

Difference in breast cancer survival between black and white women has not changed substantially

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In an analysis of 5-year survival rates among black and white women diagnosed with breast cancer between 1991 and 2005, black women continued to have a lower rate of survival, with most of the difference related to factors including poorer health of black patients at diagnosis and more advanced disease, rather than treatment differences, according to a study in the July 24/31 issue of *JAMA*.

"For 20 years health care investigators in the United States have been keenly aware of [racial disparities](#) in survival among women with [breast cancer](#). Numerous reports have not only identified and documented worse outcomes in black patients with breast cancer but have suggested potential reasons for the disparities based on differences in screening, presentation, comorbid conditions on presentation, [tumor biology](#), stage, treatment, and socioeconomic status," according to background information in the article.

Jeffrey H. Silber, M.D., Ph.D., of the Children's Hospital of Philadelphia, and colleagues examined the extent of the [racial differences](#) in breast cancer survival in the Medicare population and the reasons the disparity exists. The study compared 7,375 black women 65 years and older diagnosed between 1991 to 2005 and 3 sets of 7,375 matched white control patients selected from 99,898 white potential control patients, using data from 16 U.S. Surveillance, Epidemiology and End Results (SEER) sites in the SEER-Medicare database. All patients

received follow-up through December 2009 and the black case patients were matched to 3 white control populations on demographics (age, year of diagnosis, and SEER site), presentation (demographics variables plus patient comorbid conditions and [tumor characteristics](#) such as stage, size, grade, and estrogen receptor status), and treatment (presentation variables plus details of surgery, [radiation therapy](#), and chemotherapy).

The researchers found that the absolute difference in 5-year survival (blacks, 55.9 percent; whites, 68.8 percent) was 12.9 percent in the demographics match. This difference remained unchanged between 1991 and 2005. After matching on presentation characteristics, the absolute difference in 5-year survival was 4.4 percent and was 3.6 percent lower for blacks than for whites matched also on treatment.

Regarding differences in treatment by race, overall, 12.6 percent of black patients did not have evidence of receiving any treatment for their breast cancer, compared with 5.9 percent of whites. Average time from diagnosis to treatment was longer among blacks than among demographics-matched whites, 29.2 days vs 22.5 days. Blacks were also more likely to have long delays in treatment: 5.8 percent of blacks did not initiate treatment within the first 3 months from diagnosis, compared to 2.5 percent of white patients. Blacks also received breast-conserving surgery without any other treatment more often than presentation-matched whites (8.2 percent vs 7.3 percent). "Nevertheless, differences in survival associated with treatment differences accounted for only 0.81 percent of the 12.9 percent survival difference," the authors write.

There were large differences in the way black and white patients presented. "For the demographics match, blacks had significantly less evidence of at least 1 primary care visit than matched whites (80.5 percent vs 88.5 percent, respectively); significantly lower rates of breast cancer screening (23.5 percent vs 35.7 percent); and significantly lower rates of colon cancer and cholesterol screening," the authors write.

"Our results suggest that it may be difficult to eliminate the racial disparity in survival from diagnosis unless differences in presentation can be reduced. There is also a disparity in treatment, with blacks receiving treatment inferior to that received by whites with similar presentation, but this explains only a small part of the observed difference in survival. The disparity in treatment might matter more if the disparity in presentation were reduced, because blacks would then be diagnosed with less advanced disease, for which treatment is more effective."

The researchers add that [black patients](#) are diagnosed not only with more advanced breast cancers but also with more unrelated comorbid conditions. "Some of the effectiveness of cancer treatment for blacks may be blunted by other health problems. If the differences in comorbid conditions at diagnosis were reduced, it is possible that the differences in cancer treatment would matter more for the differences in survival."

More information: *JAMA*. 2013;310(4):389-397

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