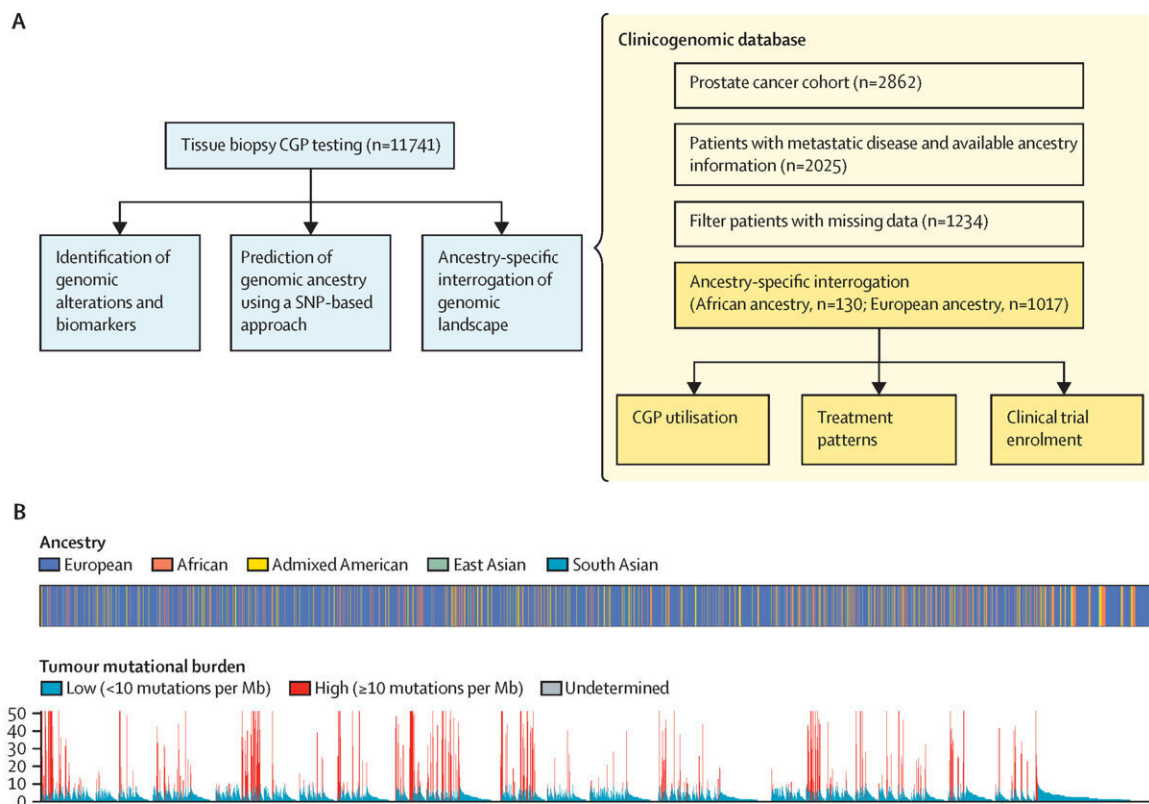


New study indicates treatment patterns, not genetics, drive prostate cancer disparities

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Overview of study design and overall genomic landscape (A) Study overview. The study comprised 11 741 patients with prostate cancer who underwent CGP to assess ancestry-based genomic patterns and an independent metastatic prostate cancer cohort of 1234 patients (including 1017 patients of European ancestry and 130 patients of African ancestry) in the Flatiron Health–Foundation Medicine clinicogenomic database to assess CGP utilization and treatment patterns. (B) Oncoplot showing the most frequently altered genes in the overall prostate cancer CGP cohort, with annotations for the tumor mutational burden,

microsatellite instability status, and predicted ancestry. The gene alterations identified in each sample are denoted based on their variant type.

CGP=comprehensive genomic profiling. SNP=single nucleotide polymorphism.

Credit: *The Lancet Digital Health* (2023). DOI: 10.1016/S2589-7500(23)00053-5

Why do men of African ancestry die from prostate cancer more frequently than other men and experience the greatest burden of advanced prostate disease globally?

A large-scale retrospective analysis by researchers with the Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine, suggests that differences in care, rather than genetics, likely explain disparities in advanced [prostate cancer](#) between men of African and European [ancestry](#).

The study of almost 13,000 men with advanced prostate cancer, published in *The Lancet Digital Health* is one of the most comprehensive studies to date of prostate cancer disparities between men of these ethnicities.

"I believe this is the largest and most representative genomic study of advanced prostate cancer in men of African and European ancestry," said Dr. Brandon Mahal, assistant professor of radiation oncology at Sylvester and the study's senior author.

"The data," he continued, "clearly show no notable differences in [genetic mutations](#) between the ancestries that we would target for treatment, which suggests these mutations probably are not driving disparities in advanced prostate cancer."

Mahal and co-authors found that men of African ancestry—despite

being at higher risk for developing aggressive prostate disease—are less likely to get comprehensive genetic profiling of their tumors early in treatment. That means they do not benefit as often as their European counterparts from sophisticated testing that can guide genetically targeted therapy and lead to improved patient outcomes. Instead, they may endure other, sometimes less-effective treatments as their cancer progresses.

African ancestry men also were less likely than European ancestry men to go into [clinical trials](#) for prostate cancer, which typically involve newer, more effective treatments for aggressive disease, Mahal noted.

"We've known for a couple of decades that prostate cancer disparities are some of the largest disparities we see across all cancer types. This research can help focus our efforts on what's needed to address these disparities," he said, adding that future studies should not ignore examining genomics.

"While this study looked at [advanced prostate cancer](#) and diminished the focus on genomics as the reason for disparities, there is still a reason to study the role of genomics in men's risk for developing prostate cancer," Mahal concluded.

More information: Smruthy Sivakumar et al, Comprehensive genomic profiling and treatment patterns across ancestries in advanced prostate cancer: a large-scale retrospective analysis, *The Lancet Digital Health* (2023). [DOI: 10.1016/S2589-7500\(23\)00053-5](https://doi.org/10.1016/S2589-7500(23)00053-5)

Provided by Sylvester Comprehensive Cancer Center

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