

New model better predicts breast cancer risk in African American women

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Researchers from Boston University's Slone Epidemiology Center have developed a breast cancer risk prediction model for African-American women that found greater accuracy in predicting risk for the disease. The use of this model could result in increased eligibility of African Americans in breast cancer prevention trials.

The effectiveness of [breast cancer](#) prevention and early detection strategies depends in part on the ability to accurately identify individuals at increased risk of the disease. Models for predicting absolute risk of breast cancer have been used for chemoprevention decision-making and for determining eligibility for recruitment into [prevention trials](#). The well-respected Gail Model has been used widely for [breast cancer risk](#) prediction in white [women](#) but has been shown to underestimate risk in African-American women. Underestimation of risk for African-American women has contributed to their underrepresentation in breast cancer prevention trials.

Researchers used prospective data from 55,000 African-American women age 30-69 at baseline in the Boston University Black Women's Health Study to develop a breast cancer [risk prediction](#) model specifically for African-American women. It included family history of breast cancer, history of benign breast disease, age at menarche, age at first birth, bilateral oophorectomy, oral contraceptive use, hormone use, body mass index at age 18 and adult height.

"The model was well calibrated in that it predicted 486 cases in comparison to an observed 506 cases during the additional five years of follow-up," explained senior author Julie Palmer, senior epidemiologist at Boston University's Slone Epidemiology Center and professor of epidemiology at Boston University School of Public Health. "Based on the Black Women's Health Study model, 14.6 percent of women age 30-69

were predicted to have a five-year risk of at least 1.66 percent. This is considerably higher than the proportion predicted by previous models to be above that end point," said Palmer.

According to the researchers previous breast cancer risk prediction models for African-American women have used information on only a few factors and may have underestimated risk. "The new [model](#) appears to improve prediction and, if used for determining eligibility for entry into prevention trials, would likely result in a greater number of African-American women invited to enroll in the trials," she added.

Provided by Boston University Medical Center

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