Collaborative Staging System

California Cancer Registry

2004

What is Collaborative Staging (CS)?

- Collaborative Staging is a collection of unified data staging systems allowing registries to report to ACoS, SEER, and CDC/NPCR.

CS Objectives

- To combine and standardize the information needed to assign stage in:
  - AJCC (TNM)
  - Summary Stage (SS) 1977 and 2000 systems
- To derive staging consistently via computer algorithms

CS Overview

- Collaborative Staging is a coding system, not a staging system
- The system consists of 94 schemas, most of which are site-specific

CS Overview

- The “facts” of the case are coded to derive TNM and Summary Stage
- The same computer algorithms are used at both the hospital registry and the central registry to derive the stage from CS data elements

CS Data Items

- There are 15 items in data set
  - 5 existing data items:
    - Tumor Size
    - Extension
    - Regional Lymph Node Involvement
    - Regional L/Ns Positive/Examined

CS Data Items

- There are 10 new data items:
  - Metastases at DX
  - 3 Method of DX fields known as Evaluation fields (required by the ACoS, but **not** required by the CCR or SEER)
  - 6 Site-Specific Factor (SSF) fields

CS Data Items

- Mostly Standardized Fields
  - Tumor size
    - minor variations for site-specific circumstances
  - Regional nodes positive/examined
    - pathologic information only
    - uniform across all sites
  - Method of evaluation fields (3) (Not required by CCR)
    - code how farthest extension was established
    - minor variations among sites
  - Metastases at diagnosis
    - documents metastases, distant nodes
    - minor variations among sites

CS Data Items

- Site-specific Fields
  - Extension
    - documents T, local, regional direct extension, distant direct extension
  - Lymph node involvement
    - documents N, regional nodes
  - 6 “site-specific” factors (if applicable)
    - used only when needed to derive T, N, M or stage group or where the factor is considered to be of clinical or prognostic importance

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Collaborative Staging Data Items

CS Tumor Size	_ _ _	Standard with exceptions
CS Extension	_ _	Site-specific
CS TS/Ext-Eval	_	Standard
CS Lymph Nodes	_ _	Site-specific
Reg LN Pos	_ _	Standard
Reg LN Exam	_ _	Standard
CS Reg Nodes Eval	_	Standard
CS Mets at Dx	_ _	Site-specific
CS Mets Eval	_	Standard

Site Specific Factors -- Only as needed-- Otherwise, 888 not applicable

SSF1	_ _ _	SSF3	_ _ _	SSF5	_ _ _
SSF2	_ _ _	SSF4	_ _ _	SSF6	_ _ _

Choosing the Correct Schema

- Most of the Collaborative Staging System schemas apply to cases defined by their primary site codes in ICD-O-3
- Some schemas apply to cases defined by their histologic type codes in ICD-O-3 and these schemas take precedence over the schema for the site

Histology Specific Coding Schemas

- Melanoma (8720-8790)
- Kaposi Sarcoma (9140)
- Retinoblastoma (9510-9514)
- Lymphoma (9590-9699 and 9702-9729)
- Mycosis Fungoides (9700-9701)
- Hematopoietic and Reticuloendothelial System (9731-9989)

Melanomas are further broken down by Primary Site Code

- Skin, vulva, penis and scrotum (C44.0-C44.9, C51.0-C51.2, C51.8-C59.9, C60.0-C60.1, C60.8-C60.9, C63.2)
- Conjunctiva (C69.0)
- Iris and ciliary body (C69.4)
- Choroid (C69.3)
- Other eye (C69.1, C69.2, C69.5, C69.8-C69.9)

Reporting Requirements

- CCR (and SEER):
  - All CS data items are required to be completed ***except*** the Evaluation fields

Reporting Requirements

- Commission on Cancer Approved Cancer Program Registries:
  - Completion of all 15 CS data items
  - Physician TNM staging will continue to be required
    - Require physicians to record Clinical and/or Pathologic T,N,M and Stage Group
    - If T,N, and M are present, but no Stage Group is assigned by the physician, the registrar may complete the Stage Group in the cancer registry database

Implementation Date

- Collaborative Staging applies to:
  - Cases diagnosed on or after January 1, 2004
  - Cases with an unknown date of diagnosis first seen at your facility on or after January 1, 2004
- Collaborative Staging should not be applied to cases diagnosed prior to January 1, 2004

General Instructions

- CS elements are collected on all cancer cases, (all sites and all histologies) regardless of whether the case has been microscopically confirmed

General Instructions

- Cases not microscopically confirmed should be coded from the scheme for the site the clinician considers most likely to be the primary

General Instructions

- Summary Stage 1977 and 2000 are generated for all sites and histologies
- TNM elements and stage group are only generated for cases that meet the TNM criteria

CS Histology Exclusion Tables

- The algorithms for determining the final TNM stage group take into account any histologies that are excluded from TNM staging using the CS AJCC Histology Exclusion Tables (page 77 in the CS Manual)
- If a histology is on the exclusion table, then the TNM and AJCC Stage are not coded:

  T=NA

  N=NA

  M=NA

  Stage= NA where Stage is not applicable

General Instructions - Timing

- The timing rule is the same for TNM 6th Edition, SS 2000, and Collaborative Staging
- Staging is based on information gathered through completion of surgery(ies) in first course of treatment or all information available within **four months** of the date of diagnosis (in the absence of disease progression), ***whichever is longer***

General Instructions

- The codes are ordered in a hierarchy so that increasing numbers generally indicate increasing degrees of tumor involvement
- **Exception**: Codes for Unknown and Not Applicable have a lesser priority over codes with lower numbers

General Instructions

- Coding is based on the best available clinical and pathologic information

General Instructions

- For the following fields:
  - CS Tumor Size
  - CS Extension
  - CS Lymph Nodes
  - CS Mets at Dx

Record the farthest extent of disease, based on combined clinical and operative/pathologic information

General Instructions

- If there is no pre-op treatment, pathologic information takes priority
- If there is pre-op treatment, clinical information takes priority in most cases (record the greatest extent of disease prior to the beginning of treatment)

General Instructions

- Site specific and histology specific guidelines take precedence over general guidelines

General Instructions

- The fields “Regional Lymph Nodes Positive” and “Regional Lymph Nodes Examined” are based on pathologic (microscopic) information only

General Instructions

- Clinical information may be used in coding CS fields, minimizing the use of coding “unknown”, instead coding “none” for regional lymph nodes or distant metastases

General Instructions

- New Rule for "Inaccessible" Sites:
  - Record regional lymph nodes and distant mets as negative (rather than unknown) when:
    - no mention of LN or mets involvement in PE, Dx testing or surgical exploration
  - AND
    - patient receives usual treatment to primary site

General Instructions

- Inaccessible rules apply to early stage (T1, T2, localized) tumors
- “Unknown” should be coded when there is **reasonable doubt** that tumor is no longer localized
- Examples of inaccessible sites: bladder, kidney, prostate, esophagus, stomach, lung, liver, corpus uteri, ovary

General Instructions

- No rule change for “accessible” sites such as breast, oral cavity, salivary gland, skin.
- Code as negative if statement in chart such as “remainder of exam is negative”

General Instructions

- Site-Specific Factors (SSF) are included in every scheme, and are incorporated into the algorithms when additional information is necessary to derive tumor (T), lymph node (N), metastasis (M), or TNM stage group, or where the factor is considered to be of clinical or prognostic importance

General Instructions

- Miscellaneous
  - Disregard mets that develop after initial extent of disease is established
  - Autopsy reports can be used for coding CS

Evaluation Fields

- **Purpose:** Code how Tumor Size, Extension, Nodes, Mets were determined
  - Associated with each field, not output stage group
  - Identifies cases with pre-operative treatment
  - Explains why and when clinical information was used in place of pathologic
  - Allows for mixed staging
    Examples: pT3 cN0 cM0

    cTX pN1 cM0

Evaluation Fields

- **General Structure**

0 Clinical only
1 Invasive techniques, no bx; or needle bx
2 Autopsy (known/suspected dx)
3 Pathology (meets criteria for pathologic T)
5 Pre-op treatment, clinical eval
6 Pre-op treatment, pathological eval
8 Autopsy (dx not suspected)
9 Unknown, not assessed

Evaluation Fields

- The CCR does not require these fields to be completed
- The ACoS requires approved facilities to complete these fields

Tumor Size

- Record the largest recorded size
  - If no pre-op treatment, use pathologic size
  - If pre-op treatment, use pre-op (clinical) size
  - Imaging takes priority over physical exam
  - Record size of invasive component, if given
  - Do not add pieces together (only pathologist)

Tumor Size

- Special Codes
  - Special site-specific code 990, microscopic focus, can be used only when tumor is identified microscopically
  - If microscopic size stated, code it
  - Codes 991-995 “stated as less than _ cm”

    Example: CXR reveals a <3 cm mass in RUL

    Answer: Code to 993
  - Codes 996-997 site-specific as needed
  - Code 998 takes precedence over a stated size

Tumor Extension

- Record farthest extension of primary
  - Generally, extension must be direct or contiguous (except corpus and ovary)
  - Disregard discontinuous mets to distant sites (code in Mets at Dx field)
  - If no pre-op treatment, use pathology report
  - If pre-op treatment, code pre-op (clinical) extension
    - In rare circumstances, post-op path may be more extensive
  - Imaging takes priority over physical exam

Tumor Extension

- Record farthest extension of primary (continued)
  - Disregard microscopic residual or positive tumor margins
  - If involved organ is not listed, approximate the location and code with similar tissues
  - If any nodal or mets involvement, case cannot be *in situ*; code as “Localized, NOS” instead (when no other info available)

CS TS/Ext Evaluation Rules

- Linked to CS Tumor Size and Extension
- Document farthest extension clinically or pathologically
  - May not be the highest evaluation code
  - Document information most useful for staging
    - Tumor size or extension

Example: TS, Ext, Eval Codes

- **Case Scenario**:

  Head of pancreas cancer involving common bile duct on abdominal CT. At laparotomy, unresectable tumor size: 4.5 cm. No biopsy, no resection

  Codes: Tumor size: 045 Surg observ

  Extension: 44 extrahepatic bile duct

  TS/Ext Eval: 0 Imaging

  Rationale: Extension is more important than size for pancreas staging (except for extension codes 10 and 30 when tumor size is more important). The bile duct involvement was noted on imaging (eval code 0), not on laparotomy (eval code 1). See note on page 312 in the CS Manual.

Lymph Nodes

- Record the farthest involved regional lymph node chain
  - Disregard distant nodes (code in Mets at Dx field)
  - If no pre-op treatment, use pathology report
  - If pre-op treatment, use pre-op (clinical) information
  - Code as much detail as possible
  - Generally the size of metastasis in node is coded, not size of node

Lymph Nodes

- For low stage, inaccessible primary sites
  - Code as (clinically) negative if there is no mention of regional lymph node involvement in:
    - Physical exam
    - Diagnostic imaging
    - Surgical exploration
  - AND patient receives usual treatment to primary site

Lymph Nodes

- If tumor is no longer localized, code Lymph Nodes as “Unknown” (where there is **reasonable doubt** that the tumor is no longer localized, but there is no documentation of lymph node metastases)
- For accessible sites, look for statement of negativity or non-involvement, such as “remainder of exam is negative”

CS Regional Nodes Evaluation

- Linked to CS Lymph Nodes
- Determine how the farthest involved nodes were documented (clinically or pathologically)
  - May not be the highest evaluation code
- For sites/histologies with no TNM schema, use code 9 - Not Applicable

Regional Lymph Nodes Positive Definition Changes

- Definition changes were made to codes 90-97. For cases diagnosed prior to 1/1/2004:
  - Codes 01-95 defined as “1-95 nodes are positive (code the exact number of nodes positive)”
  - Code 96 defined as “96 or more positive nodes”
  - Code 97 defined as “Positive nodes-number unspecified”

Regional Lymph Nodes Positive Definition Changes

- Effective with cases diagnosed 1/1/2004 forward:
  - 00 All nodes examined negative
  - 01–89 1–89 nodes positive (code exact number of nodes positive)
  - 90 90 or more nodes positive
  - 95 Positive aspiration of lymph node(s)
  - 97 Positive nodes - number unspecified
  - 98 No nodes examined
  - 99 Unknown if nodes are positive; Not applicable; Not documented in record
- **NOTE:** Cases coded prior to 1/1/2004 will be converted to the new codes. Any cases entered after the conversion process should apply the new codes regardless of date of diagnosis.

Regional Lymph Nodes Positive

- Apply code 99 for the following sites:
  - Brain and Cerebral Meninges
  - Other Parts of the CNS
  - Hematopoietic, Reticuloendothelial, Immunoproliferative and Myeloproliferative Neoplasms
  - Hodgkin and Non-Hodgkin Lymphoma
  - Other Ill-defined Primary Sites
  - Placenta
  - Unknown Primary Site

Regional Lymph Nodes Examined

- Count total regional nodes removed and examined by pathologist
  - Cumulative through all first course procedures
  - If no nodes examined, code as 00
  - If no nodes in specimen, code as 00
  - Aspiration of regional LN is coded as 95
  - Any combination of aspirated, biopsied, sampled, or dissected nodes is coded as 98
  - Do not count distant nodes

Regional Lymph Nodes Examined

- 00 — No nodes examined
- 01–89 — 1–89 nodes examined (code exact number of nodes examined)
- 90 — 90 or more nodes examined
- 95 — No regional nodes removed but aspiration of regional nodes performed
- 96 — LN “sampling,” number unk/not stated
- 97 — LN “dissection,” number unk/not stated
- 98 — LN removed, number unk/not stated; Procedure type not stated; Nodes examined, number unk.
- 99 — Unknown if nodes were examined; Not applicable or negative; Not documented in patient record

Regional Lymph Nodes Examined

- Apply code 99 for the following sites:
  - Brain and Cerebral Meninges
  - Other Parts of the CNS
  - Hematopoietic, Reticuloendothelial, Immunoproliferative and Myeloproliferative Neoplasms
  - Hodgkin and Non-Hodgkin Lymphoma
  - Other Ill-defined Primary Sites
  - Placenta
  - Unknown Primary Site

Example: Lymph Nodes, LN Eval, Reg Nodes Pos/Examined

- **Case Scenario:**

  Lung ca, CXR shows mass in medial RUL, negative mediastinum. Mediastinoscopy reveals enlarged, hard paratracheal node. Bx confirms metastatic adenoca. Patient referred for radiation therapy.

Codes:

Lymph nodes:	20	paratracheal, NOS
LN Eval:	3	removal of 1 node
Nodes Pos:	01	1 node positive
Nodes Exam:	01	1 node positive

Example: Lymph Nodes, LN Eval, Reg Nodes Pos/Examined

- **Case Scenario**

  Stomach ca dx'd on endoscopy. At laparotomy, celiac nodes were enlarged and hard (not biopsied). At gastrectomy, 7/10 lesser curvature nodes were involved.

  Final Dx: Gastric ca with 7/10 lesser curvature nodes and probable celiac nodes involved.

Codes:

Lymph Nodes:	40	Celiac nodes
LN Eval:	1	Surgical Observation
Nodes Pos:	07	7 nodes pathologically positive
Nodes Exam:	10	10 nodes removed

Mets at Dx

- Record only discontinuous, blood-borne or implantation metastases or distant lymph node involvement
  - Code structures, nodes, and tissues not listed in Extension or Lymph Nodes
  - Code as specifically as possible
- Assign the highest applicable code (farthest documented metastasis)
- Disregard mets that develop after extent of disease was established

Mets at Dx Vs. Disease Progression

- **Guideline:** Code to Mets at Dx (include mets found after treatment started if):
  - Dx procedure planned before treatment
  - Pt was asymptomatic at time of dx procedure
  - Within timing rules (including if pt goes from unknown mets status to positive mets within the timing rules)

Mets at Dx Vs. Disease Progression

- **Guideline:** Disease Progression
  - If patient becomes symptomatic and mets are found, disregard for Mets at Dx
  - If patient goes from known negative mets status to positive mets, disregard for Mets at Dx

Example: Mets at Dx Vs. Disease Progression

Case Scenario:

Asymptomatic pt had a lumpectomy, 3 weeks post-op and still asymptomatic, planned bone scan positive for mets.

Answer: Code bone mets in Mets at Dx

Rationale: The bone scan was planned in advance

Case Scenario:

Asymptomatic pt had a lumpectomy, 2 months post-op, pt had back pain and had a bone scan that was positive for mets

Answer: Do not code to Mets at Dx

Rationale: The patient developed symptoms, during this time period, thus this is disease progression

Mets at Dx

- For low stage, inaccessible primary sites:
  - Code as (clinically) negative if there is no mention of distant metastasis in:
    - Physical exam
    - Diagnostic imaging
    - Surgical exploration
  - AND patient receives usual treatment to primary site

Mets at Dx

- If tumor is no longer localized, Mets at Dx may be coded as “Unknown” (where there is **reasonable doubt** that the tumor is no longer localized, but there is no documentation of distant metastases)
- For accessible sites, look for statement of negativity, such as “remainder of exam is negative”

Mets at Dx

- Codes:
  - 00 No; none
  - 10 Distant lymph node(s)
  - 40 Distant metastases, except code 10; Distant metastasis, NOS; Carcinomatosis
- Site/Histology-Specific Codes Where Needed
  - 50 Code 40 plus code 10
  - 99 Unknown; distant metastasis cannot be assessed; not stated in patient record

Example: Mets at Dx Eval Codes

Case Scenario:

Sigmoid colon ca dx'd on colonoscopy. At resection, liver was palpated and was normal. Pre-op CT of chest and abdomen also normal.

Codes:

Mets at dx: 00 No distant mets

Mets Eval: 0 Clinical/imaging info only

Rationale:

Code Mets Eval as 0 (imaging) because the CT of the chest documented no distant mets farther from the primary than the liver exam during surgery observation (Mets Eval code 1)

Site Specific Factors (SSF)

- Necessary for AJCC TNM
- Only used as needed by disease site
- Replace existing Tumor Marker fields
- Apply code 888 if there is no site/histology – specific factor for a schema
- Apply code 000 Not Done, when there is a statement in the record that the test was not performed
- Apply code 999 if there is no report of a lab test in the record; not documented in the patient record

Site Specific Factors (SSF)

SSF	Sites Where Used
1	Head and neck, colon, rectum, liver, pleura, melanoma, mycosis fungoides, Kaposi sarcoma, breast, ovary, placenta, prostate, testis, melanoma/conjunctiva, melanoma/iris and ciliary body, retinoblastoma, brain, thyroid, lymphoma
2	Head and neck, liver, melanoma, breast, prostate, testis, melanoma/iris and ciliary body, lymphoma
3	Head and neck, melanoma, breast, prostate, testis, lymphoma
4	Head and neck, melanoma, breast, prostate, testis
5	Head and neck, breast, prostate, testis
6	Head and neck, breast, prostate

Summary – The Advantages of the CS System

- Registrar codes “the facts” about the case
- Uses the best available data for staging (pathological or clinical or mixed)
- Improves data quality
  - standardizing rules for timing, clinical and pathologic assessments
  - compatibility of descriptions across all of these systems for all cancer sites
  - ability to combine clinical and pathological info also results in fewer unstagable cases
- Computer derives the TNM and Summary Stage

Summary – The Advantages of the CS System

- Maintains independent objectives of users
  - ACoS, SEER, NPCR
  - Accommodates future TNM revisions
- Enhances collaboration with physicians
- NCDB submission to include:
  - CS data elements for deriving stage
  - Physician-reported staging

Summary – The Advantages of the CS System

- Unified data collection system designed to provide a common goal:
  - Meets the needs of 3 staging and coding systems:
    - TNM
    - EOD
    - Summary Stage

Questions About CS?

- Direct all CS questions to your regional registry ***except*** those dealing with the CS Evaluation fields (data item not required by the CCR)
- General CS information and electronic version of the manual:
  - AJCC Web site: **www.cancerstaging.org**
  - SEER Training Web site:

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

Questions Regarding ACoS Required Fields

- For questions regarding data items required by the ACoS, but not required by the CCR, such as:
  - Comorbidity/Complications 1-6 fields
  - CS Evaluation fields
  - AJCC staging
- Contact Inquiry@facs.org