Is it really prostate cancer?

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Clinical History

69 year old; PSA 6.5 ng/mL

Father deceased at 76 yo from metastatic prostate cancer

Recent hospitalization for presumed urosepsis

No lower urinary tract symptoms at present

Digital exam: 30cc prostate, large right sided nodule from the base to the apex, mobile rectal mucosa, stage cT3a

Prostate biopsy: Gleason 4+4=8 in 1 core, 3%, 1 mm
Prostate MRI: what are the findings?
Axial T1-weighted image (A) shows post-biopsy changes in the left midgland peripheral zone (PZ) (white arrow)

Axial T2-weighted (B) and DCE-MR (C) images at the corresponding level demonstrate a T2 hypointense enhancing lesion in the right peripheral zone with suspected extracapsular extension and rectal invasion (Likert/PI-RADS score 5) (yellow arrows)
2 microscopic foci of Gleason 3+4=7 (arrows)
No extracapsular extension, no seminal vesicle invasion, negative surgical margins
Nonneoplastic prostate: chronic granulomatous prostatitis (outlined by blue dots)
Discussion: Granulomatous Prostatitis

• Dominant lesions with Likert/PI-RADS score 4 or 5 are most likely to be prostate cancer in the correct clinical setting
• Granulomatous prostatitis is uncommon but can mimic prostate cancer
  – Low T2 signal mass / nodule
  – Restricted diffusion with low ADC
  – Extra-prostatic extension
• Causes:
  – Previous intravesical BCG therapy for bladder cancer
  – Tuberculous prostatitis
  – Previous intervention (TURP)
  – IDIOPATHIC
Discussion: Prostate Cancer Mimics

- Be aware of other pitfalls that may mimic or obscure cancer
  - Normal anatomic structures
  - Noncancerous benign conditions
  - Technical limitations of MRI

Benign Conditions That Mimic Prostate Carcinoma: MR Imaging Features with Histopathologic Correlation

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Abbreviations: ADC = apparent diffusion coefficient, BPH = benign prostatic hyperplasia, DCE = dynamic contrast-enhanced, DW = diffusion-weighted, H-E = hematoxylin-eosin, PSA = prostate-specific antigen

Radiologist, Be Aware: Ten Pitfalls That Confound the Interpretation of Multiparametric Prostate MRI

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