Colon and Rectum
AJCC 8th Edition Staging

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T, N, M Categories

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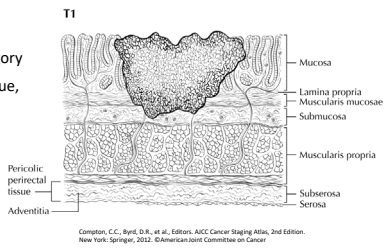
Colorectum Microscopic Anatomy

- Critical to understand tissue layers of colorectum
  - Know order of layers
  - Regardless of name, same layer = same T category
  - Subserosa or pericolic tissue, serosa or adventia: main T category does ***NOT*** change
  - Peritonealized or non-peritonealized: main T category does ***NOT*** change



Compton, C.C., Byrd, D.R., et al., Editors. AJCC Cancer Staging Atlas, 2nd Edition. New York: Springer, 2012. ©American Joint Committee on Cancer

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Clinical T Category

- cTX
  - Correctly assigned for colonoscopy, does not provide tissue layer involvement
  - Don't assume for all cases, imaging may provide tissue layer
- NCCN Guidelines & ACR Appropriateness Criteria
  - Colon cancer
    - Abdominal/pelvic MRI
    - Abdominal/pelvic CT
  - Rectal cancer
    - Pelvic MRI
    - Endorectal/transrectal US
    - Abdominal/pelvic CT or MRI

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Clinical T & Pathological T Categories

- Involvement of other organs or structures
  - Potential direct involvement for clinical staging
    - cT4b: imaging shows adherent to other structures
  - Evidence of direct involvement for pathological staging
    - pT4b: tumor found in adhesions on microscopic exam
    - pT1-T4a: tumor not microscopically found in adhesions
    - Assign pT category based on microscopic anatomical depth of invasion

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Pathological T Category

- T4a - penetrates to surface of visceral peritoneum
  - T4a appropriate only in areas with peritoneum
  - Ascending/descending colon
    - Could have T4a on peritoneal side
    - If tumor on retroperitoneal side, could be T3 & positive radial margin
  - Rectum
    - Sometimes upper rectum has peritoneum
    - Never rectum below peritoneal reflection, could be T3 & positive margin
  - Unequivocal extension into other organs would be T4b
- Operative findings are part of pathological stage
  - Surgeon sees pT4b involvement but does not biopsy
  - Pathologist reports pT3 since based on specimen received
  - Correct T category assignment is pT4b ***per surgeon***

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Clinical N and M Categories

- Clinical N
  - Must estimate nodal involvement to assign
  - Physician may use judgment to assign category
  - Includes tumor deposits
    - With nodal involvement, deposits are not added to node count
    - Without nodal involvement, cN1c assigned
- Clinical M category
  - Important to use subcategories: a, b, c
  - May be cM or pM
  - Only one of multiple sites must have microscopic proof for pM1b, pM1c

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Pathological N and M Categories

- Mesenteric nodes
  - Term used by pathologists but not surgeons
  - Mesenteric not in list of regional nodes since surgeons were main authors
  - Surgeons see precise anatomic location during surgery
  - Pathologists use mesenteric, more general term, because
    - Don't usually localize nodes as "right colic", "middle colic", etc
    - Can't tell nodal location for sure in excised specimen, landmarks are not there for precise localization
  - Any mesenteric node in resection specimen is regional node
- M category assessment
  - May be cM or pM
  - Multiple metastatic sites: microscopic proof of one site is pM1b, pM1c
  - Do not need microscopic proof of all met sites

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Polyps: Types and T Category

- Polyp: abnormal growth projecting from mucous membrane
  - Sessile: mostly a flat growth, no stalk
  - Pedunculated: attached by a narrow elongated stalk
- Polyp T category
  - Pathology report
    - Invasive adenoca
    - No info about intraepithelial, lamina propria, or submucosa
  - If path report says invasive, that is at least involvement of submucosa
  - Assign T1
  - Anatomy is distorted so it can be hard to assess
  - But if confined to mucosa, it would not be called invasive

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Polyps: Diagnosis vs. Treatment

- Sessile polyp
  - Colonoscopy bx is usually diagnostic, incomplete resection, cTX
  - Surgical resection is treatment, pT
- Pedunculated polyp
  - Colonoscopy snare polypectomy is treatment, pT
  - No diagnosis prior to snare, therefore no clinical stage assigned
- General guideline for polyp removal during colonoscopy
  - Incomplete resection – cTNM
  - Complete resection of polyp, treatment – pTNM
  - Not dependent on margins, but on purpose/intent of resection

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Stage Classification –
Diagnostic Workup & Treatment

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Clinical and Pathological Staging

- Clinical staging
  - Colonoscopy usually not sufficient to assign clinical stage
  - May be assigned with imaging information
  - Incidental findings at surgical resection not clinically staged
- Pathological staging
  - Use clinical stage information together with
  - Operative findings and
  - Pathology report of resected specimen

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Posttherapy Staging

- Neoadjuvant therapy is often used for rectal cases
- yc staging – rectum
  - Initial treatment must be neoadjuvant
  - Assessment by exam, imaging, biopsies
  - No stage group
- yp staging – rectum
  - Initial treatment must be neoadjuvant
  - All information from yc staging with
  - Operative findings and
  - Pathology report of resected specimen

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Criteria for Clinical Classification - PreTreatment

- Patient undergoing diagnostic workup
  - Medical history and physical examination
  - Colonoscopy
  - Sigmoidoscopy
  - Diagnostic biopsy
  - Imaging based on guidelines
- Incidental finding during surgical resection
  - Resection most likely for emergency bowel obstruction
  - No clinical stage assigned if this is treatment for cancer
  - Never assign stage in retrospect, cannot go back in time

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Diagnosis vs. Treatment

- Diagnostic procedures
  - Biopsies
  - Sampling of polyp (no intent for surgical treatment resection)
- Surgical treatment of primary site
  - Resection of colorectal tumor
  - Extent of resection depends on size and location
    - Local excision
    - Segmental resection
    - Partial colectomy
    - Hemicolectomy
    - Total colectomy
  - Nodal dissection is important, commonly performed

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Treatment Satisfying Stage Classification

- Pathological staging
  - Resection of colorectal tumor
    - Intent is treatment not sampling
  - Nodal dissection is standard, but not required to qualify for staging
- Postneoadjuvant therapy staging
  - Common for rectal cancer
  - Chemo and radiation therapy

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Information and Questions on AJCC Staging

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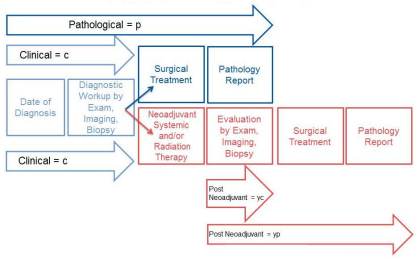
Timing is Everything

AJCC Stage Classifications

Defining Time Frame and Criteria



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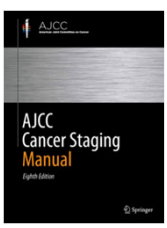
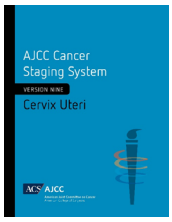
AJCC Web Site

- https://cancerstaging.org
- https://www.facs.org/quality-programs/cancer-programs/american-joint-committee-on-cancer/
- General information
  - Overview
  - Version 9
  - Cancer Staging Systems
    - AJCC 8th edition Chapter 1: Principles of Cancer Staging
  - Cancer Staging Education
  - FAQ & Resources





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CAnswer Forum

- Submit questions to AJCC Forum
  - Version 9 Forum
  - 8th Edition Forum
  - Located within CAnswer Forum
  - Provides information for all
  - Allows tracking for educational purposes
- http://cancerbulletin.facs.org/forums/

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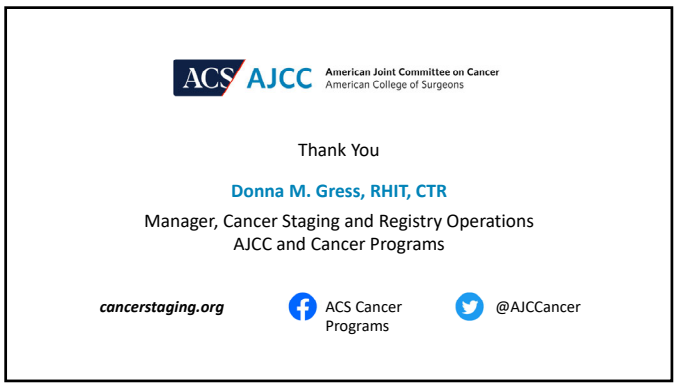

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