Researchers develop breast cancer prediction tool for black women

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The lack of a breast cancer risk prediction model tailored to Black women represents a critical gap, given that U.S. Black women, on average, are more likely to have breast cancer at earlier ages and with a

worse prognosis than White women. The relatively small number of Black women enrolled in epidemiologic studies of breast cancer has hampered efforts to derive and test models for use in Black women. Now, researchers from Boston University's Slone Epidemiology Center have developed and evaluated a risk prediction model for breast cancer in U.S. Black women, suitable for use in primary care settings.

"Because U.S. Black women have a disproportionately high rate of [breast cancer](#) deaths, improvement in early detection of breast cancer in this population is critical, especially in young Black women who have not yet reached the ages at which mammographic screening is typically begun," explained corresponding author Julie Palmer, ScD, director of BU's Slone Epidemiology Center and the Karin Grunebaum Professor in Cancer Research at Boston University School of Medicine.

Breast cancer risk prediction tools are used by clinicians to identify women at higher than average risk of breast cancer for early or more frequent screening by mammography and other modalities.

Palmer and colleagues used epidemiologic data from three case-control studies of Black women from various regions of the U.S. to build a new risk prediction model. They then tested the model using 15 years of follow-up data from 51,798 participants in the Boston University Black Women's Health Study. The model was found to be well-calibrated. Discriminatory accuracy, which reflects how well a model predicts risk for an individual woman, was similar to that of the most frequently used questionnaire-based breast cancer risk prediction models in White women, and was best for women under age 40.

According to the researchers, the model is simple to use and all the information required can be obtained from the women themselves with a few simple questions. "This new tool for personalized prediction of breast cancer risk in Black women can be easily used by primary care

providers to guide screening recommendations and/or referral for genetic testing, particularly for young Black women, thus leading to earlier diagnosis and reduced mortality," said Palmer.

These findings appear online in the *Journal of Clinical Oncology*.

More information: A validated risk prediction model for breast cancer in U.S. Black women, *Journal of Clinical Oncology* (2021).

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