New Model Predicts Breast Cancer Risk in African American Women

Researchers have developed a new risk prediction model that more accurately estimates the breast cancer risk of African American women, according to a study published online November 27 in the *Journal of the National Cancer Institute*.

The Breast Cancer Risk Assessment Tool, also known as the Gail model, is widely used for estimating breast cancer risk and for determining which women are eligible for breast cancer prevention trials. However, much of the model was based on breast cancer data from white women, so it is unclear how well the model applies to African American women or those from other racial groups. The Women’s Contraceptive and Reproductive Experiences (CARE) study was conducted to obtain data on African American women with and without breast cancer.

Mitchell Gail, M.D., Ph.D., of the National Cancer Institute in Bethesda, Md., and colleagues used data from the CARE study and the Surveillance, Epidemiology, and End Results (SEER) program to build a new model for estimating breast cancer risk in African American women. They then used data from two trials—the Women’s Health Initiative and the Study of Tamoxifen and Raloxifene (STAR)—to test the model.

The new CARE model accurately predicted the number of cancers observed in African American women in the Women’s Health Initiative overall and in most subgroups. CARE model risk predictions usually were higher than those from the Gail model in women aged 45 and older. The researchers estimated that 30 percent of African American women would have a 5-year breast cancer risk of at least 1.66 percent, which would have qualified them for participation in the STAR trial, compared with the estimate of 14.5 percent using the Gail model.

The CARE model is not recommended for women with a previous history of breast cancer, and it may underestimate breast cancer risks in certain other women, such as those who carry a BRCA mutation.

“Despite these limitations, the CARE model appears to offer more valid and usually larger estimates of invasive breast cancer risk for African American women than the currently available [Gail model]. Although we are aware of the need for additional validation studies, we recommend the CARE model for counseling African American women and for determining the eligibility of African American women for breast cancer prevention trials,” the authors write.

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**Citation:**

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