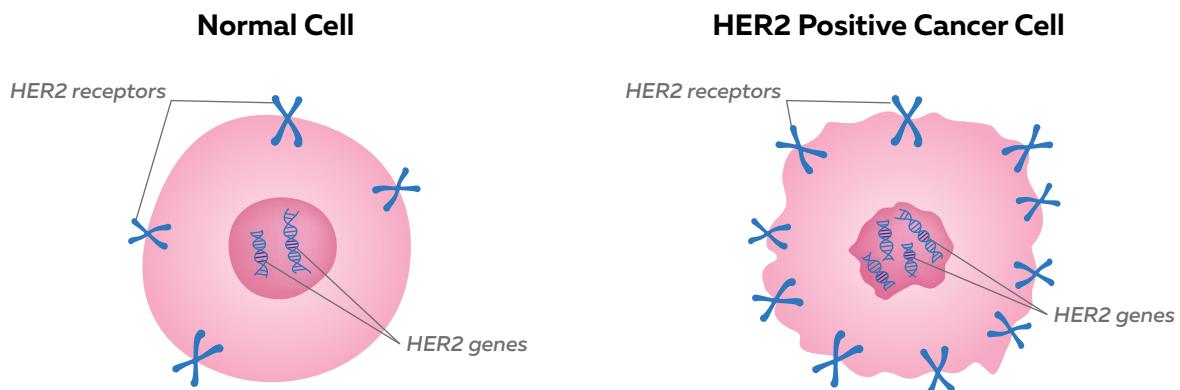


# What Is **HER2** Breast Cancer?

HER2 stands for *human epidermal growth factor receptor 2*. It is a protein that signals normal human cells to grow.

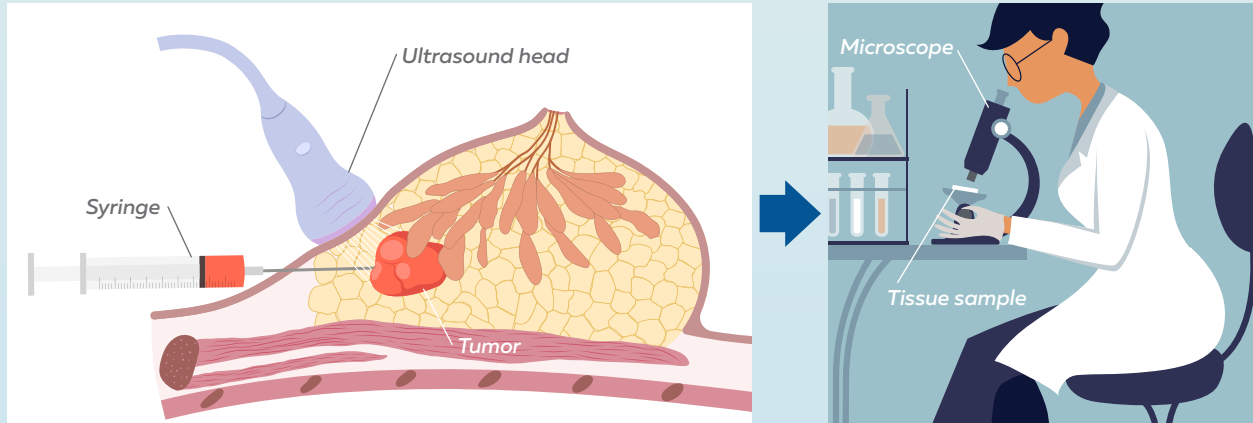
Approximately  
**15% to 20%**  
of all breast cancers are HER2 positive.

In some breast cancers, there is a mutation that makes extra copies of the gene that produces the HER2 protein. This leads to more HER2 protein being made, which promotes the breast cancer cells to grow and survive.



# How Is HER2-Positive Breast Cancer Diagnosed?

*A biopsy of the breast is performed, which means that tissue is collected from the breast. The cancer cells are then examined under a microscope.*



*There are 2 tests used to determine HER2 status:*

## Immunohistochemistry (IHC)

The cells collected from the biopsy are stained with dye so the HER2 proteins can be seen under the microscope. The test measures the amount of HER2 protein on the cancer cells. The IHC test is scored from 0 to 3+:

- **0 and 1:** Negative (it is not HER2 positive)
- **2+:** Equivocal or borderline (test result is unclear; needs further testing to determine whether it is HER2 positive)
- **3+:** Positive (it is HER2 positive)

## Fluorescence in situ hybridization (FISH)

If the IHC results are borderline (2+) or inconclusive, then a FISH test will be performed. This test uses chemicals to make the HER2 proteins glow under the microscope. This helps identify extra copies of the gene that makes the HER2 protein. These results are either positive or negative.



**Make sure you ask your doctor any questions you have about the tests and/or the diagnosis. Your doctor will also begin the conversation about treatment planning.**

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