AJCC 8th Edition Staging

Overview

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Learning Objectives

- Review development of AJCC 8th Edition
- Outline Chapter 1 – Principles of Cancer Staging
- Explain fundamental changes to disease site chapters
- Summarize new and changed disease site chapters
Development of AJCC 8th Edition
Overview

• AJCC TNM is used worldwide
  – Not just for use in the US
  – International collaboration
  – International databases used to develop staging systems

• AJCC Cancer Staging Manual
  – Supplies T, N, M, and stage groups
  – Provides critical information to understand staging system
    • General information and anatomy
    • Criteria for clinical and pathological classifications
    • Guidance on applying T, N, M category criteria
    • Evidence used for changes
    • Explanations for prognostic factors
    • Grade system for that chapter
    • Comments on histologies
AJCC 8th Edition

• 18 Expert panels
  – 5 continents
  – 22 countries
  – 415 individual contributors

• 7 Cores including Data Collection Core

• Partnerships – collaboration and license AJCC content
  – UICC
  – CAP Protocols
  – NCCN guidelines
  – Other endeavors
Philosophy

- Levels of evidence for key information ensure transparency
- Changes must be based on data
- Data sources
  - NCDB
  - SEER
  - Multi-institutional databases
  - International databases
  - Publications
Eighth Edition Dedication

The AJCC Cancer Staging Manual, 8th Edition is dedicated to all CANCER REGISTRARS in recognition of their:

- education and unique commitment to the recording and maintenance of data that are so vital for the care of the cancer patient;
- professionalism in the collection of factors that are fundamental to sustaining local, state, and national cancer registries;
- dedication to the cataloging of information crucial to cancer research;
- leadership, support, and promulgation of the principles of cancer staging;
- AND THEIR POSITIVE IMPACT ON CANCER PATIENT OUTCOMES.
Chapter 1 – Principles of Cancer Staging
Chapter 1 Staging Rules

• Team of physicians reviewed Chapter 1
  – Extensive line by line review
  – Over a span of two years

• Harmonization Summit September 2015
  – Full day for vetting staging rules
  – Audience response system for voting
  – Approximately 60 physicians in attendance
  – Registrars also participated

• Final chapter reviewed/edited by 7 physicians
Chapter 1 Staging Rules

• Expansion of chapter 1 rules
  – Explains the basics of staging
  – Clarify terminology
  – Describes time frame and criteria for each classification

• A few new rules based on changes in medical practice

• Detailed rules for clinical and pathological classifications
  – Guidance for T, N, and M for both classifications

• Detailed rules for stage groups

• Rules in table format for easy reference
Terminology

• Pathological is new classification term for 8\textsuperscript{th} edition
  – Previous editions: pathologic staging
  – 8\textsuperscript{th} edition: changed to pathological staging

• Emphasize T, N, M are categories
  – Example: T category, not T stage
  – Subcategories
    • Ensured each subcategory has a main category in the table

• New term for stage groups
  – 7\textsuperscript{th} edition: anatomic stage/prognostic groups
  – 8\textsuperscript{th} edition: prognostic stage groups
Chapter 1 - Structure

• Introduction
  – Role of managing physician in assigning stage

• AJCC TNM staging system
  – Introduction
  – Classifications
  – Categories and subcategories
  – Prognostic stage groups
  – Unknown designation: X

• General staging rules
  – Guiding principles
  – Table format
Chapter 1 - Structure

• Stage classifications
  – General information and criteria
  – Table format

• Clinical
  – Timeframe and criteria
  – Detailed rules for T, N, and M

• Pathological
  – Timeframe and criteria
  – Detailed rules for T, N, and M

• Timeframe and criteria only
  – Posttherapy or Post Neoadjuvant Therapy
  – Recurrence or retreatment
  – Autopsy
Chapter 1 - Structure

- AJCC Prognostic stage groups
  - Rules for stage group assignment
  - Table format

- Additional staging descriptors and guidelines
  - N suffixes include
    - Sentinel nodes (sn)
    - FNA or core biopsy (f)
  - Multiple primary tumors (m)
  - Guidance on synchronous and metachronous primaries
  - Unknown primary site T0
Chapter 1 - Structure

• Additional staging descriptors and guidelines
  – Histologic codes for staging
  – Grade
    • General rules
    • Cancer registry documentation
  – LVI
    • Coding structure with new options
  – Residual tumor and surgical margins
    • Guidance and coding instructions
  – Response to neoadjuvant therapy assessment
    • Guidance for pathologists in determining response
Fundamental Changes to Disease Site Chapters
New and Revised Chapters

• New AJCC staging based on
  – Sites or subsites
  – Histologies

• Split current chapters in some sites, based on
  – Anatomic subsites
  – Differences in staging due to histology

• 83 chapters in 8th edition
  – 7th edition had 57

• Chapters updated to keep pace with medical advances
Reorganization of Chapters

• Organization of chapters by body system or function
  – Part I through Part XVIII

• Examples
  – Thyroid moved to endocrine system
  – GIST moved to soft tissue sarcoma
  – Urinary tract is its own section
    • Includes both males and females
New Features

• Levels of Evidence

• Imaging

• Risk Assessment Models

• Recommendations for Clinical Stratification

• Prognostic factors
  – Required for stage grouping
  – Recommended for clinical care
  – Emerging factors (available online only)
Imaging Section

• Imaging section in each chapter

• Guidance for physicians when ordering tests

• Information for radiologists on reporting results
  – Structured reporting is being promoted

• Aids communication for assigning stage
Factors and Registry Data Collection

• Most factors similar to 7th edition

• Prognostic factors distinguished by their purpose
  – Prognostic factors required for stage grouping
    • Categories assigned along with TNM
  – Additional factors recommended for clinical care
    • Important for physicians in care of their patients
  – Emerging factors
    • Latest information, will be reevaluated as evidence grows

• Registry data collection variables
  – Recommended by physician experts
  – Guidance for surveillance community
Histology Code Changes

• WHO Classification of Tumors used for 8th Edition
  – Defined list of histology codes and terms included in chapter

• Histology code
  – Indicates prognostic staging is only for those histologies
  – Does not indicate histology may not occur in that disease site
  – Does not include terms no longer in common usage
Histology Code Changes

• Histology codes
  – No longer range of ICD-O-3 histologies
  – Previously were inclusive of all histologies common in registries

• Discussions ongoing with SEER
  – Regarding MPH rules
  – Guidance provided by AJCC experts
  – Example: colon cancer needs to indicate histology driving the prognosis, not the fact it arose in a polyp
New and Changed Disease Site Chapters
New Paradigms

- Mediating variable affecting the cancer and staging
- Separate stage groups for post neoadjuvant therapy staging
- Based on specific anatomic sites and subsites
- Unknown primaries with nodal involvement
- Inclusion of staging for sites not in previous editions
New Chapters

• New disease site chapters for staging

• Head and Neck
  – Cervical Lymph Nodes & Unknown Primary
  – HPV-Mediated (p16+) Oropharynx Cancer
  – Cutaneous Squamous Cell Carcinoma of the Head and Neck

• Thorax
  – Thymus

• Endocrine System
  – Parathyroid
  – Adrenal Neuroendocrine Tumors

• Hematologic Malignancies
  – Leukemia
Chapter Changes

• Split chapters resulting in some new staging

• Pancreas
  – Exocrine Pancreas – Hepatobiliary System
  – Neuroendocrine Tumor of Pancreas – Neuroendocrine Tumors

• Neuroendocrine Tumors
  – Neuroendocrine Tumors of the Stomach
  – Neuroendocrine Tumors of the Duodenum and Ampulla of Vater
  – Neuroendocrine Tumors of the Jejunum and Ileum
  – Neuroendocrine Tumors of the Appendix
  – Neuroendocrine Tumors of the Colon and Rectum
  – Neuroendocrine Tumors of the Pancreas
Chapter Changes

• Split chapters or sections resulting in some new staging

• Bone – one chapter, multiple staging sections
  – Appendicular Skeleton/Trunk/Skull/Face
  – Pelvis
  – Spine

• Soft Tissue Sarcoma
  – Introduction to Soft Tissue Sarcoma
  – Soft Tissue Sarcoma of Head and Neck
  – Soft Tissue Sarcoma of Trunk and Extremities
  – Soft Tissue Sarcoma of Abdomen and Thoracic Visceral Organs
  – Soft Tissue Sarcoma of Retroperitoneum
  – Soft Tissue Sarcoma – Unusual Histologies and Sites
Chapter Changes

• Split chapters – may be in different disease systems

• Head & Neck Pharynx
  – Nasopharynx
  – HPV-Mediated (p16+) Oropharynx
  – Oropharynx (p16-) and Hypopharynx

• Appendix
  – Appendix – Lower Gastrointestinal Tract
  – Neuroendocrine Tumors of Appendix – Neuroendocrine Tumors

• Endocrine System Thyroid
  – Thyroid – Differentiated and Anaplastic
  – Thyroid – Medullary
Chapter Changes

• Merged chapters
  – Ovary, Fallopian Tube, and Primary Peritoneal Carcinoma

• Deleted chapters
  – Cutaneous Squamous Cell Carcinoma and Other Cutaneous Carcinomas
Staging Changes
Head and Neck

• Cervical Nodes and Unknown Primary
  – New criteria for extranodal extension (ENE)
  – Extranodal extension designated as ENE(+) or ENE(-)
  – Occult primary tumors (unknown primary) are T0
  – If EBV-related stage with nasopharynx
  – If HPV-related stage with oropharynx
  – All other cases use this chapter

• HPV-mediated (p16+) Oropharyngeal Cancer
  – Test utilized is p16 (cyclin-dependent kinase inhibitor 2A)
  – p16+ staged with this chapter
  – p16- staged with Oropharynx (p16-) and Hypopharynx chapter

• Cutaneous Squamous Cell Ca of Head & Neck
  – Staging system does not change reportability requirements
Upper Gastrointestinal Tract

• Esophagus & Esophagogastric Junction
  – Different stage group tables for clinical, pathological, ypathological
  – Change in tumor location criteria
  – Change in proximal stomach location for EGJ tumors

• Stomach
  – Different stage group tables for clinical, pathological, ypathological
  – Change in proximal stomach location for EGJ tumors
Lower Gastrointestinal Tract

• Colon and Rectum
  – Histology codes do not include polyp origin
  – Histology driving prognosis utilized
  – Discussions with SEER for MPH rules

• Anus
  – Lesions overlying perineal body are perianal or vulvar
  – Perianal are staged with this chapter
  – Anatomical illustrations for perianal vs skin
Neuroendocrine Tumors

- Well differentiated is not the grade
  - It is histologic type

- NET may be Grade 1, Grade 2, or Grade 3
  - Most common is G1 and G2
  - Rare well differentiated NET G3 are included

- Grade based on
  - Mitotic count
  - Ki-67 index
Thorax

• Lung

  – New designations to specify type of *in situ*

  – New size cut points

  – New T1mi

  – Tables with criteria for multiple tumors vs separate tumors

  – Revisions and new M1 subcategories
Bone and Soft Tissue Sarcoma

• Bone
  – T category by type of bone
    • Appendicular skeleton, trunk, skull, facial bones
    • Spine
    • Pelvis
  – Must assign grade according to AJCC grade table

• Soft tissue sarcoma
  – Separate chapters based on site and/or histology
  – GIST chapter in this section
Skin

• Merkel cell carcinoma
  – Rule changes for cN category
  – Critical to indicate sentinel nodes only
  – Different stage groups for clinical and pathological

• Melanoma
  – New size cut points for T category
  – Mitotic rate no longer used
  – Redesigned stage tables
  – Different stage groups for clinical and pathological
Breast

- Two breast stage group tables: anatomic & prognostic

- Anatomic stage group
  - Only in global regions where biomarkers tests not routinely available

- Prognostic stage group
  - Used in countries where biomarker tests routinely performed

- Cancer registries **must** use Prognostic Stage Group table
  - If biomarkers not available, case reported as unstaged
  - T, N, M information assigned, but registry stage group is 99

- Lobular carcinoma *in situ* not staged
  - Does not affect reportability – ask your standard-setter
Male Genital Organs

• Prostate
  – Grade Group
    • WHO and International Society of Urologic Pathologists (ISUP)
    • Formalized changes to Gleason scoring
    • Adoption of prognostically important Grade Groups
    • Table in AJCC chapter
  – No pT2 subcategories
Endocrine System

• Thyroid Differentiated and Anaplastic

• Differentiated
  – New age cut point <55 or >55

• Anaplastic
  – New T categories
Hematologic Malignancies

• Hodgkin and Non-Hodgkin Lymphomas
  – Lugano
  – SLL/CLL now uses Lugano and Rai

• Plasma Cell Myeloma
  – RISS staging

• Leukemia
  – Prognostic factors required for clinical care
Information and Questions on AJCC Staging
AJCC Web site

- https://cancerstaging.org

- Ordering information
  - Cancerstaging.net

- General information
  - Education
  - Articles
  - Errata
CAnswer Forum

• Submit questions to AJCC Forum
  – NEW 8th Edition Forum
  – 7th Edition Forum will remain
  – Located within CAnswer Forum
  – Provides information for all
  – Allows tracking for educational purposes

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

• 8th edition is a significant step forward

• Education planned for physicians and registrars

• Significant disease site changes will be communicated

• AJCC Web site provides roadmap for information

• Congratulations to Cancer Registrars on 8th edition dedication
Thank you

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AJCC
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