UF Proton Therapy Institute: Survival rates and quality of life improve for prostate cancer patients after proton therapy

JACKSONVILLE, Fla. — Proton therapy is effective and safe for prostate cancer treatment, according to new research from the University of Florida Proton Therapy Institute.

The findings from seven studies were presented Oct. 28-31 in Boston during the American Society for Radiation Oncology (ASTRO) 54th Annual Meeting, the premier scientific conference on radiation oncology.

Among the most significant results reported:

- Five-year cancer progression-free survival rate of 99 percent in low- and intermediate-risk prostate cancer patients\(^1\)
- Five-year cancer progression-free survival rate of 74 percent in high-risk prostate cancer patients\(^2\)
- Minimal bowel and urinary side effects that return to pre-treatment levels or improve upon pre-treatment levels within 2 years of treatment\(^1,2,3,4\)
- Minimal impact on sexual function with decrease in erectile function in the first year that stabilizes in years 2 and 3.\(^4\)

The studies, which followed UF Proton Therapy Institute patients over time, evaluated both patient-reported and provider-reported data. Notably, patient-reported data mirrors provider-reported data and concurs with study results from other institutions.

To assess the effectiveness of a therapy, radiation oncologists balance the probability of cure with the probability of side effects — called therapeutic ratio. The UF prostate cancer studies found relatively high therapeutic ratios — which are desirable — for radiation.

“These data confirm what we already knew about the excellent outcomes with proton therapy and I think represent as high a therapeutic ratio for early and intermediate stage prostate cancer as has been achieved with any other modality — perhaps the best,”

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said Nancy P. Mendenhall, M.D. medical director of UF Proton Therapy Institute and principal investigator on two of the seven studies.

Other studies established benchmarks for evaluating the effects of proton therapy on testosterone production\(^5\) as well as for comparing outcomes between African-American and white men\(^6\) and comparing outcomes for use of prostate-only versus whole-pelvis irradiation.\(^7\)

“All of these studies are based on actual clinical outcomes. They are not surrogate data, this is actually what happened to the patient as the patient expresses it or as the providers have interpreted it following the patients closely in a prospective fashion,” said Mendenhall. “This quality data adds to the body of evidence that exists in the literature showing the benefits of proton therapy for prostate cancer treatment.”

UF Proton Therapy Institute is a nonprofit 501(c)3 organization affiliated with the UF College of Medicine and the UF Shands Cancer Center, dedicated to delivering state-of-the-art cancer treatment and setting new standards for treating and curing the disease. The cancer treatment facility houses both conventional radiation and proton therapy, and delivers proton therapy to 100 patients a day. For more information about UF Proton Therapy Institute, please visit www.floridaproton.org, or call toll-free 877-686-6009.

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3 Henderson RH, Li Z, Hoppe BS, Marcus RB, Mendenhall WM, Nichols RC, Morris CG, Williams CR, Costa J, Mendenhall NP. Three-year Analysis of Urinary Toxicity in Two Prospective Trials of Image-guided Proton Therapy for Early- and Intermediate-Risk Prostate Cancer: Outcomes in Men with Moderate to Severe Pretreatment Urinary Obstructive Symptoms; ASTRO 54: Poster Presentation 2514


6 Bryant C, Hoppe B, Mendenhall NP. Does Race Influence Quality of Life, Toxicity or Early Relapse Following Proton Therapy in Men with Prostate Cancer?; ASTRO 54: Poster Presentation 3150

7 McGee L, Hoppe BS, Henderson RH, Morris CG, Nichols RC, Su Z, Li Z, Mendenhall WM, Williams CR, Mendenhall NP. Impact of Proton Therapy to the Prostate Alone Versus the Whole Pelvis on Patient-Reported Outcomes and Toxicities in High-Risk Prostate Cancer Patients; ASTRO 54: Poster Presentation 2443

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