

# Genetic risk strategies needed for young, black, female breast cancer patients, study shows

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Researchers at Moffitt Cancer Center and colleagues in Canada have published study results focused on black women younger than 50, a population disproportionately afflicted with and dying from early-onset breast cancer compared to their white counterparts. The research published in the Jan. 16 issue of *The Breast Journal*.

Early-onset [breast cancer](#) has been associated with mutations in the BRCA1 and BRCA2 genes. These breast cancer predisposing genes were discovered almost 20 years ago and confer a [lifetime risk](#) of breast cancer of 60 to 70 percent, as well as a much higher risk of a second primary breast cancer compared to noncarriers. The researchers suggest that genetic counseling and BRCA testing can reduce [cancer incidence](#) and mortality in those identified with mutations.

"We need to better understand why [black women](#) develop early-onset, [aggressive disease](#)," said study co-author Tuya Pal, M.D., associate member of the Cancer Epidemiology Program at Moffitt. "More research may be needed to help us develop strategies to reduce this disparity."

According to prior studies, few young black women undergo genetic testing, despite the known association between [BRCA mutations](#) and breast cancer. And when black women develop breast cancer, their family history and financial status may influence their treatment choices,

such as bilateral mastectomy surgery to prevent future cancer.

"Black women continue to be underrepresented in studies of the [genetic causes](#) of breast cancer," said study co-author Susan T. Vadaparampil, Ph.D., M.P.H., a behavioral scientist in the Health Outcomes and Behavior Program at Moffitt. "However, our efforts in the state of Florida demonstrate that these women are willing to participate in studies focused on the genetic causes of cancer."

Their study, carried out using the Florida state cancer registry, surveyed black women 50 and younger with breast cancer who resided in one of four Florida counties between 2005 and 2006 and conducted BRCA testing in 46 participants.

Participants and nonparticipants were similar in clinical and sociodemographic characteristics, suggesting that a representative sample was recruited, enhancing the generalizability of findings, the researchers reported. All participants received telephone-based pre-test genetic counseling during which a three-generation family history was generated.

"Through our study, we determined that 34 participants met national guidelines for BRCA testing, but only 13 reported that their health care providers referred them for genetic counseling and/or testing," Pal said. "A genetic evaluation is important in at-risk women, and is important for decision-making in the pre-surgical setting for patients, due to the high risk for second primary breast cancer in those with BRCA mutations."

Analysis also found that among BRCA mutation carriers, there was an association between those who chose bilateral mastectomy and with those with a family history of breast cancer and higher household income. The researchers noted that the association between bilateral mastectomy and [family history](#) suggests that genetic information may be

considered by patients and providers when deciding on type of surgery, despite lack of referral for genetic counseling and consideration of BRCA testing. Interestingly, said the researchers, bilateral mastectomy was more common in those with higher incomes, and further study into this association is warranted.

"Our study found that the BRCA mutation prevalence in younger black women is similar to previous studies, yet our findings demonstrated that the majority are not referred for genetic counseling and/or BRCA testing, despite most meeting national practice guidelines for BRCA testing," Vadaparampil said. "This may represent a missed clinical opportunity."

The researchers have used their study as the foundation for additional outreach, education and research efforts by the research team and their community partners. This research has also helped the study authors secure additional grants to conduct a larger Florida-wide study focused on young black women, examine the impact of [genetic counseling](#) and testing on quality of life in participants, and promote awareness of inherited breast cancer in black women throughout Florida and beyond. As part of these efforts, a culturally targeted brochure designed to increase awareness about inherited breast cancer has been developed and sent to more than 15,000 women.

Provided by H. Lee Moffitt Cancer Center & Research Institute

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