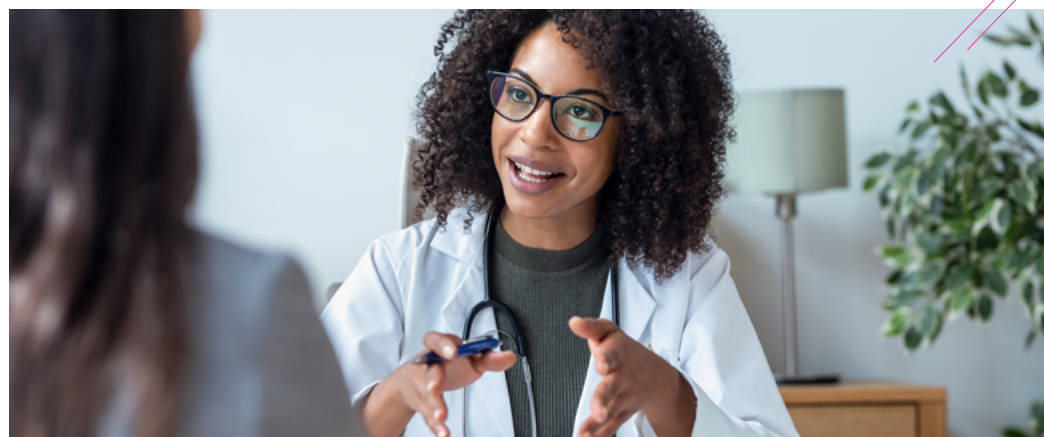


HER2-TARGETED THERAPIES

for Early Breast Cancer

Questions for my doctor.

- What are my treatment options?
- Is HER2-targeted therapy right for me?
- What are the side effects and risks of the therapy you recommend for me?
- Will my heart need to be monitored during treatment?
- Is there a clinical trial I could join?



HER2-positive breast cancer

HER2-positive breast cancers have a lot of a protein called HER2 on the surface of the cancer cells. The HER2 protein is important for cancer cell growth. HER2-negative breast cancers have little or no HER2 protein.

All breast cancers are tested for **HER2 status**. This information is part of breast cancer staging and helps guide treatment.

About 10% to 20% of newly diagnosed breast cancers are HER2-positive.

What are HER2-targeted therapies?

HER2-targeted therapies treat HER2-positive breast cancers. They are only used to treat HER2-positive breast cancers. They have no role in the treatment of HER2-negative cancers.

HER2-targeted therapy drugs for early breast cancer

Drug Name	Brand Name	Pill, injection (given under the skin) or IV (given by vein through an IV) drug
Trastuzumab	Herceptin	IV drug or injection
Pertuzumab	Perjeta	IV drug or injection
Ado-trastuzumab emtansine (T-DM1, trastuzumab emtansine)	Kadcyla	IV drug
Neratinib	Nerlynx	Pill

Other HER2-targeted therapy drugs are under study for early breast cancer treatment.

This fact sheet is intended to be a brief overview. For more information, visit [komen.org](https://www.komen.org) or call the Komen Patient Care Center's Breast Care Helpline at 1-877 GO KOMEN (1-877-465-6636) Monday through Thursday, 9 a.m. to 7 p.m. ET and Friday, 9 a.m. to 6 p.m. ET or email at helpline@komen.org. Se habla español.

HER2-TARGETED THERAPIES

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Resources

Susan G. Komen®

1-877 GO KOMEN

(1-877-465-6636)

komen.org

BreastCancerTrials.org

415-476-5777

breastcancertrials.org

Related online resources:

- [HER2-Targeted Therapy for Breast Cancer video](#)
- [Breast Cancer 101 Interactive Tool](#)
- [Clinical Trials](#)
- [Treatment Overview for Breast Cancer](#)
- [What is Breast Cancer](#)
- [Biosimilars](#)
- [Questions to Ask Your Doctor - Biosimilars](#)
- [Questions to Ask Your Doctor - HER2 Targeted Therapies for Breast Cancer](#)



How do HER2-targeted therapies work?

- Trastuzumab and pertuzumab are specially made antibodies that target HER2-positive cancer cells. When attached to the HER2 protein, these drugs can slow or stop the growth of these cancer cells.
- Ado-trastuzumab emtansine (T-DM1) is an antibody-drug conjugate. It combines the antibody drug trastuzumab and a chemotherapy drug called DM1. This combination allows the targeted delivery of the chemotherapy to HER2-positive cancer cells.
- Neratinib is a tyrosine-kinase inhibitor. This drug targets enzymes important for cell functions called tyrosine-kinase enzymes. Tyrosine-kinase inhibitors can block these enzymes at many points along the HER2 cancer growth pathway.

Side effects of targeted therapies

Unlike chemotherapy, targeted therapies only kill cancer cells with little harm to healthy cells. However, they have some possible side effects:

- Trastuzumab can cause heart problems. Your heart will be checked before and during treatment to help make sure there are no problems.
- Pertuzumab can cause diarrhea, nausea and fatigue.
- Ado-trastuzumab emtansine can cause heart and liver problems. Your heart and liver will be checked before and during treatment to help make sure there are no problems.
- Neratinib can cause diarrhea. Your doctor will recommend medications to help control the diarrhea. It can also cause nausea, vomiting, rash and fatigue.

Biosimilar forms of trastuzumab

Biosimilars are “generic-like” versions of biologic drugs that are already approved by the Federal Drug Administration (FDA). Trastuzumab is a biologic drug (it’s an antibody). There are several FDA-approved biosimilars for trastuzumab. These biosimilars are as safe and as effective as trastuzumab.

Your health care provider can tell you whether a biosimilar drug may be part of your treatment plan. If you have questions about biosimilars, talk with your doctor.

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