemistry report]

Cystic fibrosis variant: Sweat Cl<sup>-</sup> > 40 and ≤ 60 mEq/L

Reference range: 5 - 35 mEq/L

Chromosome analysis: Linkage marker on chromosome 7 for CFTR

Cystic fibrosis transmembrane conductance regulator (CFTR)

**Cytomegalovirus (CMV) infection:**

CMV isolated on culture

OR IgM Antibodies to CMV found

**Dehydration:**

>5% loss of ideal body weight in 24 hr

**Dementia:**

Mini-mental status examination < 9.7 points

**Diabetes mellitus:**

Major types: Type I - insulin dependent diabetes mellitus (IDDM), and Type II - non-insulin dependent diabetes mellitus (NIDDM).

Serum glucose  $\geq$  126 mg/dL after > 8hr fast

OR 2 hr postprandial glucose  $\geq$  200 mg/dL (World Health Organization protocol for oral glucose tolerance test using 75g anhydrous glucose in water)

AND  $\geq$  24 hours later, serum glucose  $\geq$  126 mg/dL after >8 hr fast

OR History of Type 1 Diabetes mellitus with random plasma

Serum glucose > 200 mg/dL

AND Polyuria

OR Polydipsia

OR Polyphagia

**Diabetes Mellitus Gestational:**

No prior pre-gestational diabetes

AND > 2 abnormal values on 3h glucose tolerance test (100gm glucose)

Fasting  $\geq$  105 mg/dL

1 hr  $\geq$ 190 mg/dL

2 hr  $\geq$ 165 mg/dL

3 hr  $\geq$ 145 mg/dL

OR positive WHO 75g test

**DIC:** *See Disseminated Intravascular Coagulation*

**Digoxin toxicity:**

Digoxin, serum: Therapeutic range 0.8 - 2.0 ng/mL [chemistry report]

Toxic range > 2.5 ng/mL

**Disorientation:** *See encephalopathy*

**Disseminated Intravascular Coagulation (DIC):**

Prothrombin time (PT) in seconds > 1.5 x control [hematology report]

OR Partial thromboplastin time (PTT) in seconds > 1.5 x control [hematology report]

OR International Normalized Ratio (INR) > 1.5 [hematology report]

One of the first three above AND all of the following

AND Platelet count < 75,000/ $\mu$ L [CBC report]

AND Fibrin split products > 1:8 dilution [chemistry report]

OR Fibrin split products  $\geq$  40 mg/dL [chemistry report]

AND Fibrinogen concentration < 150 mg/dL [chemistry report]

OR Hypofibrinogenemia

AND Increased D-Dimer concentration [chemistry report]

**Down's syndrome:**

Cytogenetics report: Trisomy 21

OR Down's syndrome mosaic: Genotype 46/47 with trisomy 21

**DVT:**

deep vein thrombosis [Doppler ultrasound, nuclear venogram, contrast venography or other venogram report]

**Ejection fraction, cardiac (EF):**

Decreased: < 0.50

Reference range: 0.56 - 0.78

[Contrast ventriculography report, radionuclide imaging report, or echocardiography report]

**Encephalopathy:**

Disoriented to person

AND disoriented to place

AND disoriented to time

**End-stage renal disease:**

Creatinine, serum >15 mg/dL [chemistry report]

AND Urea nitrogen, serum > 100 mg/dL [chemistry report]

AND Creatinine clearance < 5 mL/min [chemistry report]

Reference ranges: Creatinine, serum Male 0.9 - 1.3 mg/dL

Female 0.6 - 1.1 mg/dL

Urea nitrogen, serum 6 - 20 mg/dL

Creatinine clearance: Males 94 - 140 mL/min

Females 72 - 110 mL/min

Corrected to 1.73 m<sup>2</sup> body surface area

**Endocarditis:**

Infective endocarditis

Culture with growth of pathologic organism(s) from heart valves [operative or pathology report]

OR Fever: (Temperature  $\geq$  101°F oral or  $\geq$  101.5°F rectal)

AND New heart vegetation [Echocardiography report]

OR Change in heart murmur

OR New heart murmur

AND **Bacteremia:** (Blood culture reports growth of bacterial organism)

OR **Fungemia:** (Blood culture reports growth of fungal organism)

**Eosinophilia:**

Increased: >750 eosinophils/ $\mu$ L [CBC report]

Reference Range: 0 - 600/ $\mu$ L

**Erythrocyte sedimentation rate (ESR):**

Westergren method

Increased: Males > 19 mm/h [hematology report]

Females > 25 mm/h [hematology report]

Reference Ranges: Males 0 - 15 mm/h

Females 0 - 20 mm/h

**Erythrocyte survival time (T<sub>½</sub> with <sup>51</sup>Cr):**

Decreased: < 25 d [hematology report]

Reference range: 25 - 32 d

**Ethanol, blood:** *See Alcohol, blood*

**Euthyroid goiter:**

All values for thyroid hormones within reference ranges

Reference Ranges: Thyroxine (T<sub>4</sub>) 4 - 13 µg/dL

Triiodothyronine (T<sub>3</sub>) 75 - 256 ng/dL

Free T<sub>4</sub> Index < 456

**Ferritin, serum:**

Increased: (Overload) > 220 ng/mL [chemistry report]

Decreased: 6 mo - 15 y < 7 ng/mL

Male < 20 ng/mL

Female < 10 ng/mL

Reference ranges: 6 mo - 15 y 7 - 140 ng/mL

Male 20 - 250 ng/mL

Female 10 - 120 ng/mL

**Fever:**

Temperature ≥ 101° F oral or ≥ 101.5° F rectal

*Moderate:* Temperature ≥ 102° F oral or ≥ 102.5° F rectal

*Severe:* Temperature ≥ 104° F oral or ≥ 104.5° F rectal

**Folate (Folic acid), serum or erythrocytes:**

Decreased: Serum < 3 ng/mL [chemistry report]

Erythrocytes < 100 ng/mL [chemistry report]

Reference range: Serum 3 - 20 ng/mL

Erythrocytes 140 - 628 ng/mL

**Forced expiratory volume in one second (FEV<sub>1</sub>):**

Decreased: < 80 % of predicted value

Reference Ranges:

Expressed as percentage of the predicted value

FEV<sub>1</sub> ≥ 80 % of predicted value

Expressed as ratio to Forced Vital Capacity

FEV<sub>1</sub>/FVC ≥ 70 %

**Fractional excretion of sodium (FENa):**

A calculation to measure the excretion of sodium compared to excretion of creatinine. In renal failure, it is increased  $FENa \geq 1.0$

$$\left[ \frac{U_{Na} / P_{Na}}{U_{Cr} / P_{Cr}} \right] \times 100$$

Where  $U_{Na}$  is Urine sodium  
 $P_{Na}$  is Plasma sodium  
 $U_{Cr}$  is Urine creatinine  
 $P_{Cr}$  is Plasma creatinine

**FTA test (Fluorescent treponemal antibody absorption test):**

Used to confirm reactive VDRL and RPR tests for syphilis

Reported as: Nonreactive  
Borderline  
Reactive

**Fungemia:**

Blood culture reports growth of fungal organism [blood culture report within 48 hours]

**Gamma glutamyl transferase:** *See  $\gamma$ -Glutamyl transferase*

**GGT:** *See  $\gamma$ -Glutamyl transferase*

**Glucose-6-Phosphate Dehydrogenase deficiency (G-6-PD deficiency):**

Causes hemolysis in infection or after ingestion of oxidant drugs.

Inheritance is sex linked. Numerous variants (>300)

Decreased: < 4.5 U/g hemoglobin [chemistry report]

Reference range: 5.5 - 9.3 U/g hemoglobin

 **$\gamma$ -Glutamyl transferase:**

Increased: Males  $\geq 38$  U/L [chemistry report]

Females  $\geq 30$  U/L [chemistry report]

Reference range: Dependent on method, age and sex

Ektachem, 37° C

Males 2 - 30 U/L

Female 1 - 24 U/L

**Guaic test, stool:**

Positive test indicates blood in the stool



**Haptoglobin, serum:**

Decreased: < 30 mg/dL [chemistry report]

Reference range: 40 - 240 mg/dL

**Hematuria:**

Females  $\geq 4$  red blood cells/hpf [urinalysis report]

Males  $\geq 1$  red blood cell/hpf [urinalysis report]

**Hemoglobin A<sub>2</sub>, blood:**

Chromatographic method:

Increased: 3.7 - 7.0 % in  $\beta$ -thalassemia trait [hematology report]

Reference range: 1.5 - 3.5 %

**Hemoglobin S, blood:**

Sickle cell trait: Hemoglobin S > 20 % of total [Hemoglobin electrophoresis report]

AND Hemoglobin A > 60 % of total [Hemoglobin electrophoresis report]

Sickle cell disease: Hemoglobin S > 80% of total [Hemoglobin electrophoresis report]

AND Hemoglobin F > 2 % of total [Hemoglobin electrophoresis report]

**Hemolysis:**

Serum haptoglobin  $\leq 30$  mg/dL [chemistry report]

OR Total serum bilirubin  $\geq 1.4$  mg/dL [chemistry report]

AND Unconjugated serum bilirubin > 80% of total bilirubin [chemistry report]

OR Chromium labeled erythrocyte T<sub>1/2</sub> survival time  $\leq 25$  days [Nuclear Medicine report]

Reference Ranges: Haptoglobin, serum 40 - 240 mg/dL

Total bilirubin, serum 0.3 - 1.2 mg/dL

Erythrocyte survival time T<sub>1/2</sub> 25 - 32 days

**Hemophilia:**

Asymptomatic: Factor VIII  $\geq 25$  % and  $\leq 50$  % of normal [chemistry report]

Mild: Factor VIII < 25 % of normal [chemistry report]

Moderate: Factor VIII  $\leq 5$  % of normal [chemistry report]

Severe: Factor VIII not detected [chemistry report]

**Hepatic Coma:**

History of severe liver disease

AND Coma

OR Hepatic encephalopathy

OR Portal systemic encephalopathy

**Hepatitis:**

Serum bilirubin > 3 mg/dL [chemistry report]  
 AND AST > 60 U/L [chemistry report]  
 OR ALT > 60 U/L [chemistry report]  
 OR GGT > 38 U/L [chemistry report]  
 AND Hepatomegaly [physical examination, liver-spleen scan or CT scan]

**HIV (Human Immunodeficiency Virus) infection:**

Screening: EIA test for antibodies to HIV  
 Confirmatory: Western blot for HIV antigens

**Huntington's disease (Huntington's chorea):**

Chromosome studies: Repeated CAG sequences in gene IT15

**5-Hydroxyindoleacetic acid, urine (5-HIAA):**

Increased: > 25 mg/d [urine chemistry report]  
 Reference range: Negative, < 25 mg/d

**Hyperaldosteronism:**

Increased (Average sodium diet)  
 Urine aldosterone > 20 µg/d [urine chemistry report]  
 OR Plasma aldosterone ≥17.4 ng/dL [chemistry report]

Reference ranges:

Depends on sodium intake, age, sex and posture

Urine: Total urinary Na      Urinary aldosterone

mEq/d

µg/d

< 20

35 - 80

50

13 - 33

100

5 - 24

200

1 - 16

Plasma: Adults (Average sodium diet)

Supine 3 - 16 ng/dL

Upright 7 - 30 ng/dL

**Hyperammonemia:**

Increased: Serum ammonia > 98 µg/dL [chemistry report]  
 Reference range: 19 - 60 µg/dL

**Hyperbilirubinemia:**

Total serum bilirubin > 3.0 mg/dL [chemistry report]  
Infants <1day old total serum bilirubin > 8mg/dL [chemistry report]  
Infants 1-2day old total serum bilirubin > 12mg/dL [chemistry report]  
Infants 2-5day old total serum bilirubin > 16mg/dL [chemistry report]  
Infants >5day old total serum bilirubin > 2mg/dL [chemistry report]  
Reference range (Adults) Total 0.3 - 1.2 mg/dL  
Unconjugated < 1.1 mg/dL

**Hypercalcemia:**

Increased: Serum calcium > 10.7 mg/dL [chemistry report]  
Reference Range: 8.6 - 10.0 mg/dL

**Hypercalciuria:**

Increased: Higher than reference range  
Reference range: Calcium free diet 5 - 40 mg/d  
Low calcium diet 50 - 150 mg/d  
Average diet 100 - 300 mg/d

**Hypercarbia:**

Increased: Males pCO<sub>2</sub> > 51 mmHg [ABG report]  
Females pCO<sub>2</sub> > 48 mmHg[ABG report]  
Reference ranges: Males pCO<sub>2</sub> 35 - 48 mmHg  
Females pCO<sub>2</sub> 32 - 45 mmHg

**Hyperchloremia:**

Increased: Serum chloride ≥109 mEq/L [chemistry report]  
Reference range: 98 - 107 mEq/L

**Hypercholesterolemia:**

Increased: Total serum cholesterol ≥ 200 mg/dL [chemistry report]  
Reference ranges: Total cholesterol  
Desirable\* < 200 mg/dL  
Moderate risk 200 - 239 mg/dL  
High risk > 240 mg/dL

\*(Recently “desirable” rather than “normal” concentrations have been established by consensus)

**Hyperkalemia:**

Increased: Serum potassium ≥ 5.5 mEq/L [chemistry report]  
Concentrations > 7.0 mEq/L may be fatal  
Reference range: 3.5 - 5.1 mEq/L

**Hypernatremia:**

Increased: Serum sodium  $\geq 148$  mEq/L [chemistry report]  
Reference range: 136 - 145 mEq/L

**Hypertension:**

Diastolic blood pressure  $> 90$  mmHg  
OR Systolic blood pressure  $> 140$  mmHg

**Hyperthyroidism:**

TSH (thyrotropin)  $0.0$   $\mu\text{g/dL}$  [chemistry report]  
AND Free thyroxine index  $\geq 15.2$  [chemistry report]  
OR Serum free T<sub>4</sub> (thyroxine)  $\geq 3.2$  ng/dL [chemistry report]

**Hypertriglyceridemia:**

Increased: Serum triglycerides:  $\geq 250$  mg/dL [chemistry report]  
Recommended therapeutic goals:  
Normal  $< 250$  mg/dL  
Borderline high 250 - 500 mg/dL  
Hyperglyceridemic  $> 500$  mg/dL  
High risk for pancreatitis  $> 1000$  mg/dL

**Hyperuricemia:**

Increased: Males: Serum uric acid  $\geq 8.4$  mg/dl [chemistry report]  
Females: Serum uric acid  $\geq 7.7$  mg/dL [chemistry report]  
Reference Ranges: Male 4.4 - 7.6 mg/dL  
Female: 2.3 - 6.6 mg/dL

**Hypoadrenalism:**

Decreased: Serum cortisol, 8:00 am  $< 4$  ug/dL [chemistry report]  
Reference Range: 5-23  $\mu\text{g/dL}$

**Hypoalbuminemia:**

Decreased: Serum albumin  $\leq 2.8$  g/dL [chemistry report]  
Reference range: 3.4 - 4.8 g/dL

**Hypocalcemia:**

Decreased: Serum calcium  $\leq 8.2$  mg/dL [chemistry report]  
OR Serum ionized calcium  $\leq 4.48$  mg/dL [chemistry report]  
Infants, serum calcium  $< 6.0$  mg/dL [chemistry report]  
OR serum ionized calcium  $< 4.0$  mg/dl [chemistry report]  
Reference ranges: Calcium 8.6 - 10.0 mg/dL  
Ionized calcium 4.60 - 5.08 mg/dL

**Hypochloremia:**

Decreased: Serum chloride  $\leq 95$  mEq/L [chemistry report]  
Reference range: 98 - 107 mEq/L

**Hypoglycemia:**

Decreased: Serum glucose  $\leq 45$  mg/dL [chemistry report]  
Infants, serum glucose  $<40$  mg/dL in first 24 hr of life  
 $<45$  mg/dL thereafter [chemistry report]  
Reference range: 75 - 115 mg/dL

**Hypokalemia:**

Decreased: Serum potassium  $\leq 3.2$  mEq/L [chemistry report]  
Reference range: 3.5 - 4.5 mEq/L

**Hyponatremia:**

Decreased: Serum sodium  $< 133$  mEq/L [chemistry report]  
Reference Range: 136 - 145 mEq/L

**Hypophosphatemia:**

Decreased: Serum inorganic phosphorus  $\leq 2.2$  mg/dL [chemistry report]  
Reference range: 2.7 - 4.5 mg/dL

**Hypoproteinemia:**

Decreased: Total serum protein  $\leq 5.5$  g/dL [chemistry report]  
Reference range: Ambulatory 6.4 - 8.3 g/dL  
Recumbent 6.0 - 7.8 g/dL

**Hyporeninemia:**

Usually measured as plasma renin activity (PRA) as Angiotensin I (AI).  
Decreased: Renin  $\leq 5.0$  MU/L on normal salt diet [chemistry report]  
Reference range: Supine 12 - 79 MU/L  
Standing 13 - 114 MU/L

**Hypotension:**

Systolic blood pressure  $< 90$  mmHg

**Hypothermia:**

Body Temperature  $< 96^\circ$  F rectal

**Hypothyroidism:**

Thyroid stimulating hormone (TSH)  $\geq 12.0$   $\mu$ U/mL [chemistry report]  
OR Free Thyroxine (FT<sub>4</sub>)  $\leq 0.3$  ng/dL [chemistry report]  
Reference ranges: TSH 0.5 - 4.2  $\mu$ U/mL  
FT<sub>4</sub> 0.8 - 2.7 ng/dL

**Hypoxemia:**

- pO<sub>2</sub> < 60 mmHg with patient breathing room air  
 OR Alveolar-arterial gradient > 15 mmHg  
 (693 x F<sub>I</sub>O<sub>2</sub>) - (1.2 x pCO<sub>2</sub>) - pO<sub>2</sub> > 15 mmHg  
 [calculated from arterial blood gas values]  
 Reference ranges: pO<sub>2</sub> 83 - 108 mmHg  
 Gradient ≤ 10 mmHg

**IgG Index:**

An index of local IgG synthesis in the CNS.

$$\text{IgG Index} = \frac{[\text{IgG}_{\text{csf}} / \text{IgG}_{\text{serum}}]}{[\text{Albumin}_{\text{csf}} / \text{Albumin}_{\text{serum}}]} \times 100$$

Reference range: 0.3 - 0.6

**Infectious arthritis:** *See Arthritis, infectious*

**Initial peak systolic right ventricular pressure:**

- Increased: > 25 mm Hg  
 Reference range: < 20 mm Hg

**Initial pulmonary wedge pressure:**

- Increased: > 15 mm Hg  
 Reference range: 3 - 15 mmHg

**International Normalized Ratio (INR):**

A method of expressing the prothrombin time that eliminates laboratory-to-laboratory variation in results due to use of different thromboplastins.

$$\text{INR} = \left[ \frac{\text{Patient PT}}{\text{Normal mean PT}} \right]^{\text{ISI}}$$

Where ISI is the International Sensitivity Index of the thromboplastin used  
 Reference Value : 1.0

**Iron Deficiency:****Anemia**

AND Serum iron  $\leq 35$   $\mu\text{g/dL}$  in females or  $\leq 55$   $\mu\text{g/dL}$  in males [chemistry report]

AND Total iron binding capacity  $\geq 513$   $\mu\text{g/dL}$  [chemistry report]

OR **Serum ferritin**  $\leq 10$   $\text{ng/mL}$  [chemistry report]

OR Iron depletion of bone marrow [bone marrow biopsy report]

Reference ranges: Iron, serum Child 50 - 120  $\mu\text{g/dL}$

Male 65 - 175  $\mu\text{g/dL}$

Female 50 - 170  $\mu\text{g/dL}$

Iron binding capacity Adult 250 - 425  $\mu\text{g/dL}$

Ferritin, serum Male 20 - 250  $\text{ng/mL}$

Female 10 - 120  $\text{ng/mL}$

**Jaundice:** *See hyperbilirubinemia*

**Lactate dehydrogenase, serum (LD):**

Serum measurements have little organ specificity unless isoenzymes are measured.

Reference ranges: Highly method dependent

Adult: 140 - 280 U/L

**Lactate dehydrogenase isoenzymes:**

There are five isoenzymes which have been numbered LD-1 to LD-5. Ordinarily LD-2 is present in greater activity than LD-1; Because myocardium contains LD-1, following myocardial infarction the ratio LD-1/LD-2 becomes greater than 1.0 (the “flipped” pattern).

**LD:** *See Lactate dehydrogenase*

**LDH:** *See Lactate dehydrogenase*

**Leukocytosis:**

Increased: Leukocytes, blood  $> 12.6 \times 10^3/\mu\text{L}$  [CBC report]

Reference Range: 4.5 - 11.0  $\times 10^3/\mu\text{L}$

**Leukocyte (neutrophil) alkaline phosphatase (LAP):**

Decreased: Score  $< 20$

Reference range: Score 40 - 130

(Score is based on 0 - 4+ rating of 100 neutrophils)

**Leukopenia:**

Decreased: Leukocytes, blood  $< 3.0 \times 10^3/\mu\text{L}$  [CBC report]

Severe decrease: Leukocytes, blood  $< 0.5 \times 10^3/\mu\text{L}$

Reference Range: 4.5 - 11.0  $\times 10^3/\mu\text{L}$

**Lipase, serum:**

Increased: Serum lipase > 300 U/L [chemistry report]

Reference range: Highly method dependent

With triolein substrate < 200 U/L

With olive oil substrate < 160 U/L

**Lymphocytopenia:**

Decreased: Blood lymphocytes <  $1.0 \times 10^3/\mu\text{L}$  [CBC report]  
< 1000/ $\mu\text{L}$

Reference range:  $1.5 - 4.0 \times 10^3/\mu\text{L}$

**Macrocytosis, erythrocyte:**

Mean corpuscular volume (MCV)  $\geq 95$  fL (or  $\mu^3$ ) [CBC report]

Reference Range: 80 - 90 fL

**Maximum voluntary ventilation (MVV):**

Decreased: MVV < 80 % of predicted value

Reference Ranges: 3 - 5 L/sec  $\geq 80$  % of predicted value

**Meningitis, pediatric:**

Growth of pathologic organism(s) in CSF

AND CSF glucose < 50% of serum glucose [chemistry report]

AND CSF protein > 150 mg/dL (premature infant) [chemistry report]

OR > 170 mg/dL (full-term infant) [chemistry report]

AND CSF neutrophils > 10/ $\mu\text{L}$  [CSF cell count report]

OR CSF lymphocytes > 25/ $\mu\text{L}$  in a premature infant [CSF cell count report]

OR > 20/ $\mu\text{L}$  in a term infant [CSF cell count report]

**Meningitis:****Bacterial meningitis:**

Growth of pathologic organism(s) in CSF [culture report]

AND CSF glucose < 50% of serum glucose [chemistry report]

AND CSF protein > 50 mg/dL [chemistry report]

AND CSF neutrophils > 1/ $\mu\text{L}$  [CSF cell count report]

OR CSF lymphocytes > 8/ $\mu\text{L}$  [CSF cell count report]



**Viral meningitis:** Also known as “Aseptic meningitis”

No growth on bacterial culture of CSF

AND CSF Glucose > 50% of serum glucose [chemistry report]

AND CSF Protein > 50 mg/dL [chemistry report]

AND CSF Lymphocytes/neutrophils > 1 [CSF cell count report]

AND CSF Lymphocytes > 8/ $\mu$ L [CSF cell count report]

OR Virus isolated from CSF [tissue culture report]

OR Acute/convalescent virus-specific antibody titer increases  
>4.0

Reference ranges: CSF glucose Infant, child 60 - 80 mg/dL

Adult 40 - 70 mg/dL

CSF protein 15 - 45 mg/dL

CSF cell count 0 - 5 cells/ $\mu$ L

All mononuclear cells

**Mental Retardation:**

Wechsler IQ  $\leq$  55

**Microcytosis, erythrocyte:**

Mean corpuscular volume (MCV) < 80 fL [CBC report]

Reference range: 80 - 90 fL

**Mini-mental Status Examination:**

A verbal test for grading cognitive status. Total maximal score is 30.

Organic Brain Disease: Score < 27

Dementia:  $\leq$  9.7

Folstein MF et al. J Psychiatr Res 12: 189, 1975

**Multiple sclerosis:**

Multiple sclerosis [MRI scan report]

OR Oligoclonal bands [CSF electrophoresis report]

OR Increased Myelin basic protein [CSF electrophoresis report]

OR Increased IgG index [CSF electrophoresis report]

**Mycoplasma:**

*Mycoplasma pneumoniae* [culture report]

OR Rise in acute/convalescent antibodies [serology report]

OR Cold agglutinin titer of > 1:64 [serology report]

**Myelin basic protein, CSF:**

Increased: > 2 ng/mL [CSF chemistry report]

Reference range: < 2ng/mL [CSF chemistry report]

**Myocardial infarction, acute (AMI):**

Elevation of ST segment [EKG report]

OR Appearance of new Q waves [EKG report]

OR Troponin I increased at 4 - 6 h [chemistry report]

OR Creatine kinase MB fraction increased at 3 - 4 h [chemistry report]

OR Creatine kinase isoforms CK3c/3a increased at 2 - 3 h [chemistry report]

Laboratory: "Cardiac markers" become elevated a few hours after onset of chest pain; however, it is important to follow the levels for 12 to 18 hours to confirm MI.

**Myocarditis:**

Diffuse ST-T wave findings on electrocardiogram [ECG Report]

AND Serum Creatine Kinase MB fraction within reference range [chemistry report]

OR Myocarditis on myocardial biopsy [pathology report]

**Myoglobin, serum:**

Increased: Male > 110 µg/L [chemistry report]

Female > 92 µg/L

Increased 1 - 3 h after myocardial infarction

Reference ranges: Male 19 - 92 µg/L

Female 12 - 76 µg/L

**Neutrophilia:**

Increased: Segmented neutrophils, blood >  $8 \times 10^3/\mu\text{L}$  [CBC report]  
> 8000/ $\mu\text{L}$

Reference ranges: White  $1.6 - 6.9 \times 10^3/\mu\text{L}$

Black  $1.2 - 6.0 \times 10^3/\mu\text{L}$

**Noonan's syndrome:**

Cytogenetics: Genotype 46XX or 46XY

**Obesity:**

Mild: Body weight  $\geq 1.2$  times ideal body weight

OR Body mass index (BMI)  $\geq 27.5 \text{ kg/m}^2$

Moderate: Body weight 1.4 - 2.0 times ideal body weight

Severe: Body weight > 2.0 times ideal body weight

**Oligoclonal bands:**

Reference range: No oligoclonal bands present

**Oliguria:**

Urine output  $\leq 500 \text{ mL/24 h}$

OR Urine output < 30 mL/h

OR Pregnancy

AND Urine output  $\leq 500 \text{ mL/24 h}$

**Opportunistic infection:**

Pneumocystis carinii [culture report]  
Cytomegalovirus spp. [culture report]  
Herpes virus spp. [culture report]  
Candida albicans [culture report]  
Cryptococcus spp. [culture report]  
Histoplasma spp. [culture report]  
Toxoplasma gondii [culture report]  
Mycobacterium-intracellulare [culture report]  
Mycobacterium-tuberculosis [culture report]  
Cryptosporidium spp. [culture report]  
Isospora belli [culture report]

**Osmolality, serum or urine:**

Increased: Serum > 300 mOsm/kg H<sub>2</sub>O [urine chemistry report]  
Decreased: Serum < 270 mOsm/kg H<sub>2</sub>O  
Reference ranges: Serum 275 - 295 mOsm/kg H<sub>2</sub>O  
Urine 50 - 1200 mOsm/kg H<sub>2</sub>O

**Osteomyelitis:**

Growth of pathologic organism(s)[microbiology culture report]  
OR **Osteomyelitis** [bone scan report OR CT scan report OR MRI report]

**Osteoporosis:**

Bone density analysis, DEXA scan, report > 2.5 standard deviations below standard adult mean value

**Pancreatic insufficiency:**

Oil droplets, egg particles or buttery material on gross examination of stool  
OR Three globules/hpf or globules ≥ 75 micra with Sudan III stain  
[Microscopic stool report]  
OR Fecal fat > 6 gm fat/day on standard diet of 100 gm fat/day  
(3 day stool specimen)

**Pancreatitis:**

Pancreatitis [operative/pathology report or CT scan report or sonogram report or KUB x-ray report]  
OR Serum lipase ≥ 300 U/L  
AND Serum amylase ≥ 500 U/L  
OR Serum p-type isoamylasemia

**Pneumonia:**

New pulmonary infiltrate (chest x-ray report)

AND Growth of pathogenic organism on sputum culture

OR Single predominant organism and many WBCs on Gram stain of sputum

**Polycythemia:**

Increased erythrocytes: Red cell mass Male  $\geq 37.5$  mL/kg [hematology report]

Female  $\geq 32.5$  mL/kg [hematology report]

Reference ranges: Male 25 - 35 mL/kg body weight

Female 20 - 30 mL/kg body weight

**Protein electrophoresis, serum (Cellulose acetate):**

Reference ranges: Albumin 3.5 - 5.5 g/dL

$\alpha_1$ -Globulin 0.1 - 0.3 g/dL

$\alpha_2$ -Globulin 0.6 - 1.0 g/dL

$\beta$ -Globulin 0.7 - 1.1 g/dL

$\gamma$ -Globulin 0.8 - 1.6 g/dL

**Prostate specific antigen, serum (PSA):**

Increases with age, benign prostatic hypertrophy and carcinoma of the prostate

Reference range  $< 4$  ng/mL

**Red cell (erythrocyte) mass:**

Increased: Above reference range in polycythemia vera and secondary polycythemia

Reference ranges: Male 25 - 35 mL/kg

Female 20 - 30 mL/kg

**Renal failure index (RFi):**

A calculated index to assess renal failure.

$$\left[ \frac{U_{Na}}{U_{Cr} / P_{Cr}} \right] \times 100$$

Where  $U_{Na}$  is concentration of sodium in the urine

$U_{Cr}$  is concentration of creatinine in the urine

$P_{Cr}$  is concentration of creatinine in the plasma

Reference ranges: RFi  $> 1$  in acute tubular necrosis

RFi  $< 1$  in glomerulonephritis

RFi  $< 1$  in obstructive nephropathy

**Renal insufficiency:**

Also see *End-stage renal disease*.

Creatinine, serum Male  $\geq 1.4$  mg/dL [chemistry report]  
Female  $\geq 1.2$  mg/dL [chemistry report]  
Reference ranges: Male 0.9 - 1.3 mg/dL  
Female 0.6 - 1.1 mg/dL

**Residual volume (RV):**

Reference range: 1000 - 1200 mL for young adult males

**Respiratory failure:**

Acute lung injury  
OR Acute respiratory distress syndrome  
OR (**Hypoxemia:**  $pO_2 < 60$  mmHg with patient breathing room air)  
OR **Alveolar-arterial gradient**  $> 15$  mmHg  
AND **Acidosis:** (Decreased: Blood pH  $< 7.325$ )  
AND **Hypercarbia:** (Males  $pCO_2 > 51$  mmHg; Females  $pCO_2 > 48$  mmHg)

**Restrictive Lung Disease:**

Total lung capacity  $\leq 75\%$  of predicted value  
[pulmonary function test report]  
OR Forced vital capacity  $\leq 75\%$  of predicted value  
[pulmonary function test report]

**Reticulocytosis:**

Increased: Reticulocytes, blood  $> 2.0\%$  of erythrocytes [CBC report]  
or  $> 100 \times 10^3/\mu\text{L}$   
Reference ranges: Reticulocytes, blood 0.5 - 1.5 %  
or 24 - 84  $\times 10^3/\mu\text{L}$

**Reye's Syndrome:**

History of recent convalescence from an upper respiratory tract infection, influenza or varicella in a child aged  $\leq 16$  years old.  
AND History of salicylate ingestion  
AND Disorientation  
OR Protracted vomiting  
OR Lethargy  
AND Fatty infiltration of the liver [operative or pathology report]  
AND Serum **ammonia**  $> 50$   $\mu\text{g/dL}$  [chemistry report]  
OR **AST**  $> 105$  U/L [chemistry report]  
AND **ALT**  $> 90$  U/L [chemistry report]

**Rhabdomyolysis:**

**Creatine kinase**  $> 267$  U/L [chemistry report]  
AND Myoglobinuria

**Rheumatoid arthritis:**

Five of the following criteria of the American Rheumatism Association are necessary for diagnosis:

History of morning stiffness > 6 weeks

Pain on motion or tenderness in one joint, as observed by physician, > 6 weeks

Swelling of one other joint > 6 weeks

AND any interval of joint free symptoms > 3 months

Symmetrical bilateral joint swelling, except the terminal phalangeal joints > 6 weeks

Subcutaneous nodules

Rheumatoid arthritis on x-ray [x-ray report of any joints]

Rheumatoid factor titer > 1:160 [chemistry report]

Poor mucin synovial clot

Synovial WBC  $\geq$  2000 cells/ $\mu$ L [cell count report]

AND No crystals

Rheumatoid arthritis on biopsy [synovial biopsy report]

**Salicylate intoxication:**

Therapeutic range: < 20 mg/dL

Toxic range: 30 - 60 mg/dL [chemistry report]

Lethal range: > 60 mg/dL [chemistry report]

**Sarcoidosis:**

Sarcoidosis [Pathology report]

**Schistosomiasis:**

Three major species are: *Schistosoma haematobium*, *S. mansoni* and *S. japonicum*.

Demonstration of eggs in the feces [Parasitology report]

**Sepsis, infant:**

Viremia: (viral culture reports growth of bacterial virus)

OR **Bacteremia:** (blood culture reports growth of bacterial organism)

OR **Fungemia:** (blood culture reports growth of fungal organism)

OR Clinical evidence of infection

AND 2 of the following criteria:

Fever in infant,  $> 38^{\circ}$  C rectal or  $> 37.8^{\circ}$  C oral

OR Hypothermia in infant  $< 36^{\circ}$  C rectal or  $< 35.8^{\circ}$  C oral

Tachypnea, Respiratory Rate  $> 90\%$  for age

OR Hyperventilation

OR  $pCO_2 < 32$  mmHg [ABG report]

OR Apnea

OR Patient intubated

OR Tachycardia, Heart Rate  $> 90\%$  for age

OR  $WBC > 12,000/\mu L$  [CBC report]

OR  $WBC < 4000/\mu L$  [CBC report]

OR  $> 10\%$  immature neutrophils [CBC report]

**Sepsis:**

- Sepsis syndrome
  - OR Viremia: (blood culture reports growth of virus organism)
  - OR **Fungemia:** (blood culture reports growth of fungal organism)
  - OR **Bacteremia:** (blood culture reports growth of bacterial organism)
  - AND **Fever:** (Temperature  $\geq 101^\circ\text{F}$  oral or  $\geq 101.5^\circ\text{F}$  rectal)
  - OR **Hypothermia:** (Body Temperature  $< 96^\circ\text{F}$  rectal)
  - AND **Tachypnea:** (Respiratory rate  $> 26/\text{min}$ )
    - OR Patient intubated
    - AND **Tachycardia:** (Heart rate  $> 110$  beats/min)
  - AND One of the following:
    - PaO<sub>2</sub>/F<sub>I</sub>O<sub>2</sub>  $< 280$  [Arterial Blood Gas Report]
    - OR Use of 40% Ventimask
    - OR **Anion gap:**  $\geq 14$
    - OR **Acidosis:** (Decreased: Blood pH  $< 7.325$ )
    - OR **Anuria:** (Urine output  $\leq 100$  mL/24 hr)
    - OR  $< 1\text{mL}/\text{kg}/24\text{h}$  for children  $\leq 16$  years old
    - OR **Hypotension:** (Systolic blood pressure  $< 90$  mmHg)
    - OR International normalized ratio (INR)  $> 1.0$
    - OR PTT  $>$  baseline
    - OR **Thrombocytopenia:** (Decreased: Platelet count, blood  $< 10 \times 10^3/\mu\text{L}$ )
      - OR Pregnant
      - AND Platelet count  $< 15 \times 10^3/\mu\text{L}$
    - OR Baseline platelet count drops 50% in 24 hours
    - OR **Coma:** (Glasgow coma scale rating  $< 8$ )
      - OR unresponsive to pain
      - AND unresponsive to verbal stimuli
      - AND unresponsive to tactile stimuli
    - OR encephalopathy
- Quartin A et.al. JAMA 1997;277;1058-63  
Sands K et.al. JAMA 1997;278;234-240

**SGOT:** *See Aspartate aminotransferase*



**Shock:**

- Hypotension:** (Systolic blood pressure < 90 mmHg)
- AND **Oliguria:** (Urine output  $\leq$  500 mL/24 h)
  - OR Urine output < 30 mL/h
  - OR Pregnancy
    - AND Urine output  $\leq$  500 mL/24 h
  - OR **Anuria:** (Urine output  $\leq$  100 mL/24 hr)
  - OR < 1mL/kg/24h for children  $\leq$  16 years old
  - OR Newborn with poor peripheral perfusion
- AND Capillary refill >2 seconds
  - OR Age < 16 years old
- AND Systolic blood pressure < 50 mmHg
- AND Urine output < 1 mL/kg/h

**SGPT:** *See Alanine aminotransferase*

**Syndrome of inappropriate anti-diuretic hormone secretion (SIADH):**

- Serum osmolality > 300 mOsm/kg H<sub>2</sub>O [chemistry report]
- AND Lethargy
  - OR Water load test positive for SIADH
  - OR **Hyponatremia:** (Decreased: Serum sodium < 133 mEq/L)

**Tachycardia:**

Heart rate > 110 beats/min for adults

**Tachypnea:**

Respiratory rate > 26/min for adults

**Temperature:** *See Fever, Hypothermia*

**Tetanus:**

Tetanospasmin and tetanolysin [chemistry report]

An acute, often fatal, infection caused by the *C. tetani* from infected tissue

**Thiamine, blood or urine:**

- Decreased (deficiency): blood < 1.7  $\mu$ g/dL [chemistry report]
  - urine < 50  $\mu$ g/d [urine chemistry report]
- Reference ranges: blood 2.5 - 7.5  $\mu$ g/dL
  - urine  $\geq$  100  $\mu$ g/d

**Thrombocytopenia:**

Decreased: Platelet count, blood  $< 10 \times 10^3/\mu\text{L}$  [CBC report]  
 OR Pregnant  
 AND Platelet count  $< 15 \times 10^3/\mu\text{L}$   
 Reference range:  $150 - 400 \times 10^3/\mu\text{L}$

**Thrombocytosis:**

Increased platelet count, blood  $> 500 \times 10^3/\mu\text{L}$  [CBC report]  
 Reference range:  $150 - 400 \times 10^3/\mu\text{L}$

**Thyroid stimulating hormone (TSH), serum:**

Reference ranges: 1-4 days 1.0 – 39  $\mu\text{L}/\text{mL}$   
 21 - 54 y 0.4 - 4.2  $\mu\text{U}/\text{mL}$   
 55 - 87 y 0.5 - 8.9  $\mu\text{U}/\text{mL}$

**Thyroxine, total, serum (T<sub>4</sub>):**

Reference ranges: Adult Male 4.6 - 10.5  $\mu\text{g}/\text{dL}$   
 Adult Female Cord 7.4 – 13.0  $\text{ng}/\text{dL}$   
 1-3 days 11.8 – 22.6

**Thyroxine, free, serum (FT<sub>4</sub>):**

Reference range: 0.8 - 2.7  $\text{ng}/\text{dL}$

**Thyroxine, free, index (FT<sub>4</sub>I):**

Reference range: FT<sub>4</sub>index 4.2 - 13.0  
 $\text{FT}_4\text{I} = \text{Total T}_4 \times \text{Thyroid hormone binding ratio (THBR)}$

$$\text{THBR} = \frac{[\% \text{ T uptake (patient serum)}]}{[\% \text{ T uptake (reference serum)}]}$$

**Toxoplasmosis:**

An infection with *Toxoplasma gondii* an intracellular parasite of humans and animals. The cat is the definitive host, while humans are the intermediate host.  
 Toxoplasmosis [Pathology report]  
 Serological tests positive

**Triiodothyronine, total, serum (T<sub>3</sub>):**

Increased: 20 - 50 y  $> 238 \text{ ng}/\text{dL}$  [chemistry report]  
 50 - 90 y  $> 216 \text{ ng}/\text{dL}$  [chemistry report]  
 Reference ranges: Cord 5 - 141  $\text{ng}/\text{dL}$   
 1-3 days 100 – 740  $\text{ng}/\text{dL}$   
 20 - 50 y 70 - 204  $\text{ng}/\text{dL}$   
 50 - 90 y 40 - 181  $\text{ng}/\text{dL}$

**Triiodothyronine, free, serum (T<sub>3</sub>):**

Increased: > 535 ng/dL [chemistry report]

Reference ranges: 260-480 ng/dL

Pregnancy: 211-383 ng/dL

**Troponin I, cardiac specific, serum (cTnI):**

Increased: > 10 µg/L [chemistry report]

Increases within 4 - 6 h after myocardial infarction

Reference range: < 10 µg/L

**Tuberculosis:**

An infectious disease caused by the acid-fast bacterium *Mycobacterium tuberculosis*.

Disease is also caused by other mycobacteria: *M. bovis*, *M. avium*, *M. kansasii* and *M. intracellulare*.

Tuberculosis [x-ray report]

AND Acid-fast bacilli present [gram stain report]

OR *M. tuberculosis* [culture report]

**Turner's syndrome:**

Genotype Turner's syndrome [Cytogenetics report]

Sexual karyotype is XO, but some patients are mosaics, with XO/XX,

XO/XXX or XO/XY being most common

**Unsaturated vitamin B<sub>12</sub> binding capacity:** *See Vitamin B<sub>12</sub> binding capacity, unsaturated*

**Urinary Tract Infection (UTI):**

Urine infected with ≥ 100,000 cfu/mL

[culture from freshly voided 'clean catch' urine]

AND Pyuria

**UTI:** *See urinary tract infection*

**Viscosity, serum:**

Increased: ≥ 1.25 cP

Reference range: 1.00 - 1.24 cP

Relative to water at 37° C

**Vitamin A, serum:**

Decreased: < 10 µg/dL [chemistry report]

Reference range: 30 - 80 µg/dL

**Vitamin B<sub>12</sub>, serum:**

Decreased: < 100 pg/mL [chemistry report]

Reference range: 200 - 835 pg/mL

**Vitamin B<sub>12</sub> binding capacity, unsaturated, serum:**

Increased: > 1600 pg/mL [chemistry report]

Reference range: 600 - 1400 pg/mL

**Vitamin D, serum:**

Decreased: < 4 pg/mL [chemistry report]

Reference range: 16 - 65 pg/mL

**White cell count (WBC):** *See Leukocytosis count*

**D-Xylose test:**

Decreased (malabsorption):

Urinary excretion (25 g dose) < 4.0 g/5 h

Reference range: Adult, 25 g dose, > 4.0 g/5 h