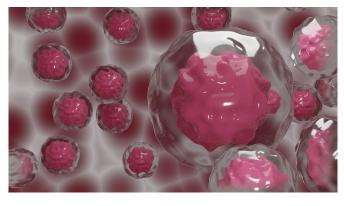


## Breast cancer survivors' fear of cancer returning linked to genomic testing, psychological factors

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Breast cancer survivors with a higher risk of cancer recurrence based on genomic testing may experience greater fear of their cancer returning, according to a new study led by researchers at NYU Rory Meyers College of Nursing. However, psychological factors such as anxiety are the best predictors of survivors' fear of their cancer recurring.

"Although genomic test results were associated with fear of <u>cancer recurrence</u>, our findings highlight that distressing, but treatable, psychological factors fuel cancer survivors' fear of recurrence," said Maurade Gormley, Ph.D., RN, an assistant professor and faculty fellow at NYU Meyers and the lead author of the study, which was published in the journal *Psycho-Oncology*.

For <u>breast cancer survivors</u>, fear and worry that their cancer will return is a significant, unmet psychological need. Over half of breast cancer survivors experience moderate to severe levels of fear of cancer recurrence; this grows to up to 70 percent among younger breast cancer survivors.

The Oncotype Dx test is a genomic test that is used to predict the likelihood of cancer recurring in women with early-stage hormone receptor-positive breast cancer, the most common form of breast cancer. It analyzes breast cancer cells after surgery or biopsy to predict the 10-year risk of recurrence, creating a 'recurrence score' that is divided into three risk categories: low, intermediate, and high. The genomic test can also be used to plan breast cancer treatment, including whether a patient will benefit from chemotherapy in addition to hormone therapy.

"We wanted to address the question of whether women with a history of breast cancer have greater fear of recurrence when they are told they are at high risk from genomic testing," said Gormley.

In the study, Gormley and her colleagues studied 110 breast cancer survivors to explore associations between the genomic test's recurrence score and its relationship to a range of factors: fear of cancer recurrence, distress, anxiety, depression, health-related quality of life, including pain and fatigue, and perceived risk of cancer recurring and spreading. They also measured women's beliefs about their illness, including their emotional response to it, perceived consequences of cancer on their lives, whether they believe they have control over their illness, and whether they perceive their cancer to be chronic.

The researchers found that breast cancer survivors with high recurrence scores reported higher overall fear and greater perceived consequences of their cancer compared to those with low recurrence scores. A greater fear of cancer recurrence was associated with higher distress, anxiety, depression, lower quality of life, and certain beliefs about their cancer, including worse perceived consequences and greater emotional response to



## illness.

The duration of time since breast cancer diagnosis was not associated with fear of cancer recurrence or perceived risk. However, younger women had greater fear of recurrence and worse psychosocial outcomes.

Further analyses revealed that the best predictors of whether someone was at high risk for fear of cancer recurrence were actually modifiable factors—anxiety, greater emotional response to cancer, and perceived consequences of illness—and not unchangeable factors like genomic test results and age. The modifiable, psychological factors explained 58 percent of the variance in fear of cancer recurrence.

"These findings are important because they illustrate that an individual's understanding of and response to their illness may explain who is at greatest risk for developing fear of cancer recurrence," said Gormley. "This could pave the way for developing targeted support—for instance, mental health interventions like cognitive behavioral skills—to address maladaptive beliefs about illness that occur among many breast cancer survivors."

**More information:** Maurade Gormley et al, Exploring the effects of genomic testing on fear of cancer recurrence among breast cancer survivors, *Psycho-Oncology* (2021). DOI: 10.1002/pon.5679

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