

Radiation therapy outcomes better for African-American than Caucasian prostate cancer patients

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While popular beliefs and population data suggest that African-American men are at higher risk of dying from prostate cancer than Caucasian men, a new analysis of genetic data from a large prospective registry and clinical data from several randomized trials indicates that African-American patients may have comparatively higher cure rates when treated with radiation therapy. The study, which is the first report demonstrating improved prostate cancer outcomes for African-American men, will be presented today at the 60th Annual Meeting of the American Society for Radiation Oncology (ASTRO).

"Our findings suggest that African-American race is not independently associated with worse [prostate cancer](#) outcomes," said lead author Daniel Spratt, MD, an associate professor and Chief of the Genitourinary Radiotherapy Program at the University of Michigan Rogel Cancer Center. "When we started this project, we had the commonly-held assumption that African-American men harbor more aggressive disease that leads to lower survival rates. We were surprised, however, that they appear to be more responsive than Caucasian men to [radiation therapy](#) and have improved outcomes following this treatment."

Cancer registries have reported that African-American men appear to be at higher risk of dying from aggressive prostate [cancer](#), with an incidence rate almost 60 percent higher and a mortality rate two-to-three times greater than Caucasian men. What remains unclear, however, are

how socioeconomic versus biological factors contribute to these disparities.

The two-part study from Dr. Spratt's team examined biological factors that drive responses to prostate cancer treatment and may explain the disparity in outcomes. The team first investigated differences in how specific genes were expressed in tumor samples from 17,003 men (1,953 or 11.5 percent African-American) with prostate cancer, focusing on androgen receptor activity—a key driver of prostate cancer—and sensitivity to [radiation](#), as well as outcomes following radiation therapy.

Tumors with low androgen receptor activity were significantly more likely to develop distant metastases within ten years (37 percent vs. 17 percent, $p=0.008$), and tumors from African-American men were significantly more likely to have low androgen receptor activity (p

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