## What is a prognosis?

A prognosis is a prediction. It is a doctor’s best estimate of the chance that a person will live free of breast cancer. In determining prognosis, doctors consider how well other people with a similar type and stage of breast cancer have done when receiving the same treatment. However, because each person is different, your doctor cannot say for certain what will happen to you.

Some factors your doctor will consider when determining your prognosis are:

- characteristics of your cancer (for example, the type and stage)
- your age
- whether you have gone through menopause
- your general health
- how well treatment might work

## What does my pathology report show?

Breast tissue that is removed during a biopsy is studied under a microscope by a pathologist (a doctor who specializes in looking at tissue). Your pathology report shows whether or not you have cancer and, if so, what type of cancer you have. If you have cancer, your pathology report will describe several characteristics of your cancer. Make sure you ask your doctor to discuss your pathology report with you. Ask for copies of your reports and keep them for your records.

Some of the most important items you may find on your reports are described in this fact sheet.

<table>
<thead>
<tr>
<th>Type of Breast Cancer</th>
<th>Description</th>
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<tbody>
<tr>
<td>Ductal carcinoma</td>
<td>Starts in the breast ducts.</td>
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<tr>
<td>Lobular carcinoma</td>
<td>Starts in the breast lobules.</td>
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Typically, these cancers are said to be either **in situ** [in SY-too] or **invasive**. Carcinoma in situ stays “in place” where it started. It has not invaded into surrounding breast tissue, nor has it spread to other parts of the body (metastasized). Carcinoma in situ is a pre-cancerous condition and highly treatable. However, if left untreated or if not treated properly, it can develop into invasive breast cancer which could metastasize. Invasive cancer spreads from the original place where it started and grows into the nearby tissue. Other less common types of breast cancer are inflammatory, medullary, mucinous, Paget’s disease of the nipple, papillary and tubular carcinoma.

For more information, call Susan G. Komen for the Cure® at 1-877 GO KOMEN (1-877-465-6636) or visit www.komen.org.
Size and Spread
Doctors use a rating scale to describe the seriousness of each case of breast cancer. The scale includes five stages: 0, I, II, III and IV. The higher the stage, the more extensive and serious the cancer. The stage depends on:

• the size of the tumor
• whether the cancer has spread to the axillary lymph nodes (glands in the underarm)
• signs of metastasis (the cancer spreading to other parts of the body)

Your report may include the size, pattern and other features of the cancer. You will find out the stage of your cancer after surgery when your doctor is able to check whether cancer was found in your lymph nodes.

Hormone Receptor Status
Sometimes breast cancer cells have receptors for hormones and sometimes they do not. Receptors are the parts of a cancer cell that allow a hormone to attach and activate the cell. Breast cancer cells can have receptors for the hormones estrogen and progesterone together, or for either hormone alone. When this is the case, the cancer is called estrogen receptor (ER) and/or progesterone receptor (PR) positive. Women with a receptor positive cancer have a somewhat better prognosis than those without. A doctor can treat ER positive cancers with hormone therapy drugs.

HER2/neu
Tumors with high levels of HER2/neu have been linked to more aggressive types of breast cancer and possibly to resistance to certain types of chemotherapy and hormonal therapy. Tumors that overexpress HER2/neu are also effective targets for the drug, trastuzumab (Herceptin).

Histologic Grade
Histologic grade is a measure of how abnormal the cells from a tumor look under a microscope. The more the cells have changed to appear cancerous, and not like normal breast cells (histology), and the greater the percentage of the cells that are dividing, the higher the grade. Tumors are given a histologic grade of 1 to 3. Grade 1 has the best prognosis.

Proliferation Rate (Cell Division)
The rate of the cancer’s proliferation is another measure of a cancer’s aggressiveness. MIB-1 (also know as Ki-67) or S-phase fraction, terms you may see on your report, are common ways to measure proliferation. The proliferation rate describes how quickly the tumor cells are growing. When the proliferation rate is low, the cancer is growing more slowly and the prognosis is better.

Your pathology report may include additional information not described on this fact sheet. Make sure you ask your doctor to discuss your pathology report with you.

Resources
The National Cancer Institute’s Cancer Information Service — a nationwide service for cancer patients and their families and friends, the public, and health care professionals that provides cancer information, local resources and services.

1-800-4-CANCER,  www.cancer.gov

National Comprehensive Network (NCCN) — 1-888-909-6226, www.nccn.org

Susan G. Komen for the Cure®’s pathology discussion — www.komen.org

Related fact sheets in this series:
• Biopsy
• Coping With a Cancer Diagnosis
• Inflammatory Breast Cancer
• Metastatic Breast Cancer
• Types of Breast Cancer
• What is Breast Cancer?