

# Chemotherapy and Endocrine Therapy Have Different Long-term Effects on Physical Health Decline for Breast Cancer Survivors, New Study Suggests

**Findings from American Cancer Society researchers could result in new interventions to improve health outcomes**

**ATLANTA, February 28, 2025** — A new study led by [American Cancer Society](#) (ACS) investigators shows breast cancer (BC) survivors in the United States receiving chemotherapy or endocrine therapy (without chemotherapy) had different long-lasting physical health decline compared to women who were cancer-free. Physical health is the body's ability to function normally and includes factors like being able to carry out activities, daily living, fatigue, or pain. The findings are out today in the *Journal of the American Medical Association (JAMA) Network Open*.

"Patients with breast cancer suffer from an abundance of long-term and late health effects and are at risk of earlier onset disease and higher incidence of chronic health conditions," said [Dr. Clara Bodelon](#), senior principal scientist, survivorship research at the American Cancer Society and lead author of the report. "These findings are important because understanding factors related to their physical health decline could lead to interventions to improve their health outcomes."

For the study, scientists used the Cancer Prevention Study 3, a prospective cohort that enrolled participants in 35 states in the U.S., the District of Columbia, and Puerto Rico between 2006 and 2013. They analyzed data from female participants diagnosed with non-metastatic BC who returned a survey at least 90 days after their diagnosis and up to five cancer-free women matched on age and year of survey return to each survivor. Physical health was assessed by investigators using the Patient-Reported Outcomes Measurement Information System (PROMIS) Global Health Scale instrument.

The results included 2,566 people diagnosed with BC and 12,826 age-matched, cancer-free women with a median age at diagnosis of 56.3 years. Of the women with BC, 1,223 (47.7%) received endocrine therapy, 276 (10.8%) received chemotherapy, and 634 (24.7%) received both. Compared to cancer-free women, there was a greater physical health decline within two years of diagnosis for BC survivors receiving endocrine therapy, chemotherapy, or both. The decline among endocrine therapy users was restricted to women receiving aromatase inhibitors. More than two years after diagnosis, the decline was only observed in women who received chemotherapy.

"This is encouraging news for breast cancer survivors. If they do not receive chemotherapy, it is unlikely that they will have long-lasting physical health decline," Bodelon added. "However, further studies are needed to confirm these results and to better understand the health consequences of these treatments."

[Dr. Lauren Teras](#) is senior author of the study. Other ACS researchers contributing to the report include [Matthew Masters](#), Den E Bloodworth, [Peter Briggs](#), [Dr. Erika Rees-Punia](#), [Dr. Lauren McCullough](#), and [Dr. Alpa Patel](#).

## **Additional ACS Resources:**

- [Breast Cancer Information](#)
- [Endocrine or Hormonal Therapy for Breast Cancer](#)
- [Cancer Statistics Center](#)

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## **About the American Cancer Society**

The American Cancer Society is a leading cancer-fighting organization with a vision to end cancer as we know it, for everyone. For more than 110 years, we have been improving the lives of people with cancer and their families as the only organization combating cancer through advocacy, research, and patient support. We are committed to ensuring everyone has an opportunity to prevent, detect, treat, and survive cancer. To learn more,

visit [cancer.org](https://cancer.org) or call our 24/7 helpline at 1-800-227-2345. Connect with us on [Facebook](#), [X](#), and [Instagram](#).

For further information: FOR MORE INFORMATION, CONTACT: American Cancer Society,  
Anne.Doerr@cancer.org

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