

# Does guideline-based treatment prevent racial disparities in cardiovascular outcomes?

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Cardiovascular disease remains the leading cause of death for women within most racial and ethnic groups in the United States. A [new study](#) in

the *Canadian Journal of Cardiology* characterizes the risk profile for Black and non-Black women with obstructive coronary artery disease (CAD) enrolled in the Women's Ischemia Syndrome Evaluation (WISE) cohort study. It concludes that racial and ethnic disparities in long-term cardiovascular outcomes were not observed among women with obstructive CAD recruited from university/academic centers who received guideline-based treatment.

Prior studies had demonstrated striking disparities in heart disease outcomes in Black versus non-Black women with nearly 20% higher rates of cardiovascular mortality in Black women. However, reasons for these disparities have been unclear. The authors of the present study set out to characterize the risk profile for Black and non-Black women with obstructive CAD and explore the factors associated with long-term adverse outcomes in this population using data from the WISE study.

Lead investigator Janet Wei, MD, Barbra Streisand Women's Heart Center, Smidt Heart Institute, Cedars-Sinai Medical Center, explains, "Over the last two decades, the WISE cohort studies have provided data to help us understand the pathophysiology for women with ischemic heart disease. In the original cohort, which over-sampled Black women in university/academic centers, one-third of the women had obstructive CAD.

"Prior studies indicate an adverse role of race and ethnicity in obstructive CAD, yet it remains unclear what contributes to this adversity. We did not observe these racial and ethnic disparities in long-term [cardiovascular outcomes](#) among those women with obstructive CAD enrolled in the WISE cohort."

The original WISE cohort recruited 944 eligible women with symptoms and/or signs of myocardial ischemia undergoing clinically indicated coronary angiography from September 1996 to March 2000 in

university/academic centers. Of the 944 women (mean age  $58\pm 12$ ; 17% non-Hispanic Black), 364 (38%) were diagnosed with CAD. The non-Black group included predominantly white women, with a minority comprised of Asian, Hispanic, Native American women.

In this current secondary analysis of the WISE cohort, investigators found that compared to non-Black women, Black women had a relatively higher burden of cardiovascular risk factors (obesity and hypertension) and overall lower socioeconomic position (lower levels of education and income and higher proportion of public health insurance). Yet long-term cardiovascular outcomes, including death from heart disease, in women with obstructive CAD were similar between Black and non-Black women.

Because the cohort of women was enrolled in university/academic centers and Black women had similar or higher use of guideline-directed therapy for CAD including statin cholesterol-lowering medication, ACE inhibitors, and angiotensin 2 receptor blockers, the researchers postulate that Black women with CAD treated in university/academic centers may experience less racial and ethnic discrimination and receive appropriate guideline-directed therapy.

Recent studies have attributed social determinants of health and structural racism to racial disparities in cardiovascular health. They suggest that if racial disparities in cardiovascular treatment can be reduced through evidence-based, guideline-directed cardiovascular care, then [racial disparities](#) in cardiovascular outcomes can be lessened or eliminated.

Dr. Wei concludes, "In summary, from the original WISE [cohort](#) of women recruited from university/academic centers, we do not observe racial and [ethnic disparities](#) in long-term major adverse cardiovascular events or cardiovascular mortality in women with obstructive CAD.

Physician and community education campaigns aimed at evidence-based and guideline-directed care should be instituted to mitigate structural racism in [cardiovascular disease](#) in community health care settings."

In an [accompanying editorial](#), Amélie Paquin, MD, MSc, Quebec Heart and Lung Institute, and Department of Medicine, Faculty of Medicine, Laval University, and colleagues acknowledge the researchers' efforts to provide race-specific data from the WISE Study, thereby contributing to reducing the gap in cardiovascular disparities.

Dr. Paquin comments, "This study is of great interest because the authors highlight an important and still unanswered question pertaining to the impact of quality of care on cardiovascular outcomes among Black women: Do academic centers provide more inclusive cardiovascular care than community centers?"

"The authors raise interesting hypotheses regarding the potential role of institutional factors in improving cardiovascular outcomes among Black women. More scientific and clinical programs dedicated to Black women are needed to better identify, understand, and reduce the gaps that they continue to experience in cardiovascular health."

**More information:** Long-term Adverse Outcomes in Black Women with Obstructive Coronary Artery Disease: A Study of the Women's Ischemia Syndrome Evaluation (WISE) Cohort, *Canadian Journal of Cardiology* (2023). [DOI: 10.1016/j.cjca.2023.08.010](https://doi.org/10.1016/j.cjca.2023.08.010)

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