

SEER SUMMARY STAGING MANUAL - 2000 CODES AND CODING INSTRUCTIONS

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Publication History

The original 2-digit Historic Coding Scheme was prepared for the National Cancer Institute's End Results Group by an Extent of Disease Advisory Group. While this code was in use since the early 1950s, it was not printed as a formal document until 1967.

The 1977 Summary Staging Guide was prepared by the Demographic Analysis Section of the National Cancer Institute and was edited by Evelyn M. Shambaugh and Mildred A. Weiss. This manual has been reprinted numerous times in the ensuing years.

Illustrations

The illustrations, renderings, drawings, and images contained in this manual are “freeware” or “shareware” images or are otherwise adaptations of illustrations that are used with permission. Some of the illustrations are compilations of public domain drawings so as to illustrate a certain component or structure as it relates to a particular anatomical site scheme.

It would be impossible to include a visual depiction of each and every anatomical structure in the human body. It is also impossible to adequately describe human anatomy in words. There are many hundreds of anatomy books that make such an attempt. To better understand the complex nature and structure of the various parts of the human body, this manual should be supplemented with several illustrated anatomy books.



Vitruvian Man by Leonardo da Vinci

Even Leonardo da Vinci, who is known as the first person to attempt to illustrate and describe every structure in the human body, is known for making the following statement one year prior to his death:

Dispel from your mind the thought that an understanding of the human body in every aspect of its structure can be given in words; the more thoroughly you describe the more you will confuse...

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Foreword

Unlike the previous Summary Staging Guide (1977), this document is intended for use as a coding manual beginning with cases diagnosed January 1, 2001 and forward rather than a staging guide. Each anatomic site in the Topography Section of the *International Classification of Disease for Oncology - Third Edition* (ICD-O-3) has a corresponding summary staging scheme included in this manual. Further, certain specific histologic types (such as mycosis fungoides, Kaposi sarcoma, malignant melanoma, Sezary disease, retinoblastoma, leukemia and lymphoma) also have specific staging schemes. In some cases, sites which previously had separate guides (such as the segments of the colon) have a single staging scheme (colon) whereas some sites which previously had a single guide (for example, larynx) have separate schemes for each subsite of the larynx (glottis, supraglottis, subglottis, and overlapping lesion or not otherwise specified).

This manual uses the European convention of not using a possessive 's' on eponymic sites (for example Kaposi sarcoma rather than Kaposi's sarcoma and non-Hodgkin lymphoma rather than non-Hodgkin's lymphoma) when referencing only ICD-O-3 sites and morphologies. Also, Hodgkin lymphoma is now the preferred term for Hodgkin's disease.

Certain undocumented rules commonly applied to summary staging have now been documented and/or clarified. For example, leukemia, by definition, represents a disseminated disease process. Thus, leukemia should always be staged as distant disease. Further, this manual presents the ICD-O-3 primary site codes included in each scheme as well as an indication of the sites where a laterality coding is required for coding in the United States. These (sub)sites are marked with the symbol <>.

The editors have made every effort to ensure that all anatomic structures and lymph nodes mentioned as regional in the previous *Summary Staging Guide - 1977, AJCC Cancer Staging Manual, Fifth Edition*, and the *SEER Extent of Disease 1998 Codes and Coding Instructions* have been fully accounted for in this staging manual. It is the desire of the editors that this manual will remove much of the ambiguity that existed previously.

The historic stage is based on the 2-digit extent of disease scheme, used by the End Results Group, since the 1950s. The concepts of localized, regional, and distant were used with the definitions "frozen in time" so that SEER long term trends can be assessed.

This document is also available in electronic format from the SEER Web page:

<http://seer.cancer.gov/Publications> (under SEER Coding Manuals)

Training modules are available on line at:

<http://training.seer.cancer.gov>

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SUMMARY STAGING

Summary staging is the most basic way of categorizing how far a cancer has spread from its point of origin. Summary staging has also been called General Staging, California Staging, and SEER Staging. The 2000 version of Summary Stage applies to every anatomic site, including the lymphomas and leukemias. Summary staging uses all information available in the medical record; in other words, it is a combination of the most precise clinical and pathological documentation of the extent of disease.

Summary staging is a required data field for facilities and central registries participating in the National Program of Cancer Registries (NPCR) of the Centers for Disease Control and Prevention. Many central registries report their data by summary stage as the staging categories are broad enough to measure the success of cancer control efforts and other epidemiologic efforts. However, even though summary staging is used frequently in cancer registries, it is not always understood by physicians.

There are five main categories in summary stage, each of which is discussed in detail. In addition, the regional stage is subcategorized by the method of spread. The code structure is:

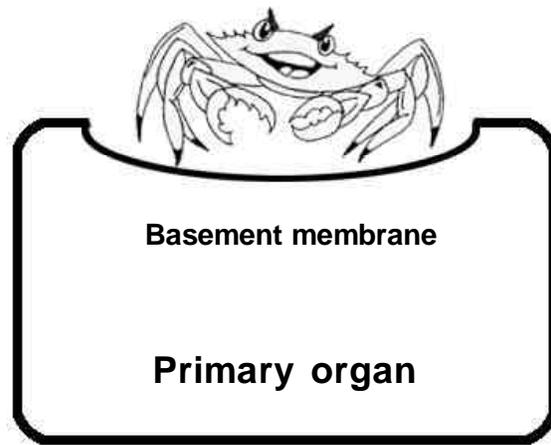
Code	Definition
0	In situ
1	Localized only
2	Regional by direct extension only
3	Regional lymph nodes involved only
4	Regional by BOTH direct extension AND lymph node involvement
5	Regional, NOS (Not Otherwise Specified)
7	Distant site(s)/node(s) involved
9	Unknown if extension or metastasis (unstaged, unknown, or unspecified) Death certificate only case

Guidelines by Stage

In situ (code = 0)

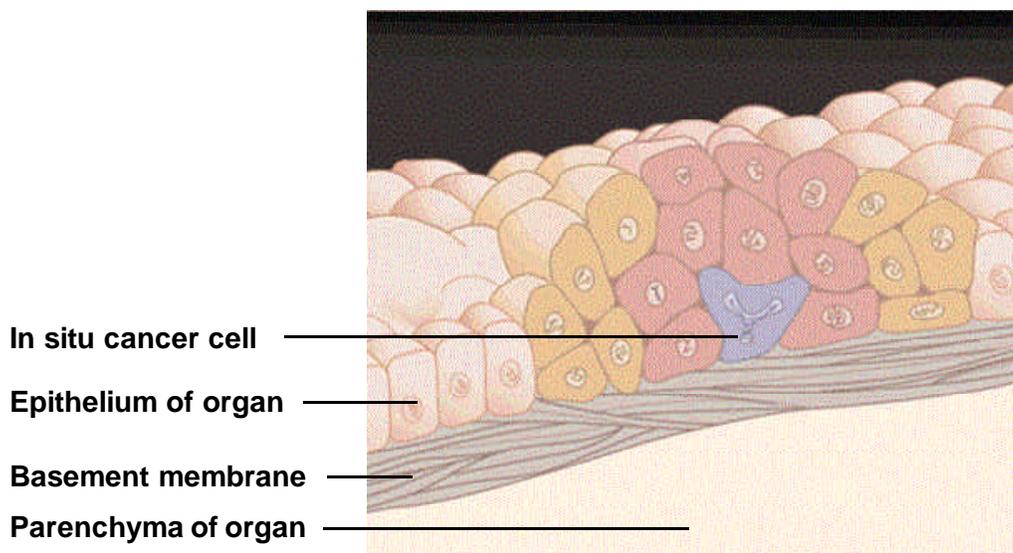
In situ means “in place.” The technical definition of in situ is the presence of malignant cells within the cell group from which they arose. There is no penetration of the basement membrane of the tissue and no stromal invasion. Generally, a cancer begins in the rapidly dividing cells of the epithelium or lining of an organ and grows from the inside to the outside of the organ. An in situ cancer fulfills all pathologic criteria for malignancy except that it has not invaded the supporting structure of organ on which it arose.

An in situ diagnosis can only be made microscopically, because a pathologist must identify the basement membrane and determine that it has not been penetrated. If the basement membrane has been disrupted (in other words, the pathologist describes the tumor as microinvasive), the case is no longer in situ and is at least localized. Pathologists have many ways of describing in situ cancer, such as non-invasive, pre-invasive, non-infiltrating, intra-epithelial, Stage 0, intraductal, intracystic, no stromal invasion, and no penetration below the basement membrane. Organs and tissues that have no epithelial layer cannot be staged as in situ, since they do not have a basement membrane. Therefore, there cannot be a diagnosis of “sarcoma in situ.”



In situ Stage

A more scientific illustration of an in situ tumor is shown here.



In situ tumor

Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan*, *The Detroit News*, Nov. 1-2, 1998.

Localized (code = 1)

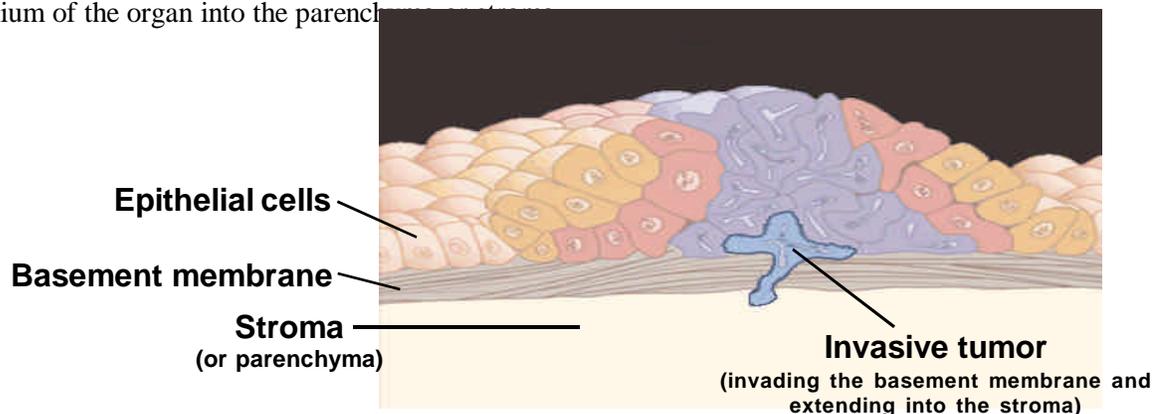
A localized cancer is a malignancy limited to the organ of origin; it has spread no farther than the organ in which it started. There is infiltration past the basement membrane of the epithelium into the functional part of the organ, but there is no spread beyond the boundaries of the organ. A tumor can be widely invasive or even show metastases within the organ itself and still be considered “confined to organ of origin” or localized in summary stage.

For organs that have definite boundaries (such as prostate, testis, or stomach) or sites where there is a clear line between the organ of origin and the surrounding region (such as breast or bladder), it is usually straightforward to determine whether the cancer is localized. An exception is skin, because it is sometimes difficult to determine where the dermis ends and subcutaneous tissue begins. For most internal organs, it is not possible to determine whether tumor is localized without exploratory surgery. However, the increasing sophistication of many imaging techniques is predicted to eventually make exploratory surgery obsolete.

It is important to know and recognize the names of different structures within the organ (such as lamina propria, myometrium, muscularis) so that a description of invasion or involvement of these structures will not be interpreted as regional spread.

Because summary stage uses both clinical and pathologic information, it is important to read the pathology and operative report(s) for comments on gross evidence of spread, microscopic extension and metastases, as well as diagnostic imaging reports for mention of distant disease. If any of these reports provides evidence that the cancer has spread beyond the boundaries of the organ of origin, the case is not localized. On the other hand, if the pathology report, operative report and other investigations show no evidence of spread, the tumor may be assumed to be localized.

The following illustration shows a tumor that has invaded past the basement membrane below the surface epithelium of the organ into the parench



Localized tumor

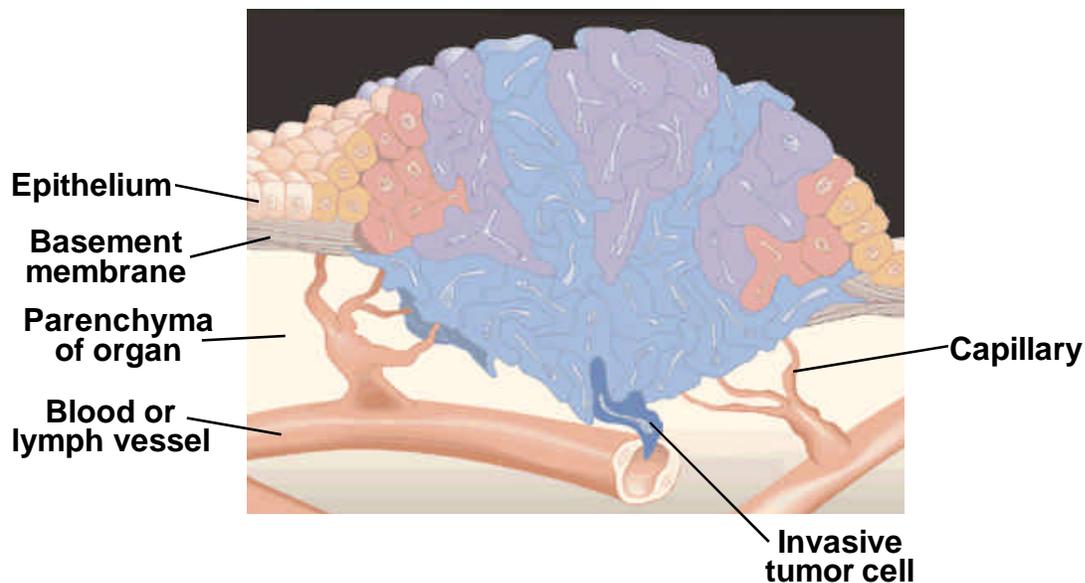
Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News*, Nov. 1-2, 1998.

Regional (code = 2-5)

Regional stage is perhaps the broadest category as well as the most difficult to properly identify. The brief definition of regional stage is tumor extension beyond the limits of the organ of origin. Although the boundary between localized and regional tumor extension is usually well-identified, the boundary between regional and distant spread is not always clear and can be defined differently by physicians in various specialties.

Cancer becomes regional when there is the potential for spread by more than one lymphatic or vascular supply route. For example, the tumor in the hepatic flexure of the colon with extension along the lumen to the ascending colon is staged as localized because both areas drain to same lymph nodes. On the other hand, a sigmoid tumor extending into the rectum is staged as regional because the tumor now has potential for the tumor cell drainage to both iliac and mesenteric nodes.

The formal (scientific) definition used by surgeons is that area extending from the periphery of an involved organ that lends itself to removal en bloc with a portion of—or an entire—organ with outer limits to include at least the first level nodal basin. However, en bloc resection (removal of multiple organs or tissues in one piece at the same time) is not always feasible or may have been shown not to be necessary. For example, a number of clinical trials have shown that lumpectomy or modified radical mastectomy has equivalent survival to the very disfiguring radical mastectomy for treatment of breast cancer. In contrast, radiation oncologists define the term regional as including any organs or tissues encompassed in the radiation field used to treat the primary site and regional lymph nodes.



Invasive tumor

Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News*, Nov. 1-2, 1998.

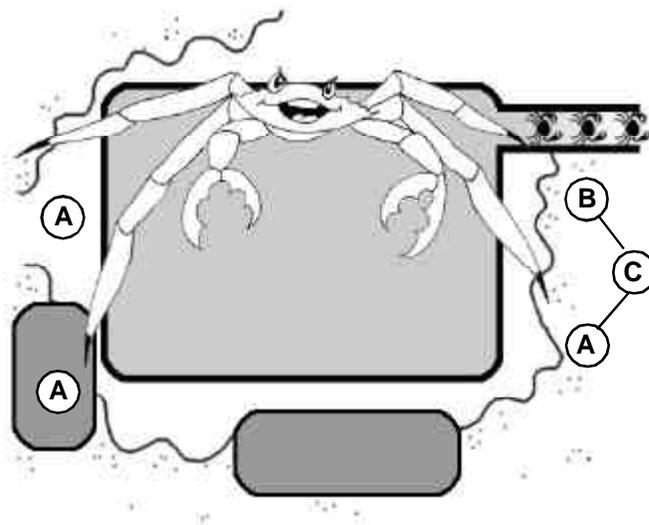
Regional stage has several subcategories, each of which is described in detail below.

Code Definition

- 2 Regional by direct extension only
- 3 Regional lymph nodes involved only
- 4 Regional by BOTH direct extension AND lymph node involvement
- 5 Regional, NOS (Not Otherwise Specified)

These codes and subcategories describe different methods of regional spread of tumor:

- A. Invasion through entire wall of organ into surrounding organs and/or adjacent tissues (code 2, regional by direct extension or contiguous spread)
- B. Tumor invasion of walls of lymphatics where cells can travel through lymphatic vessels to nearby lymph nodes where they are “filtered” out and begin to grow in the nodes (code 3, regional to lymph nodes)
- C. A combination of direct extension and lymph node involvement (code 4, regional by direct extension and to regional nodes)



Regional Stages
A. Direct extension
B. To regional lymph nodes
C. Combination of A and B

A fourth category of regional stage is code 5, regional not otherwise specified. This category may be used when it is unclear whether the tissues are involved by direct extension or lymph nodes, or when the other categories are not applicable, such as for staging Non-Hodgkin and Hodgkin lymphoma of more than one lymph node chain.

Clinicians may use some terms differently than cancer registrars. Therefore, it is important to understand the words used to describe the spread of the cancer and how they are used in staging. For example:

- 1) “Local” as in “carcinoma of the stomach with involvement of the local lymph nodes.”
Local nodes are the first group of nodes to drain the primary. Unless evidence of distant spread is present, such a case should be staged as regional, not local.
- 2) “Metastases” as in “carcinoma of lung with peribronchial lymph node metastases.”
Metastases in this sense means involvement by tumor. Such a case would still be regional. Learn the names of regional nodes for each primary site.

Regional Lymph Node Involvement

Regional lymph nodes are listed for each site.

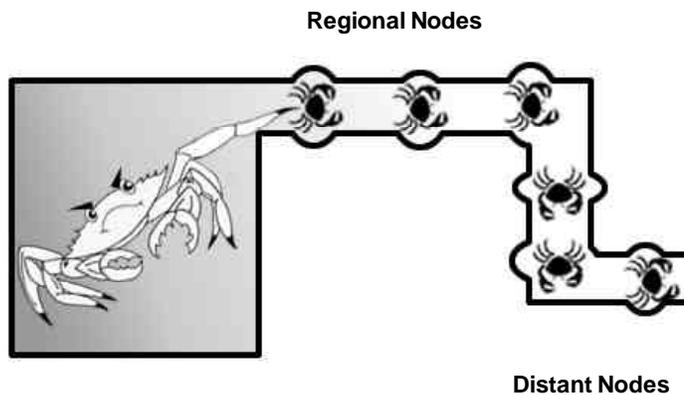
1. Consider the farthest specific lymph node chain that is involved by tumor.
2. For lymphomas, any mention of lymph nodes is indicative of involvement and is used to determine the number and location of lymph node chains involved (see lymphoma scheme).
3. For solid tumors, the terms “fixed” or “matted” and “mass in the mediastinum, retroperitoneum, and/or mesentery” (with no specific information as to tissue involved) are considered involvement of lymph nodes.
4. Terms such as “palpable”, “visible swelling”, and “shotty” should be ignored. Look for a statement of involvement, either clinical or pathological. The terms “enlarged” and “lymphadenopathy” should be ignored for all sites except lung. For lung primaries, these terms are interpreted as regional lymph node involvement.
5. The terms “homolateral” and “ipsilateral” are used interchangeably. Any unidentified nodes included with the resected primary site specimen are to be considered as “Regional Lymph Nodes, NOS.”
6. If the only indication of lymph node involvement in the record is the physician’s statement of an N category from the TNM staging system or a stage from a site-specific staging system, such as Dukes’ C, consider that information in considering regional lymph node involvement.
7. If there is a discrepancy between documentation in the medical record and the physician’s assignment of TNM, the documentation takes precedence. Cases of this type should be discussed with the physician who assigned the TNM (see General Guideline 9).
8. If a specific chain of lymph nodes is named, but not listed as regional, first determine if the name is synonymous with a listed lymph node. Otherwise, assume distant lymph node(s) are involved.

Note: Regional lymph nodes are not palpable for inaccessible sites such as bladder, kidney, prostate, esophagus, stomach, lung, liver, corpus uteri and ovary. The best description concerning regional lymph nodes will be the surgeon’s evaluation at the time of exploratory surgery or definitive surgery.

Distant (code = 7)

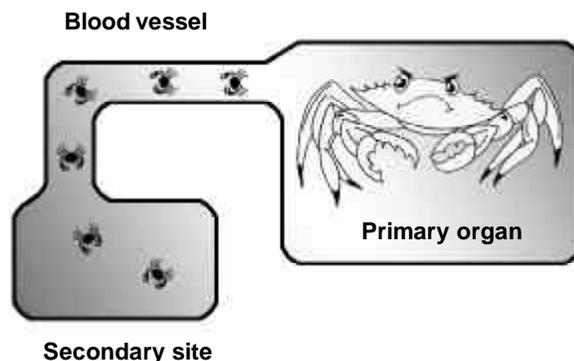
Distant metastases are tumor cells that have broken away from the primary tumor, have travelled to other parts of the body, and have begun to grow at the new location. Distant stage is also called remote, diffuse, disseminated, metastatic, or secondary disease. The point is that in most cases there is no continuous trail of tumor cells between the primary site and the distant site. Cancer cells can travel from the primary site in any of four ways:

- 1) Extension from primary organ beyond adjacent tissue into next organ; for example, from the lung through the pleura into bone or nerve.
- 2) Travel in lymph channels beyond the first (regional) drainage area. Tumor cells can be filtered, trapped and begin to grow in any lymph nodes in the body.



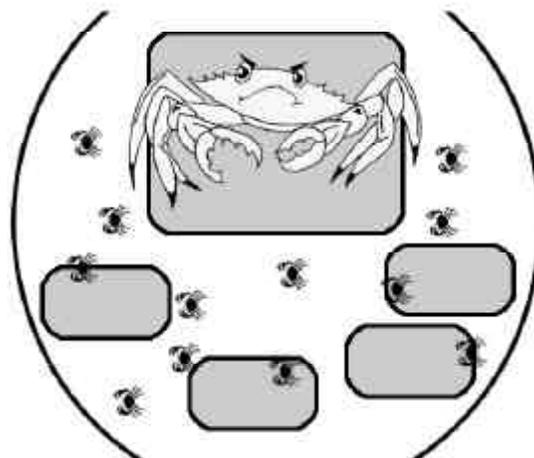
Distant lymph node involvement

- 3) Hematogenous or blood-borne metastases. Invasion of blood vessels within the primary tumor (veins are more susceptible to invasion than thicker-walled arteries) allows escape of tumor cells or tumor emboli which are transported through the blood stream to another part of the body where it lodges in a capillary or arteriole. At that point the tumor penetrates the vessel wall and grows back into the surrounding tissue. (Please see the scientific illustration on the next page.)



Blood-borne metastases

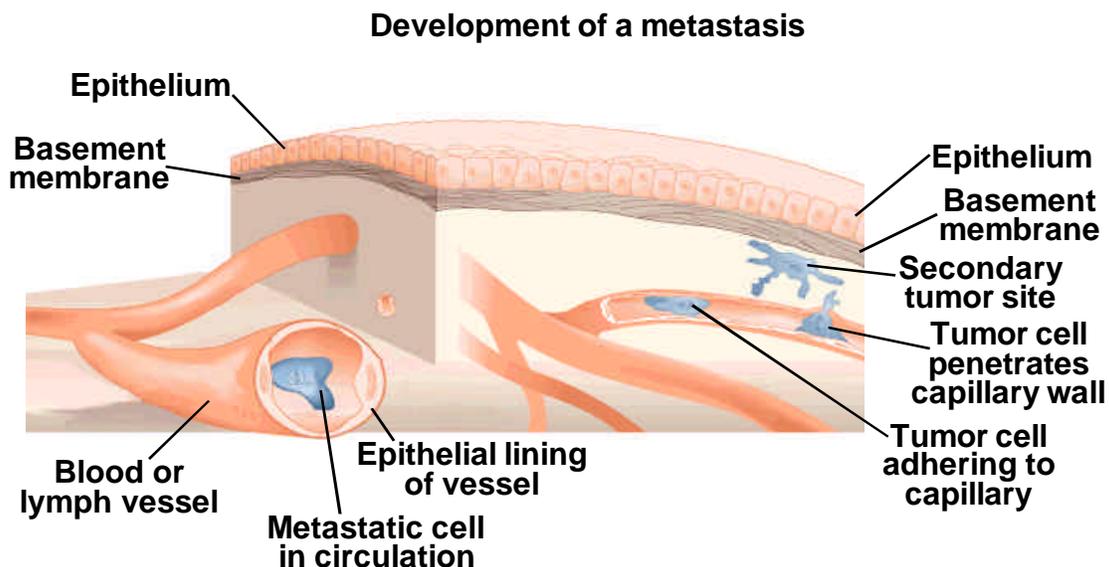
- 4) Spread through fluids in a body cavity. Example: malignant cells rupture the surface of the primary tumor and are released into the thoracic or peritoneal cavity. They float in the fluid and can land on and begin to grow on any tissue reached by the fluid. This type of spread is also called implantation or seeding metastases. Some tumors form large quantities of fluid called ascites that can be removed, but the fluid rapidly re-accumulates. However, the presence of fluid or ascites does not automatically indicate dissemination. There must be cytologic evidence of malignant cells.



Implantation metastases

Common sites of distant spread are liver, lung, brain, and bones, but they are not listed specifically for each scheme. These organs receive blood flow from all parts of body and thus are a target for distant metastases. However, if the primary site is adjacent to the liver, lung, brain or bone, it is important to review the summary staging scheme for the primary site to assure that the stage is not regional by direct extension. An example would be liver involvement from a primary in the gallbladder. It is likely that this is regional by direct extension rather than distant stage, since the gallbladder is adjacent to liver. Read the diagnostic imaging reports to determine whether the cancer involves the surface of the secondary organ, which would be regional by direct extension, or whether the cancer is inside the secondary organ. If the latter is the case, the only way it could have developed in the secondary organ is if the tumor cells arrived there via the blood stream (distant hematogenous metastases). Another way to remember the difference between regional direct extension and distant metastases is whether the secondary site has tumor *on* the surface (most likely direct extension) or *in* the organ (blood-borne metastases). Hematopoietic, reticuloendothelial, immunoproliferative, and myeloproliferative neoplasms are considered distant except as noted in the staging scheme.

In the last of the series of scientific drawings, the cancer cell that invaded the blood vessel has floated to a new organ. As the blood vessels in the secondary site get smaller, the cancer cell has the ability to penetrate the capillary wall and settle in the new organ. The growth of tumor in the new organ is called a metastasis.



Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan*, *The Detroit News*, Nov. 1-2, 1998.

Unknown if Extension or Metastasis (code = 9)

If the primary site is unknown (C80.9), then the summary stage must be unknown.

There will be cases for which sufficient evidence is not available to adequately assign a stage. Examples include occasions when the patient expires before workup is completed, when a patient refuses a diagnostic or treatment procedure, and when there is limited workup due to the patient's age or a simultaneous contraindicating condition. If sufficient information does not exist, the case is unstageable.

This code should be assigned very sparingly. If at all possible, contact the physician to see if there is more information about the case which is not in the record, such as diagnostic studies performed prior to admission or documentation in the physician's office record.

Death certificate only cases are coded to '9', unknown.

General Instructions for Using the SEER Summary Staging Manual - 2000

The SEER Summary Staging Manual - 2000 schemes consist of a one-digit hierarchical code for each and every site. In the United States, these staging schemes will apply to January 1, 2001 diagnoses and later.

General Guidelines

1. For each site, summary stage is based on a combined clinical and operative/pathological assessment. Gross observations at surgery are particularly important when all malignant tissue is not removed. In the event of a discrepancy between pathology and operative reports concerning excised tissue, priority is given to the pathology report.
2. Summary stage should include all information available through completion of surgery(ies) in the first course of treatment or within four months of diagnosis in the absence of disease progression, whichever is longer.
3. Summary stage information obtained after treatment with radiotherapy, chemotherapy, hormonal therapy, or immunotherapy has begun may be included unless it is beyond the time frame given in guideline 2 above.
4. Exclude any metastasis known to have developed after the diagnosis was established.
5. Clinical information, such as description of skin involvement for breast cancer and distant lymph nodes for any site, can change the stage. Be sure to review the clinical information carefully to assure accurate summary stage. If the operative/pathology information disproves the clinical information, code the operative/pathology information.
6. All schemes apply to all histologies unless otherwise noted. Exceptions to this, for example, include all lymphomas and Kaposi sarcoma which should be staged using the histology schemes regardless of the primary site.
7. Autopsy reports are used in coding summary stage just as are pathology reports, applying the same rules for inclusion and exclusion.
8. Death Certificate Only cases and unknown primaries are coded '9' for summary stage.
9. The summary stage may be described only in terms of T (tumor), N (node) and M (metastasis) characteristics. In such cases, record the summary stage code that corresponds to the TNM information. If there is a discrepancy between documentation in the medical record and the physician's assignment of TNM, the documentation takes precedence. Cases of this type should be discussed with the physician who assigned the TNM.
10. Site-specific guidelines take precedence over general guidelines. Always consider the information pertaining to a specific site.

GUIDELINES FOR SUMMARY STAGING

For efficient assignment of the summary stage code, here are some additional guidelines. Three of the summary staging categories can be ruled out quickly: in situ, distant, and localized.

In situ

1. Rule out in situ stage disease. Carcinomas and melanomas are the only types of cancer that can be classified as in situ. Only carcinomas have a basement membrane. Sarcomas are never described as in situ. A pathologist must examine the primary organ and state that the tumor is in situ. If the cancer is anything except a carcinoma or melanoma, it cannot be in situ.
2. If there is any evidence of invasion (or extension to), nodal involvement or metastatic spread, the case is not in situ even if the pathology report so states. This is a common error in staging cervical cancer where the path report states that the cancer is “in situ with microinvasion”—such a case would be staged as localized.

Distant

3. Rule out distant disease. If metastases can be documented, there is no need to spend a great deal of time identifying local or regional spread. If distant metastases are recorded on x-ray or needle biopsy, the stage is already determined and the patient does not need to undergo a lot of other tests.
4. Hematopoietic diseases, such as leukemia and multiple myeloma, are considered disseminated or distant at time of diagnosis.
5. Rule out distant spread by reading the operative report for comments about seeding, implants, liver nodules, or other indications of metastases. Read diagnostic reports for references to distant disease.
6. If nodes, organs, or adjacent tissues are not specifically mentioned in the description of the various categories, attempt to cross-reference the term you have with those outlined. If there is no match, assume the site in question represents distant disease.

Localized

7. Rule out that the cancer is “confined to the organ of origin.” In order for a lesion to be classified as localized, it must not extend beyond the outer limits of the organ and there must be no evidence of metastases anywhere else.
8. Terms such as “blood vessel invasion” or “perineural lymphatic invasion” do not necessarily indicate that the cancer has spread beyond the primary organ. If tumor at the primary site has invaded lymph or blood vessels, there is the potential for malignant cells to be transported throughout the body. Step 1 (invasion), has occurred, but not necessarily steps 2 (transport of cancer cells) and 3 (growth at the secondary site). The case may still be localized.
9. Vascular invasion within the primary is not a determining factor in changing the stage unless there is definite evidence of tumor at distant sites.

Regional

10. If in situ, local and distant categories have been ruled out, the stage is regional.
11. For carcinomas, if there are lymph nodes involved with the tumor, the stage is at least regional.
12. For tissues, structures, and lymph nodes, assume ipsilateral unless stated to be contralateral or bilateral.

Unknown if Extension or Metastasis

13. If there is not enough information in the record to categorize a case, it must be recorded as unstageable.

HOW TO ASSIGN SUMMARY STAGE

Answers to four basic questions will determine the correct code for summary stage.

1. Where did the cancer start?

In what organ or tissue did the tumor originate? Is there a specific subsite of the organ involved? Information about the “primary site” will usually come from the physical examination, a diagnostic imaging report, the operative report or the pathology report. Code the primary site according to the rules in the *International Classification of Diseases for Oncology, Third Edition*. In addition to recording this code in the primary site field on the cancer abstract, this code will be useful later in the staging process.

2. Where did the cancer go?

Once the primary site is known, determine what other organs or structures are involved. Review the physical examination, diagnostic imaging reports, operative report(s), pathology report(s), and laboratory tests to identify any structures that are involved by cancer cells. Any of these reports can provide a piece of information that might change the stage. Note whether there is lymphatic or vascular invasion and/or spread, which organs are involved, whether there is a single focus or multiple foci of tumor.

It is important to know the names of the substructures within the primary site as well as the names of surrounding organs and structures. Note the names of any tissues that are reported to be involved by cancer cells. Refer to the word list on page ? to determine whether a tissue is involved or not involved.

3. How did the cancer get to the other organ or structure?

Did the cancer spread to the new site in a continuous line of tumor cells from the primary site? If the pathologist can identify a trail of tumor cells from one organ to another, the stage may be regional by direct extension or distant by direct extension. Did the cancer spread by breaking away from the primary cancer and floating to the new site in the blood stream or body fluids? If there is no direct trail of tumor cells from the primary organ to the new site, the stage is probably distant (except for ovary).

4. What are the stage and correct code for this cancer?

- A. Open the SEER Summary Staging Manual 2000 to the staging scheme that includes the ICD-O-3 primary site/histology code identified earlier. Staging schemes for all primary sites are in ICD-O-3 code order with the exception of those that are based on histology.
- B. Review the staging scheme looking for the names of the structures and organs that were reported as involved. If more than one structure or organ is involved, select the highest category that includes an involved structure.

Examples:

- If all reports are negative for spread of the cancer and the pathologist states that the cancer is non-invasive or non-infiltrating, code the stage as 0, in situ.
- If all reports are negative for spread of the cancer and the pathologist states that the cancer is invasive or infiltrating, code the stage as 1, localized.
- If other organs or structures are involved, assign the highest code associated with an involved structure.

Abbreviations, Acronyms, and Symbols

AJCC	American Joint Committee on Cancer
C-	Topography code of the <i>International Classification of Diseases for Oncology, Third Edition (ICD-O-3), 2000</i>
cm	centimeter
FIGO	Federation Internationale de Gynecologie et d'Obstetrique
M-	Morphology code of the <i>International Classification of Diseases for Oncology, Third Edition (ICD-O-3), 2000</i>
mm	millimeter
NOS	Not Otherwise Specified
SEER	Surveillance, Epidemiology and End Results
SSG	Summary Staging Guide
TNM	Primary Tumor, Regional Lymph Nodes, Distant Metastasis, the staging system developed by the American Joint Committee on Cancer (AJCC) and the Union Internationale Contra la Cancer (UICC).
UICC	Union Internationale Contre le Cancer (International Union Against Cancer)
<	less than
>	greater than
<=	less than or equal to
>=	greater than or equal to
<>	Laterality must be coded for this site. Laterality may be submitted for other sites.
#	Considered localized in Historic Stage
##	Considered regional in Historic Stage
###	Considered distant in Historic Stage
*	Considered localized in 1977 Summary Staging Guide
**	Considered regional in 1977 Summary Staging Guide
***	Considered distant in 1977 Summary Staging Guide

Note: The use of #s or *s on the heading of a group of terms applies to all of the terms in the group.

Definitions of Terms Used in this Manual

Adjacent tissue(s), NOS

Connective tissue

Some of the summary staging schemes for ill-defined or non-specific sites in this manual contain a description of “adjacent tissue(s), NOS” which is defined here as the unnamed tissues that immediately surround an organ or structure containing a primary cancer. Use this category when a tumor has invaded past the outer border (capsule, serosa, or other edge) of the primary organ into the organ’s surrounding supportive structures but has not invaded into larger structures or adjacent organs. The structures considered in ICD-O-3 as connective tissue include the following: adipose tissue; aponeuroses; arteries; blood vessels; bursa; connective tissue, NOS; fascia; fatty tissue; fibrous tissue; ganglia; ligaments; lymphatic channels (not nodes); muscle; nerves (spinal, sympathetic and peripheral); skeletal muscle; subcutaneous tissue; synovia; tendons; tendon sheaths; veins; and vessels, NOS. In general, these tissues do not have specific names. These tissues form the framework of many organs, provide support to hold organs in place, bind tissues and organs together, and serve as storage sites for nutrients. Blood, cartilage and bone are sometimes considered connective tissues, but in this manual they would be listed separately.

Adjacent organs

Organs are anatomic structures with specific physiologic functions other than (or in addition to) support and storage. In general, continuous tumor growth from one organ into an organ lying next to the primary site would be coded to ‘2 - Regional by direct extension only’ (unless regional lymph nodes are also involved).

Adjacent structures

Connective tissues large enough to be given a specific name would be considered adjacent structures. For example, the brachial artery has a name, as does the broad ligament. In general, continuous tumor growth from one organ into an adjacent named structure would be coded to ‘2 - Regional by direct extension only’ (unless regional lymph nodes were also involved).

Cortex (adjective: cortical)

The external or outer surface layer of an organ, as distinguished from the core, or medulla, of the organ. In some organs, such as the adrenal glands, the cortex has a different function than the medulla.

Medulla (adjective: medullary)

The central portion of an organ, in contrast to the outer layer or cortex. Sometimes called marrow. In some organs, such as bone, the medulla or marrow has a different physiologic role than the cortex.

Parenchyma

The parenchyma is the functional portion of an organ, in contrast to its framework or stroma. For example, the parenchyma of the kidney contains all of the structures which filter and remove waste products from the blood. In general, malignancies tend to arise in the parenchyma of an organ.

Stroma

The stroma is the cells and tissues that support, store nutrients, and maintain viability within an organ. Stroma consists of connective tissue, vessels and nerves, and provides the framework of an organ. In general, spread of tumor to the stroma of an organ is still considered localized or confined to the organ of origin.

Interpreting Ambiguous Terminology for Summary Stage

Consider as involvement

adherent
apparent(ly)
appears to
comparable with
compatible with
consistent with
contiguous/continuous with
encroaching upon[§]
extension to, into, onto, out onto
features of
fixation to another structure^{§§}
fixed^{§§}
impending perforation of
impinging upon
impose/imposing on
incipient invasion
induration
infringe/infringing
into[§]
intrude
invasion to into, onto, out onto
matted (for lymph nodes only)
most likely
onto[§]
overstep
presumed
probable
protruding into (unless encapsulated)
suspected
suspicious
to[§]
up to

[§] interpreted as involvement whether the description is clinical or operative/ pathological

^{§§} interpreted as involvement of other organ or tissue

Do NOT Consider as Involvement

abuts
approaching
approximates
attached
cannot be excluded/ruled out
efface/effacing/effacement
encased/encasing
encompass(ed)
entrapped
equivocal
extension to without invasion/ involvement of
kiss/kissing
matted (except for lymph nodes)
possible
questionable
reaching
rule out
suggests
very close to
worrisome