Collaborative Stage Version 2: What's New

Education and Training Team
Collaborative Stage Data Collection System
Version 2

Learning Objectives

• **Identify changes and updates in CS version 2**

• **Understand rationale behind changes**

• **Understand relationships among**
  – **AJCC TNM 7th edition**
  – **CSv2**
  – **Treatment timing**
  – **Clinical information**
  – **Pathologic information**
  – **CAP Protocols**

• **Understand how and why site-specific factors are used**

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What's New in Version 2

	Version 1 (6th Ed)	Version 2 (7th Ed)
Team members	6	Nearly 60
Work Teams	1	7 with sub-groups
Schemas	94	140
Tables (estimated)	1,900	5,500
CS data fields	15	34
Field length*	2	3

* CS Extension and CS Lymph Nodes

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CSv2 Changes

- **New name**
  - Collaborative Stage Data Collection System (CS)

- **Based on AJCC Cancer Staging Manual, seventh edition**

- **Commitment to make staging more clinically relevant**
  - Better definitions and instructions
  - More site-specific factors

- **Compatible with 2010 CAP Protocols**

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Other Features of CSv2

- **Histology inclusions rather than exclusions**
  - Code ranges rather than specific terms

- **Consistency of code structures from site to site**

- **More non-specific terms, "Stated as T_, NOS"**

- **More non-anatomic factors**
  - Treatment decisions, prognostic/predictive data

- **Data items more complete for lab values**
  - Colon, rectum, appendix: CEA and CEA Lab Value

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New Schemas

- Mucosal melanoma of head and neck (26)
- Esophagus-GE Junction
- Appendix
- Gastrointestinal stromal tumor (7)
- Neuroendocrine tumor (neuroendocrine/carcinoid) (4)
- Intrahepatic bile ducts
- Perihilar bile ducts
- Distal bile duct
- Other biliary
- Merkel cell carcinoma
- Ocular adnexal lymphoma
- Adrenal gland

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Modifications to Schemas

- **Non-melanoma skin is primarily squamous CA**

- **Lung**
  - **Pleural effusion moved to Mets at Dx**
  - **Separate tumor nodules moved to Extension**

- **Extracapsular extension for head and neck sites**
  - **Split into clinical and pathologic**

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New CSv2 Data Fields

- **New fields in NAACCR record version 12**
  - **Site-specific factors 7-25 (#2861-2879)**
  - **Pre- and Post-Treatment (11 fields; #2730-2785)**
  - **7th Edition derived fields**

- **Grade Path Value (#449)**

- **Grade Path System (#441)**

- **Lymph-Vascular Invasion (#1182)**

- **Specific fields for metastatic sites (#2851-2854)**
  - **Mets at Dx-Bone, -Brain, -Liver, -Lung**

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Mets at Dx-Metastatic Sites

- **4 new fields**
  - **Bone excluding marrow**
  - **Lung excluding pleura and pleural fluid**
  - **Brain excluding spinal cord and other CNS**
  - **Liver**

- **Code 0 when CS Mets at Dx is 00**

- **Code structure**
  - **0 – No**
  - **1 – Yes**
  - **8 – Not applicable**
  - **9 – Unknown**

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Lymph-Vascular Invasion (1)

- **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**

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Lymph-Vascular Invasion (2)

- **Code structure**

  0 – Lymph-vascular invasion not present (absent)/ Not identified

  1 – Lymph-vascular invasion present/identified

  8 – Not applicable

  9 – Unknown/Indeterminate

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Grade Path Value (1)

- **Does not replace Grade/Differentiation (#440)**

- **Record grade specified in Grade Path System**

- **Code structure**

  1 Recorded as Grade I or 1
  2 Recorded as Grade II or 2
  3 Recorded as Grade III or 3
  4 Recorded as Grade IV or 4
  Blank No 2-, 3-, or 4-grade system available; unknown

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Grade Path Value (2)

- **Coding instructions**
  - **Record grade reported in patient record**
  - **Based on same tissue as Grade/Differentiation field**
  - **Do not use for site-specific grading systems**
    - **Part of the SSF fields**
  - **If grade is described as a fraction (x/y)**
    - **This data field is the numerator**
  - **Histologic grade is another name for overall grade or grade NOS**
    - **Takes priority over a nuclear or architectural grade**

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Grade Path System (1)

- **New item**
  - **In addition to Grade Differentiation (#440)**

- **Record stated grade system; not converted**

- **Used in conjunction with "Grade Path Value"**

- **Code Structure**
  - 2 Two-grade system
  - 3 Three-grade system
  - 4 Four-grade system
  - Blank Not a 2-, 3- or 4-grade system; unknown

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Grade Path System (2)

- **Coding instructions**
  - **Record the grading system in the record**
  - **Based on same tissue as Grade/Differentiation field**
  - **Do not use for site-specific grading systems**
    - **Part of the SSF fields**
  - **If grade is described as a fraction (x/y)**
    - **This data field is the denominator**

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CSv2 Field Changes

- **CS Extension and CS Lymph Nodes expanded**
  - **Two digits to three digits**

- **7th and 6th Edition mapping fields**

- **Additional Site-specific Factors**
  - **NAACCR record allows up to 25 SSFs**

- **Pre- and post-adjuvant therapy staging data fields**

- **CS "mixed stage" (combined clinical-pathologic) continues**

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Example CS Extension Table: Colon

Code		TNM 7th Map	TNM 6th Map	SS77 Map	SS2000 Map
420	Fat, NOS	T3	T3	RE	RE
450	Extension to: All colon sites: Adjacent tissue(s), NOS Connective tissue Mesenteric fat … Ascending and descending colon Retroperitoneal fat Transverse colon/flexures Gastrocolic ligament Greater omentum	T3	T3	RE	RE
460	Adherent to other organs or structures, but no microscopic tumor found in adhesion(s)	T3	T3	RE	RE
490	Stated as T4, NOS	T4NOS	T4	RE	RE
500	Invasion of/through serosa (mesothelium) (visceral peritoneum) Stated as T4a, NOS	T4a	T4	RE	RE
550	Any of [(420) to (450)] + (500)	T4a	T4	RE	RE
570	Adherent to other organs or structures, NOS	T4b	T4	RE	RE

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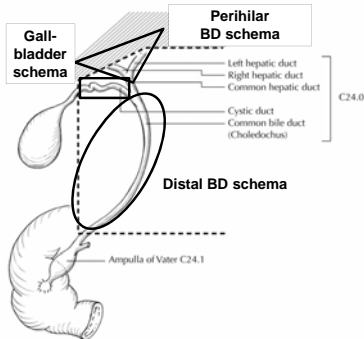## CSv2 Coding Issues

- **Topography codes split into different schemas**

  - **Esophagus schema now includes**
    - **Gastroesophageal junction (C16.0)**
    - **Stomach fundus (C16.1)**
    - **Part of stomach body (C16.2)**

  - **Extrahepatic bile ducts (C24.0) split into**
    - **Perihilar (proximal)**
    - **Distal bile duct**
    - **Gallbladder schemas**

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C24.0 Extrahepatic Bile Ducts

Extrahepatic Bile Ducts. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors. AJCC Cancer Staging Atlas. New York: Springer, 2006: 139-145. ©American Joint Committee on Cancer. Used with permission of the American Joint Committee on Cancer (AJCC®), Chicago, Illinois.

C24.0 Extrahepatic Bile Ducts

	Perihilar BD schema	Distal BD schema	Gall-bladder schema
Common bile (choledochal) duct		✔	
Cystic bile duct			✔
Hepatic bile duct – right, left, common	✔		
Klatskin tumor	✔		
Sphincter of Oddi		✔	
Extrahepatic bile duct [NOS]			

CSv2 Coding Issues, continued

- **Schemas for some sites split by morphology**

  - **Head and neck: mucosal melanomas vs. carcinomas**

  - **GIST and neuroendocrine tumors of GI tract separate from carcinomas**

  - **Liver and intrahepatic bile ducts separate**
    - **Liver (Hepatocellular ca)**
    - **Intrahepatic BD (Cholangioca)**

  - **Esophagus: separate stagings for squamous vs. adenocarcinoma**

CSv2 Coding Issues, continued

- **TNM 7 includes staging for certain histologies**
  - **Currently NOT reportable to population-based registries**
  - **May be reportable-by-agreement**
    - **High grade dysplasia of esophagus**
    - **PanIN III of pancreas, severe ductal dysplasia**
    - **Carcinoid of appendix**
    - **Squamous carcinoma of skin**

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CSv2 Coding Issues, continued

- **Some codes made obsolete**

- **"Flavors" of Obsolete**
  - **Obsolete Data Retained Version xxxx (vanilla)**
  - **Obsolete Data Converted Version xxxx (chocolate)**
  - **Obsolete Data Converted and Retained Version xxxx (rocky road)**
  - **Obsolete Data Reviewed and Changed Version xxxx (hazelnut)**

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Site-Specific Factors (1)

- **New SSFs**
  - **Based on AJCC 7th edition**
  - **Some needed for TNM mapping**
    - **Number of positive axillary nodes, extracapsular extension; thickness of melanoma**
  - **Some tumor markers and lab values**
    - **CA 125, CA 19-9, AFP, HCG, KRAS, Ki-67**
  - **Some prognostic/predictive**
    - **Gleason tertiary pattern; IPI, FLIPI, IPS (lymphomas)**
  - **Some for future research/special interest**
    - **Microsatellite instability (GI cancers), tumor infiltrating lymphocytes (TILs; Merkel cell)**
  - **Some for patient history of other diseases**
    - **Sjogren's syndrome (ocular lymphoma), history of asbestos exposure (pleural mesothelioma), retinoblastoma gene mutation**

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Site-Specific Factors (2)

- **25 total SSFs available**
  - Breast – 24
  - Eyelid, lacrimal gland – 15 to 16
  - Prostate – 13
  - Ocular lymphoma – 12
  - Head & Neck sites (carcinoma & melanoma) – 9 to 11
  - Colon and Rectum – 9
  - CNS – 9

- **Standards setters decide which SSFs are required**

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Site-Specific Factors (3)

- **If information regarding SSF is not in path report or medical record**

- **Registrar is not required to go looking for it**

  - Information may not be available in some facilities

  - Not registrar's role to enforce practice standards

  - Instructions included in schemas on how to code missing information

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Examples of New SSFs (1)

- **Microsatellite instability (MSI)**

  - Colon, rectum and appendix schemas

  - Pathologic test
    - Determines likelihood of a specific gene mutation for hereditary non-polyposis colorectal cancer (HNPCC)/Lynch syndrome

  - Code structure
    - 000   Stable
    - 010   Unstable – Low
    - 020   Unstable – High [suggestive of HNPCC]
    - 030   Unstable, NOS
    - 998   Test ordered, results not in chart
    - 999   Unknown; Not documented

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Examples of New SSFs (2)

- **HPV Status**
  - Head & neck sites (melanoma/carcinoma), anus, penis

  - Presence of human papilloma virus (HPV)
    - Known risk factor for cancer

  - Code structure
    - Negative for any HPV
    - Negative for high-risk HPV, type(s) not specified
    - Low risk positive (all positive type(s) are low risk)
    - High risk positive, NOS, type(s) not specified
    - High risk positive, specified type(s) other than types 16 or 18*
    - High risk positive for HPV 16 only*
    - High risk positive for HPV 18 only*
    - High risk positive for HPV 16 and 18*
    - High risk positive for HPV 16 or 18 plus any other high risk type(s)*
    - * with or without positive results for low risk type(s)
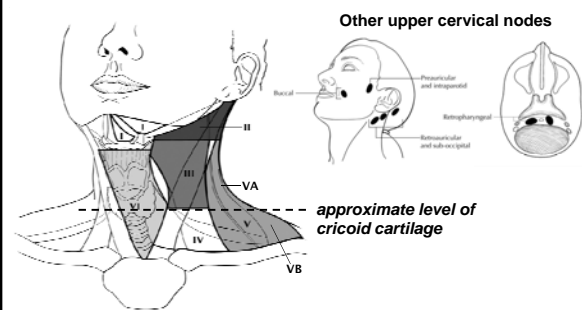
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Examples of New SSFs (3)

- **Upper and Lower Cervical Lymph Node Levels**

  - Head and neck sites

  - Defines whether LN are above or below lower border of cricoid cartilage for prognostic purposes

  - Code structure
    - 000 No lymph nodes involved
    - 010 Upper level lymph nodes involved
      Levels I, II, III, VA, "Other groups"
    - 020 Lower level lymph nodes involved
      Levels IV, VB, VII
    - 030 Upper and lower level lymph nodes involved
    - 040 Unknown level lymph nodes involved
      Code "mid neck" and levels V, VI here if not specified as upper or lower
    - 999 Unknown, not stated

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Upper and Lower Cervical Lymph Nodes

Other upper cervical nodes

VA

approximate level of cricoid cartilage

IV

VB

From: Introduction to Head and Neck Sites. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors. AJCC Cancer Staging Atlas. New York: Springer, 2006: 13-18. ©American Joint Committee on Cancer. Used with permission of the American Joint Committee on Cancer (AJCC®), Chicago, Illinois.

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Examples of New SSFs (4)

- **Prostate New SSFs**
  - **Gleason Tertiary Pattern**
  - **Number of Cores Positive**
  - **Number of Cores Examined**
  - **Clinical Staging Procedures Performed**
    - **Digital rectal exam, imaging**
  - **Gleason information from core needle biopsy/TURP**
    - **Primary and secondary pattern**
    - **Score**
  - **Needle core biopsy findings**
  - **Gleason information from prostatectomy/autopsy**
    - **Primary and secondary pattern**
    - **Score**

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Examples of New SSFs (5)

- **Breast New SSFs**

  SSF 7 – Nottingham or Bloom-Richardson Score/Grade

  SSF 8 – HER2: IHC Test Lab Value

  SSF 9 – HER2: IHC Test Interpretation

  SSF 10 – HER2: FISH Test Lab Value

  SSF 11 – HER2: FISH Test Interpretation

  SSF 12 – HER2: CISH Test Lab Value

  SSF 13 – HER2: CISH Test Interpretation

  SSF 14 – HER2: Result of Other or Unknown Test

  SSF15 – HER2: Summary Result of Testing

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Examples of New SSFs (6)

- **Breast New SSFs, continued**

  SSF 16 – Combinations of ER, PR, and HER2

  SSF 17 – Circulating Tumor Cells & detection method

  SSF 18 – Disseminated Tumor Cells & detection method

  SSF 19 – Assessment of Ipsilat. Level I-II Axillary LN

  SSF 20 – Assessment of Distant Metastases

  SSF 21 – Response to Neoadjuvant Therapy

  SSF 22 – Multi-gene Signature Method

  SSF 23 – Result/Score of Multigene Signature

  SSF 24 – Paget Disease

  SSF25 – 988

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Pre- and Post-Treatment Fields

	Pre	Post
Tumor size		✓
Extension		✓
TS/Ext Eval	✓	
Reg LN	✓	✓
LN Eval	✓	
Mets at Dx	✓	✓
Mets Eval	✓	

Deferred to 2011

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CS Data Collection and Coding Manual

- **Electronic manual**
  - **Designed for desktop use for easy access**
    - **508 compatible for people with disabilities**
  - **Print manual *may* be available**

- **Part I extensively revised and expanded**
  - **Improvements based on suggestions from users and reliability studies**

- **Part I rules cross-referenced in Part II**
  - **Hyperlinks in electronic manual**

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CS Manual Part I

- **Coding instructions**
  - **General**
  - **Data fields**
- **More examples with rules**
- **Site-specific notes section**
  - **Lymph nodes (head and neck, breast)**
  - **Other problematic data items**
    - **Clinical status of regional lymph nodes (stomach, colon)**
- **Lab values and tumor markers**
- **Appendices**
- **Cross-referenced to Part II schemas**

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What's NOT New in Version 2

- **Code every case — all sites and all histologies**
  - **Computer algorithm will map to appropriate**
    - **6th and 7th edition T, N, M**
    - **Stage Group 1977 and 2000**

- **Pay attention to table notes**

  - **Notes before tables – coding guidelines**

  - **Notes after tables – mapping guidelines**
    - *** (asterisk) for 6th Ed notes**
    - **^ (carat) for 7th Ed notes**

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Summary

- **CSv2 based on changes in TNM 7th edition**

- **Enhanced clinical and pathologic information**

- **Improved definitions and instructions in manual**

- **Mapping to both 6th and 7th Editions**

- **More site-specific factors**
  - **Markers and lab values**
  - **Prognostic and predictive data**
  - **Fine points of TNM mapping**
  - **If not in chart, don't search for SSFs**

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Inquiry & Response System

- **Submit questions to Inquiry & Response System**

  - **Allows tracking for educational purposes**

  - **Provides information for all**

- **http://web.facs.org/coc/default.htm**

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