

HORMONE RECEPTOR-POSITIVE BREAST CANCER

Breast cancer is not one disease. In fact, treatment for breast cancer has become more personalized and is based on several factors. One important factor is information about the cancer cells themselves.

Some breast cancers need your body’s natural hormones – estrogen and progesterone – to grow. These cancer cells have estrogen receptors (ER) or progesterone receptors (PR) that catch the hormones that move through your body. These receptors promote cancer growth.

Cancer cells with these receptors are called **hormone receptor-positive** breast cancers. These include estrogen receptor-positive and progesterone receptor-positive breast cancers. Another factor that helps guide treatment is whether the cancer cells have HER2 proteins, and if so, how much.

When breast cancer cells are removed during a biopsy or surgery, they are tested for these hormone receptors and the HER2 protein. On your pathology report, you may see the terms:

- Estrogen receptor-positive (ER+) or estrogen receptor-negative (ER-)
- Progesterone receptor-positive (PR+) or progesterone receptor-negative (PR-)
- HER2-positive, HER2-low (for metastatic breast cancer) or HER2-negative

Hormone Treatment

Treatment for ER-positive breast cancer includes **hormone therapy, also called endocrine therapy**. Hormone therapy slows or stops the growth of these cancers. It prevents them from getting the hormones they need to grow. Hormone therapy drugs include tamoxifen and aromatase inhibitors. These include (anastrozole (Arimidex), exemestane (Aromasin) or letrozole (Femara)). **Ovarian suppression** (with surgery or drugs) is also a hormone therapy.

Treatment with the hormone therapies tamoxifen and/or an aromatase inhibitor lowers the risk of:

- Breast cancer recurrence.
- Breast cancer in the opposite breast.
- Death from breast cancer.



Common side effects of hormone therapy:

- Menopausal symptoms, such as hot flashes, in those who take tamoxifen and aromatase inhibitors.
- Joint and muscle pain and loss of bone density in those who take aromatase inhibitors.

Hormone Therapy Options		
Premenopausal (before menopause) women	Postmenopausal (after menopause) women	Men
Tamoxifen	Tamoxifen	Tamoxifen
Tamoxifen plus ovarian suppression	Aromatase inhibitor	
Aromatase inhibitor plus ovarian suppression		

Sometimes, a tumor is ER-positive, but PR-negative. These cases are treated as ER-positive breast cancers. ER-negative tumors are not treated with hormone therapy.

Chemotherapy

The tumor profiling test **Oncotype DX** is used for some patients with small ER-positive breast cancers. The results help predict the chance the cancer will come back (recur) and spread to other parts of the body (metastasize). The level of risk predicts whether someone will benefit from chemotherapy along with hormone therapy. It can also predict who can safely avoid chemotherapy.

This fact sheet is intended to be a brief overview. For more information, visit komen.org or call Susan G. Komen’s Breast Care Helpline at 1-877 GO KOMEN (1-877-465-6636) Monday through Friday, 9 a.m. to 10 p.m. ET or email at helpline@komen.org. Se habla español.

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Resources

Susan G. Komen®
1-877 GO KOMEN
(1-877-465-6636)
komen.org

Related online resources:

- [Breast Cancer Prognosis for Early Breast Cancer](#)
- [Hormone Receptor-Negative Breast Cancer](#)
- [HER2-Targeted Therapies for Early Breast Cancer](#)
- [What is Breast Cancer?](#)

Questions to Ask Your Doctor:

- Will you go over my pathology report so I can understand it?
- What treatment are you recommending for me, and why?
- How will this treatment be given?
- What are common side effects of this treatment? How can they be managed? What side effects should I report to you?
- Are there clinical trials available for someone with ER-positive breast cancer? If so, what do you recommend for me?

	Risk of metastasis	Treatment
Oncotype DX test score is high	Fairly high risk of metastasis within the next 10 years	Treatment with both hormone therapy and chemotherapy may be recommended.
Oncotype DX test score is low	Low risk of metastasis within the next 10 years	Hormone therapy alone may be recommended.

HER2 status of the tumor

HER2 is important for cell growth and survival. Tumors are tested for the HER2 protein. If the tumors have HER2 proteins, HER2-targeted therapies may be given. If the tumors have no HER2 proteins, no HER2-targeted therapy will be given. Your doctor will discuss your treatment options with you. Learn more about [hormone receptor status](#) and [HER2 status](#) on komen.org.

Triple positive breast cancer

Breast cancers that are ER-positive, PR-positive and HER2-positive are called triple positive breast cancers. These cancers will be treated with hormone therapy and [HER2-targeted therapy](#) in addition to surgery, and possibly, radiation therapy and chemotherapy.

Risk of recurrence

The risk of recurrence for those with ER-positive tumors is slightly lower than those with ER-negative tumors the first 5 years after diagnosis. After 5 years, the risk of recurrence begins to increase.

Metastatic breast cancer (MBC) treatment

MBC, also known as stage 4 breast cancer, may be treated with single drugs or a combination of drugs. Treatment focuses on extending life and maintaining quality of life. Some drugs used specifically to treat MBC include:

- [Chemotherapy](#)
- [Hormone therapy](#), [CDK4/6 inhibitors](#), [mTOR inhibitors](#) and [PI3 kinase inhibitors](#) for ER-positive cancer.
 - For premenopausal women, hormone therapy almost always begins with ovarian suppression.
 - For postmenopausal women, hormone therapy can be an aromatase inhibitor, tamoxifen, fulvestrant or another hormone therapy drug.
- [HER2-targeted therapies](#) (HER2 antibody therapies, HER2 antibody-drug conjugates, Tyrosine-kinase inhibitors) for HER2-positive breast cancer.
- [HER2-antibody-drug conjugate](#), trastuzumab deruxetecan (Enhertu), for HER2-low MBC.
- [PARP inhibitors](#) for people with a *BRCA* gene mutation.

MBC is an area of active research. In the future, some of these drugs may be used to treat breast cancer at earlier stages. If you have breast cancer, consider joining a clinical trial. Clinical trials offer the chance to try new treatments and possibly benefit from them.

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