

Metastatic breast cancer (also called stage IV or advanced breast cancer) is cancer that has spread beyond the breast to other parts of the body (most often the bones, lungs, liver or brain). Although metastatic breast cancer has spread to another part of the body, it's still breast cancer and is treated as breast cancer.

While metastatic breast cancer can't be cured today, it can be treated. The goal is to extend life and maintain a good quality of life.

HER2 protein

About 10-20 percent of breast cancers have high amounts of a protein called HER2. HER2 is important for cell growth and survival. Tumors from the site of metastasis are biopsied and tested for HER2 status and other tumor characteristics. HER2 status is part of your pathology report and helps guide your treatment.

- HER2-positive metastatic breast cancers have a high amount of HER2 protein on the surface of the cancer cells.
- HER2-negative metastatic breast cancers have little or no HER2 protein on the surface of the cancer cells.

If you were treated for breast cancer in the past, the HER2 status of the metastasis may be different than the HER2 status of your primary breast cancer.

HER2-targeted therapies for metastatic breast cancer

HER2-positive breast cancers can be treated with HER2-targeted therapies. These therapies attach to the HER2 protein and slow or stop tumor growth, leading to cancer cell death throughout the body.

HER2-targeted therapy drugs for metastatic breast cancer are shown on the table on the next page. Some HER2-targeted therapies are specially-made antibodies. Some are a combination of an antibody drug and a chemotherapy drug (called HER2 antibody-drug conjugates). Others are a class of drugs called tyrosine-kinase inhibitors.



Your doctor will talk with you about the HER2-targeted therapy that will be included in your treatment plan. Sometimes, more than one HER2-targeted therapy is given at the same time. If the tumor has little or no HER2 (HER2-negative), no HER2-targeted treatment is given.

The HER2-targeted therapy drugs you get will depend on:

- The biology of your tumor (characteristics of the cancer cells)
- Where the cancer has spread
- Your symptoms
- Your past breast cancer treatments

Biosimilars

Biosimilars are drugs that are “highly similar” to other biologic drugs already approved by the U.S. Food & Drug Administration (FDA). The FDA-approved biosimilars for breast cancer treatment are all biosimilars to trastuzumab (Herceptin). Your doctor can tell you whether a biosimilar may be part of your breast cancer treatment plan.

Metastatic Breast Cancer: HER2-TARGETED THERAPIES

Questions for my doctor.

What are my treatment options for my HER2-positive metastatic breast cancer?

What are the side effects of my treatment?

How can side effects such as diarrhea, constipation, headache, skin changes be managed?

Is there a clinical trial I could join?

How can I learn more?

Resources

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

Related online resources:

- [Clinical Trials](#)
- [Metastatic Breast Cancer: Bone Protection](#)
- [Metastatic Breast Cancer: Quality of Life](#)
- [Metastatic Breast Cancer: Treatment Overview](#)
- [Metastatic Breast Cancer: What is it?](#)
- [Questions to Ask Your Doctor: Bone Protection](#)
- [Questions to Ask Your Doctor: Metastatic Breast Cancer](#)

Drug name	Brand name and (how given)	When treatment is used	Some possible side effects
HER2-antibody drugs			
Trastuzumab (tras-TOO-zoo-mab)	Herceptin (IV drug) Herceptin Hylecta (injection under the skin)	Treatment of HER2-positive metastatic breast cancers.	Heart problems*, headache, fever and chills
Pertuzumab (per-TOO-zoo-mab)	Perjeta (IV drug) Phesgo (injection under the skin with pertuzumab and trastuzumab)	Treatment of HER2-positive metastatic breast cancers. Not given alone, only in combination with trastuzumab.	Heart problems (due to the combination with trastuzumab)*, diarrhea, nausea, fatigue and rash
Margetuximab (MAR-jeh-TUK-sih-mab)	Margenza (IV drug)	For HER2-positive metastatic breast cancers that have already been treated with 2 or more HER2-targeted therapies (at least 1 in the metastatic setting).	Heart problems*, fatigue, headache, fever and chills
HER2-antibody drug conjugates (antibody drug plus a chemotherapy)			
Ado-trastuzumab emtansine (T-DM1) (A-doh-tras-TOO-zoo-mab em-TAN-seen)	Kadcyla (IV drug)	For HER2-positive metastatic breast cancers that have progressed on trastuzumab and a taxane-based chemotherapy.	Heart problems (due to the combination with trastuzumab)*, liver problems**, nausea, fatigue, muscle and joint pain and low platelet counts
Fam-trastuzumab deruxtecan (trastuzumab deruxtecan) (fam-tras-TOO-zoo-mab DEH-rux-TEE-kan)	Enhertu (IV drug)	For HER2-positive metastatic breast cancers that have progressed on 2 or more HER2-targeted therapies.	Heart problems (due to the combination with trastuzumab)*, lung problems***, low white blood cell counts, anemia, nausea and fatigue
Tyrosine-kinase inhibitors			
Tucatinib (too-KA-tih-nib)	Tukysa (pill)	Given alone or in combination with chemotherapy and/or other HER2-targeted. These drugs can pass through the blood-brain barrier and may be used to treat some metastatic breast cancers that have spread to the brain.	Diarrhea, nausea, vomiting and fatigue In rare cases, these drugs have been linked to liver problems**.
Neratinib (neh-RA-tih-nib)	Nerlynx (pill)		
Lapatinib (luh-PA-tih-nib)	Tykerb (pill)		
<p>*Your heart will be checked before and during treatment to help ensure there are no problems. **Your liver will be checked before and during treatment to help ensure there are no problems. ***You will be checked throughout your treatment for signs and symptoms of new or worsening breathing problems.</p>			

Other HER2-targeted therapies for metastatic breast cancer are under study. For more information about HER2-positive metastatic breast cancer, visit komen.org.

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