Black Women Have Worse Breast Cancer Outcomes Despite Receiving Similar Treatment

Additional research is required to determine the basis for these racial disparities.

December 10, 2018 By American Association for Cancer Research

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Even with equivalent treatments in women with hormone receptor-positive, HER2-negative breast cancer, black women had significantly higher breast cancer recurrence and increased overall mortality compared to white women in a large phase III clinical trial, TAILORx, according to data presented at the 2018 San Antonio Breast Cancer Symposium, held Dec. 4–8.

“Our findings are consistent with prior studies indicating that black women with hormone-receptor positive, HER2-negative breast cancer have worse prognoses than women of other racial and ethnic backgrounds, even when they have access to the same contemporary cancer care,” said Kathy Albain, MD, Huizenga Family Endowed Chair in Oncology Research and professor of medicine at Loyola University Chicago Stritch School of Medicine and director of the Breast and Thoracic Oncology Programs at the Cardinal Bernardin Cancer Center of Loyola Medicine in Maywood, Illinois. “This suggests that additional research is required to determine the basis for these racial disparities and also highlights the need to enhance accrual of minority populations in cancer clinical trials.”

Albain and colleagues analyzed the association between clinical outcomes and race in participants from the TAILORx trial, which evaluated more than 10,000 women with the most common type of early breast cancer (hormone receptor-positive, HER2-negative, axillary lymph node-negative). Findings released from the TAILORx study in June 2018 showed no benefit from chemotherapy for 70 percent of the women in the trial. It found that treatment to prevent the cancer from returning with chemotherapy and hormone therapy, following surgery, is not more beneficial than hormone therapy alone in patients with a low or intermediate recurrence score.

Following enrollment in the TAILORx trial, patients’ tumors were analyzed using the 21-gene Oncotype DX recurrence score (RS; on a scale of 0-100) which predicts cancer recurrence. Patients with low risk (RS score of 0-10) were treated with hormone therapy alone, while patients with high risk (RS score 26 and above) were treated with hormone therapy and chemotherapy. Patients with an intermediate risk of recurrence (RS score of 11-25)—the primary study group—were randomized to receive hormone therapy and chemotherapy or hormone therapy alone.

Of the 9,719 breast cancer patients able to be evaluated, 8,189 (84 percent) were white, 693 (7 percent) were black, 405 (4 percent) were Asian, and 432 (4 percent) were of other or unknown race. In terms of ethnicity, 7,635 (79 percent) were non-Hispanic, 889 (9 percent) were Hispanic, and 1,195 (12 percent) were of unknown ethnicity. The trial showed no significant difference in RS distribution or mean RS between white and black participants.

Usage and type of chemotherapy following surgery were similar between black and white participants and between Hispanic and non-Hispanic populations. Additionally, the usage, type, and duration of hormone therapy were similar between black and white participants and between Hispanic and non-Hispanic populations.

In an analysis of the entire trial population, black women had up to a 4 percent higher absolute risk of recurrence or death. When the authors compared outcomes between black and white women, adjusting for multiple factors, they found that black women had a 39 percent higher relative risk of breast cancer recurrence and a 52 percent higher relative risk of death.

Sixty-eight percent of black women in the trial had a RS score of 11-25. In this intermediate group, there was an 80 percent higher relative risk of recurrence in black women compared to white women. There was a 67 percent higher relative risk of death in black women compared to white women.

When ethnicity was examined, women of Hispanic ethnicity generally had better outcomes than non-Hispanic women, Albain said.

“The racial disparities observed in this trial were not explained by differences in recurrence score, duration, or reported adherence to hormone therapy, nor were they explained by use of chemotherapy, or characteristics such as age, tumor size, or tumor grade,” Albain said. “As such, our results suggest that biological differences may contribute to the significantly different outcomes of black women compared to others with breast cancer.”

Limitations of the study include the retrospective nature of the analysis, lack of adequate power to address specific questions in the race/ethnicity subsets, and a reliance on self-reported adherence to hormone therapy.

TAILORx was sponsored by the National Cancer Institute, part of the National Institutes of Health. It was designed and led by the ECOG-ACRIN Cancer Research Group. It was supported in part by the Breast Cancer Research Foundation, Susan G. Komen, and the United States Postal Service Breast Cancer Research Stamp.

This press release was originally published by the American Association for Cancer Research on December 6, 2018.

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