Understanding the Stages of Breast Cancer

Staging is a standard term used across the medical profession to communicate how widespread or advanced the cancer is in the breast tissue and possibly other parts of your body.

If you are diagnosed with breast cancer, doctors and pathologists will examine biopsy and imaging results to determine the stage — also known as the progression — of the disease.

The process is complicated but necessary to determine the best treatment plan for your particular type of cancer. The most common staging system is the TNM (Tumor, Node, Metastasis - more on this below), which focuses on tumor size, lymph node involvement and metastatic spread of the cancer. It also factors in details related to hormone receptors, the protein HER2 and growth rate of the cells.

The staging of your tumor is utilized by doctors to explain the breadth and scope of the cancer and helps them determine how to move forward with treatment, including surgery, if needed.

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Understanding the Stages of Breast Cancer Cont.

Doctors use diagnostic tests to find out the cancer's stage, so staging may not be complete until all the tests are finished. The stage of a breast cancer is determined by the cancer's characteristics, such as how large it is and whether or not it has hormone receptors. The stage of the cancer helps you and your doctor:

- figure out your prognosis, the likely outcome of the disease
- decide on the best treatment options for you
- determine if certain clinical trials may be a good option for you

Breast cancer stage is usually expressed as a number on a scale of 0 through IV — with stage 0 describing non-invasive cancers that remain within their original location and stage IV describing invasive cancers that have spread outside the breast to other parts of the body.

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Clinical vs. Pathological Staging

Clinical staging is based on the results of tests done prior to surgery. If your biopsy comes back positive, your doctor may order additional tests to garner a better understanding if and where the cancerous cells have spread. This data gathering period may include physical examinations, mammogram, ultrasound, and MRI scans. In some cases your doctor may also order a bone or CT scans.

Pathologic staging is based on what is found during surgery to remove breast tissue and lymph nodes. While a lot of the aforementioned tests can provide your oncological team with lots of information and data points, it is not until surgery is performed whereby the surgeons can remove the tumor and possible lymph nodes in order to confirm the size of the tumor, the number of lymph node involvement, and whether or not the cancer has metastasized.

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Early Stage Breast Cancer

Early stage breast cancer refers to stages 0-III.

Stage 0

Stage 0 cancers are called “carcinoma in situ.” Carcinoma means cancer and “in situ” means “in the original place.” Types of “in situ carcinoma” include:

- DCIS – Ductal carcinoma in situ
- LCIS – Lobular carcinoma in situ
- Paget disease of the nipple

Stage I

Stage I can be divided into Stage IA and Stage IB. The difference is determined by the size of the tumor and the lymph nodes with evidence of cancer.

Understanding the Stages of Breast Cancer Cont.

Stage II

Stage II means the breast cancer is growing, but it is still contained in the breast or growth has only extended to nearby lymph nodes.

This stage is divided into groups: Stage IIA and Stage IIB. The difference is determined by the size of the tumor and whether the breast cancer has spread to the lymph nodes.

Stage III

Stage III cancer means the breast cancer has extended beyond the immediate region of the tumor and may have invaded nearby lymph nodes and muscles, but has not spread to distant organs.

This stage is divided into three groups: Stage IIIA, Stage IIIB, and Stage IIIC. The difference is determined by the size of the tumor and whether cancer has spread to the lymph nodes and surrounding tissue.

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Stage IV

In Stage IV, the cancer has spread to other organs and parts of the body beyond the breast. This stage is often referred to as metastatic breast cancer (MBC) and is more difficult to treat due to the impact on other organs. Stage IV cancer symptoms include visible swelling in the breast and armpit; dry, flaky skin; red, dimpled skin; nipple discharge; breast pain; fatigue; insomnia; loss of appetite; weight loss; shortness of breath and other symptoms related to the specific organs involved.

Although Stage IV breast cancer is not curable, it is treatable to a certain extent and current advances in research and medical technology mean that more and more women are living longer by managing the disease as a chronic illness with a focus on quality of life as a primary goal. With excellent care and support, as well as personal motivation, Stage IV breast cancer may respond to a number of treatment options that can extend one's life for several years.

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Understanding the Stages of Breast Cancer Cont.

TNM Staging System

Doctors use the TNM system to ensure that medical professionals are using the same language and system to describe the tumor.

T refers to the size of the tumor measured in centimeters and where it is located.

N refers to the number of lymph nodes which were positive for cancer. If no lymph nodes were involved, the pathology report would state N(0).

M refers to whether or not the cancer has traveled to distant part of the body such as the bones or organs. If it has spread, it will state where and how much.

As an example, stage IIB may read something like this: (T3, N0, M0) meaning the tumor is greater than 55mm and has not spread to the lymph nodes or other parts of the body.

Understanding the Stages of Breast Cancer Cont.

Updated Staging Guidelines

The American Joint Committee on Cancer (AJCC) established the way cancer is communicated. Clinicians and the surveillance community count on the AJCC for the most comprehensive anatomic staging data available, I.e., the Cancer Staging Manual and Cancer Staging Atlas.

In 2018 the AJCC updated the breast cancer staging guidelines to add other cancer characteristics to the T, N, M system to determine a cancer's stage.

In addition to knowing the stage of your cancer, breast cancer is also classified according to other characteristics. These include how sensitive it is to the hormones estrogen and progesterone as well as to the level of certain proteins that play a role in breast cancer growth, such as HER2. It is also classified by the cancer's genetic makeup.

Understanding the Stages of Breast Cancer Cont.

- Tumor Grade: a measurement of how much the cancer cells look like normal cells

- Estrogen- & Progesterone-Receptor Status: do the cancer cells have receptors for the hormones estrogen and progesterone?

- HER2 status: are the cancer cells making too much of the HER2 protein?

- Oncotype DX score, if the cancer is estrogen-receptor-positive, HER2-negative, and there is no cancer in the lymph nodes.

The above amended guidelines have helped to create and reinforce ontological/surgical treatment advances. As you can imagine Staging is a complex undertaking and these latest AJCC guidelines allow for a more cohesive and universal diagnosis and treatment options.

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