



## HER2 Positive Breast Cancer

HER2 stands for human epidermal growth factor receptor 2. HER2 is a gene that produces HER2 proteins, which are receptors on breast cells. These receptors are present in normal breast tissue and control how breast tissue grows and repairs itself. In some cases, there are too many HER2 receptors. This is called over-expression. These extra HER2 receptors cause breast cells to grow more rapidly and out of control, which can lead to a tumor. HER2+ breast cancers tend to grow quickly and may recur more often. About 1 out of every 5 (10-20%) breast cancers are HER2+. HER2+ breast cancer can also be [hormone receptor \(HR\) positive](#).

### How do I know if my cancer has too much HER2?

After a breast biopsy or surgery, a sample of the tumor is tested for the presence of extra HER2. The result can be found in your pathology report. There are two tests for HER2 and the results are reported differently.

- The immunohistochemistry (IHC) test looks for overexpression of the HER2 protein. The result is reported as a number from 0 to +3. Zero and +1 are considered Her 2 negative, +2 is borderline and +3 is considered Her 2 positive.
- The FISH test (or fluorescent in situ hybridization), checks the tumor for extra copies of the Her 2 gene. The result is reported as positive or negative.
- Patients with a +2 (borderline) result on IHC, should have the FISH test done to clarify if the borderline result is positive or negative.
- IHC is faster and less expensive, so it is often the first test done.
- If your breast cancer recurs, talk with your provider about re-testing your tumor. Research has shown that HER2 status can change over time. This means if you are HER2 negative, your tumor could become HER2 positive and if your tumor is HER2 negative it could become HER2 positive.

### How are HER2 positive breast cancers treated?

Once your provider knows that the cancer is HER2 positive, they can use medicines made specifically for these tumors called targeted therapy. The targeted therapy attaches to HER2 receptors on the surface of breast cancer cells. This blocks the receptors from receiving signals to grow. By blocking the signals, the tumor growth can be slowed or stopped.

- There are several targeted therapies available for the treatment of HER2+ breast cancers. They include [trastuzumab](#), [pertuzumab](#), [lapatinib](#), [neratinib](#), [ado-trastuzumab emtansine](#), and [fam-trastuzumab deruxtecan-nxki](#).
- Targeted therapy is often given along with chemotherapy and/or radiation therapy as part of the treatment plan.
- If your cancer is also hormone receptor-positive, you will also receive hormone therapy.
- In early-stage breast cancer, you will likely receive the targeted therapy for a specific amount of time. For example, one year.
- In later stage cancer, you may receive targeted therapy for as long as it is working and not causing side effects that you cannot tolerate.

### How can I manage this diagnosis?

- While the diagnosis of breast cancer may be challenging, remember there are many treatment options.
- Learn about your type of breast cancer and common treatments. This can help you ask questions at your oncology visits and feel more in control of your treatment decisions.
- Seek out support groups or peer support (online or by phone).

- All cancers are unique, and you should not compare your experience to others.

## Resources

[OncoLink's Resources for More Information: Breast Cancer.](#)

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