What is prognosis?
Prognosis is the best guess of a person’s chances of survival. For breast cancer, it’s based on how well other people with a similar type and stage of breast cancer have done with the same treatment. Each person is different. Your doctor can give you some information about your prognosis, but they can’t say for sure what will happen to you.

What does my pathology report show?
If you have breast cancer, your pathology report describes your diagnosis. Either your surgeon or oncologist will go over the report with you. They can answer your questions. Ask for a copy of your report for your records.

Some of the most important findings on your pathology report(s) that help determine prognosis are:

- Tumor is non-invasive or invasive
- Tumor size
- Tumor grade
- Tumor characteristics (ex: hormone receptor and HER2 status. You may also hear these called tumor biomarkers.)

Non-invasive versus invasive

Non-invasive cancer

Ductal carcinoma in situ (DCIS) is a non-invasive breast cancer (cancer has not spread into nearby breast tissue). It’s also called stage 0. In situ [in SY-too] means “in place.” The abnormal cells are within the milk ducts (the canals that carry breast milk to the nipple during breastfeeding).

Although DCIS is non-invasive, without treatment, the abnormal cells may become invasive breast cancer over time. With treatment, prognosis for DCIS is very good.

Invasive cancer

Invasive breast cancer has spread from the milk ducts or lobules (the sacs in the breast that produce milk) into nearby breast tissue. Cancer cells may have also spread to the lymph nodes or other parts of the body. Prognosis of invasive breast cancer depends on the stage and other factors.

Tumor size

After the tumor is removed, the pathologist will measure it. In most cases, the smaller the tumor, the better the prognosis tends to be.
Tumor grade
Tumor grade is a measure of how similar tumor cells are to normal cells under a microscope. The more abnormal the cells appear, the higher the tumor grade. In general, the lower the tumor grade, the better the prognosis tends to be. Grade 1 has the best prognosis.

Characteristics of the tumor
Hormone receptor status
Some breast cancers need your body’s natural hormones estrogen (ER) and progesterone (PR) to grow. These cancer cells have proteins on the outside of their walls called hormone receptors. They catch the hormones that move through your body. When the hormones attach to these receptors, they fuel cancer growth. Breast cancer cells are tested for these receptors. If the tumor has a lot, it’s called ER and/or PR-positive breast cancer. These breast cancers are treated with hormone therapy which improves survival for people with these cancers.

HER2 status
Breast cancer cells are tested for a protein called HER2. HER2 is important for cell growth and survival. Some breast cancers have a lot of HER2 protein on the surface of their cells. These tumors are HER2-positive. They are treated with HER2-targeted therapy which improves survival for people with these cancers.

Tumors with little or no HER2 protein on the cell surface are not treated with HER2-targeted therapy.

These are just a few factors that affect prognosis and treatment. Find out more at komen.org/diagnosis.

Tumor profiling
Tumor profiling tests give information about the genes in cancer cells. Tumor profiling is used to help make treatment decisions in some people with estrogen receptor-positive cancers. It can help decide whether or not chemotherapy is needed in addition to hormone therapy. You may also hear the terms genomic testing and molecular profiling.

Breast cancer stage
Breast cancer stage is the most important factor for prognosis. Stage is not always listed in pathology reports. It comes from the results of the biopsy of the tumor tissue, any biopsies of the lymph nodes and other tests. So, you may have more than one pathology report. Your medical team combines all the information and determines the breast cancer stage. It helps plan your treatment.

Doctors use a scale to describe breast cancer stages: 0 to 4. The earlier the stage, the better the prognosis tends to be. Stage 0, 1 and 2 have a better prognosis than stage 3 and 4.

Find out more about pathology reports at komen.org/breast-cancer/diagnosis/pathology-reports/.