Incidental prostate cancer after HoLEP

Theodora A. Potretzke MD and Adam Froemming MD
Department of Radiology
Mayo Clinic Rochester

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79 year-old male, history of BPH

• Status post Holmium Laser Enucleation of the Prostate (HoLEP)
• Incidental small volume Gleason 3+3 prostate cancer on HoLEP specimen
• Pre-HoLEP PSA 1.6 ng/mL 1 year prior to HoLEP
• Post-HoLEP PSA 3.9 ng/mL
T2

HoLEP defect

PZ mass

DWI b=1000

ADC

Post Gd subtraction

PZ mass
Findings

• Focal lesion right posterior peripheral zone mid-gland 2.5 cm

PIRADS Scoring:

T2 5  Homogenously hypointense mass ≥ 1.5 cm

DWI 5  Focal markedly hypointense on ADC and markedly hyperintense on high b-value DWI ≥ 1.5 cm

DCE +  Focal early hyperenhancement

→ PIRADS 5 – very high suspicion for a clinically significant prostate cancer
• Targeted biopsy using MR-US fusion:
  • **Gleason 4+5 prostate adenocarcinoma**
  
• Biopsy also included cores of the rest of the gland which showed additional Gleason 4+5 disease in adjacent areas

• Patient to be seen by Radiation Oncology for consideration of external beam radiotherapy for his high grade prostate cancer
Holmium Laser Enucleation of the Prostate (HoLEP) is a minimally-invasive transurethral procedure for BPH. Used most commonly in men with a severely enlarged prostate. An alternative to open prostatectomy in men with prostate > 100g where standard TURP may be staged and less effective. More tissue is removed than during TURP. Incidental prostate cancer is uncommon (~6% \(^1\)). Older age and higher preoperative total PSA density independently predict incidental prostate cancer after HoLEP. Incidental prostate cancer after HoLEP is usually low grade\(^1\), like originally found in this case.