

## **MEDICAL BREAKTHROUGHS** **RESEARCH SUMMARY**

TOPIC: BREAST CANCER TREATMENT: HOW MUCH IS TOO MUCH?  
REPORT: **MB #5138**

**BACKGROUND:** *Breast cancer* is a disease in which cells in the breast grow out of control. There are different kinds of breast cancer. The kind of breast cancer depends on which cells in the breast turn into cancer. About 287,850 new cases of invasive breast cancer will be diagnosed in women. About 43,250 women will die from breast cancer. Breast cancer mainly occurs in middle-aged and older women. The median age at the time of breast cancer diagnosis is 62. This means half of the women who developed breast cancer are 62 years of age or younger when they are diagnosed. A very small number of women diagnosed with breast cancer are younger than 45.

(Sources: [https://www.cdc.gov/cancer/breast/basic\\_info/what-is-breast-cancer.htm](https://www.cdc.gov/cancer/breast/basic_info/what-is-breast-cancer.htm)  
[https://www.cancer.org/cancer/breast-cancer/about/how-common-is-breast-cancer.html#:~:text=The%20American%20Cancer%20Society's%20estimates,will%20die%20from%20breast%20cancer. \)](https://www.cancer.org/cancer/breast-cancer/about/how-common-is-breast-cancer.html#:~:text=The%20American%20Cancer%20Society's%20estimates,will%20die%20from%20breast%20cancer.)

**DIAGNOSING:** The most common symptom of breast cancer is **a new lump or mass** (although most breast lumps are *not* cancer). A painless, hard mass that has irregular edges is more likely to be cancer, but breast cancers can be also soft, round, tender, or even painful. Other possible symptoms of breast cancer include **swelling of all or part of a breast, skin dimpling, breast or nipple pain, nipple retraction, nipple discharge, and/or swollen lymph nodes under the arm or near the collar bone.**

(Source: <https://www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/breast-cancer-signs-and-symptoms.html>)

**NEW TECHNOLOGY:** Trastuzumab and pertuzumab together can be used in combination with chemotherapy to prevent relapse in people with early-stage HER2-positive breast cancer. Both are also used together in metastatic disease, where they delay progression and improve overall survival. Trastuzumab (Herceptin) has been approved to be used to prevent a relapse in patients with early-stage HER2-positive breast cancer. Pertuzumab (Perjeta) is used to treat metastatic HER2-positive breast cancer, and also used as both neoadjuvant and adjuvant therapy.

(Source: [https://www.cancer.gov/types/breast/research#:~:text=HER2%2DPositive%20Breast%20Cancer%20Treatment&text=Trastuzumab%20and%20pertuzumab%20together%20can,progression%20and%20improve%20overall%20survival. \)](https://www.cancer.gov/types/breast/research#:~:text=HER2%2DPositive%20Breast%20Cancer%20Treatment&text=Trastuzumab%20and%20pertuzumab%20together%20can,progression%20and%20improve%20overall%20survival.)

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**If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at [mthomas@ivanhoe.com](mailto:mthomas@ivanhoe.com)**