2016 AJCC TNM & Cancer Stage Review

2016-2017 FCDS WEBCAST SERIES
SEPTEMBER 15, 2016
Steven Peace, CTR

AJCC Cancer Staging Instruction for Registrars
https://cancerstaging.org/CSE/Registrar/

CDC & Florida DOH Attribution

“We acknowledge the Centers for Disease Control and Prevention, for its support of the Florida Cancer Data System, and the printing and distribution of the materials for the 2015-2016 FCDS Webcast Series under cooperative agreement DP003872-03 awarded to the Florida Department of Health. The findings and conclusions in this series are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention”.

FCDS would also like to acknowledge the Florida Department of Health for its support of the Florida Cancer Data System, including the development, printing and distribution of materials for the 2015-2016 FCDS Webcast Series under state contract CODJU. The findings and conclusions in this series are those of the author(s) and do not necessarily represent the official position of the Florida Department of Health.
Outline

- Introduction to AJCC Cancer Staging
- AJCC Cancer Staging Manual - Purchase and Ordering Information
- AJCC Cancer Staging Manual - Organization, Chapter Outline, Contents
- Using the AJCC Cancer Staging Manual
- 2016 Coding Instruction Updates
- 2016 Category Code Updates
- Ambiguous Terminology Clarification
- Correct Use of “X”, <blank>, “88” and “99”
- AJCC Stage/Prognostic Group
- 2016 AJCC TNM Edits
- AJCC Curriculum for Registrars
- AJCC Disease Site Webinars
- AJCC Cancer Staging Manual, 8th edition
- Staging References and Resources
- Questions

Introduction

- The AJCC Cancer Staging System is an “anatomic staging system”

- The AJCC Cancer Staging Manual, Handbook and Staging Atlas, prepared by the American Joint Committee on Cancer, are used by physicians, cancer registries, and other allied health care professionals throughout the world to facilitate the uniform description and reporting of cancer staging for most neoplastic diseases.

- Proper classification and staging is essential for physicians to assign proper treatment, evaluate results of management and clinical trials, and to serve as the standard for local, regional and international reporting on cancer incidence and outcomes.

- As knowledge of cancer biology expands, cancer staging must incorporate these advances. This is why the non-anatomic prognostic factors were added in 2010.

- The Seventh Edition of the AJCC Cancer Staging Manual brings together all the currently available information on staging of cancer at various anatomic sites and incorporates newly acquired knowledge on the etiology and pathology of cancer...supplemented by selected molecular markers
Introduction

<table>
<thead>
<tr>
<th>Edition</th>
<th>Publication Year</th>
<th>Effective Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1977</td>
<td>1978-1983</td>
</tr>
<tr>
<td>2</td>
<td>1983</td>
<td>1984-1988</td>
</tr>
<tr>
<td>5</td>
<td>1997</td>
<td>1998-2002</td>
</tr>
<tr>
<td>6</td>
<td>2002</td>
<td>2003-2009</td>
</tr>
<tr>
<td>7</td>
<td>2009</td>
<td>2010-2016</td>
</tr>
<tr>
<td>8</td>
<td>2016</td>
<td>2017-</td>
</tr>
</tbody>
</table>

Purchase and Ordering Information

- COST: $64.95
- ISBN: 978-0-387-88440-0

- Required - Florida Mandate
  - FCDS will not purchase
  - Facility may purchase
  - Individual may purchase

- Also Required to Purchase 8th Edition in 2016-2017
- https://cancerstaging.org
- http://springer.com
- 1-800-SPRINGER

AJCC Staging Manual Organization

- Part I – Chapter 1 – Purposes and Principles of Cancer Staging
- Part I – Chapter 2 – Cancer Survival Analysis
- Parts II -- XII are organized by Body System (digestive/GYN/GU/etc.)
- Each Body System (Part) includes 1 or more Site Chapters
- 57 Site Chapters Organized by Primary Site and/or Histologic Type
  - Chapters are grouped by Body System (digestive, urinary, etc.)
  - Chapters are organized by Disease Site (Primary Site)
  - Plus a few Histology-Based Chapters (melanoma, Merkel cell, etc.)
- Alphabetical Index
- CD-ROM with Printable Staging Forms

Chapter Outline and Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staging at a Glance</td>
<td>Summary of anatomic stage/prognostic grouping</td>
</tr>
<tr>
<td>Changes in Staging</td>
<td>Table summarizing changes in staging from the 6th edition</td>
</tr>
<tr>
<td>Introduction</td>
<td>Overview of factors affecting staging and outcome</td>
</tr>
<tr>
<td>Anatomic Considerations</td>
<td></td>
</tr>
<tr>
<td>o Primary Tumor</td>
<td></td>
</tr>
<tr>
<td>o Regional lymph nodes</td>
<td></td>
</tr>
<tr>
<td>o Metastatic sites</td>
<td></td>
</tr>
<tr>
<td>Rules for Classification</td>
<td></td>
</tr>
<tr>
<td>o Clinical</td>
<td></td>
</tr>
<tr>
<td>o Pathologic</td>
<td></td>
</tr>
<tr>
<td>Prognostic Features</td>
<td>Identification and discussion of non-anatomic prognostic factors</td>
</tr>
<tr>
<td>Definitions of TNM</td>
<td>T: Primary tumor</td>
</tr>
<tr>
<td>o N: Regional lymph nodes</td>
<td></td>
</tr>
<tr>
<td>o M: Distant metastasis</td>
<td></td>
</tr>
<tr>
<td>Anatomic Stage Prognostic Groups</td>
<td></td>
</tr>
<tr>
<td>Prognostic Factors (SSFs)</td>
<td>a. Required for staging</td>
</tr>
<tr>
<td>o b. Clinically significant</td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td></td>
</tr>
<tr>
<td>Histopathologic Type</td>
<td></td>
</tr>
<tr>
<td>Bibliography</td>
<td></td>
</tr>
<tr>
<td>Staging Form</td>
<td></td>
</tr>
</tbody>
</table>

AJCC Cancer Staging Manual, 7th ed. – Chapter 1, Table 1.10, p.14
ANATOMY

Primary Site. The retina is composed of neurons and glial cells. The precursors of the neuronal elements give rise to retinoblastoma, whereas the glial cells give rise to astrocytomas, which are benign and extremely rare in the retina. The retina is limited internally by a membrane that separates it from the vitreous cavity. Externally, it is limited by the retinal pigment epithelium (RPE) and Bruch’s membrane, which separate it from the choroid and act as natural barriers to extension of retinal tumors into the choroid. The continuation of the retina with the optic nerve allows direct extension of retinoblastomas into the optic nerve and then to the subarachnoid space. Because the retina has no lymphatics, spread of retinal tumors is either by direct extension into adjacent structures or by distant metastasis through hematogenous routes.

Regional Lymph Nodes. Because there are no intraocular lymphatics, this category of staging applies only to anterior extrascleral extension. The regional lymph nodes are preauricular (parotid), submandibular, and cervical.

Local Extension. Local extension anteriorly can result in soft tissue involvement of the face or a mass protruding from between the lids. Posterior extension results in retinoblastoma extending into the orbit, paranasal sinuses, and/or brain.

Metastatic Sites. Retinoblastoma can metastasize through hematogenous routes to various sites, most notably the bone marrow, skull, long bones, and brain.

RULES FOR CLASSIFICATION

Choroidal Invasion. The presence and the extent (focal vs. massive) of choroidal invasion by tumor should be stated. Differentiation should be made between true choroidal invasion and artificial invasion due to seeding of fresh tumor.

Clinical Staging. All suspected cases of retinoblastoma should have a neuroradiologic imaging scan. If it is possible to obtain only one imaging study, computerized tomography (CT) is recommended because detection of calcium in the eye on CT confirms the clinical suspicion of retinoblastoma. The request should include cuts through the pineal region of the brain. Magnetic resonance imaging is particularly useful if extension into either the extracranial space or the optic nerve is suspected or if there is a concern about the possible presence of a primitive neuroectodermal tumor (PNET) in the pineal region (retinoblastoma).

A staging examination under anesthesia should include ocular ultrasound and retinal drawings of each eye, with each identifiable tumor measured and numbered. Digital images of the retina may be very helpful. In bilateral cases, each eye must be classified separately. Tumor size or the distance from the tumor to the disc or fovea is recorded in millimeters. These millimeter distances are measured by ultrasound, estimated by comparison with a normalized optic disc (1.5 mm), or deduced from the fact that the field of a 28-diopter condensing lens has a retinal diameter of 13 mm.

Pathologic Staging. If one eye is enucleated, pathologic staging of that eye provides information supplemental to the clinical staging. First, the pathology should provide histologic verification of the disease. All clinical and pathologic data from the enucleated specimen are to be used.

Processing the Enucleated Retinoblastoma Globe. In certain situations fresh tumor material may be needed from the enucleated globe for research purposes or genetic testing. In these cases the globe should be moved to a sterile area in the Operating Room away from the operative field. After collecting the specimen, the surgeon should change his/her gloves before reentering the operative field.

Processing With Tumor Sampling. To collect the tumor specimen, the optic nerve should be removed before opening the globe to prevent the optic nerve from accidentally becoming contaminated with artificial clumps of tumor cells (so-called floaters). The surgeon should first ink the surgical margin of
Chapter Outline and Contents

Chapter 52, Retinoblastoma

- AJCC Cancer Staging Manual, 7th ed. – Chapter 52, Retinoblastoma, p.563-564

Identifying Neoplasms by Chapter

- Verify Primary Site against list of ICD-O-3 Topography Codes
- First Page of Each Chapter includes a list of ICD-O-3 Site Codes

- Verify Histopathologic Type against list of ICD-O-3 Histology Codes
- First Page of Many Chapters includes a list of ICD-O-3 Histology Codes

- When there is not a list of Histology Codes – go to end of chapter and review the section entitled "Histopathologic Type" to confirm histology

- If cannot verify site and/or histology then go to the Alphabetical Index at the back of the manual to find site/histology combination

- If there is not a corresponding AJCC Staging Chapter – then “N/A”
Neoplasms Not in the AJCC Manual

- Not all types of cancer are AJCC-stage able.
- **Use the Primary Site Codes** listed at the beginning of each chapter in the AJCC Cancer Staging Manual. **Use the List of Histopathologic Types** in each chapter are toward the end of each chapter and are used as a guide to indicate the cancer types which can be AJCC-staged using that staging scheme.
- **Histologic Types** listed as inclusions (or not listed – because they are exclusions) for each individual chapter should **NOT** be AJCC-staged using that chapter.
- **Note:** Some chapters are specifically limited to certain cancer types only with a certain anatomic site (such as skin melanomas). Some chapters are specifically limited to certain histologic types 9590-9729 regardless of primary site. This site and/or histology limitation does not limit coding for the primary site here.
Neoplasms Not in the AJCC Manual

- Pediatric cancers are not included in the AJCC Cancer Staging Manual with only a few exceptions. See below for exceptions.

- These cancers would ordinarily be considered un-stage able in this system.

- **However**, if a physician has staged a pediatric case using TNM (clinically or pathologically), then this staging may be coded and unknown codes should be used for any unspecified fields.

- **Exceptions**: Musculoskeletal Sites (sarcoma), Lymphoid Neoplasms, Retinoblastoma, and Other Neoplasms of Primary Site and/or Histology where a relevant chapter that would include pediatric cases exists.

Neoplasms Not in the AJCC Manual

- When the primary site is not clear, not specified or unknown.

- AJCC staging of the cancer should be based on "reasonable clinical certainty" of a primary site identification. You cannot assign TNM to C80.9 or C76.* cases.

- When there is not "reasonable clinical certainty" indicating one primary site, then the AJCC staging should be "not applicable" (as for an unknown primary site).

- When a case is assigned a Primary Site Code of “body system, NOS” that would also include sub-sites such as “colon, NOS” versus “sigmoid colon” the case cannot be staged due to lack of specificity of tumor origin or degree of cancer spread from that NOS primary site at diagnosis, including regional lymph nodes.

- **Exception**: Histology-based chapters such as “Lymphoid Neoplasms”
Read the Chapter Introduction, Anatomy and Rules Before You Start

- These 3 sections are too often overlooked or skimmed. This is where most of your questions will be answered...not in the coding section.

- The Rules for Classification instruct you as to which diagnostic and staging tests, imaging, biopsy, sentinel or resected nodes, etc. can and should be used when assigning clinical or pathologic TNM.

- Sometimes the Cancer Staging Form and/or the AJCC Chapter includes anatomic drawings to help clarify local/regional anatomy.

- Always review the Prognostic Features as this will help you identify which laboratory tests, symptoms, or other factors are important for staging.

2016 TNM Coding Instruction Update

- A New Format and Appearance for T, N, and M Category Codes

  - Old Format:
    - Clinical Stage – T1N0M0 Stage IA
    - Pathologic Stage – T2N1M0 Stage IIB
    - Yp Stage – fits into same field structure as above

  - New Format:
    - Clinical Stage – cT1 cN0 cM0 Stage 1A
    - Clinical Stage – pTis cN0 cM0 Stage 0
    - Clinical Stage – cT3 cN1 pM1 Stage IV
    - Pathologic Stage – pT1B pN0(i+) cM0 Stage IA
    - Pathologic Stage – pT2 pN1mic cM0 Stage II
    - Pathologic Stage – pTX pNX pM1B Stage IV
Stage Classifications – Points in Time

- Stage can be defined at specified (different) points in time
  - Clinical – before any treatment has been given
  - Pathologic – pathologic findings at time of surgical resection
  - Post-Treatment – after neoadjuvant therapy – clinical and/or pathologic evidence of response to presurgical treatment(s)
  - Retreatment – recurrence after disease free interval
  - Autopsy – unsuspected prior to death, incidental finding
Stage Classifications – Points in Time

- **Timing for Clinical Stage** – Date of Diagnosis up to the 1st treatment… in the Absence of Disease Progression or within first 4 months after Diagnosis

- **Timing for Pathologic Stage** – Date of Diagnosis through definitive surgery… in the Absence of Disease Progression or within first 4 months after Diagnosis

- **Timing for Post-Treatment Stage (Pathologic - yp)** – Pathologic Stage following treatment with neoadjuvant therapy(s) and definitive surgery (can include progression after neo-TX)

- **Timing for Post-Treatment Stage (Clinical - yc)** – Clinical Stage following treatment with neoadjuvant therapy(s) and before definitive surgery or no definitive surgery (can include progression after neo-TX)
Clinical Stage – Pretreatment Stage

- Pretreatment or Clinical Stage is Stage at Time of Diagnostic Workup
  - Patient Medical History
  - Physical Examination
  - Diagnostic Imaging
  - Endoscopy
  - Biopsy of primary site
  - Biopsy of single node or sentinel nodes
  - Biopsy of metastatic sites
  - Exploratory Surgery
  - Other relevant lab tests, biomarker tests, or examinations

“c” and “p” and “yp”

- Clinical (c)
- Clinical Stage is determined before any type of definitive therapy is started and is used as a guide to determine what the first steps used to establish the diagnosis of breast cancer should be and to decide upon approach and intent of 1st treatment – should 1st treatment include lumpectomy, SLN, mastectomy, neoadjuvant chemo, or palliative care.
- Clinical Stage – includes physical exam with inspection and palpation of the skin, breast, and lymph nodes (axillary, supraclavicular, and cervical), breast imaging and other imaging studies, and pathologic examination of the breast or other tissue(s) used to establish/confirm the diagnosis.
Pathologic Stage

- Must meet chapter-specific criteria for surgical resection to assign
- Includes all of the clinical stage information from clinical stage, plus
  - Observations at time of surgical resection from operative report
  - Pathologic Examination of surgically resected primary specimen
  - Pathologic Examination of surgically resected regional lymph nodes
  - Pathologic Examination of biopsy or resection of metastasis

```
“c” and “p” and “yp”

- Pathologic (p)
- Pathologic Stage is assigned following complete resection of the primary tumor and must include microscopic examination of the primary, regional lymph nodes and/or other suspect tissues.
- Pathologic Stage is used to guide anatomic stage specific adjuvant therapy decisions and to estimate prognosis.
- Pathologic Stage includes all information in the clinical setting PLUS all information obtained from surgical reports and pathology reports related to the extent of cancer spread through the completion of definitive surgery performed as a part of the 1st course of treatment or within 4 months of initial diagnosis of cancer in the absence of disease progression.
```
Post-Treatment Stage

- Documents measured response to initial (neoadjuvant) therapy(s)
  - Complete Response
  - Partial Response
  - No Response
  - Progression
- May be clinical measurement only – yc
  - Based on post-treatment imaging, physical examination, biopsy
- More often it is post-treatment pathologic stage – yp
  - Based on post-treatment surgical resection of primary site and regional nodes
  - Must meet chapter-specific criteria for surgical resection
- What about pre-treatment with less than 1 month of endocrine therapy including various hormones (prostate, breast, thyroid)? Not Neoadjuvant Tx...

“c” and “p” and “yp”

- Post Neoadjuvant Treatment (yp)
- Post Neoadjuvant Treatment Stage is assigned following a prescribed “course” of neoadjuvant therapy (chemo, biologics, radiation, etc.).
- Post Neoadjuvant Treatment Stage includes microscopic examination of the primary, regional lymph nodes and/or other suspect tissues.
- Response to Neoadjuvant Therapy is determined by comparison of pre-treatment Clinical Stage to post-treatment Pathologic Stage and is qualified by the presence or absence of cancer in the primary tumor, regional lymph nodes, etc. or T, N, or M Category Differences.
  - Pathologically Confirmed Complete Response (CR)
  - Pathologically Confirmed Partial Response (PR)
  - Pathologically Confirmed No Response (NR)

2016 AJCC TNM Coding Instruction Updates

What is the “yc” prefix?
When will “yc” be allowed?
2016 Clinical "T" Codes

2016 AJCC TNM Category Code Updates

2016 Valid Codes for "T" Category

2016 Pathologic "T" Codes

2016 AJCC TNM Category Code Updates

2016 Valid Codes for "T" Category

2016 AJCC TNM Category Code Updates

2016 Pathologic "T" Codes

Table 1. TNM Clin T [548]

Table 2. TNM Path T [582]

NAACCR 2016 Implementation Guidelines (NAACCRv6)
2016 Valid Codes for “T” Category

Table 2. TNM Path T [88]

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>Not recorded</td>
</tr>
<tr>
<td>pT1</td>
<td>Microscopic evidence only</td>
</tr>
<tr>
<td>pT2</td>
<td>Any palpable tumor, no enlarged lymph nodes</td>
</tr>
<tr>
<td>pT3</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pT4</td>
<td>Any palpable tumor, enlarged lymph nodes</td>
</tr>
</tbody>
</table>

Added codes: pSU, pSUI, pSUd

2016 Valid Codes for “N” Category

Table 3. TNM Clin N [56]

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>Not recorded</td>
</tr>
<tr>
<td>N0</td>
<td>No regional lymph node metastases</td>
</tr>
<tr>
<td>N1</td>
<td>Regional lymph node metastases</td>
</tr>
</tbody>
</table>

2016 AJCC TNM Category Code Updates

2016 Pathologic “T” Codes

2016 Clinical “N” Codes
2016 Valid Codes for “N” Category

2016 Pathologic “N” Codes

2016 AJCC TNM Category Code Updates

2016 Clinical “M” Codes

2016 Pathologic “M” Codes

2016 AJCC TNM Category Code Updates

NAACCR 2016 Implementation Guidelines (NAACCRv6)
AJCC (prefix/suffix) Stage Descriptors

Identifies the AJCC pathologic stage (prefix/suffix) descriptor as recorded by the physician. AJCC stage descriptors identify special cases that need separate data analysis. The descriptors are adjuncts to and do not change the stage group.

<table>
<thead>
<tr>
<th>Codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>E (Extramedullary lymphomas only)</td>
</tr>
<tr>
<td>2</td>
<td>S (Spleen, lymphomas only)</td>
</tr>
<tr>
<td>3</td>
<td>M (Multiple primary tumors in a single site)</td>
</tr>
<tr>
<td>4</td>
<td>Y (Classification during or after initial multimodality therapy) – pathologic staging or completion of therapy</td>
</tr>
<tr>
<td>5</td>
<td>E &amp; S (Extramedullary and spleen, lymphomas only)</td>
</tr>
<tr>
<td>6</td>
<td>M &amp; Y (Multiple primary tumors and initial multimodality therapy)</td>
</tr>
<tr>
<td>9</td>
<td>Unknown, not stated in patient record</td>
</tr>
</tbody>
</table>

Ambiguous Terminology Clarification

- **AJCC does NOT**
  - Define ambiguous terminology
  - Mandate how words should be interpreted

- **How to interpret words for cancer involvement**
  - Review clinician's statements
  - Treatment choices may indicate clinician's impression
  - Review and analysis of entire case
    - Physical exam
    - Medical history of all other diseases
    - Symptoms
    - Imaging
    - Lab tests
    - Diagnostic procedures
    - All other available information

- **Judgment call based on all aspects of patient's care**
Use of Unknown “X” Designation

Use of Unknown X Designation

- X used when
  - Information is unknown for specific category

- Clarification of unknown
  - Unknown to physician providing patient care
  - Not unknown to one physician, but known to other physicians
  - Not unknown to registrar from lack of documentation in chart

- Misuse of X from registrar lacking chart information
  - Can skew data analysis
  - Can lead to
    - Inaccurate studies
    - Wrong conclusions about national status of patient care

Use of Unknown “X” Designation

Use of Unknown X Designation

- TX and/or NX cases usually cannot have stage assigned

- X category only used for T and N
  - When absolutely necessary

- Exception examples (not exhaustive list of every option)
  - Any T and/or Any N with M1 is stage IV
  - Any T N2 M1, T3 Any N M1, Any T Any N M1
  - TX and/or NX with M1 is stage IV
  - TX N2 M1, T3 NX M1, TX NX M1
  - Category combinations belong in one and only one stage group
    - Lung TX N3 M0 is stage IIIIB
      - Every combination of T with N3 M0 is stage IIIIB
    - Urethra T4 NX M0 is stage IV
      - T4 M0 with every combination of N is stage IV
Use of Unknown “X” Designation

- MX is NOT valid option for AJCC staging
- MX eliminated from AJCC 7th Edition
- Always cM0 unless clinical or pathologic evidence of mets
- Pathologists should not use MX
  - CAP agreed pathologists should not comment on M unless pM1
  - Pathologist cannot assign stage group unless case is pM1

<Blank>, 88, 99, or “X”

Key Points for Blank & X

- X can only be used according to AJCC definitions
- Must use blanks if AJCC criteria for X is not met
- Remember MX does NOT exist
- Assigning cM0 only requires patient to have had H&P
  - Does not mean registrar must find H&P on chart
  - If physician suspects mets
    - It will be mentioned
    - Treatment plan will be different
<Blank>, 88, 99, or "X"

**Blank vs. X**

- AJCC defines X for T and N categories
  - Cannot be assessed
- Cannot use X for other situations
  - No surgical resection is NOT pTX pNX pM blank Stage 99
- Blank should be used when
  - No information is available in chart
  - Cannot be assigned a valid AJCC category
  - Patient not eligible for clinical or pathologic stage
    - Categories are blank
    - Stage group is blank or 99

---

**CoC FORDS Values – Blank, X, 88, 99**

- T, N, and M data fields
  - Values allowed by FORDS
  - Further explanations from AJCC
  - Blank indicates
    - No information in medical record
    - Do not know if any assessment was performed
    - Criteria not met for this stage classification so each category (T,N,M) is blank
  - X indicates not assessed
    - T cannot be assessed
    - N cannot be assessed
    - Does not apply to M, if patient was examined it can be assigned
    - Criteria met for this stage classification so each category is valid or X
  - 88 indicates not applicable, not defined by AJCC

---
CoC FORDS Values – Blank, X, 88, 99

- Stage group data fields
  - Values allowed by FORDS
  - Further explanations from AJCC
    - Blank indicates
      - No information in medical record or
      - Criteria not met for pathologic staging
        - CoC does not allow blank for clinical or pathologic staging
    - 99 indicates unknown, not defined by AJCC
      - 99 indicates T or N are unknown, and stage cannot be assigned
      - 99 indicates T, N, or M are not specific enough to assign stage
        - Example: T2 assigned when T2a or T2b needed to assign stage
      - CoC mandates non-blank for clinical and pathologic stage group, use 99
    - 88 indicates not applicable, not defined by AJCC

Composition of Stage Groupings

Stage Grouping Principles

- Standard stage group principle defined for each case
  - Pure clinical stage group
  - Pure pathologic stage group

- Pure stage group does NOT mean
  - Every category must be c
    - cT cN cM
  - Every category must be p
    - pT pN pM

- Pure stage group does mean following AJCC rules
  - Using c or p for categories according to established rules
  - Examples
    - cT cN pM clinical stage group
    - pT pN cM pathologic stage group
Composition of Stage Groupings

Standard Composition of Stage Groupings

- Clinical Stage Group
  - cT
  - cN
  - cM or pM

- Pathologic Stage Group
  - pT
  - pN
  - cM or pM

- Postneoadjuvant Therapy Stage Group
  - ypT
  - ypN
  - cM or pM

Carcinoma In Situ - Exceptions

CIS Exception to Stage Grouping

- Carcinoma in situ (CIS) definition
  - Does not involve any structures that allow tumor spread
  - Cells cannot spread to
    - Other parts of primary site/organ
    - Regional tissues outside primary site/organ
    - Regional nodes
    - Distant sites

- CIS exception to stage grouping principles
  - pTis cN0 cM0 clinical stage 0
  - pTis cN0 cM0 pathologic stage 0

- Caution for pathologic stage 0
  - Requires chapter specific criteria is met
  - Cannot assign based on small sample
  - Potential sampling error if less than chapter criteria
### 2016 AJCC Staging Examples

These examples are not using any specific site, but rather general information examples:

<table>
<thead>
<tr>
<th>Mode</th>
<th>T</th>
<th>N</th>
<th>M</th>
<th>Gp Stg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CLINICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-treatment</td>
<td>c1</td>
<td>c0</td>
<td>c0</td>
<td>c1</td>
</tr>
<tr>
<td>Biopsy of primary site only</td>
<td>c1</td>
<td>c0</td>
<td>c0</td>
<td>c1</td>
</tr>
<tr>
<td>Biopsy of regional LN w/o primary resection (Bx LN ≠ pN)</td>
<td>c1</td>
<td>c1</td>
<td>c0</td>
<td>c2</td>
</tr>
<tr>
<td>Biopsy of distant mets (LN or organ)</td>
<td>c1</td>
<td>c0</td>
<td>p1</td>
<td>c4</td>
</tr>
<tr>
<td>Clinical distant mets (no bx)</td>
<td>c any</td>
<td>c any</td>
<td>c1</td>
<td>c4</td>
</tr>
<tr>
<td>Incidental dx (Surprise) at surgery</td>
<td>c blank</td>
<td>c blank</td>
<td>c blank</td>
<td>99</td>
</tr>
</tbody>
</table>

#### PATHOLOGICAL

<table>
<thead>
<tr>
<th>Mode</th>
<th>T</th>
<th>N</th>
<th>M</th>
<th>Gp Stg</th>
</tr>
</thead>
<tbody>
<tr>
<td>No surgical resection</td>
<td>p blank</td>
<td>p blank</td>
<td>p blank</td>
<td>99</td>
</tr>
<tr>
<td>Surgical resection primary &amp; Reg LN</td>
<td>p1</td>
<td>p0</td>
<td>c0</td>
<td>p1</td>
</tr>
<tr>
<td>Surgical resection primary W/O Reg LN</td>
<td>p1</td>
<td>pX</td>
<td>c0</td>
<td>p99</td>
</tr>
<tr>
<td>Surgical resection Reg LN W/O primary (≠ pN)</td>
<td>p blank</td>
<td>p blank</td>
<td>p blank</td>
<td>p99</td>
</tr>
<tr>
<td>Poss. Exception: Exc Reg LN HS/KH w/o resection</td>
<td>p blank</td>
<td>p blank</td>
<td>p1</td>
<td>cM0</td>
</tr>
<tr>
<td>Surgical resection only distant mets</td>
<td>p blank</td>
<td>p blank</td>
<td>p1</td>
<td>p4</td>
</tr>
</tbody>
</table>

#### NEOADJUVANT

Clinical - answer as above examples
Pathological - answer after surgical resection - do NOT forget "Y" in descriptor field

---

## 2016 AJCC TNM EDITS

### 2015 NAACCR Metafile
- 68 edits in metafile for TNM data items
- 8 TNM edits in "Central:v15 State Example" edit set (NPCR model)
- 37 TNM edits in "HospVs15 COC Required – All" edit set

### 2016 NAACCR Metafile
- 190 edits in metafile for TNM data items
- 52 TNM edits in "Central:v16 State Example" edit set (NPCR model)
- 117 TNM edits in "HospVs16 COC Required – All" edit set

- Date of Diagnosis
- Use of ‘c’ or ‘p’ prefix
- Comparison to Surgery
- Comparison to SSF Values
- Comparison to Other Data Items
- No Allowance for Undefined Parent Codes
- Comparison to New Field, Tumor Size Summary
- Comparison of Stage Group to T, N, and M Values
2016 AJCC TNM EDITS

For specified site/histology combination, inconsistency between TNM components and assigned pathologic stage group.

2016 AJCC TNM EDITS

For specified site/histology combination, combination of assigned clinical TNM components is invalid for staging.

Edit: Primary Site, TNM Clin Stage Valid 8-8d 7 (OCC) 1:166. Combination of TNM Clin Stage is invalid for TNM staging.

TNM Clin Stage Group (970) [1]
TNM Clin Stage (960) [0]
Primary Site (950) [3]
Histologic Type Code (100) [0]
Behavior Code (100) [0]
Date of Diagnosis (100) [Y:2016 M:01 D:15]
Over-ride Site/TNM-Stage Jrp (495) [485]
Age at Diagnosis (100) [3]
Grade (951) [3]
Site-Specific Factor 1 (1000) [999]
Site-Specific Factor 2 (1001) [999]
Site-Specific Factor 3 (1002) [999]
Site-Specific Factor 4 (1003) [999]
Site-Specific Factor 5 (1004) [999]
Site-Specific Factor 6 (1005) [999]
Site-Specific Factor 7 (1006) [999]
Site-Specific Factor 8 (1007) [999]
Site-Specific Factor 9 (1008) [999]
Site-Specific Factor 10 (1009) [999]
Type of Reporting Source (500) [1]

Edit: TNM Path Ed50 2016 (JCCS)
E.1760: TNM Path N may be coded c0 only when TNM Path T = in situ
TNM Path T (940) [p2]
TNM Path N (946) [c0]
Date of Diagnosis (530) [Y:2016 M:01 D:15]
2016 AJCC TNM EDITS

For specified site/histology groups, TNM Path N must be consistent with the number of positive nodes as coded in Regional Nodes Positive.

AJCC Curriculum for Registrars

https://cancerstaging.org/CSE/Registrar/Pages/AJCC-Curriculum.aspx
AJCC Curriculum for Registrars

Module 1: Introduction
- The introduction will provide an overview of staging. This will include the background materials to explain why staging is performed and how it is used. It will also provide a broad discussion of the elements of staging, including the classification, the T, N, and M categories, and the stage groups. There will be a brief discussion of the differences in terminology between the manual for physicians and patient care, and the materials written for cancer registries and the surveillance community.

Lesson 1: Why staging is necessary and how staging is used
- Understand the development of staging as a common language for cancer. This lesson includes the definitions and purpose of staging and the role of staging systems in patient care and research. Understand the many cases of staging, including patient care, guidance, and research.

Lesson 2: Types of classifications and their use
- Why there are different classifications, instead of just one stage, and how they are used.

Lesson 3: T, N, M Categories used to describe the cancer involvement
- How the cancer is described using each of the T, N, and M categories.

Lesson 4: Stage Groups put together cases with similar prognosis
- Why stage groups are used and what is the meaning of the groups.

Lesson 5: Terminology — Differences between physicians and registrars
- Registrars use specific reporting terms in their ambulatory terminology lists which do not apply to the AJCC Cancer Staging Manual. The terms are also used to reporting words in registry manuals in a manner not used by physicians in the AJCC Cancer Staging Manual.

Lesson 6: Link to AJCC Staging Curriculum “What is Cancer Staging?"
- PowerPoint presentation designed for cancer patients and the public. This will reinforce the information taught in this module.

https://cancerstaging.org/CSE/Registrar/Pages/AJCC-Curriculum.aspx
AJCC Disease Site Webinars

- AJCC 7th Edition Chapter Specific
- Slides and Presentations by AJCC Staff
- Clarifications for Registrars and “TNM Cliffs Notes”
  - Focus: uniqueness, differences, exceptions, or special concerns
- Each webinar will include:
  - Overview and Learning Objectives
  - Anatomy Affecting Stage
  - Classification Issues
  - Assigning T, N, M, Stage Group
  - Information & Questions on AJCC Staging and Summary
- 5 Disease Site webinars will include:
  - Melanoma
  - Lung
  - Breast
  - Colorectal
  - Prostate

Purchase and Ordering Information

- COST: $119.99
- ISBN: 978-3-319-40617-6

- 1429 pages
- 512 illustrations
- 187 color illustrations

- Required - Florida Mandate
  - FCDS will not purchase
  - Facility may purchase
  - Individual may purchase

- https://cancerstaging.org
- http://springer.com
- 1-800-SPRINGER

Staging References and Resources

Information and Questions on AJCC Staging

AJCC Web site

- https://cancerstaging.org
- Cancer Staging Education Registrar menu includes
  - Timing is Everything – stage classification timeframe graphic
  - Presentations
    - Self-study or group lecture materials
      - Registrar’s Guide to Chapter 1, AJCC Seventh Edition
      - Explaining Blanks and X, Ambiguous Terminology and Support for Staging
      - AJCC T, N, and M Category Options for Registry Data Items in 2016
  - AJCC Curriculum for Registrars
    - 4 free self-study modules of increasing difficulty on staging rules
      - Each modules consists of 7 lessons, including recorded webinar with quizzes
Staging References and Resources

AJCC Web site

- https://cancerstaging.org
- Cancer Staging Education Physician menu includes
  - Articles
    - 18 articles on AJCC staging in various medical journals
  - Webinars
    - 14 free webinars on staging rules and some disease sites
- Cancer Staging Education General menu includes
  - Staging Moments
    - 15 case-based presentations in cancer conference format to promote accurate staging with answers and rationales

AJCC Cancer Staging Manual and Atlas

Order at http://cancerstaging.net
Staging References and Resources

CAnswer Forum

- Submit questions to AJCC Forum
  - Located within CAnswer Forum
  - Provides information for all
  - Allows tracking for educational purposes

- Special AJCC sub-forums for staging education questions

http://cancerbulletin.facs.org/forums/

Thank you

Donna M. Green, RHT, CTR
AJCC Technical Specialist

AJCC
American Joint Committee on Cancer
Validating Intent, Improving Patient Care

633 N. Saint Clair, Chicago, IL 6011-3211
cancerstaging.org