

Breast cancer screening found effective in men at high risk for the disease

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Three-dimensional culture of human breast cancer cells, with DNA stained blue and a protein in the cell surface membrane stained green. Image created in 2014 by Tom Misteli, Ph.D., and Karen Meaburn, Ph.D. at the NIH IRP.

Men at high risk of developing breast cancer may benefit from mammography, or breast X-ray, screening for the disease, a new study shows.

The study, publishing in the journal *Radiology* online Sept. 17, involved 1,869 men, ages 18 to 96, who had a mammogram at NYU Langone between 2005 and 2017. Some sought testing (diagnostic mammogram) because they felt a mass in their breast, while others had no symptoms and wanted to be screened because a family member had recently been diagnosed with the disease.

In total, 41 men were found to have [breast cancer](#), as confirmed by breast tissue biopsy. Among the 271 men who had screening exams, five had the disease. All with breast cancer had surgery (mastectomy) to remove their tumor.

Researchers at NYU School of Medicine and its Perlmutter Cancer Center conducted what they say is the largest review in the United States of the medical records of men who have had a screening mammogram.

A key study finding was that mammography was more effective at detecting cancer in high-risk men than is the norm for women at average risk of breast cancer. For every 1,000 exams in these men, 18 had breast cancer. By contrast, the detection rate for women is roughly five for every 1,000 exams. Researchers attribute this result in part to the lower amount of breast tissue in men. More tissue can mask the detection of small tumors.

"Our findings show the potential of mammography in screening men at high risk for breast cancer and in detecting the disease well before it has spread to other parts of the body," says study lead investigator and Perlmutter diagnostic radiologist Yiming Gao, MD.

Current National Cancer Care Guidelines only recommend checking for breast cancer as part of annual physical exams, not using more sensitive imaging tests like a mammogram, for men age 35 and older with BRCA mutations, says Gao, an assistant professor in the Department of Radiology at NYU Langone Health.

Among the study's other main findings was that men who had already had breast cancer were 84 times more likely to get it again than men who had no personal history of the disease. Men with an immediate relative who had breast cancer, such as a sister or mother, but not a cousin, were three times more likely to develop the disease.

"Men at high risk of breast cancer often seek out testing because a female family member had the disease," says study senior investigator and Perlmutter radiologist Samantha Heller, MD, Ph.D., an associate professor of radiology at NYU Langone Health. "In general, men need to be more aware of their [risk factors](#) for breast cancer and that they, too, can develop the disease."

Most of the men in the analysis sought testing because of concerns about a breast mass. Heller cautions, however, that the lack of targeted screening in those at high risk and the tendency to wait to feel a lump before seeking care may explain why men have a higher risk of dying from breast cancer than women, even though the disease is much more common in women.

Other men with elevated risk of breast cancer included those of Ashkenazi descent, an ethnic group widely known for high rates of some cancers (who were 13 times more likely to get breast cancer than non-Ashkenazi men) and those who had [genetic mutations](#), such as BRCA1 or BRCA2, long linked to increased risk for breast cancer (up to seven times more likely than men with no genetic risk).

Before they would recommend any changes to clinical guidelines, Heller and Gao say more research is needed to determine at what age and how often mammograms should be performed in men at high risk.

"With increasing numbers of women and men seeking genetic counseling for [breast](#) cancer, there is a need for advice to both men and women about their actual risk and guidance about the best screening practices to make sure if they do get the disease, that it is detected and treated early," says Gao.

The team plans to expand their analyses to include data from other [cancer](#) centers and to better define the risk relationships among [family members](#).

More information: "Breast Cancer Screening in High-Risk Men: A 12-Year Longitudinal Observational Study of Male Breast Imaging Utilization and Outcomes," *Radiology*, 2019.
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Provided by NYU Langone Health

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