



# Breast Cancer Research Results and Study Updates

See [Advances in Breast Cancer Research](#) for an overview of recent findings and progress, plus ongoing projects supported by NCI.

## Some Women Avoid Breast Cancer Screening After False-Positive Mammogram Results

Posted: October 4, 2024

Some women who receive a false-positive result on a mammogram may not come back for routine breast cancer screening in the future, a new study finds. Better doctor-patient communication about the screening process is needed, several researchers said.

## Breast Cancer May Spread by Recruiting Nearby Sensory Nerves

Posted: September 20, 2024

A new study may provide important new insights into breast cancer metastasis. Blood vessels within tumors release a molecule that draws sensory nerves closer to the tumors, the study shows. This close proximity turns on genes in the cancer cells that drive metastasis.

## How Breast Cancer Risk Assessment Tools Work

Posted: June 27, 2024

Drs. Ruth Pfeiffer and Peter Kraft of NCI's Division of Cancer Epidemiology and Genetics discuss how breast cancer risk assessment tools are created and how people can use them to understand and manage their risk.

## Can Some People with Breast Cancer Safely Skip Lymph Node Radiation?

Posted: January 23, 2024

Some people with no evidence of cancer in nearby lymph nodes after presurgical chemotherapy can skip radiation to that area without increasing the risk of the cancer returning, a clinical trial found. But some experts caution that more details are needed.

## Study Adds to Debate about Mammography in Older Women

Posted: September 12, 2023

For women in their 70s and older, the risk of overdiagnosis with routine screening mammography is substantial, a new study suggests. The findings highlight the need for conversations between older women and their health care providers about the potential benefits and harms of continuing screening mammography.

## Pausing Long-Term Breast Cancer Therapy to Become Pregnant Appears to Be Safe

Posted: January 20, 2023

Many young women who are diagnosed with early-stage breast cancer want to become pregnant in the future. New research suggests that these women may be able to pause their hormone therapy for up to 2 years as they try to get pregnant without raising the risk of a recurrence in the short term.

## A Safer, Better Treatment Option for Some Younger Women with Breast Cancer

Posted: January 11, 2023

For younger women with advanced breast cancer, the combination of ribociclib (Kisqali) and hormone therapy was much better at shrinking metastatic tumors than standard chemotherapy treatments, results from an NCI-funded clinical trial show.

## Shorter Course of Radiation Is Effective, Safe for Some with Early-Stage Breast Cancer

Posted: November 30, 2022

In a large clinical trial, a condensed course of radiation therapy was as effective and safe as a longer standard course for those with higher-risk early-stage breast cancer who had a lumpectomy. This shorter radiation course makes treatment less of a burden for patients.

## Pembrolizumab Improves Survival in Advanced Triple-Negative Breast Cancer

Posted: August 9, 2022

Adding the immunotherapy drug pembrolizumab (Keytruda) to chemotherapy can help some patients with advanced triple-negative breast cancer live longer. In the KEYNOTE-355 trial, overall survival improved among patients whose tumors had high levels of the PD-L1 protein.

## Enhertu Improves Survival for Metastatic “HER2-Low” Breast Cancer

Posted: July 5, 2022

People with metastatic breast cancer whose tumors had low levels of HER2 protein lived longer after treatment with trastuzumab deruxtecan (Enhertu) than those treated with standard chemotherapy, results of the DESTINY-Breast04 clinical trial show.

## NCI Study Advances Personalized Immunotherapy for Metastatic Breast Cancer

Posted: February 1, 2022

NCI researchers have shown that an experimental form of immunotherapy that uses an individual's own tumor-fighting immune cells could potentially be used to treat people with metastatic breast cancer who have exhausted all other treatment options.

## New Risk Model Aims to Reduce Breast Cancer Disparities in Black Women

Posted: December 6, 2021

Most breast cancer risk tools were developed with data mainly from White women and don't work as well for Black women. A new tool that estimates risk for Black women may help identify those who might benefit from earlier screening, enabling earlier diagnosis and treatment.

## Enhertu May Be Preferred Therapy for Some Metastatic Breast Cancers

Posted: October 19, 2021

In people with metastatic HER2-positive breast cancer, the targeted drug trastuzumab deruxtecan (Enhertu) markedly lengthened progression-free survival compared with trastuzumab emtansine (Kadcycla), new study results show.

## Combo of Ribociclib, Letrozole Improves Survival in Advanced Breast Cancer

Posted: October 6, 2021

In a large clinical trial, women with HR-positive, HER2-negative metastatic breast cancer treated with ribociclib (Kisqali) and letrozole (Femara) as their initial treatment lived approximately 1 year longer than women treated with letrozole only.

## Breast Cancer Surgery Choice May Affect Young Survivors' Quality of Life

Posted: September 30, 2021

Women with early-stage breast cancer who had one or both breasts surgically removed (a unilateral or bilateral mastectomy) had lower scores on a quality-of-life survey than women who had breast-conserving surgery, a new study has found.

## Physical Activity May Lessen the Effects of Chemo Brain, Study Finds

Posted: August 26, 2021

For women undergoing chemotherapy for breast cancer, meeting the national physical activity guidelines may help alleviate cognitive issues, a new study suggests. The benefits may be even greater for patients who were physically active before treatment.

## Sacituzumab Govitecan Earns Full Approval for Triple-Negative Breast Cancer

Posted: May 12, 2021

Sacituzumab govitecan (Trodelyv) now has regular FDA approval for people with locally advanced or metastatic triple-negative breast cancer (TNBC). The update follows last year's accelerated approval of the drug for people with TNBC.

## Imaging Test Could Help Guide Breast Cancer Treatment Decisions

Posted: March 11, 2021

For some people with ER-positive breast cancer, a new imaging test may help guide decisions about receiving hormone therapy, according to a new study. The test can show whether estrogen receptors in tumors are active and responsive to estrogen.

## Oncotype DX Breast Cancer Test May Be Less Accurate for Black Patients

Posted: February 26, 2021

The test, which helps guide treatment decisions, was not as good at predicting the risk of death from breast cancer for Black patients as for White patients, a new study has found. The findings highlight the need for greater racial diversity in research studies.

## Trial Tests Abemaciclib As New Option for Early-Stage Breast Cancer

Posted: January 6, 2021

The drug abemaciclib (Verzenio) may be a new treatment option for people with the most common type of breast cancer, with new study findings suggesting that it can reduce the risk of the cancer returning.

## Fertility Preservation Safe for Young Women with Breast Cancer

Posted: December 22, 2020

Fertility preservation for young women with breast cancer doesn't increase their risk of dying in the ensuing decades, a new study affirmed. Experts said the findings support routinely offering fertility preservation to patients who want it.

## Some Postmenopausal Women with Breast Cancer May Forgo Chemotherapy

Posted: December 9, 2020

Some postmenopausal women with HR-positive, HER2-negative breast cancer may not benefit from chemotherapy and can safely forgo the treatment, according to clinical trial results presented at the San Antonio Breast Cancer Symposium.

## Having a Heart Attack May Make Breast Cancer Grow Faster

Posted: August 17, 2020

A heart-related event, like a heart attack, may make breast cancer grow faster, a new study suggests. In mice, heart attacks accelerated breast tumor growth and human studies linked cardiac events with breast cancer recurrence, researchers reported.

## Sacituzumab Govitecan Approved for Metastatic Triple-Negative Breast Cancer

Posted: May 28, 2020

FDA has approved sacituzumab govitecan (Trodelyv) for the treatment of triple-negative breast cancer that has spread to other parts of the body. Under the approval, patients must have already undergone at least two prior treatment regimens.

## For Women with Breast Cancer, Regular Exercise May Improve Survival

Posted: May 15, 2020

Women with high-risk breast cancer who engaged in regular exercise before their cancer diagnosis and after treatment were less likely to have their cancer return or to die compared with women who were inactive, a recent study found.

## New Approach Uses Much Less Tissue to Analyze Tumor Proteins and Genes

Posted: February 27, 2020

Researchers have developed a “microscaled” approach to analyze the proteins and genetic changes (proteogenomics) of a tumor that uses tissue from a core needle biopsy. The analyses can provide important information that may help guide treatment.

## For Metastatic HER2-Positive Breast Cancer, New Treatments Emerge

Posted: January 8, 2020

Tucatinib improved survival for women in the HER2CLIMB trial, including some whose cancer had spread to the brain. Trastuzumab deruxtecan improved survival and shrank many tumors in the DESTINY-Breast01 trial, which led to its accelerated approval.

## Analysis Shows Women with High Breast Cancer Recurrence Scores Benefit from Chemo

Posted: October 24, 2019

A TAILORx analysis shows women with early-stage breast cancer and high recurrence scores on the Oncotype DX who received chemotherapy with hormone therapy had better long-term outcomes than what would be expected from hormone therapy alone.

## After a Breast Cancer Diagnosis, Men May Be More Likely to Die than Women

Posted: October 2, 2019

Men with breast cancer may be more likely to die of the disease than women, particularly during the first 5 years after diagnosis, a new study suggests. The higher likelihood of death was linked in part to undertreatment and later diagnosis.

## For Some Women with Breast Cancer, Cost Influences Decisions about Surgery

Posted: September 6, 2019

In a survey of nearly 600 breast cancer survivors, researchers found that the cost of care factored into the decisions the women made about what type of surgery to get. Many women also reported never discussing costs with their physicians.

## T-DMI Approval Expanded to Include Some Women with Early-Stage HER2-Positive Breast Cancer

Posted: May 23, 2019

FDA has expanded the approved use of the drug ado-trastuzumab emtansine (Kadcyla), also called T-DM1, to include adjuvant treatment in some women with early-stage HER2-positive breast cancer.

## Fewer Women with Ovarian, Breast Cancer Undergo Genetic Testing than Expected

Posted: April 9, 2019

Many women diagnosed with ovarian and breast cancer are not undergoing tests for inherited genetic mutations that can provide important information to help guide decisions about treatment and longer-term cancer screening, a new study has found.

## Atezolizumab Approved for Some Patients with Triple-Negative Breast Cancer

Posted: March 28, 2019

FDA has approved atezolizumab (Tecentriq) in combination with chemotherapy for the treatment of some women with advanced triple-negative breast cancer. This is the first FDA-approved regimen for breast cancer to include immunotherapy.

## Bone Marrow Transplant Drug May Improve Immunotherapy for Metastatic Breast Cancer

Posted: March 11, 2019

The build-up of connective tissue around some types of cancer can act as a barrier to immunotherapy. A new study uses a bone marrow transplant drug, plerixafor, to break down this barrier and improve the efficacy of immune checkpoint inhibitors in animal models of breast cancer.

## Dormant Tumor Cells Can Be Sensitized to Chemotherapy

Posted: February 20, 2019

A new study in mice shows that disrupting the relationship between breast cancer cells that spread to bone and normal cells surrounding them makes the cancer cells sensitive to treatment.

## Whole- and Partial-Breast Radiation Effective at Preventing Breast Cancer from Returning

Posted: December 19, 2018

In women with early-stage breast cancer, two clinical trials have shown that both whole- and partial-breast radiation therapy are effective at preventing the cancer from returning after breast-conserving surgery.

## Can Topical Drugs Help Prevent Breast Cancer?

Posted: December 4, 2018

Researchers are testing a topical-gel form of the drug tamoxifen to see if it can help prevent breast cancer as effectively as the oral form of the drug but with fewer side effects.

## Gene Tied to Alzheimer's May Be Associated with Cancer-Related Cognitive Problems

Posted: November 9, 2018

Findings from a clinical study and a mouse study may shed light on genetic risk factors for developing cancer-related cognitive problems in older breast cancer survivors. The results suggest a gene associated with Alzheimer's disease may play a role.



## Two Drugs Work Together to Block 'Master Regulator' of Breast, Other Cancers

Posted: September 4, 2018

Arsenic trioxide and retinoic acid work together to target the master regulator protein Pin1, a new study shows. In cancer cell lines and mice, the drug combination slowed the growth of triple-negative breast cancer tumors.

## Ribociclib Approval Expanded for Some Women with Advanced Breast Cancer

Posted: August 20, 2018

FDA has expanded the approved uses of ribociclib (Kisqali) for women with advanced breast cancer, including new uses in pre- and postmenopausal women. It's the first approval under a new FDA program to speed the review of cancer drugs.

## Liquid Biopsy May Predict Risk of Breast Cancer Returning Years Later

Posted: August 15, 2018

Using a liquid biopsy to test for tumor cells circulating in blood, researchers found that, in women with breast cancer, the presence of these cells could identify women at risk of their cancer returning years later.

## TAILORx trial finds most women with early breast cancer do not benefit from chemotherapy

Posted: June 3, 2018

Findings from the TAILORx clinical trial show chemotherapy does not benefit most women with early breast cancer. The new data, released at the 2018 ASCO annual meeting, will help inform treatment decisions for many women with early-stage breast cancer.

## Easing Concerns about Giving Research Study Participants Their Genetic Test Results

Posted: June 1, 2018

Do cancer study participants want to receive their genetic test results? A recent study involving women with a history of breast cancer tested an approach for returning genetic research results and evaluated the impact those results had on the women.

## Moving Beyond BMI: Low Muscle Mass May Affect Cancer Survival

Posted: April 30, 2018

Researchers compared the risk of death for women with breast cancer who had low skeletal muscle mass, or sarcopenia, at the time of their cancer diagnosis and women who had adequate muscle mass.



## Higher Risk of Heart Failure Seen in Some Cancers

Posted: March 26, 2018

Some people who have been treated for breast cancer or lymphoma have a higher risk of developing congestive heart failure than people who haven't had cancer, results from a new study show.

## Abemaciclib Approval Expands Initial Treatment Options for Advanced Breast Cancer

Posted: March 20, 2018

FDA has approved the CDK4/6 inhibitor abemaciclib (Verzenio) as a first-line treatment in some women with advanced or metastatic breast cancer. Under the approval, the drug must be used in combination with an aromatase inhibitor.

## Can Oxygen "Microbubbles" Make Radiation Therapy More Effective?

Posted: February 20, 2018

A new study in mice raises the possibility that using microscopic, oxygen-carrying bubbles may improve the effectiveness of radiation therapy in the treatment of breast cancer.

## Olaparib Approved for Treating Some Breast Cancers with BRCA Gene Mutations

Posted: January 29, 2018

The drug olaparib (Lynparza®) is the first treatment approved by the Food and Drug Administration for patients with metastatic breast cancer who have inherited mutations in the BRCA1 or BRCA2 genes.

## Acupuncture May Reduce Treatment-Related Joint Pain for Breast Cancer Patients

Posted: January 8, 2018

Joint pain caused by aromatase inhibitors in postmenopausal women with breast cancer can cause some women to stop taking the drugs. Reducing their symptoms may translate into better adherence to therapy.