



# Prostate cancer treatment modality among factors influencing penile prosthesis satisfaction

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Since its origin in the 1970s, penile prosthetic surgery (PPS) has proven to be an invaluable treatment option for patients suffering from medication-refractory erectile dysfunction (ED) following prostate cancer treatment. The effects of prostate cancer treatment on sexual function can vary. While the short-term months to years following prostatectomy show increased rates of ED compared to radiotherapy, as time progresses, there is no significant difference in the rates of ED for men undergoing either surgery and radiation as proven by Resnick *et al.* when following patients 15 years after their treatment (1). However, little is known about how the choice of primary treatment (surgery *vs.* radiation) for prostate cancer impacts eventual satisfaction in men undergoing PPS. The present study found lower satisfaction following radiation relative to surgery (2).

The authors should be applauded for this important contribution to the literature. However, there are some important factors to consider when interpreting the study findings (2). First, the radiation cohort included 32 patients in the radiation group, with only 6 of these receiving brachytherapy (BT) and the remainder receiving external beam radiation therapy (EBRT). Recent studies report BT to have improved erectile function compared to EBRT (3,4). In addition to different modalities of radiation, total radiation dose and updated protocols from 2011

to 2021 may increase the heterogeneity of this cohort. Broadening the study population to allow stratification of the radiation cohort by modality may provide additional useful information. Patients who underwent radical prostatectomy (RP) were not stratified by degree of nerve sparing (unilateral or bilateral, partial or complete). This has implications for pre-PPS sexual function that could affect decision-making and ultimately satisfaction.

The lack of baseline or preoperative data on patients within this study makes it difficult to draw definitive conclusions. Preoperative sexual function as measured by the International Index of Erectile Function (IIEF) score is a strong predictor of post-cancer treatment erectile function and satisfaction, and may also impact PPS satisfaction scores (5,6). Without using a validated measure of baseline function, analysis of post-PPS satisfaction may be confounded by different perceived changes in erectile function (EF) by the patient. The use of the Erectile Dysfunction Inventory of Treatment Satisfaction (EDITS) questionnaire rather than the procedure-specific validated Satisfaction Survey for Inflatable Penile Implant (SSIPI) survey further limits the potential generalizability of these results in the larger population of PPS patients (7). Validated tools provide increased objectivity when assessing subjective parameters such as perceived change in penile length.

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It is also important to understand the role of testosterone in treatment efficacy and patient-partner satisfaction. Patients who receive androgen deprivation therapy (ADT) +/- pelvic radiation likely have decreased sexual function scores as a result of residual effects on the hypothalamic-pituitary-gonadal axis blockade of testosterone. While this study found RP patients to have higher level of sexual satisfaction following PPS, the overwhelming majority of radiation patients had a history of ADT prior to the EDITS questionnaire which may have confounded the results. Accounting for baseline testosterone and stratification of the patient cohort by ADT could significantly alter the study conclusions, though this would also require a larger sample size to assess.

Taken together with the above considerations, the study findings should not be used in convincing patients to choose a prostate cancer treatment based on increased sexual satisfaction with PPS. Rather, setting appropriate expectations for cohorts of patients undergoing different interventions remains key. This allows for increased understanding of factors affecting sexual satisfaction as well as earlier and improved counseling for ED patients who are considering PPS.

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