

Study finds racial disparities exist in radiation therapy rates for early stage breast cancer

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Black women are less likely than white women to receive radiation therapy after a lumpectomy, the standard of care for early stage breast cancer, according to a new study by researchers at The University of Texas M. D. Anderson Cancer Center.

The largest of its kind and the first to examine such racial disparities in [radiation therapy](#), the study was published today in *Cancer*. It was first presented at the 2008 American Society of Clinical Oncology (ASCO) Breast Cancer Symposium.

Led by Grace Li Smith, M.D., Ph.D., a postdoctoral fellow in M. D. Anderson's Department of Radiation Oncology, the researchers reviewed the Medicare records of more than 37,000 patients diagnosed with early stage breast cancer in 2003.

"Although there have been smaller studies of racial disparities in breast cancer care, no prior research has examined the differences across the nation in the rates of radiation therapy after lumpectomy between whites and blacks," said Smith, the study's first author. "The national Medicare database, because it's so comprehensive, allowed us to determine the extent to which [racial disparities](#) in radiation therapy affected patients across the country."

For the retrospective cohort study, Smith and her M. D. Anderson

colleagues used Medicare claims to examine the treatment history of [women](#) aged 66 and older diagnosed in 2003 with early stage, newly diagnosed breast cancer. Of the 37,305 women who underwent a lumpectomy for their breast cancer, 34,024 were white and 2,305 were black. Overall, 74 percent of the white women received radiation therapy after their lumpectomy; in contrast, 65 percent of the black breast cancer patients received the same treatment.

"The use of radiation after lumpectomy is considered to be the standard of care for women with invasive breast cancer, as clinical trials have demonstrated that it both reduces the chance of recurrence and improves the chance of survival," said Thomas Buchholz, M.D., professor in the Department of Radiation Oncology and the study's senior author. "While there are some breast cancer patients, such as those over age 70, with significant co-morbidities for whom radiation would not be appropriate, this discrepancy remained consistent when specifically looking at patients under the age of 70."

Perhaps the most unexpected aspect of the study, said Smith, was the magnitude of the disparity in specific areas of the country: the Pacific West, 72 (whites) vs. 55 percent (blacks); East South Central, 72 (whites) vs. 57 percent (blacks), and the Northeast, 70 (whites) vs. 58 percent (blacks).

However, in some parts of the country - the Mountain West (76 percent vs. 74 percent) and the North Central Midwest (74 percent vs. 72 percent) - there was virtually no discrepancy in radiation rates between whites and blacks. That level of geographic non-disparity was also surprising and of great benefit for further research, said Smith.

"Until further research is conducted, we may only speculate about the underlying reasons why black and white women are not receiving radiation at the same rate. We don't know if fewer black women are

receiving radiation simply because it is not offered to them, because they decline the treatment, or perhaps because they are unable to complete a whole course of treatment due to other health problems. These questions will be important subjects of future study. As a medical community, we need to identify and eliminate any obstacle prohibiting all women from receiving necessary care for their breast cancer."

Smith's plans for follow up research include evaluating the difference in radiation rates results in a difference in mortality. She also plans to investigate whether radiation patterns correlate with other illnesses secondary to [breast cancer](#) care, and if there are disparities in other types of cancer treatment.

Smith hopes that results from the study may prompt physicians and patients to work together to overcome some of the barriers to treatment.

"Physicians may be able to help patients identify specific barriers to their care and may be able to be influential in helping patients overcome such obstacles," said Smith. "Or, if there are concerns or misconceptions about radiation treatment, patients themselves may play a role by becoming educated about the value of radiation after [lumpectomy](#) and helping to disseminate this information into their communities."

Source: University of Texas M. D. Anderson Cancer Center ([news](#) : [web](#))

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