

Although diagnosed with higher-risk prostate cancer, Black men undergoing radiation have better outcomes than white men

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UCLA Jonsson Comprehensive Cancer Center researchers leading a meta-analysis of seven randomized trials found an "unexpected result":

Although Black men appeared to have more aggressive disease when they enrolled in clinical trials of radiation therapy for prostate cancer, their treatment outcomes and disease-specific outcomes were better than those of their white counterparts.

"These results provide high-level evidence challenging the common belief that Black men who are diagnosed with [prostate cancer](#) will necessarily have a worse prognosis than [white men](#)," said Dr. Amar Kishan, associate professor and vice chair of clinical and translational research in the Department of Radiation Oncology at UCLA and a researcher at the UCLA Jonsson Comprehensive Cancer Center. Kishan is a co-senior author of an article in the Dec. 29 issue of *JAMA Network Open*.

"This is especially important because an unfounded belief can inadvertently contribute to 'cancer injustice,' leading to the use of more aggressive treatments than might be necessary—potentially reducing quality of life—and diverting attention away from other [important factors](#) that can influence outcome, including access to more comprehensive healthcare," said Kishan, chief of the Genitourinary Oncology Service for the Department of Radiation Oncology at the David Geffen School of Medicine at UCLA and the UCLA Jonsson Comprehensive Cancer Center.

Dr. Ting Martin Ma, a resident physician in the Department of Radiation Oncology at the David Geffen School of Medicine at UCLA and a researcher at the UCLA Jonsson Comprehensive Cancer Center, said Black men are more likely to be diagnosed with [prostate](#) cancer than white men, and they have a two-fold increased risk of dying from the disease, but until now there have been no significant studies to assess race-specific differences in response to initial therapy.

"Although previous studies have shown that death due to prostate cancer

was similar for Black men and white men—provided there is equal access to care and standardized treatments—death from prostate cancer often is the culmination of many years of multiple salvage therapies, and prostate cancer mortality does not intrinsically capture initial responsiveness to primary therapy. Here we studied early metrics of response to treatment, including biochemical recurrence (PSA rise above a threshold) or development of distant metastasis in men with localized prostate cancer, which is also the predominant disease state patients present with. This information will help us identify potential drivers and mitigators of disparities in prostate cancer care," said Ma, co-first author with Tahmineh Romero, senior statistician in the UCLA Department of Medicine Statistics Core.

Co-senior author Dr. Daniel Spratt, the chairman of the Department of Radiation Oncology at University Hospitals Seidman Cancer Center, said, "Race is a social construct, and thus any findings observed must be viewed through this lens; this includes the social and/or biological manifestations from structural racism."

Ma added that it is important to note that the men in these studies not only had access to clinical trials, but they enrolled in trials in which all patients received the same treatment. Because Black men tend to be less willing to entertain the idea of participating in clinical trials—a byproduct of medical mistrust—this equity in access to care and receipt of treatment may not be representative of the general population.

Additionally, most of the deaths that occur in both Black and white men are due to non-prostate cancer causes. "This underscores the importance of overall healthcare, which can influence survival outcomes on a population level," Kishan said.

In what is believed to be the largest [meta-analysis](#) of its kind on the subject, the researchers reviewed individual patient data of 8,814

patients from seven randomized clinical trials on radiation therapy for prostate cancer—studies that enrolled a substantial number of Black men and were conducted by the Radiation Therapy Oncology Group (RTOG)/NRG Oncology. All patients in the trials received either standard or high-dose radiation therapy, and some patients also underwent short- or long-term androgen deprivation therapy.

Of the total, 1,630 men self-identified as Black; 7,184 as white. Overall, Black men were younger, with a median age of 68 versus 71, and they were significantly more likely to have high-risk disease. To investigate associations between race and treatment effectiveness, the researchers extracted and analyzed statistics on recurrence (biochemical recurrence, or BCR), metastasis (distant metastasis, or DM) and prostate cancer-specific mortality, or PCSM, and other, secondary endpoints.

According to the results, Black men were significantly younger and more likely to have high-risk disease at the time of treatment, but they had lower recurrence, metastasis and PCSM rates than white men, even without statistical adjustment. When adjustments were made for age and other factors, "race remained significantly associated with improved BCR, DM and PCSM outcomes," the authors reported in the article. "The fact that Black men had improved early and late disease outcomes when compared with white men is a novel and unexpected result that highlights that Black men may have an improved response to their initial treatment."

"These results do not suggest that there are no biological differences that might drive differences in prostate [cancer](#) incidence between racial groups," the authors said. "In fact, it is possible that the association with differential treatment response that is noted might be, at least in part, explained by differences in underlying biology."

More information: Amar U. Kishan et al, Comparing Response to

Radiation Therapy for Prostate Cancer in Black, White Men, *JAMA Network Open* (2021). [DOI: 10.1001/jamanetworkopen.2021.39769](https://doi.org/10.1001/jamanetworkopen.2021.39769)

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