

AUA
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MAY 15-18

Under The Radar: PSA Kinetics & Prostate Cancer Screening After HoLEP

Taylor Brewer, PA-C
Vanderbilt University Medical Center

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NM

- 71 yo M
 - Underwent HoLEP 05/2018 -- massive prostate with J hooking of ureter, L ureteral stone also treated at that time
 - Pathology: 165 grams benign prostatic tissue
 - Pre-HoLEP PSA 2.71
 - Post HoLEP PSA 1.07 06/2018

NM

- PSA Trend:
 - 02/2018: 2.71 (pre-HoLEP)
 - 06/2018: 1.07
 - **03/2021: 3.56**
 - Prostate MRI with one PI-RADS 4 lesion + one PI-RADS 3 lesion
- MRI guided biopsy 04/2021
 - **Grade Group 5** prostate cancer in 4 total cores with cribriform morphology present as well as perineural invasion

NM

- CT + Bone scan 05/2021 without evidence of metastatic disease
- Treatment
 - IMRT + 18 months ADT
 - PSA nadir <0.10, most recent PSA 01/2026 0.20

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HoLEP

- HoLEP creates PSA drop with mean reduction in PSA of 81.7% to 86%
- Average postoperative nadir 0.91-1.2 ng/mL

HoLEP

- 2019 study of large group of post HoLEP patients:
 - PSA >1.0 ng/mL in post HoLEP patient has a 94% probability of prostate cancer detection and **80% risk of clinically significant disease**
 - PSA density above 0.1 ng/mL post HoLEP associated with 95% risk of prostate cancer and **88% risk of clinically significant prostate cancer**

HoLEP

- Post-HoLEP PSA values should remain low even during follow up
 - PSA > 1.73 in 1st year should prompt rigorous evaluation of prostate cancer in post-HoLEP patient (3)
- Glandular size reduction is durable = monitoring PSA velocity long term is important in post HoLEP population

Citations

1. [Change in Serum Prostate Specific Antigen Concentration after Holmium Laser Enucleation of the Prostate: A Marker for Completeness of Adenoma Resection?](#)
2. [The Role of Prostate Specific Antigen Monitoring after Holmium Laser Enucleation of the Prostate - PubMed](#)
3. [Changes in serum PSA after endoscopic enucleation of the prostate are predictive for the future diagnosis of prostate cancer - PubMed](#)