FACTS FOR LIFE

Prognostic Factors

What is a prognosis?

A prognosis is the expected or probable outcome of a disease. 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.

Type of Breast Cancer

Breast cancer tumors are classified as non-invasive or invasive. Most breast cancer occurs in the ducts of the breast — the tubes that carry breast milk to the nipple.This breast cancer is called ductal carcinoma. A second, but less common form of breast cancer occurs in the lobules — where breast milk is made. This breast cancer is called lobular carcinoma.

Non-invasive

Non-invasive breast cancer is an abnormal growth of cells still within the area in which it started. These cancer cells have not invaded into surrounding breast tissue. Ductal carcinoma in situ (DCIS) is a non-invasive breast cancer and referred to as stage 0. In situ [in SY-too] means "in place." Although DCIS and lobular carcinoma in situ (LCIS) sound similar, LCIS is not considered breast cancer. LCIS is a risk factor for breast cancer.

Invasive cancer

When breast cancer cells spread into surrounding breast tissue from the ducts or lobules, the cancer is called invasive. This increases the chance for cancer cells to spread to the lymph nodes.

- Metastatic — Metastasis [mĕ-tăs'tă-sis] occurs when breast cancer cells break away from the breast tumor and spread to other organs of the body.

Size and Spread
Doctors use a scale to describe the stage of advancement of breast cancer. The scale includes five stages: 0, I, II, III and IV. The higher the stage, the more serious the cancer. The stage depends on:

- the size of the tumor
- whether the cancer has spread to the axillary lymph nodes (underarm lymph nodes)
- signs of metastasis (the cancer cells found in 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 hormone receptor-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 over-express HER/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 proliferation rate describes how quickly the tumor cells are growing. It can also help show how aggressive a tumor is and how likely it is to spread to other parts of the body. When the proliferation rate is low, the cancer is growing more slowly and the prognosis is better. The Ki-67 test is a common way to measure proliferation rate.

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

Resources

Susan G. Komen for the Cure®
1-877 GO KOMEN (1-877-465-6636)
www.komen.org

Susan G. Komen for the Cure®'s pathology discussion — www.komen.org/diagnosis

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

Related fact sheets in this series:

- Biopsy
- Coping With a Cancer Diagnosis
- Inflammatory Breast Cancer
- Metastatic Breast Cancer
- Types of Breast Cancer Tumors
- What is Breast Cancer?

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