

University of Florida Proton Therapy Institute response to study questioning proton therapy for prostate cancer

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As interest in proton therapy grows we expect, and welcome, rigorous scientific research into its potential for treating many kinds of cancer. A widely published news article yesterday reported on findings being presented today at the American Society of Clinical Oncologists' meeting in San Francisco that suggest proton therapy for prostate cancer may have more side effects than traditional radiation.

At this point, it is difficult to comment on the results as we have not seen the full presentation or manuscript. However, we are cautious that retrospective reviews based on large databases are potentially flawed by uncontrolled variables and should be interpreted in light of the excellent published results with proton therapy.

It is important to note that these findings differ significantly from the results of our own prospective studies which have been publishedⁱ. In our study, the rate of grade III gastrointestinal toxicity was low, 1%, rather than the 20% implied by the current study. Thus far, our results and all other published outcomes for proton therapy (Slaterⁱⁱ, Coenⁱⁱⁱ) have been excellent, with extremely low rates of acute and late gastrointestinal toxicity, as might be expected from the dose distributions achieved with proton therapy.

We continue to believe that delivering less radiation to normal tissues should result in less long-term complications. This latest retrospective study underscores the need for rigorous prospective studies that control for variables, such as are ongoing at UFPTI and at other proton therapy facilities around the globe.

ⁱ N.P. Mendenhall, Z. Li, B.S. Hoppe, R.B. Marcus Jr., W.M. Mendenhall, R.C. Nichols, C.G. Morris, C.R. Williams, J. Costa, R. Henderson, I. Early outcomes from three prospective trials of image-guided proton therapy for prostate cancer. [Int J Radiat Oncol Biol Phys](#). 2012 Jan 1;82(1):213-21. Epub 2010 Nov 17

ⁱⁱ J.D. Slater, C.J. Rossi Jr., L.T. Yonemoto et al. Proton therapy for prostate cancer: The initial Loma Linda University experience. [Int J Radiat Oncol Biol Phys](#), 59 (2004), pp. 348–352

ⁱⁱⁱ J.J. Coen, A.L. Zietman, C.J. Rossi, J.A. Grocela, J.A. Efstathiou, Y. Yan, W.U. Shipley. Comparison of high-dose proton radiotherapy and brachytherapy in localized prostate cancer: a case-matched analysis. [Int J Radiat Oncol Biol Phys](#). 2012 Jan 1;82(1):e25-31. Epub 2011 Apr 4.