Racial disparities in sentinel lymph node biopsy in women with breast cancer

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The use of sentinel lymph node biopsy (SLNB) to stage early breast cancer increased in both black and white women from 2002 to 2007, but the rates remained lower in black than white patients, a disparity that contributed to disparities in the risk for lymphedema (arm swelling common after breast cancer treatment because of damage to the lymphatic system).

SLNB was developed to replace axillary (arm pit) lymph node dissection (ALND) for staging early breast cancer to minimize complications. SLNB can often provide patients with a much more limited surgery. Racial disparities exist in many aspects of breast cancer care but their existence in the use of SLNB had been uncharacterized.

Researchers identified cases of nonmetastatic, node-negative breast cancer in women 66 years of age or older from 2002 through 2007. Of the 31,274 women identified, 1,767 (5.6 percent) were black, 27,856 (89.1 percent) were white and 1,651 (5.3 percent) were of other or unknown race.

SLNB was performed in 73.7 percent of white patients and 62.4 percent of black patients. While the use of SLNB increased by year for both black and white patients, blacks were 12 percent less likely than whites throughout the study period to undergo SLNB. The authors suggest that adoption of SLNB in blacks patients lagged two to three years behind its adoption in white patients. The 5-year cumulative lymphedema risk was 8.2 percent in whites and 12.3 percent in blacks. The authors note

socioeconomic and geographic factors were associated with lower SLNB use including insurance coverage through Medicaid, living in areas with lower education or income levels, and living in areas with fewer surgeons.

"These findings emphasize that not all newly developed techniques in breast cancer care are made available in a timely fashion to all eligible patients. As new techniques continue to be developed, focused educational interventions must be developed to ensure that these techniques reach historically disadvantaged patients to avoid disparities in care. More contemporary data will be needed to determine whether this disparity still exists in black patients and other at-risk minorities." Dalliah M. Black, M.D., of the University of Texas MD Anderson Cancer Center wrote in his *JAMA Surgery* paper.

In a related commentary, Colleen D. Murphy, M.D., and Richard D. Schulick, M.D., M.B.A., of the University of Colorado, Aurora, write: "One key and uncertain issue in the study of lymphedema is its very diagnosis."

"In the study by Black and colleagues, it seems likely that patients undergoing axillary lymph node dissection, when sentinel node biopsy may have been indicated, were cared for at institutions without lymphedema screening protocols. … In black women, lymphedema screening may be especially relevant; Black et al have demonstrated that this population is at highest risk," they continue.

"Black and colleagues have highlighted another disparity in breast cancer care and its associated morbidity. With this information in hand, we should seek to eliminate these differences as much as possible."

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