


AJCC 8<sup>th</sup> Edition Staging

Introduction & Descriptors

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National Center for Chronic Disease Prevention and Health Promotion  
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Learning Objectives

- Demonstrate purpose and approach to AJCC staging
- Examine format and expansion of Chapter 1
- Outline use of stage descriptors and guidelines
- Dissect 8<sup>th</sup> edition staging 1-page guide



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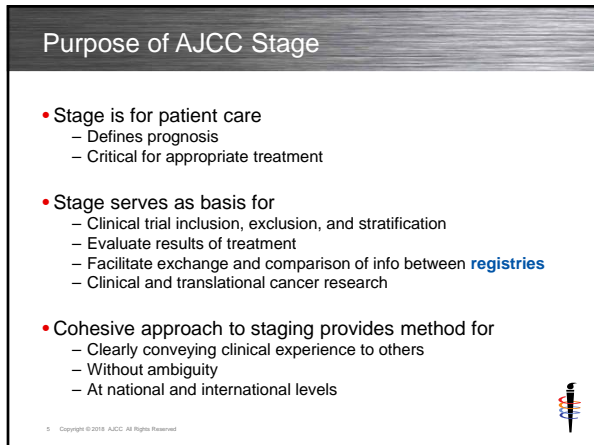
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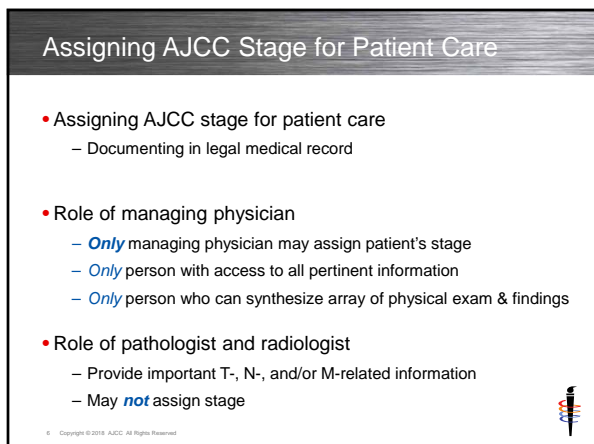
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### Assigning AJCC Stage in Registry

- Assigning AJCC stage for registry purposes
  - Recording stage in abstract database
  - **MAY NOT** document in legal medical record
- Role of cancer registrar
  - Documenting physician assigned stage in abstract database
  - Assigning AJCC stage in abstract database
    - When managing physician documented stage is not available
    - When only partial stage info available from physicians
  - Ensure all appropriate stage classifications in abstract
    - Clinical if cancer known prior to treatment
    - Either pathological **or** posttherapy based on qualifying treatment



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### Registry Specific AJCC Rules

- Cancer registry documentation and data
  - Specific **registry guidelines** throughout chapter 1
  - Document what is found
  - Do **not** adjust, interpret, change
  - Critical for researchers to have this **unaltered data**
- Rationale
  - Registry data affects future patient care
  - Altered data could negatively impact patient care
- Note to registrars on AJCC staging
  - Do not complete data items when info unclear or unavailable
  - Never prioritize completeness over accuracy



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### Format and Expansion – AJCC Chapter 1

- Chapter 1 “Principles of Cancer Staging”
  - New user-friendly format
  - Rules repeated so each staging classification has complete info
  - Provide **examples** and **exceptions**
- Comprehensive analysis of staging rules and nomenclature
  - AJCC-UICC Lexicon Project January 2012
  - Content Harmonization Core August 2014
    - Team of fifteen physicians
    - Line by line review over span of two years
  - Harmonization Summit September 2015
    - 60 physicians voted on rules, along with **registrars**
  - Resulted in expansion of chapter
  - Precise standardized definitions and rules for staging
  - Final chapter reviewed/edited by 7 physicians



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### AJCC Terminology

- Stage
  - Used **only** for aggregate information resulting from T, N, and M
  - Never individual categories (no T stage)
- Classifications – time point in patient's care continuum
  - Time frame (staging window)
  - Criteria
- Categories
  - T, N, M
  - Prognostic factors required for stage group
- AJCC Prognostic Stage Groups
  - Stage groups or stage
  - Aggregate information



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### Aligning Registry Data Items with AJCC



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### Cohesive Approach to AJCC TNM

- Aligning **registry data items** with AJCC TNM system
  - Need cohesive approach to break down barriers
  - Allow registrar to document AJCC TNM without alteration
  - Plans presented to registry community
- Existing differences hinder ability to communicate, affects
  - Registrar and physician communication
  - Researchers utilizing national databases
  - Electronic exchange between systems



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### Registry Data Alignment with AJCC

- Facilitates communication with physicians & researchers
  - Use same language as AJCC
  - No more registry shorthand and storage codes
  - Examples from registrar questions & physicians
    - c2 c2a c0
    - Tc2 Nc2a Mc0
    - cTc2 cNc2a cMc0
- All new AJCC 8th stage data items
  - Clinical
  - Pathological
  - Posttherapy
- Use format specified in AJCC manual, up to 15 characters
  - ypTis(DCIS)
  - pN0(mol+)
  - cM1b(0)
  - 3C (only exception, do not use Roman numerals for group)



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### Change in Registry Data Item for Descriptors

- Descriptor data item prior to 2018
  - Category suffix: (m)
  - Stage prefix: y
  - Stage group info for lymphoma: E, S
- Identified issues with descriptor data item
  - Confusing to mix disparate concepts in one data item
  - Poor compliance and inconsistent usage
  - Alter for 2018 by creating new items or merging into existing
- Transformation for 2018
  - Developed **new** suffix data items for T and N
  - Shifted stage prefix to new yp stage data items
  - Incorporated E into stage group, S no longer used



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### New Stage Data Items

- CLINICAL STAGE
  - Clin T Clin T suffix
  - Clin N Clin N suffix
  - Clin M
  - Clin Grade
  - Clin Stage Group
  - Staged by
- PATHOLOGICAL STAGE
  - Path T Path T suffix
  - Path N Path N suffix
  - Path M
  - Path Grade
  - Path Stage Group
  - Staged by
- POST THERAPY STAGE
  - Post Therapy T Post T suffix
  - Post Therapy N Post N suffix
  - Post Therapy M
  - Post Therapy Grade
  - Post Therapy Stage Group
  - Staged by



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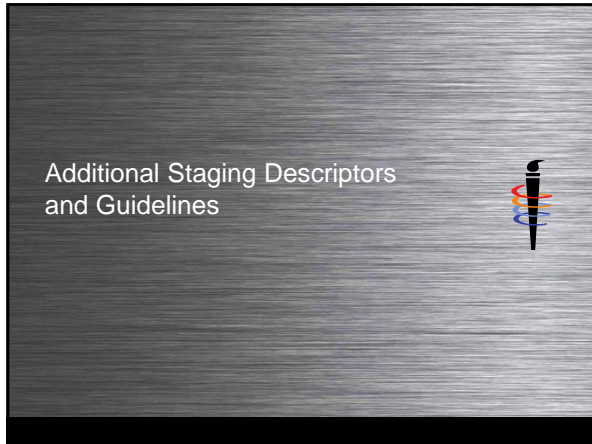
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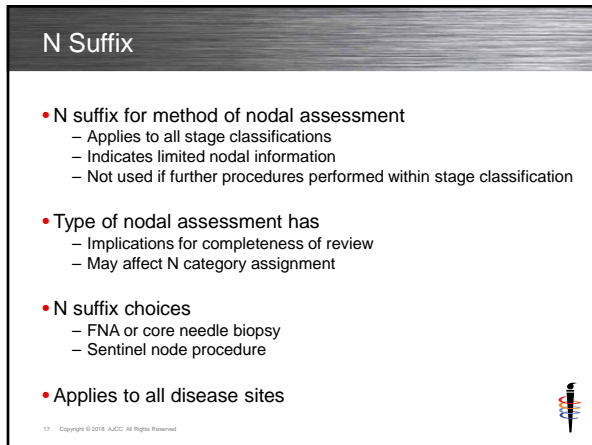
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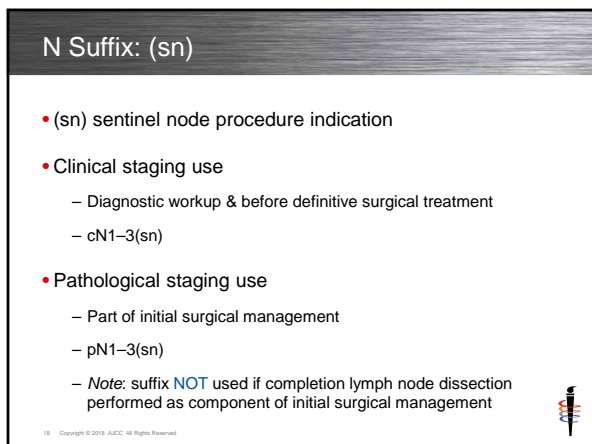
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### N Suffix: (f)

- (f) FNA or core needle biopsy of node indication
- Clinical staging use
  - Diagnostic workup before treatment
  - cN1–3(f)
- Pathological staging use
  - Part of primary site surgical resection
  - pN1–3(f)
  - *Note:* suffix **NOT** used if subsequent completion lymph node dissection as component of initial surgical management

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### New Registry Data Item for N Suffix

- N suffix – 3 new data items
  - cN suffix
  - pN suffix
  - ypN suffix
- N suffix coding

code	label	description
sn	(sn)	Sentinel node procedure without resection of nodal basin
f	(f)	FNA or core needle biopsy without resection of nodal basin
blank	blank	No suffix needed or appropriate; not recorded

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### New Registry Data Item for T Suffix

- T suffix – 3 new data items
  - cT suffix
  - pT suffix
  - ypT suffix
- T suffix coding

code	label	description
m	(m)	Multiple synchronous tumors OR For thyroid differentiated and anaplastic only, Multifocal tumor
s	(s)	For thyroid differentiated and anaplastic only, Solitary tumor
blank	blank	No information available; not recorded

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### Guidelines – Unknown Primary Site

- No primary tumor evidence, **BUT** anatomic site suspected
- **Not** used if origin cannot be determined, **no site information**
- **cT0**
  - Primary tumor not identified on
    - Physical exam
    - Imaging
    - Endoscopy
    - Other diagnostic procedures
- **pT0**
  - No evidence of primary tumor identified
    - After surgical resection of suspected primary tumor, and
    - **Never** identified on biopsy

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### Grade in AJCC 8E

- Recommended grading system specified in each chapter
  - Grading system to be used by pathologist and
  - Documented in cancer registry
- Cancer registry
  - **Must** record grade as specified in disease site chapter
  - According to rules **only** in chapter 1 and disease site chapter
  - Do **NOT** use registry rules for **new (AJCC) grade data item**

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### Grade Problems and Solution

- Grade data **unusable** in many sites by AJCC experts
  - Inconsistent grading systems used
  - Data coding rules conflicted with physician guidance
- **New** grade data items for each stage classification
  - Incorporates both AJCC and standard registry coding
    - **Prioritizes AJCC** specified grade
    - Provides standard registry grade when AJCC not applicable
  - Grade tables specific for each disease site
  - Grade system based on prognostic significance
- Grade coding rules
  - Approved by **AJCC and pathologists**
  - Medically accurate
  - Follows AJCC 8<sup>th</sup> edition Chapter 1

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### Comparison of Pathology Grading Systems

3-Grade System	4-Grade System
GX: Cannot be assessed	GX: Cannot be assessed
G1: Well differentiated	G1: Well differentiated
G2: Moderately differentiated	G2: Moderately differentiated
G3: Poorly differentiated, Undifferentiated	G3: Poorly differentiated G4: Undifferentiated

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- ### Pathology Criteria for Grading Systems
- G1 criteria **identical** in 3- & 4-grade systems
  - G2 criteria **identical** in 3- & 4-grade systems
  - G3 and G4
    - 4-grade system distinguishes criteria, separates
    - 3-grade system does **not** distinguish or **too subtle**, groups together
  - Grading systems based on
    - Prognostic significance
    - Reproducible between pathologists
  - 3-grade system coding      • 4-grade system coding
 

– 1	– 1
– 2	– 2
– 3	– 3
	– 4
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### New Cancer Registry Grade Data Item

G	G Definition
1	G1: Well differentiated
2	G2: Moderately differentiated
3	G3: Poorly differentiated, undifferentiated
9	Grade cannot be assessed (GX); Unknown; Not applicable

G	G Definition
1	G1: Well differentiated
2	G2: Moderately differentiated
3	G3: Poorly differentiated
4	G4: Undifferentiated
9	Grade cannot be assessed (GX); Unknown; Not applicable

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### Breast Grade

G	G Definition
1	G1: Low combined histologic grade (favorable), SBR score of 3–5 points
2	G2: Intermediate combined histologic grade (moderately favorable); SBR score of 6–7 points
3	G3: High combined histologic grade (unfavorable); SBR score of 8–9 points
L	Nuclear Grade I (Low) (in situ only)
M	Nuclear Grade II (interMediate) (in situ only)
H	Nuclear Grade III (High) (in situ only)
A	Well differentiated
B	Moderately differentiated
C	Poorly differentiated
D	Undifferentiated, anaplastic
9	Grade cannot be assessed (GX); Unknown; Not applicable

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### Grade for Each Stage Classification

- Grade needed for each stage classification
  - Document, even if grade not needed for stage group
  - Critical to provide information for each, not always the same
  - Follows same timeframe and criteria rules as stage
- Grade data items
  - Grade clinical – all patients if cancer known prior to treatment
  - Grade pathological – primary treatment is surgical resection
  - Grade posttherapy – neoadjuvant followed by surgical resection
- Patients will have only 1 or 2 grades coded, never all 3

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### LVI: Lymphovascular Invasion

- LVI further refined for 8<sup>th</sup> edition
  - Critical to know each component in some disease sites
  - Chapter will specify use of LVI vs. L, V, both L & V

Component of LVI coding	Description
0	LVI not present (absent)/not identified
1	LVI present/identified, NOS
2	Lymphatic and small vessel invasion only (L)
3	Venous (large vessel) invasion only (V)
4	BOTH lymphatic and small vessel AND venous (large vessel) invasion
9	Presence of LVI unknown/indeterminate

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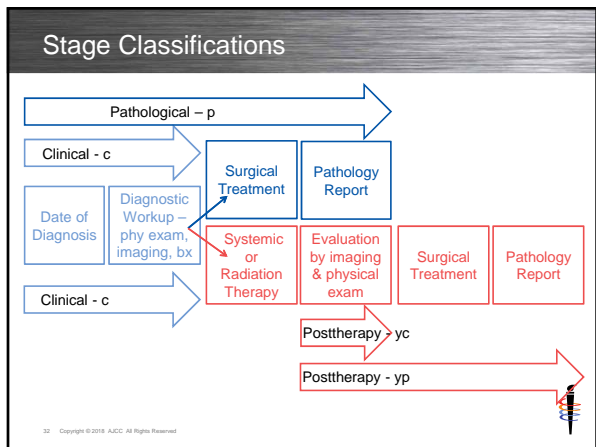
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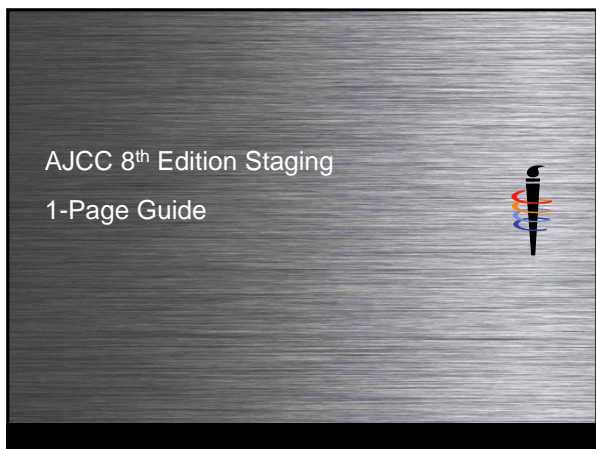
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**AJCC 8<sup>th</sup> Edition Staging: 1-Page Guide**

**AJCC 8<sup>th</sup> Edition Staging**

- Rules and associated rationale for Eighth Edition AJCC
- General rules described in AJCC Chapter 1
- Refer to relevant disease site chapters
  - Specific allowable disease site differences
  - Stage differences necessary for appropriate medical care of patient

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**AJCC 8<sup>th</sup> Edition Staging: 1-Page Guide**

**KEY TERMINOLOGY**

- Classifications
  - Describes points in time of care of cancer patient
  - Criteria: timeframe & specific medical assessments/practices
- Categories
  - T, N, M
  - Any non-anatomic factors needed to assign stage group
- Stage group
  - Easily communicated summary of categories
  - Groups patients with similar prognosis
- Assigning stage
  - AJCC stage assigned by managing physician
  - Based on data from all relevant sources

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**AJCC 8<sup>th</sup> Edition Staging: 1-Page Guide**

**CLINICAL STAGING CLASSIFICATION RULES**

- General: clinical classification
  - From date of diagnosis until definitive treatment, or within 4 months
- T category
  - Hx, symptoms, phy exam, labs, imaging, endoscopy, bx, surg exp
- N category
  - Phy exam, imaging, FNA/core needle bx, excisional bx, sentinel node bx
- M category
  - Clinical history, physical exam, imaging, FNA/biopsy
- Rationale
  - Diagnostic bx of primary/nodes/distant mets = clinical classification
  - Path report on biopsy is **not** pathological staging
  - cN even if based on lymph node bx
  - Clinical M category is
    - cM if based on history, physical exam and imaging
    - pM1 if based on biopsy proven involvement

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**AJCC 8<sup>th</sup> Edition Staging: 1-Page Guide**

**PATHOLOGICAL STAGING CLASSIFICATION RULES**

- **General:** pathological classification
  - Clinical stage, op findings, path report resected specimen
- **T category**
  - Must meet definitive surgical treatment specified in chapter
- **N category**
  - Microscopic assessment of 1 node required, include imaging & dx bx
- **M category**
  - History, physical exam, imaging, FNA/biopsy, resection
- **Rationale**
  - Include all findings even if not microscopically proven
  - Pathological staging based on synthesis of all info
    - Not solely on resected specimen pathology report
    - Pathologist cannot assign final stage
  - Pathological M category is
    - cM if based on physical exam and imaging
    - pM1 if based on bx proven involvement, "pM0" NOT a valid category

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**AJCC 8<sup>th</sup> Edition Staging: 1-Page Guide**

**POST NEOADJUVANT THERAPY STAGING CLASSIFICATION RULES**

- **yc Clinical**
  - Includes physical exam and imaging assessment
  - *After* neoadjuvant systemic/radiation therapy
- **yp Pathological**
  - Includes all information from yc staging,
  - Surgeon's operative findings and
  - Pathology report from resected specimen

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**Information and Questions on AJCC Staging**



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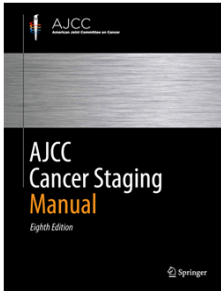
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**AJCC Web site**

- <https://cancerstaging.org>
- Ordering information
  - [Cancerstaging.net](http://Cancerstaging.net)
- General information
  - Education
  - Articles
  - Updates



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**CAnswer Forum**

- Submit questions to AJCC Forum
  - NEW 8<sup>th</sup> Edition Forum
  - 7<sup>th</sup> Edition Forum will remain
  - Located within CAnswer Forum
  - Provides information for all
  - Allows tracking for educational purposes
- <http://cancerbulletin.facs.org/forums/>



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**Quiz**



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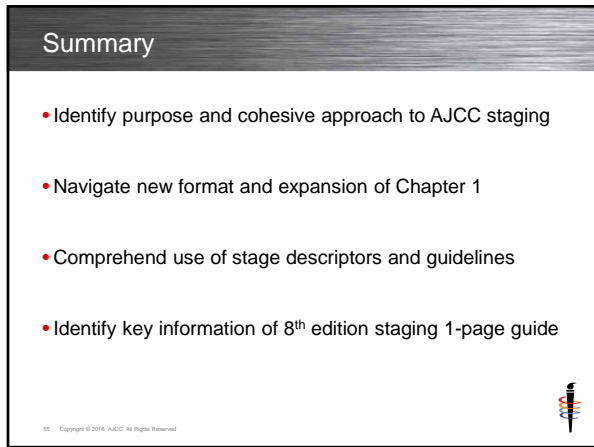
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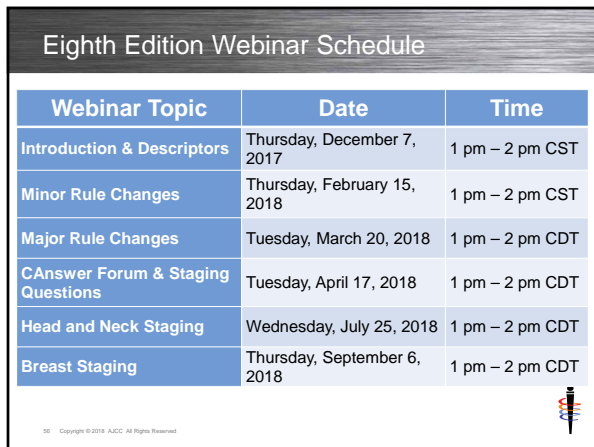
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Webinar Schedule – NPCR ETCs		
Webinar Topic	Date	Time
Introduction & Descriptors	Thursday, Nov 30, 2017	1 pm – 2:30pm CST
Minor Rule Changes	Thursday, Feb 8, 2018	1 pm – 2:30pm CST
Major Rule Changes	Wednesday, Mar 14, 2018	1 pm – 2:30pm CDT
CAnswer Forum & Staging Questions	Thursday, April 12, 2018	1 pm – 2:30pm CDT
Head and Neck Staging	Thursday, July 19, 2018	1 pm – 2:30pm CDT
Breast Staging	Wednesday, Aug 29, 2018	1 pm – 2:30pm CDT

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Thank you

Donna M. Gress, RHIT, CTR  
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First Author, Chapter 1: Principles of Cancer Staging



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