

Genetic Disparity and Worse Colorectal Outcomes for Black Americans

Research shows that colorectal cancer patients with African ancestry had shorter survival and fewer mutations needed for immunotherapy.

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Health disparities are present in a multitude of different health issues and drive inequity among populations. These [populations](#) can be defined by factors like race, income, gender or even geographic location. Improving access to colorectal cancer screening involves addressing these populations. Researchers can utilize data to identify [geographic disparities](#), but understanding racial disparities becomes more complicated due to sociodemographic and cultural considerations. Yet, scientists at the Memorial Sloan Kettering Cancer Center (MSKCC) may have discovered reasons for these disparities on a microscopic level.

MSKCC researchers [analyzed DNA sequencing data](#) of over 4,000 patients at the hospital over the course of 8 years and compared it to ancestry information. [They found](#) that patients with African ancestry had shorter median survival post-diagnosis, had less accurately predicted outcomes, and were less likely to have the genetic mutations needed to be considered for immunotherapy. Overall survival for the African ancestry group was only 45.7 months post-diagnosis compared to 67.1 months for the European ancestry group.

Mutations in the adenomatous polyposis (APC) gene, which is a known tumor suppressor, are associated with better CRC outcomes. However, this mutation appeared to make no difference in survival for Black patients while improving survival rates among European, East Asian, and South Asian CRC patients.

Disparity in Treatment Response

When it came to treatment, the African ancestry group had less genetic markers for effective immunotherapy treatment as defined by the FDA. While the European ancestry group had a [20.4% qualification rate](#), the African ancestry group had only 13.5%. Even compared to those who did not qualify for immunotherapy treatments based on FDA guidelines, those with African ancestry still

experienced [less actionable genetic alterations](#) than the European group (5.6% and 11.2% respectively). Researchers propose that this may be due to fewer BRAF V600E mutations in the African ancestry group. Patients who carry this mutation typically respond well to certain targeted treatments.

A [limitation](#) of this study is its exclusion of environmental and lifestyle factors that are important in CRC outcomes.

Addressing health disparities in screening and treatment benefits researchers and community efforts by identifying how and where to implement interventions. This study suggests that these large-scale issues may have solutions hidden within the population of interest itself.

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<http://beta.docker.cancerhealth.com/blog/genetic-disparity-worse-colorectal-outcomes-black-americans>