Version 2
Overview and Update
CSv0202 to CSv0203

CS version 2
Education and Training Team

What We’ll Cover

• Rules changes and revisions
  – CSv0202 to CSv0203
• Sites with Major Changes
  – Esophagus and Stomach
  – Biliary Tract
  – Peritoneum

CSv2 Changes

• New name
  – Collaborative Stage Data Collection System (CS)
• Commitment to make staging more clinically relevant
  – Better definitions and instructions
  – More site-specific factors
CSv0203 Changes

• Based on post-publication changes in AJCC Cancer Staging Manual, seventh edition
• Continued work to make CAP Protocols compatible with registrar abstracting needs
• Thorough, independent review of codes and format by Data Validation Team

2010 CSv2 Data Validation Project

• March – August, 2010
• Purpose
  – Improve CSv2 system for registry use
  – Validate mapping between CSv2 codes and AJCC and SEER summary staging systems
  – Review every table of every schema
  – Apply style criteria consistently across all schema tables
  – Correct problems noted with first release of CSv2

Results of Data Validation Project

• Changes in CSv0203
  – Code 988 Not applicable clarified
  – New and expanded table notes
  – Code structures and definitions more consistent
  – Formatting and punctuation
  – Corrections to fix problems identified
    • Missing code definitions
    • T, N, M and stage group mapping
    • More combination codes and converted codes
    • Review of schema index page
Results of Data Validation Project

• Changes in CSv0203, continued
  – New schema for plasma cell malignancies
  – Updated schema for Kaposi sarcoma
  – Post-orchiectomy tumor markers for testis added
  – Newly required site-specific factor for intrahepatic bile duct
  – Extensive revision of lung, GIST, cutaneous melanoma and corpus uteri extension tables

Example Colon CS Extension CSv0202

<table>
<thead>
<tr>
<th>Code</th>
<th>TNM7 Map</th>
<th>TNM6 Map</th>
<th>SS77 Map</th>
<th>SS2000 Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>420</td>
<td>Fat, NOS</td>
<td>T3</td>
<td>T3</td>
<td>RE</td>
</tr>
<tr>
<td>450</td>
<td>Extension to: All colon sites: Adjacent tissue(s), NOS Connective tissue Mesenteric fat Ascending and descending colon Retropertioneal fat Transverse colon/flexures Gastrocolic ligament Greater omentum</td>
<td>T3</td>
<td>T3</td>
<td>RE</td>
</tr>
<tr>
<td>460</td>
<td>Adherent to other organs or structures, but no microscopic tumor found in adhesion(s)</td>
<td>T3</td>
<td>T3</td>
<td>RE</td>
</tr>
<tr>
<td>500</td>
<td>Invasion of through serosa (mesothelium) (visceral peritoneum)</td>
<td>T4a</td>
<td>T4</td>
<td>RE</td>
</tr>
<tr>
<td>550</td>
<td>Any of 420 to 450 + 500</td>
<td>T4a</td>
<td>T4</td>
<td>RE</td>
</tr>
<tr>
<td>560</td>
<td>Stated as T4a, no other information</td>
<td>T4</td>
<td>T4</td>
<td>RE</td>
</tr>
<tr>
<td>570</td>
<td>Adherent to other organs or structures, NOS</td>
<td>T4b</td>
<td>T4</td>
<td>RE</td>
</tr>
</tbody>
</table>

Example Colon CS Extension CSv0203

<table>
<thead>
<tr>
<th>Code</th>
<th>TNM7 Map</th>
<th>TNM6 Map</th>
<th>SS77 Map</th>
<th>SS2000 Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>450</td>
<td>Extension to: All colon sites: Adjacent tissue(s), NOS Connective tissue Mesenteric fat Ascending and descending colon Retropertioneal fat (excised)</td>
<td>T3</td>
<td>T3</td>
<td>RE</td>
</tr>
<tr>
<td>458</td>
<td>Fat, NOS (was 420)</td>
<td>T3</td>
<td>T3</td>
<td>RE</td>
</tr>
<tr>
<td>460</td>
<td>OBSOLETE: See Note 3, codes 555 and 570</td>
<td>T3</td>
<td>T3</td>
<td>RE</td>
</tr>
<tr>
<td>470</td>
<td>Stated as T4, no other information</td>
<td>T3</td>
<td>T3</td>
<td>RE</td>
</tr>
<tr>
<td>500</td>
<td>Invasion of through serosa (mesothelium) (visceral peritoneum)</td>
<td>T4a</td>
<td>T4</td>
<td>RE</td>
</tr>
<tr>
<td>555</td>
<td>500 + (450 + 458)</td>
<td>T4a</td>
<td>T4</td>
<td>RE</td>
</tr>
<tr>
<td>565</td>
<td>Stated as T4a, no other information</td>
<td>T4a</td>
<td>T4</td>
<td>RE</td>
</tr>
<tr>
<td>567</td>
<td>Adherent to other organs or structures, NOS</td>
<td>T4b</td>
<td>T4</td>
<td>RE</td>
</tr>
<tr>
<td>570</td>
<td>Adherent to other organs or structures, NOS</td>
<td>T4b</td>
<td>T4</td>
<td>RE</td>
</tr>
</tbody>
</table>
New Standards Setter Requirements

- COC – minor changes
- SEER – same as COC
- NPCR – new requirements
  - Data items needed to derive TNM7 stage (as available)
    - CS Reg Nodes Eval, Mets Eval
    - CNS SSF1
    - Breast SSF 15,16
    - Schema discriminators

Reportability Issues

- Reportable-by-Agreement Cases
  - Staging systems available in TNM for neoplasms that may not be reportable to population-based registries
  - Examples
    - Borderline tumors of ovary
    - GIST, NOS
    - Carcinoid of appendix
    - Squamous ca of skin
    - High grade dysplasia (esophagus)
    - PanIN III of pancreas, severe ductal dysplasia

Reportability Issues, continued

- The presence of a schema in CSv2 does not imply that the disease is reportable
- Follow instructions of population-based registry regarding reportability
  - If reportable, follow instructions in schema
  - If not reportable, follow facility policies for collecting data
CS Coding Instructions Part I

- Section 1
  - General rules
  - Data fields rules
  - More examples with rules
- Section 2 – Site-specific notes
  - Lymph nodes (head and neck, breast)
  - Other problematic data items
  - Clinical status of regional lymph nodes (stomach, colon)
  - Lab values and tumor markers
  - Other site-specific factors

CS Coding Instructions

- Electronic document
  - Designed for desktop use so it can be easily accessed
  - PDF will allow sticky notes, word search, cross-referencing
- Part II schemas organized in site-related groups

Rules Review
CS General Guidelines

- Timing rule
  - Includes all information gathered through completion of surgery(ies) in first course of treatment OR
  - Within four months of diagnosis in absence of disease progression
  - Whichever is LONGER.

- Timing rule NOT identical to TNM7.

CS General Guidelines

- Clinician statement of T, N, M
  - Codes included in CS version 2
    - Stated as T1, NOS; Stated as T1a, NOS
  - Use only when there is no information available to assign more specific code

- Discrepancies between clinician statement and documentation
  - Documentation takes precedence
  - Discuss case with clinician

CS General Comments

- Obsolete codes
  - Necessary as a result of TNM 6 to 7 changes
    - Splitting of previous codes
    - Moving a structure from Extension to Mets at Dx
    - Correcting mapping errors in CS version 1
  - Labeled in CSv2
    - Obsolete codes may be hidden in software
  - Do not use obsolete codes for 2010 diagnoses and forward
    - Retained as a reference for researchers
Part I Discussion of OBSOLETE

<table>
<thead>
<tr>
<th>CSv0203</th>
<th>Update 4-1-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBSOLETE DATA EXPLAINED V2003</td>
<td>ERROR</td>
</tr>
<tr>
<td>OBSOLETE DATA REVIEWED AND CHANGED V2010</td>
<td>ERROR ERROR ERROR ERROR</td>
</tr>
<tr>
<td>OBSOLETE DATA CONVERTED V2093</td>
<td>ERROR ERROR ERROR ERROR</td>
</tr>
</tbody>
</table>

CS General Comments

- **Inaccessible lymph nodes**
  - Nodes within body cavities that cannot be palpated or easily examined
  - Examples (not all-inclusive): regional nodes for bladder, kidney, colon, prostate, esophagus, stomach, lung, liver, corpus, ovary
- **Accessible lymph nodes**
  - Breast, oral cavity, salivary gland, skin, thyroid, etc.
  - Code regional nodes as negative if general statement in chart ‘remainder of exam negative’

CS General Comments

- **Inaccessible lymph nodes rule**
  - Record regional lymph nodes as NEGATIVE (rather than unknown) when
  - no mention of LN involvement in PE, Dx testing or surgical exploration
  - *clinically* early stage (T1, T2, localized) tumors
  - patient receives ‘usual’ treatment to primary
  - All three conditions have to be met
  - Code unknown if reasonable doubt that tumor is not localized
CS General Comments

• Schema Discriminator
  – Some primary sites have multiple schemas
    • Example: Colon (carcinoma), GIST Colon, NET Colon, Lymphoma ➔ determined by histology
  – Some ICD-O-3 codes have multiple schemas
    • Example: C24.0 Extrahepatic bile ducts (distal bile duct; cystic duct; right, left, and common hepatic ducts) ➔ determined by schema discriminator
    • Example: Nasopharynx includes pharyngeal tonsils. Nasopharynx has its own schema; pharyngeal tonsils are coded with oropharynx.
    • Example: Peritoneum (usually soft tissue sarcomas, but sometimes primary peritoneal carcinoma in women)
  – Schema discriminator brings appropriate schema to computer screen

CS General Comments

• Unknown status of distant metastasis
  – No MX category in TNM 7th edition
  – CS Mets at Dx code 99 (unknown) maps to M0
  – Registrar can assume no distant mets unless there is
    • Evidence of mets clinically (physical exam, imaging, etc.)
    • Microscopically proven distant mets
    • Use code 00 instead

Eval Fields – General Guidelines

• Assign Eval code that describes diagnostic procedure associated with corresponding data field
  – May not be numerically highest Eval code

• Eval code relates to highest T, N, or M category, not necessarily to highest code in CS field

• Use a pathologic Eval code if a biopsy documents highest T, N, or M without resection
CS Nodes Eval – Rules

- Linked to CS Lymph Nodes

- Code as clinical or pathologic based on intent of procedure and assessment of T
  - If LN procedure part of workup, staging basis is clinical (codes 0, 1, 5, 9)
  - If LN procedure part of treatment, code as pathologic (codes 2, 3, 6)
    - Must have resection of primary site meeting pT criteria

CS Nodes Eval – Rules, cont’d

- Most sites use standard table

- General structure
  - 0 Clinical only; no nodes removed
  - 1 No nodes removed; endoscopy or invasive techniques; surgical observation OR FNA, needle bx; or excisional bx as part of diagnostic workup without removal of primary site sufficient for pT
    - Bx does not meet criteria for pathologic N
  - 2 Autopsy (known or suspected dx)

CS Nodes Eval – Rules, cont’d

- General structure, cont’d
  - 3 Any microscopic assessment of regional nodes WITH removal of primary site sufficient for pT OR Positive biopsy of highest N category regardless of T
    - Meets criteria for pathologic N
  - 5 Pre-op tx and resection; clinical evidence
  - 6 Pre-op tx and resection; path evidence more extensive
  - 8 Autopsy (dx not suspected)
  - 9 Unknown, not assessed; no TNM schema
CS Nodes Eval – Rules, cont’d

- Code 9
  - Always 9 for sites without TNM mapping
  - Avoid 9 if possible when CS Lymph Nodes is 999

- Sentinel nodes
  - Code as pathologic when tumor size/extension meets criteria for pT
  - When no pT, exam of single LN or sentinel nodes is clinical
  - Code as pathologic when there is a positive biopsy of node in highest N category

Regional Nodes Positive/Examined
General Rules

- Counting nodes (positive or examined)
  - Do not count positive aspiration or core biopsy of node in same chain removed at surgery
  - Do count positive aspiration or core biopsy of node in different region
  - If location of biopsied/aspirated node unknown, do not count

- Priority of node counts
  - Final dx, synoptic report, microscopic, gross

CS Mets at Dx Rules

- Generally used for discontinuous, blood-borne, or fluid-borne mets and involved distant lymph nodes
- Code the farthest documented metastasis
  - Usually clinical or inferred
  - If no pre-op tx: path when available; if pre-op tx: clinical
- Mets at Dx codes (general structure)
  - 10 Distant lymph nodes
  - 40 Specific named structures or carcinomatosis
  - 50 Distant nodes plus distant mets
  - 60 Nonspecific distant metastases
**CS Mets at DX**

- **When to code 00 vs. 99**
  - Code 00 when
    - No clinical or pathologic evidence of distant mets and patient is not treated as if mets are present or suspected
    - Only history and physical exam needed
  - Code 99 when
    - Reasonable doubt that tumor no longer localized
    - Maps to MX in TNM 6th edition and M0 in 7th edition
- **No MX in TNM 7th edition**
  - Registrar can code Mets at Dx 00 unless distant mets are identified and classified as cM1 or pM1
- **CTCs and DTCs**
  - Breast only: code as 05
- **Code 98**
  - Lymphoma, heme-retic, and some others

**Site-Specific Factors**

- **25 SSFs available**
  - Needed for TNM mapping
  - Tumor markers and lab values
  - Prognostic/predictive
  - Future research/special interest
  - Associated diseases and conditions

**Coding of Lab Test Interpretation**

- **Priority of information**
  - Code clinician’s interpretation
  - If no MD interpretation, registrar may interpret from reference range listed on lab report
  - If no MD interpretation and no reference range listed, code as 999
    - Use common sense and code 010 rather than 999 if lab result is extremely abnormal
Use of SSF 900 Series Codes

- 987 Not applicable (case does not meet criteria for SSF)
- 988 Not applicable: information not collected for this case
- 997 Test ordered, results not in chart
- 998 Test not ordered OR No histologic examination of primary site
- 999 Unknown; not documented

Sites with Major Changes

CSv2 Schema Changes

- Organ schemas split by morphology
  - Head and neck
    - Mucosal melanoma vs. carcinoma
  - Liver and intrahepatic bile ducts separate
    - Liver (Hepatocellular carcinoma)
    - Intrahepatic bile ducts (Cholangiocarcinoma)
  - GI tract
    - GIST vs. NET vs. carcinoma
GI Tract Schemas

<table>
<thead>
<tr>
<th></th>
<th>Carcinoma</th>
<th>GIST</th>
<th>NET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esophagus</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Esophagus-GEJunction</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Stomach</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Appendix</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Colon</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Rectum</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Anus</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CSv2 Schema Changes

- Organ schemas split by morphology
  - Corpus uteri
    - Carcinoma vs. adenosarcoma vs. sarcoma
  - Skin
    - Cutaneous SCC and Other Cutaneous Carcinoma
    - Merkel cell
    - Malignant melanoma
  - Esophagus
    - Separate TNM stage mapping for squamous vs. adenocarcinoma

Schemas Split/Revised

- Extrahepatic bile ducts (C24.0) split into
  - Perihilar (proximal) bile ducts
  - Cystic duct
  - Distal bile duct
- Esophagus (GE Junction) now includes
  - Gastroesophageal junction (C16.0)
  - Stomach fundus (C16.1)
  - Part of stomach body (C16.2)
- Peritoneum
  - Peritoneum
  - Retroperitoneum
  - GIST peritoneum
  - Peritoneum Female Genital
C24.0 Extrahepatic Bile Ducts

SSF 25 Subsite of Extrahepatic Bile Ducts

- 010 Perihilar bile duct(s); Proximal extrahepatic bile duct(s); Hepatic duct(s) BDPerihilar
- 020 Stated as Klatskin tumor BDPerihilar
- 030 Cystic bile duct; cystic duct CysticDuct
- 040 Common bile duct; Common duct, NOS BDDistal
- 050 Diffuse involvement; > 1 subsite involved, subsite of origin not stated BDPerihilar
- 060 Subsite of extrahepatic bile ducts not stated, but treated with combined hepatic and hilar resection BDPerihilar
- 070 Subsite of extrahepatic bile ducts not stated, but treated with pancreatoc-dudenection BDPerihilar
- 999 Subsite not stated and not classifiable in codes 050-070 BDDistal

C24.0 Extrahepatic Bile Ducts

<table>
<thead>
<tr>
<th></th>
<th>Perihilar BD schema</th>
<th>Distal BD schema</th>
<th>Cystic Duct schema</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common bile (choledochal duct)</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Cystic bile duct</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Hepatic bile duct – right, left, common</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Klatskin tumor</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphincter of Oddi</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Extrahepatic bile duct [NOS]</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Esophagus-Stomach Changes

- Shift of C16.0, parts of C16.1 and C16.2 to esophagus schema
- Esophagogastric junction (EGJ) tumors:
  - If midpoint (epicenter) within 5 cm of EGJ and also extends into esophagus, classify and stage as esophagus
  - Stage all others with midpoint in stomach > 5 cm from EGJ or those within 5 cm of the EGJ with no extension into esophagus as gastric carcinoma

New Schema: Esophagus GE Junction

- Esophagogastric Junction
- Gastroesophageal Junction

SSF 25: Involvement of Cardia and Distance from GE Junction

- 000 No involvement of esophagus or EGJ  
  Stomach
- 010 Tumor located in Cardia or EGJ  
  EsophGEJ
- 020 Esoph or EGJ involved AND tumor midpoint from EGJ ≤ 5 cm  
  EsophGEJ
- 030 Esoph or EGJ involved AND tumor midpoint from EGJ > 5 cm  
  Stomach
- 040 Esoph or EGJ involved AND tumor midpoint from EGJ unknown  
  EsophGEJ
- 050 Esoph and EGJ not involved but tumor midpoint from EGJ ≤ 5 cm  
  Stomach
- 060 Esoph involved or esoph involvement unknown AND tumor midpoint from EGJ > 5 cm or unknown AND MD stages case using esoph definitions  
  EsophGEJ
- 999 Involvement of esoph not stated, unk or no info, not documented  
  Stomach
- Blank for Stomach cases C16.3-C16.9
- Blank for Cardia/EGJ cases C16.0
Peritoneum

- **Retroperitoneum** C48.0 only
  - All sarcoma histologies except 8935-8936
- **Peritoneum** C48.1-C48.2, C48.8
  - Males: 8000-8934, 8940-9136, 9141-9582, 9700-9701
  - Females: 8580-8589, 8680-8921, 9120-9136, 9141-9582, 9700-9701
- **Peritoneum Female Genital**
  - 8000-8576, 8590-8671, 8930-8934, 8940-9110
- **GIST Peritoneum**
  - 8935-8936 only

SSF 25 Peritoneum Schema Discriminator

- 001 Male Peritoneum
- 002 Female PeritoneumFemaleGen
- 003 Other (hermaphrodite) Peritoneum
- 004 Transsexual Peritoneum
- 009 Unknown sex Peritoneum

Lymph-Vascular Invasion**

- **Coding instructions**
  - Based on all pathology reports or information available
    - Priority given to positive results
    - Includes lymphatic invasion, vascular invasion, or lymph-vascular invasion
    - Do not use for perineural invasion
    - Use CAP checklist as primary source
      - Other sources may be used in the absence of a checklist
Lymph-Vascular Invasion 

- Code structure
  0 – Lymph-vascular invasion not present (absent)/Not identified
  1 – Lymph-vascular invasion present/identified
  8 – Not applicable
  9 – Unknown/Indeterminate

Summary

- Read and understand the CS general rules
- Do not rely on memory when coding
- Refer to the site-specific schema every time
- Read the notes for each data field
- Understand the anatomy
  – Primary site, adjacent structures and regional nodes
- Record the most extensive code
  – Greatest size/extension or farthest documented mets
  – Use NOS and “Stated as” codes as last resort
- Understand the new definitions of the Eval fields
- Code SSFs as required

CAnswer Forum

- Submit questions to CS Forum
  – Located within the CAnswer Forum
  – Provides information for all
  – Allows tracking for educational purposes
  – Includes archives of Inquiry & Response System
- http://cancerbulletin.facs.org/forums/
American Joint Committee on Cancer
Contact Information

AJCC Web Site: www.cancerstaging.org

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