

# AJCC Staging Moments

AJCC TNM Staging 8th Edition

Prostate Cancer Case # 1



AJCC

**American Joint Committee on Cancer**

Validating science. Improving patient care.

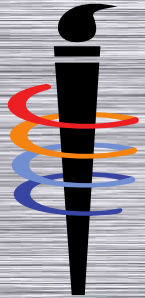
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# Prostate Case # 1

## Presentation of New Case

- Newly diagnosed prostate cancer patient
- Presentation at Cancer Conference for treatment recommendations and clinical staging



# Prostate Case # 1

## History

- 56 yr old white man asked PCP about prostate cancer screening with Prostate Specific Antigen (PSA) during his annual check-up
- After “shared decision” discussion between PCP and patient PSA test was ordered
- Family history negative; no prior prostate screening; mild lower urinary tract symptoms (nocturia X 1; slight decreased urinary stream)



# Prostate Case # 1

## Physical & Lab Results

- PSA level was 6.7 ng/dl
- PCP digital rectal examination documented no prostate nodules or induration and an estimated gland size of 30cc



# Prostate Case # 1

## Diagnostic Procedure

- Urologist digital rectal exam: 1 cm left mid gland firm nodule
- Procedure
  - Transrectal Ultrasound (TRUS)-guided core needle biopsy of prostate
  - Prostate volume: 33 cc
- Pathology prostate:
  - 6/12 needle cores positive
  - Gleason 4+3=7 (GG3) 1 core-left side- 40% of core
  - Gleason 3+4=7 (GG2) 3 cores-left & right- 15,25,70% of cores
  - Gleason 3+3=6 (GG1) 2 cores-right side- 30,45% of cores



# Prostate Case # 1

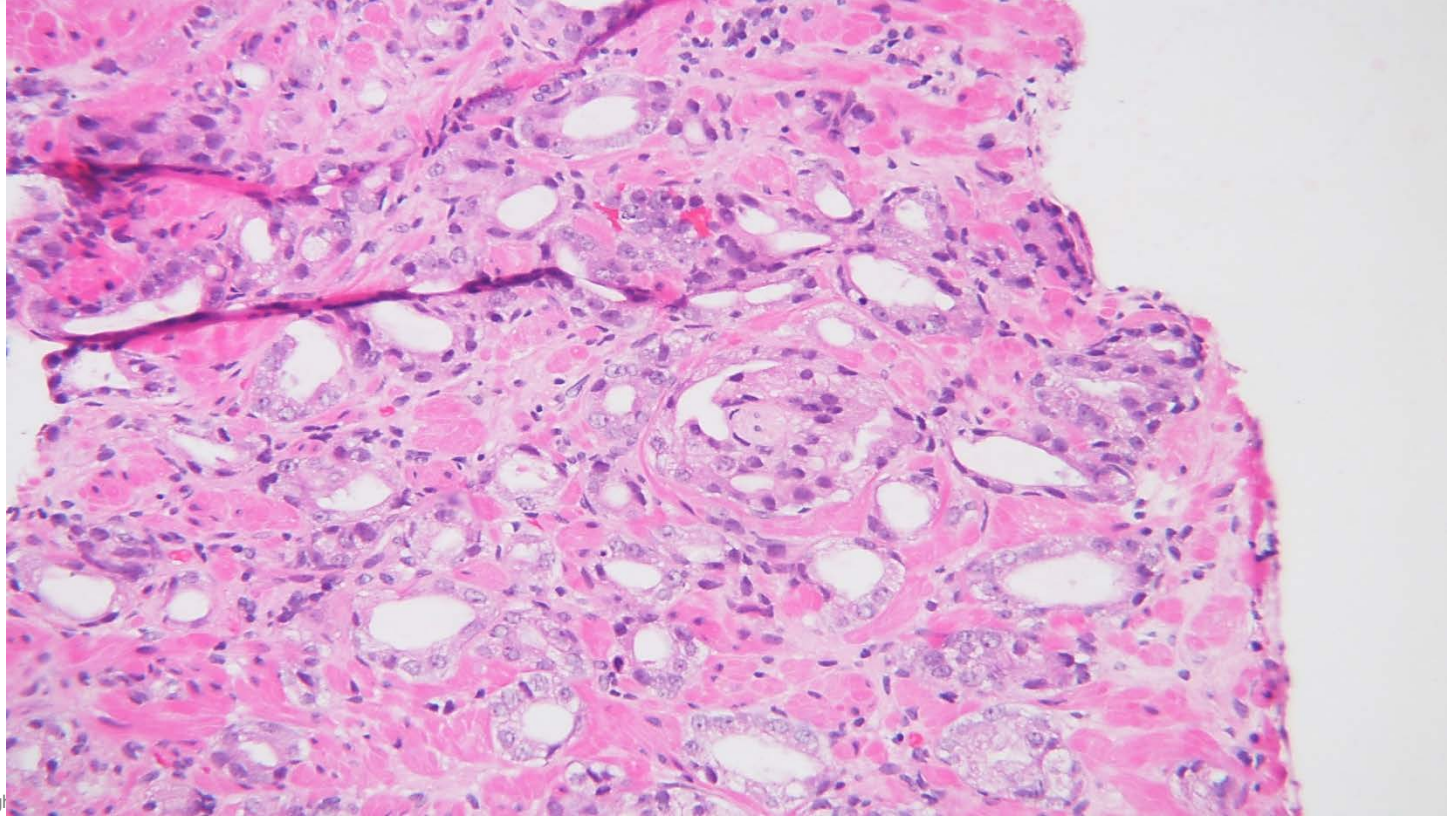
## Imaging Results

- Bone scan – negative for metastatic disease
- CT abd/pelvis – negative for metastatic disease



# Prostate Case # 1

## Gleason 4+3=7





# Prostate Case # 1

## Clinical Staging

- Clinical staging
  - Uses information from the physical exam, imaging, and diagnostic biopsy
- Purpose
  - Select appropriate treatment
  - Estimate prognosis
  - Provide risk grouping



# Prostate Case # 1

## Clinical Staging

- Synopsis: patient with 1 cm left mid gland firm nodule, Gleason 4+3=7 GG3, PSA 6.7, no nodes or mets on imaging
- What is the clinical stage?
  - T\_\_\_\_\_
  - N\_\_\_\_\_
  - M\_\_\_\_\_
  - PSA\_\_\_\_\_
  - Gr Grp\_\_
  - Stage Grp\_\_\_\_\_



# Prostate Case # 1

## Clinical Staging

- Clinical Stage correct answer
  - cT2a
  - cN0
  - cM0
  - PSA <20
  - Grade Group 3
  - Stage Group IIC
- Based on stage, treatment is selected
- Review treatment guidelines for this stage



# Prostate Case # 1

## Clinical Staging

- Rationale for staging choices
  - cT2a for 1cm nodule on lt side, ½ of one side or less
  - cN0 for no nodes on imaging
  - cM0 for bone scan and CT negative results, and because there were no symptoms or signs to suggest metastatic disease
  - PSA <20 as it was 6.7
  - Grade Group 3 for Gleason 4+3=7
  - Stage Group IIC



# Prostate Case # 1

## Treatment Options

- Review treatment guidelines for this stage
- Discuss appropriate treatment plans for this patient



# Prostate Case # 1

## Initial Treatment

- Presentation at Cancer Conference for initial treatment recommendations:
  - Patient chose radical prostatectomy with pelvic node dissection



# Prostate Case # 1

## Surgery & Findings

- Procedure
  - Small incision retropubic total prostatectomy with bilateral pelvic lymphadenectomy
- Operative findings
  - No gross evidence of extra-prostatic extension
  - No grossly enlarged pelvic lymph nodes



# Prostate Case # 1

## Pathology Results

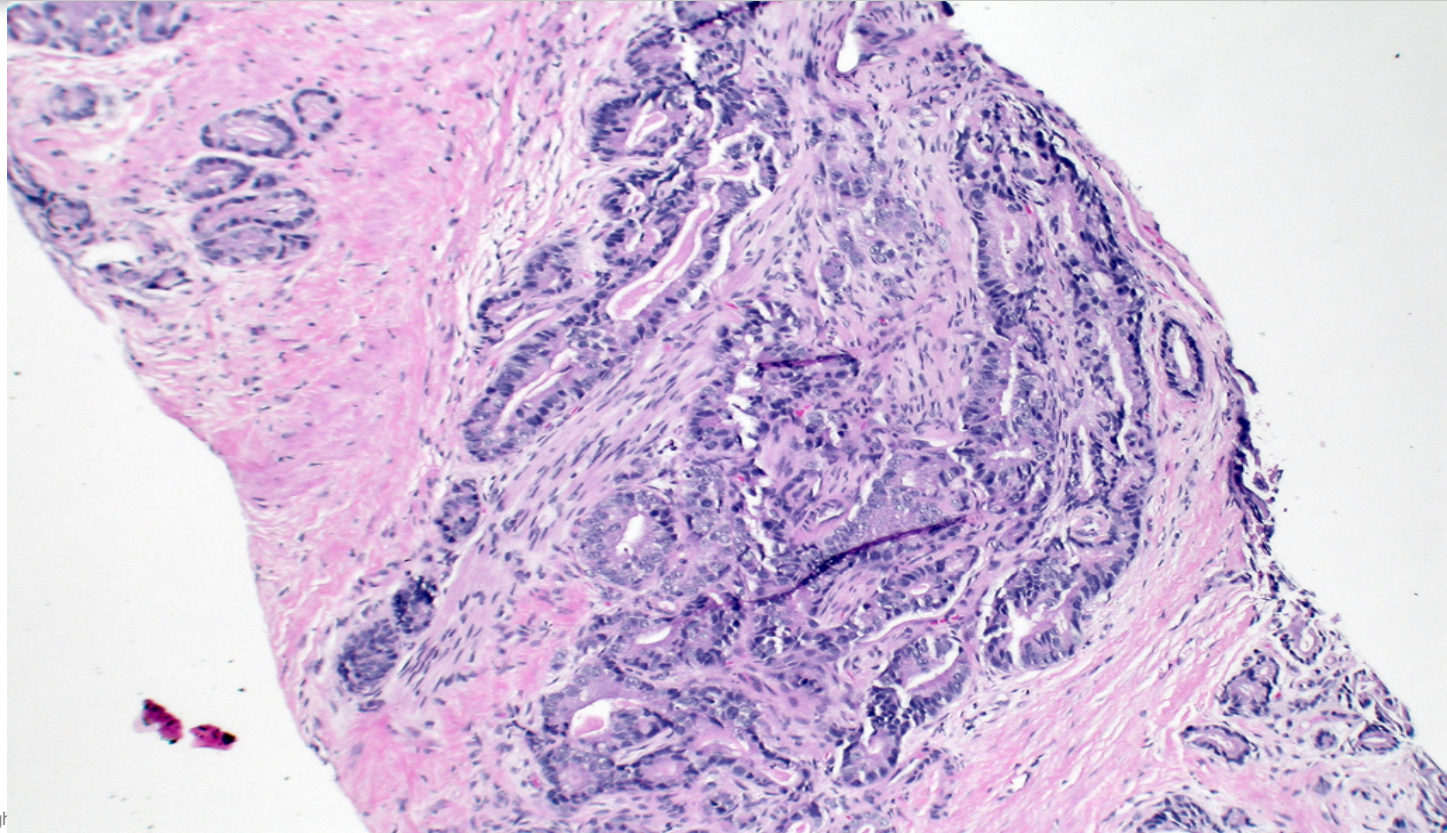
- Prostate and Seminal Vesicles:
  - Tumor present on both sides
  - Gleason 4+4=8, 4+3=7, 3+4=7, 3+3=6 involving separate tumors
  - Tumor # 1 showing 5 mm left lateral positive margin with Gleason 4+3=7 at this margin
  - Two distinct areas of extraprostatic extension
  - Seminal vesicles were negative for malignancy
  
- R & L obturator nodes:
  - 8 nodes all negative





# Prostate Case # 1

## Gleason 4+4=8



# Prostate Case # 1

## Pathological Staging

- Pathological staging
  - Uses information from clinical staging, operative findings, and resected specimen pathology report
- Purpose
  - Additional precise data for estimating prognosis
  - Calculating end results (survival data)



# Prostate Case # 1

## Pathological Staging

- Synopsis: extraprostatic extension, Gleason 4+4=8 Grade Group 4, negative nodes, PSA <20
- What is the pathological stage?
  - T\_\_\_\_\_
  - N\_\_\_\_\_
  - M\_\_\_\_\_
  - PSA\_\_\_\_
  - Grade Grp\_\_\_\_
  - Stage Group\_\_\_\_\_



# Prostate Case #1

## Pathological Staging

- Pathological stage correct answer
  - pT3a
  - pN0
  - cM0
  - PSA <20
  - Grade Grp 4
  - Stage Group IIIB
- Based on pathological stage, there is more information to estimate prognosis and adjuvant treatment is discussed



# Prostate Case #1

## Pathological Staging

- Rationale for staging choices
  - pT3a for extraprostatic extension
  - pN0 for 8 negative nodes
  - cM0 – use clinical M with pathological staging unless there is microscopic confirmation of distant metastases
  - PSA <20 – pretreatment value was 6.7
  - Grade Grp 4 for Gleason 4+4=8
  - Stage Group IIIB



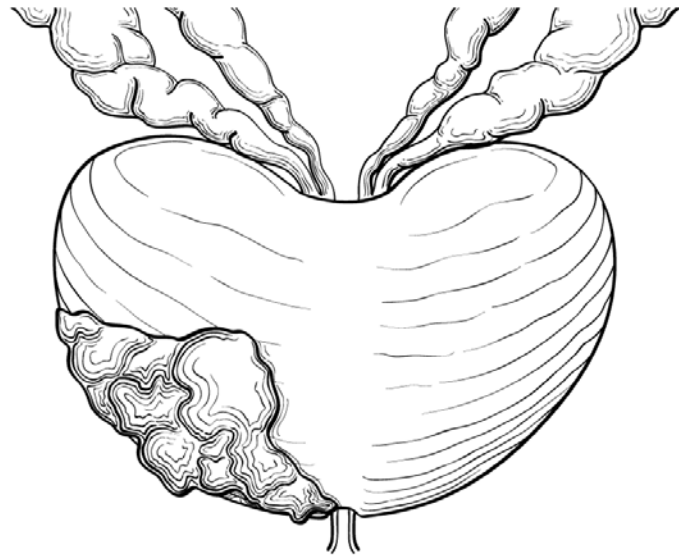
# Prognostic Factors/Registry Data Collection

- Applicable for management of this case
  - Pretreatment serum PSA lab value: 6.7
  - Grade Group 4
  - Gleason pattern & score: 4+4 = 8
  - Number of cores examined: 12
  - Number of cores positive: 6
  - Needle core bx positive: both sides



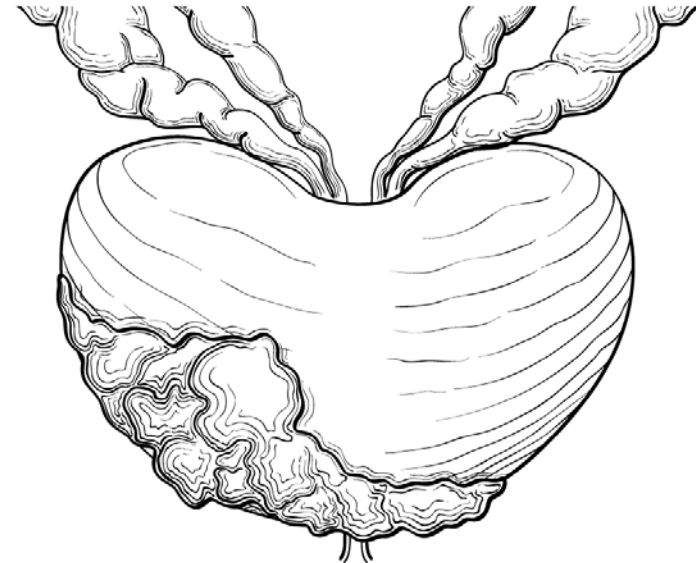
# T3a

T3a



Clinical and pathological T3a is defined as tumor with unilateral (left) or bilateral (right) extraprostatic extension

T3a



Buyyounouski, Choyke, et al. Prostate. In Amin, M.B., Edge, S.B., Greene, F.L., et al. (Eds.) AJCC Cancer Staging Manual. 8th Ed., 2017



# Prostate Case #1

## Recap of Staging

- Summary of correct answers
  - Clinical stage cT2a cN0 cM0 PSA <20 Grade Group 3 Stage Group IIC
  - Pathological stage pT3a pN0 PSA <20 Grade Group 4 Stage Group IIIB
- The staging classifications have a different purpose and therefore can be different. Do not change clinical staging based on pathological staging information.





# Staging Moments Summary

- Review site-specific information & rules
- Clinical Staging
  - Based on information before treatment
  - Used to select treatment options
- Pathological Staging
  - Based on clinical data PLUS operative findings and resected specimen pathology report
  - Used to evaluate end-results (survival)

