

Study reveals significant difference in cardiomyopathy genes between Black and white patients

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Although at greater risk, a new study found that patients of African ancestry with dilated cardiomyopathy (DCM) were less likely to have clinically actionable variants in DCM genes than those of European ancestry. LSU Health New Orleans is one of the 25 clinical sites nationally that enrolled participants in the study. Professor and Chief of Cardiology Dr. Frank Smart leads the LSU Health New Orleans site. The research, which adds critical genetic information about this understudied population, is published in the *Journal of the American Medical Association*.

"Black patients with cardiomyopathy have an increased familial risk, as well as an increased risk of adverse outcomes from cardiomyopathy compared to white patients," notes Dr. Smart. "Despite knowing the increased risk in [black patients](#), most patients who have been involved in clinical trials for heart failure have been white. Genetic trials associated with heart failure have had an even more significant racial imbalance."

The multisite study enrolled 1,198 patients with dilated cardiomyopathy, 43.0% of whom were black, 56.8% white, and 8.5% Hispanic. The authors write, "The estimated prevalence of any variant classified as pathogenic, likely pathogenic, or of uncertain significance among African ancestry patients was 57.5%, lower than the estimated 65.1% among European ancestry patients."

"Among patients with variants classified as pathogenic, likely pathogenic, or of uncertain significance, the estimated odds of having at least one pathogenic/likely pathogenic variant were 75% lower for

patients of African ancestry compared with patients of European ancestry.

"As our ability to track and impact treatment of genetic cardiomyopathy improves, it is essential that we have characterized all genetic variants associated with [heart failure](#) and cardiomyopathy and not just those variants seen in white patients," Smart adds.

"This study was specifically designed to assess the lack of in-depth [genetic information](#) associated with cardiomyopathy in blacks. Moving forward, it is essential that we eliminate this racial inconsistency in scientific knowledge and disease pathology in order to improve care in all patient populations."

More information: Elizabeth Jordan et al, Genetic Architecture of Dilated Cardiomyopathy in Individuals of African and European Ancestry, *JAMA* (2023). [DOI: 10.1001/jama.2023.11970](https://doi.org/10.1001/jama.2023.11970)

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