African American women with breast cancer less likely to have newer, recommended surgical procedure

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African American women with early stage, invasive breast cancer were 12 percent less likely than Caucasian women with the same diagnosis to receive a minimally invasive technique, axillary sentinel lymph node (SLN) biopsy, years after the procedure had become the standard of surgical practice, according to research from The University of Texas MD Anderson Cancer Center.

The study, presented at the 2012 CTRC-AACR San Antonio Breast Cancer Symposium, also found that those African American women who underwent the older, more invasive procedure, axillary lymph node (ALN) dissection, had higher rates of lymphedema. The findings were presented today by Dalliah Mashon Black, M.D., assistant professor in MD Anderson's Department of Surgical Oncology.

SLN biopsy became accepted as standard of care for the staging of breast cancer in 2002 and the preferred practice by 2007 when the National Comprehensive Cancer Network and other national organizations endorsed the minimally-invasive procedure. The older technique, ALN dissection, is associated with a number of complications, including lymphedema. Black estimates that approximately 75 percent of newly diagnosed breast cancer patients are eligible for SLN biopsy.

"With this research, we wanted to determine if new surgical innovations

were being incorporated fairly amongst different patient populations," says Black, also the study's first author. "This study looks at trends over time, comparing appropriate patients who all would have been candidates for the SLN biopsy to see how the new procedure was implemented in African Americans and Caucasians."

For the retrospective population-based study, the MD Anderson team used Medicare claims data between 2002 and 2007 from the Surveillance, Epidemiology and End Results (SEER) database to examine the surgical history of 31,274 women age 66 and older diagnosed with early-stage, invasive breast cancer. Of those women, 1,767 (5 percent) were African American, 27,856 (89 percent) were Caucasian and 1,651 (5.3 percent) were other, or of unknown race.

The researchers found that 62 percent of African American patients underwent the SLN biopsy, compared to 74 percent of the Caucasian patients. Although the SLN biopsy rate increased in both groups between 2002 and 2007, a fixed disparity persisted through the five years.

The five-year cumulative incidence of lymphedema was 12.1 percent in those who received ALN dissection, compared to 6.9 percent in those who received SLN biopsy. Overall, African Americans had a higher rate of the complication; however, among those patients who had the SLN biopsy, patients had similar risk of lymphedema, regardless of race.

"The risk of lymphedema was primarily driven by differences in treatment: ALN dissection resulted in about twice the risk. When we looked at outcomes stratified by treatment, Caucasians and African Americans had similar risks of lymphedema if they had a SLN," says Benjamin Smith, M.D., assistant professor in MD Anderson's Department of Radiation Oncology and the study's senior author. "This ties the treatment disparity to a disparity in outcome."

Overall, the findings were a surprise to Black and her team.

"We were surprised to learn that the disparity persisted through 2007 and that there was an adverse patient outcome, lymphedema, associated with the findings. However, when we controlled for tumor characteristics and types of breast surgery, there was still a significant difference," says Black.

"SLN is now a safe and integral part of the surgical management of early invasive breast cancer. Improving patient education and creating ways to ensure all healthcare providers know practice guidelines which they are able to implement, will help with this disparity. No early stage, appropriate patient should opt for less if properly educated," Black continues.

Provided by University of Texas M. D. Anderson Cancer Center

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