The use of brachytherapy as the sole modality of treatment for early-stage prostate cancer has gained popularity over the past decade due to the advent of the transrectal ultrasound-guided technique and the favorable reports of image-based analysis and were unable to demonstrate any statistically significant difference in PSA outcomes or morbidity among all patients with Gleason scores between 2 and 8. Cs-131 is a relatively new encapsulated isotope that has been FDA approved for use in brachytherapy. It is particularly attractive because of its energy which is similar to I-125 (29 KeV), but a substantially shorter half-life of 9.7 days. There are recent radiobiological data that suggest that isotes of shorter half-lives may be more effective in the treatment of prostate cancer, particularly if the α/β ratio is lower for prostate tissue than the previously thought 6-10. It may in fact be much lower, in the 1-3 range. These values of α/β are comparable to, if not lower than, late-responding normal tissues which would strengthen the argument for shorter lived radionuclides. In addition to the potential advantages in terms of cellular lethality, a shorter acting isotope may have advantages in terms of morbidity. With a half-life of 9.7 days, and a presumed effective life of 4.5 half-lives, Cs-131 has spent meaningful time of 39-48 days as opposed to 68-85 days for Pd-103, and 240-300 days for 125-T.

In both cases, patients were asked to complete the Day-0 and Day-30 IPSS, QoL, VAS, and overactive bladder questionnaires. These parameters were well tolerated to date, with minimal to moderate early urinary symptoms that resolve relatively rapidly, within approximately 4-8 weeks.

**REFERENCES**