SpaceOAR™ Hydrogel

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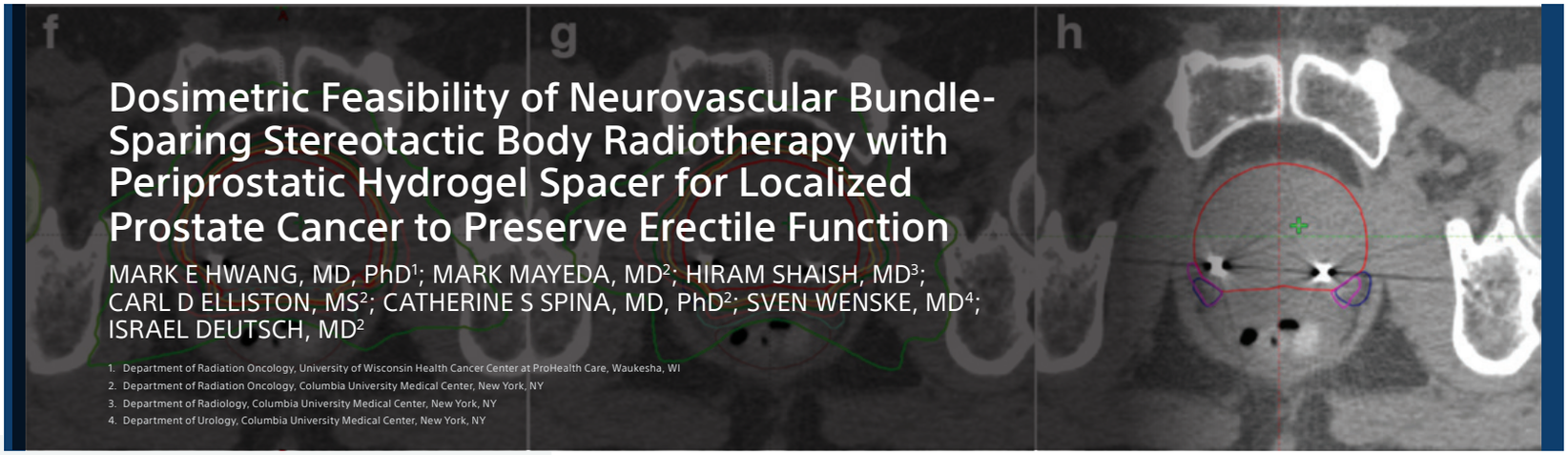

Dosimetric Feasibility of Neurovascular Bundle-Sparing Stereotactic Body Radiotherapy with Periprostatic Hydrogel Spacer for Localized Prostate Cancer to Preserve Erectile Function

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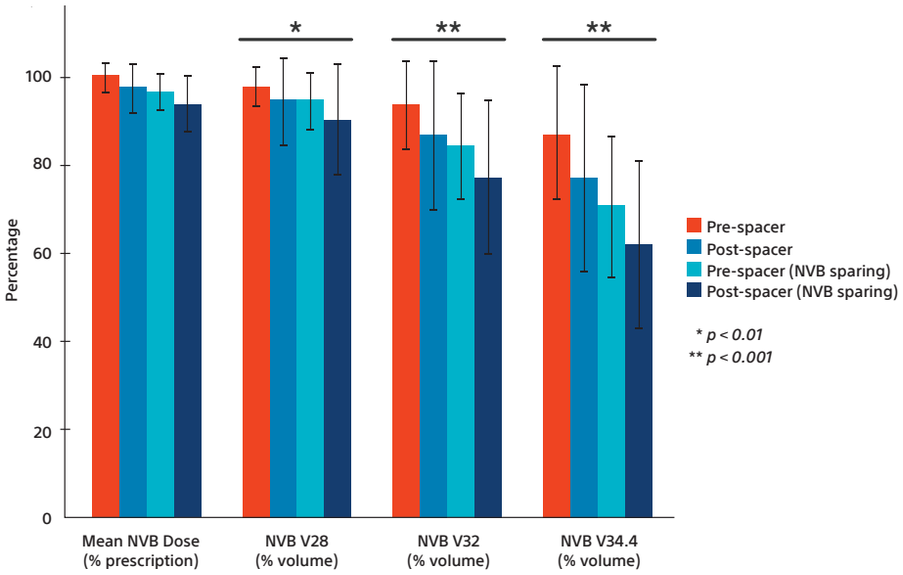
Limitations of this report include:

- Study was retrospective in nature.
- The SpaceOAR™ Hydrogel pivotal study did not use SBRT so the results may not be comparable.
- This study was not designed or powered to make definitive claims about the benefits of a spacer.
- These results may not be achieved with other SBRT protocols.
- Contours of the NVB were performed by a single expert prostate radiologist.
- This NVB-sparing technique is limited to men with visible NVB classically located posterolateral to the prostate, accounting for approximately half to two-thirds of men with prostate cancer.
- Day-to-day variation in dose per fraction is more likely to affect the NVB than other organs-at-risk. This variability cannot be evaluated from the treatment plan. Comparison of planned NVB dose with delivered NVB dose will therefore be of clinical interest moving forward.

Reference
Hwang ME, Mayeda M, Shaish H, Elliston CD, Spina CS, Wenske S, et al. Dosimetric feasibility of neurovascular bundle-sparing stereotactic body radiotherapy with periprostatic hydrogel spacer for localized prostate cancer to preserve erectile function. *Br J Radiol* 2021; **94**: 20200433.

Thirty-five men with low- and intermediate-risk prostate cancer who underwent rectal hydrogel spacer placement and pre-, post-spacer prostate MRI studies were treated with prostate SBRT (36.25 Gy in five fractions). A prostate radiologist contoured the neurovascular bundles (NVB) for NVB-sparing radiation treatment planning. Three SBRT treatment plans were developed for each patient: (1) no NVB sparing, (2) NVB-sparing using pre-spacer MRI, and (3) NVB-sparing using post-spacer MRI.



" NVB-sparing SBRT with hydrogel spacer placement has the potential to significantly reduce the high dose delivered to the NVB. The spacer contributes to this effect by inducing a small but dosimetrically meaningful NVB displacement in the posterior direction. We believe that the described approach to offer clinically meaningful reductions in RiED warrants prospective clinical trials."

Link to full article: https://doi.org/10.1259/bjr.20200433

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URO-1014207-AA MAY 2021