

Predicting erectile dysfunction from prostate cancer treatment

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Researchers have identified 12 DNA sequences that may help doctors determine which men will suffer from erectile dysfunction (ED) following radiation therapy for prostate cancer. Identifying these patients in advance of treatment may better inform men and their families as to which prostate cancer treatments are best for their specific cancer and lifestyle, according to a study to be published online September 27, 2012, in advance of the October 1, 2012 print issue, in the *International Journal of Radiation Oncology.Biology.Physics (Red Journal)*, the official scientific journal of the American Society for Radiation Oncology (ASTRO). The findings could also guide doctors in recommending the most effective treatments that carry the least risk of patients developing ED.

The main treatments for [prostate cancer](#)—surgery, brachytherapy ([seed implants](#)) and external beam radiation therapy—are all very effective at curing prostate cancer. Unfortunately, each treatment places patients at risk for ED. Although many men will maintain their potency, doctors would like to identify which men are at greatest risk for the development of difficulty with sexual function.

In this multi-institutional, multi-national study, researchers from New York's Mount Sinai School of Medicine, Albert Einstein College of Medicine of Yeshiva University in Bronx, N.Y., New York University School of Medicine, Florida Radiation Oncology Group in Jacksonville, Fla., and Maastricht University Medical Center in Maastricht, the Netherlands, examined 593 men who were treated with brachytherapy

and/or [external beam radiation](#) therapy and hormone therapy. Of them, 260 reported erectile dysfunction.

"Through a two-stage genome-wide association study, 12 single [nucleotide polymorphisms](#) (SNPs) were identified that were associated with the development of erectile dysfunction after radiation treatment for prostate cancer," said Barry S. Rosenstein, PhD, department of radiation oncology at New York's Mount Sinai Medical School. "If validated further, these SNPs could provide the basis for a blood test that would enable radiation oncologists to predict more accurately which men are most likely to develop erectile dysfunction after prostate cancer radiation therapy."

"Prostate cancer screening and treatment are undergoing major shifts," said Harry Ostrer, MD, professor of pathology and genetics at Albert Einstein College of Medicine, director of genetic and genomic testing at Montefiore Medical Center and co-principal investigator of the study. "This is part of our ongoing effort to personalize and optimize treatment for prostate cancer."

Provided by American Society for Radiation Oncology

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