

Study finds least aggressive form of breast cancer still poses risk for death years later

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Women with the most common and least aggressive subtype of breast cancer were still at risk of death from the disease more than 10 years after diagnosis, according to a Kaiser Permanente study published in the journal *Cancer Epidemiology, Biomarkers & Prevention*.

The 21-year study included nearly 1,000 women from Kaiser Permanente Southern California and found that molecular subtypes of breast cancer were important independent predictors of breast cancer mortality. In particular, women with luminal A tumors—a subtype of breast cancer that is generally thought to have the best prognosis—were still at risk for death from the cancer more than 10 years after [diagnosis](#).

Researchers also found that women with HER2-enriched and luminal B tumors had roughly a two-fold increased risk of death from breast cancer compared to women who are diagnosed with luminal A tumors, a finding that is consistent with previous studies.

"The findings of this study indicate that it is important to consider breast cancer molecular subtypes in determining the optimal treatment for women with breast cancer," said study lead author Reina Haque, PhD, MPH, from Kaiser Permanente Southern California's Department of Research & Evaluation. "Women with luminal A tumors—the least aggressive but most common cancerous breast tumor—could benefit from extended treatment to improve their chances for long-term survival."

Breast cancer tumors are often divided into four molecular subtypes:

- luminal A, which tends to have the best prognosis with fairly high survival rates;
- luminal B, which typically occurs in younger women and has a poor prognosis;

- the basal-like subtype, which also tends to occur in younger women, as well as African American women, and has a poor prognosis;
- and the HER2-enriched subtype, which has a fairly poor prognosis and is prone to early and frequent recurrence and metastases.

Of the four subtypes, luminal A is the most common and is responsible for 42 to 59 percent of all breast cancer cases.

Breast cancer is the second-leading cause of cancer death in women and will be responsible for nearly 40,000 deaths among U.S. women this year, according to the American Cancer Society. The risks for developing breast cancer increase as a woman ages, while other factors include genetics, personal health history, and diet.

"These and earlier findings strongly support molecular subtypes as important independent predictors of breast cancer mortality," said Haque. "It is important for women with breast cancer, even those diagnosed with the least aggressive form of the disease, to be an advocate for their own health and speak to their doctors about treatment options."

Researchers suggest that future breast cancer studies should focus on identifying factors that are associated with longer survival in women with luminal A tumors as well as how the association between breast cancer molecular subtypes and survival varies by race and ethnicity, particularly in minority women who are more likely to have aggressive tumor subtypes.

This study is the latest Kaiser Permanente research effort to understand the effects of breast cancer. In January, Kaiser Permanente Colorado Institute for Health Research contributed to new research that reveals substantial differences—by both surgeon and institution—in the rates of follow-up surgeries for women who underwent a partial mastectomy for

treatment of breast cancer. The differences, which cannot be explained by a patient's medical or treatment history, could affect both cancer recurrence and overall survival rates, according to the study.

And last year, research scientists at the Kaiser Permanente Northern California Division of Research found that [breast cancer](#) survivors who experience significant weight gain have an increased risk of death after diagnosis and were 14 percent more likely to experience a cancer recurrence compared to [women](#) whose weight remained stable following diagnosis.

Provided by Kaiser Permanente

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