

# Study finds no relationship between pCR rate and race in women with breast cancer

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Locally advanced breast cancer patients who received the same class of neoadjuvant chemotherapy were found to have no evidence of disease at the time of their surgery, or achieved pathological complete response, at the same rate regardless of race, according to researchers at The University of Texas M. D. Anderson Cancer Center.

The study, presented in a poster discussion session at the 2009 [Breast Cancer](#) Symposium in San Francisco, is the largest in a homogenous group of breast cancer patients evaluating pathological complete response (pCR) according to race. Only one other study, also conducted at M. D. Anderson but limited to triple negative breast cancer patients (estrogen and progesterone receptor negative, HER2 negative), has analyzed the relationship between the two.

"Our findings confirm pathological complete response is a strong prognostic indicator and a surrogate for good survival, despite a patient's race, and that it's vital we continue to strive towards achieving this milestone for all women with breast cancer," said Mariana Chavez Mac Gregor, M.D., a medical oncology fellow at M. D. Anderson. "The study also mandates that we continue to research the differences across races in breast cancer."

[Racial disparities](#) in breast cancer are known: the American Cancer Society (ACS) estimates that 19,540 blacks and 14,200 Hispanics will be diagnosed with the disease in 2009. While the overall incidence rate is 10 percent lower in blacks than whites, in 2001-2005, they had a 37

percent higher death rate. ACS also reports that overall breast cancer mortality rates are lower in [Hispanic women](#) than white women.

Understanding the reasons for such disparities - be it access to care and screening, biological differences in tumors and/or breast cancer subtypes - is the focus of ongoing research efforts across the cancer community, explained Chavez Mac Gregor, the study's first author.

"While these disparities are known, we also understand that breast cancer patients who achieve pathological complete response have better outcomes," said Chavez-Mac Gregor. "What we didn't understand until now was if pathological complete response rates had any relationship with race. If a specific ethnic group had a better or worse response rate, maybe we could then determine which groups may be in need of additional and /or improved therapies."

Using the M. D. Anderson Breast Medical Oncology database, the retrospective study identified 2,074 patients diagnosed with Stages II and III breast cancer and treated at the institution between 1994 and 2008. Of the patients, 1,334 (64.3 percent) were white, 302 (14.6 percent) black, 316 (15.2 percent) Hispanic, and 122 (5.9 percent) were classified as "other" race groups. The median age of the women was 50. All received neoadjuvant anthracycline- and taxane-based chemotherapy; receiving similar class of therapy was an important component in the design of the study, said Chavez Mac Gregor.

At the time of surgery, the researchers found no difference of statistical significance in pCR rates among racial groups: 12.3 percent in whites; 12.5 percent in blacks; 14.24 percent in Hispanics; 11.5 percent in other.

Among all patients, at a median follow-up of 30 months, there were 438 recurrences and 327 deaths. The five year unadjusted recurrence-free (RFS) and overall survival (OS) rates were: 71 percent and 79 percent in

whites; 60 percent and 57 percent in blacks; 76 percent and 79 percent in Hispanics; and 75 percent and 84 percent in "other," respectively. Lack of achieving pCR, HER2-positive and triple-negative subtypes, lymph node involvement were all found to be independent predictors of worse RFS and OS.

In further analysis, the study reconfirmed what had been noted in literature - although not statistically significant, blacks tended to have poorer outcomes, while Hispanics had improved outcomes compared to whites, said Chavez Mac Gregor.

The study is not without limitations, she noted: in design, it was both retrospective and a single-institution study, and race was self-reported. In addition, the research focus was until the time of surgery, with less attention towards patients' experience post-surgery, such as compliance to hormone therapies or other adjuvant treatments, other than RFS and OS.

In the same cohort of patients, Chavez Mac Gregor plans further analysis of patients who did not achieve pCR to better understand why they might not have reached this milestone.

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

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