Overview

- Provide key information for prostate on
  - Common staging issues and questions
  - Exceptions and cautions for T, N, M
  - Diagnostic procedures vs. treatment
  - Treatment satisfying stage classification criteria
  - Blank vs. X
Learning Objectives

- Analyze common staging issues and questions
- Determine exceptions and cautions for T, N, M
- Distinguish diagnostic procedures vs. treatment
- Identify treatment satisfying stage classification criteria
- Recognize difference between blank vs. X

Prostate Staging

Clinical T Category

- Physical exam and DRE
  - Gold standard for assigning T category
  - Required for assigning T category
  - Determine whether tumor inapparent or apparent
  - Apparent tumor
    - Involvement of prostate lobes
    - Extension beyond prostate
- DRE
  - Determines location for biopsy
  - Multiple biopsies for inapparent or some apparent tumors
  - May be targeted to areas of extension beyond prostate
  - Used for staging as prognosis based on palpable tumors
  - No list of words that mean palpable
  - Determine by description, physician notes
  - Small inapparent tumors found on biopsy do not affect prognosis

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Clinical T Category

- Biopsy reports not used to assign cT
  - Confirms presence of cancer
  - Does not determine T category

- Biopsies of extraprostatic tissue
  - Still need DRE information for staging
  - DRE performed on all patients
  - DRE for extracapsular extension
    - Seminal vesicles palpable if potentially involved
    - In sensitive for some extraprostatic extension
  - MR imaging may identify area to biopsy
  - Extraprostatic biopsies not random
    - Based on DRE, Gleason, imaging

Clinical N and M Categories

- Imaging is not required to assign cN0 or cM0

- cN category
  - Based on physician judgment and nomograms
  - Identify possibility of cN1 then further study appropriate

- Clinical M category
  - Only physical exam required to assign cM0
  - If signs or symptoms then further study appropriate
  - Mets may be cM1 or pM1 with subcategories a, b, or c

Pathologic T, N, and M Categories

- pT category
  - Must meet criteria of total or radical prostatectomy
  - All clinical findings + op findings + specimen path report

- pN category
  - Must have microscopic assessment of at least 1 node to assign
  - No node removed is pNX

- Pathologic M category
  - Only physical exam required to assign cM0
  - Imaging not required to assign cM0
  - If signs or symptoms then further study appropriate
  - Mets may be cM1 or pM1 with subcategories a, b, or c
PSA

- PSA is prognostic factor category required for staging
  - Category just like T, N, and M
  - Important to document

- PSA must be measured pre-diagnosis
  - Means prior to digital rectal exam
  - Means prior to biopsy
  - Any manipulation of prostate may raise PSA levels

- If multiple PSA tests, use last pre-diagnosis test

- PSA not available
  - Common when incidental finding at time of surgery
  - May not be able to assign stage group with PSA X

Gleason

- Gleason is prognostic factor category required for staging
  - Category just like T, N, and M
  - Important to document

- Gleason pattern and score assigned to each specimen
  - Inherent morphologic heterogeneity of prostate ca
  - This means normal to have different grades throughout tumor
  - Highest Gleason used for staging

- Clinical stage Gleason
  - Based on biopsy or TURP during that stage timeframe

- Pathologic stage Gleason
  - Based on bx, TURP, prostatectomy during that stage timeframe
  - Highest Gleason used for staging

Criteria for Clinical Classification

- Patient undergoing diagnostic workup
  - Elevated PSA
  - DRE
  - Diagnostic biopsy
  - Identified on TURP due to urinary symptoms
  - Imaging in certain circumstances, see NCCN guidelines

- Incidental finding during prostatectomy
  - No clinical stage assigned
  - Never assign stage in retrospect, cannot go back in time
Diagnostic vs. Treatment

- Diagnostic procedures
  - Biopsies
  - TURP

- Surgical treatment of primary site
  - Total prostatectomy
  - Radical prostatectomy
  - If nodal dissection not done, still considered treatment

Treatment Satisfying Stage Classification

- Pathologic staging
  - Total/radical prostatectomy satisfies criteria
  - Nodal dissection not required to qualify for staging
  - Rarely biopsy of highest T and N used to qualify
  - Must have both categories biopsied
  - Not assigned based on just highest T category

- Postneoadjuvant therapy staging NOT appropriate
  - No neoadjuvant therapy outside of clinical trials
  - Neoadjuvant ADT short term (4-6 months) treatment
  - Neoadjuvant ADT long term (2-3 years) treatment
  - Lupron shot prior to surgery not neoadjuvant treatment for staging
  - Rule for staging, not for registry treatment fields

Blank vs. X

- Tell patient’s story through staging

  - Clinical staging – story of pt’s diagnosis and workup
    - cTX = physician did not examine patient, no DRE
    - cT blank = registrar had no access to information
    - cT blank = no workup for pt, incidental finding at surgical treatment

  - Pathologic staging – pt’s story through surgical treatment
    - pTX = someone lost specimen between OR and path dept
    - pT blank = pt didn’t have surgical treatment
    - pT blank = registrar had no access to information

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Case Scenario

Diagnostic Workup

- History/chief complaint
  - 77 year old male with urinary retention
  - Admitted for transurethral resection prostate (TURP)
- Physical exam
  - Rectal: BPH
- Procedure
  - TURP, cystolitholapaxy: 3-4 bladder stones all <1cm, friable urethra, especially distal to verumontanum with bleeding from scope trauma, concerning for malignancy
- Pathology report
  - Prostatic adenocarcinoma involving 5% of chips in transurethral resection prostate
  - Gleason score 4+3=7

Clinical Staging Information

- Physical exam
  - BPH stated, infers negative exam
  - Exam is legal requirement before surgical procedure
- Procedure
  - Must understand terminology used in report
  - Verumontanum
    - Part of distal prostatic urethra
    - Single most important anatomic landmark in TURP
    - Without that knowledge, could interpret as urethral primary
    - No description to play a role in staging
- Pathology report
  - Gleason 7
  - Involving 5% of tissue
Clinical Staging Answer & Rationale

- **cT1a**
  - Exam only found BPH, which means no apparent tumor
  - Incidental finding in 5% of TURP tissue
- **cN0**
  - No reason to suspect nodal involvement, NCCN guidelines
- **cM0**
  - No signs or symptoms of mets
- **PSA X**
  - Not performed, cancer not suspected, do NOT use lowest value
- **Gleason 7**
- **Stage unknown**
  - Gleason 7 would fit in stage IIA, but PSA is unknown
  - Gleason X and PSA X stage I is not accurate

Treatment

- **History & physical**
  - 67 year old male with PSA of 9.62
  - DRE: 4x4cm prostate with induration in both lobes, cT2c
  - CT pelvis and bone scan negative
  - Biopsy: bilateral poorly differentiated prostatic ca
- **Operative report**
  - Radical prostatectomy with bilat pelvic lymphadenectomy: no gross mets in nodes, no gross extension outside prostate, palpable disease bilaterally at mid.
- **Pathology report**
  - Invasive poorly diff prostatic adenocarcinoma, Gleason 4+3=7. Multifocal and involves both lobes prostate. 2cm greatest dimension, 40% of tissue evaluated. Lt seminal vesicle involved. Extensive extracapsular extension. Margins neg. Multifocal and extensive perineural invasion. 0/12 positive lymph nodes.

Pathologic Staging Information

- **Surgery**
  - Patient had surgical resection qualifying for pathologic staging
- **Clinical staging information**
  - cT2c PSA <20
- **Operative report**
  - Palpable bilateral disease
  - No gross nodes/extraprostatic involvement
- **Pathology report**
  - Gleason 7
  - Bilateral disease
  - Left seminal vesicle involved
  - Extracapsular extension
  - Margins negative & perineural invasion plays no role in staging
  - No pelvic nodes involved
Pathologic Staging Answer & Rationale

- **pT3b**
  - Bilateral lobes
  - Extraprostatic and seminal vesicle involvement
- **pN0**
  - Pelvic nodes negative
- **cM0**
  - No signs or symptoms of mets
- **PSA <20**
  - 9.6
- **Gleason 7**
- **Stage III**

Information and Questions on AJCC Staging

Stage Classifications

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CAnswer Forum

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

Summary

- Employ critical thinking to understand disease site
  - Analyze common staging issues affecting stage assignment
  - Determine exceptions and cautions for T, N, M
  - Utilize guidelines available to registrars
- Tell patient’s story through accurate staging
  - Utilize correct stage classifications
  - Distinguish diagnostic procedures vs. treatment
  - Identify treatment satisfying stage classification criteria
  - Recognize difference in story between blank vs. X
- Identify resources for AJCC staging