

Breast Cancer - Male - Staging

This section has been reviewed and approved by the [Cancer.Net Editorial Board \[1\]](#), April / 2010

Stages

Staging is a way of describing a cancer, such as where it is located, if or where it has spread, and if it is affecting the functions of other organs in the body. Doctors use diagnostic tests to determine the cancer's stage, so staging may not be complete until all the tests are finished. Knowing the stage helps the doctor to decide what kind of treatment is best and can help predict a patient's prognosis. There are different stage descriptions for different types of cancer.

One tool that doctors use to describe the stage is the TNM system. This system uses three criteria to judge the stage of the cancer: the size of the tumor itself, the presence of cancer in the lymph nodes around the tumor, and whether the tumor has spread to other parts of the body. The results are combined to determine the stage of cancer for each person. There are five stages: stage 0 (zero), which is non-invasive ductal carcinoma in situ (DCIS), and stages I through IV (one through four), which represent invasive breast cancer. The stage provides a common way of describing the cancer so doctors can work together to plan the best treatments.

TNM is an abbreviation for tumor (T), node (N), and metastasis (M). Doctors look at these three factors to determine the stage of cancer:

- How large is the primary tumor and where is it located? (**Tumor, T**)
- Has the tumor spread to the lymph nodes? (**Node, N**)
- Has the cancer metastasized to other parts of the body? (**Metastasis, M**)

There are two types of staging for breast cancer. First, the clinical stage is based on the results of tests done before surgery, such as a physical examination, x-rays, CT scans, and MRI tests. Then, the pathologic stage is assigned based on information found during surgery, plus the laboratory results (pathology) of the breast tissue and any lymph nodes removed during surgery. In general, more importance is placed on the pathologic stage than the clinical stage.

Tumor. Using the TNM system, the ?T? plus a letter or number (0 to 4) is used to describe the size and location of the tumor. Some stages are divided into smaller groups that help describe the tumor in even more detail.

TX: The primary tumor cannot be evaluated.

T0: There is no evidence of cancer in the breast.

Tis: Refers to *carcinoma (cancer) in situ*. In this case, the cancer is confined within the ducts and lobules of the breast tissue and has not spread into the surrounding tissue of the breast. There are three types of breast carcinoma in situ:

Tis (DCIS): DCIS is a non-invasive cancer, but if not removed it can later develop into an invasive type of breast cancer. A designation of DCIS means that cancer cells have been found in breast ducts and have not spread past the layer of tissue where they began.

Tis (LCIS): Lobular carcinoma in situ (LCIS) describes abnormal cells found in the lobules or glands of the breast. LCIS is not cancer, but it increases the risk of developing invasive breast cancer.

Tis (Paget's): Paget's disease of the nipple is a rare form of early, non-invasive cancer that is confined to the skin cells of the nipple. Sometimes Paget's disease is found to be associated with an underlying invasive breast cancer. If there is also an invasive breast cancer present, it is classified according to the stage of the invasive tumor.

T1: The invasive part of the tumor in the breast is 20 millimeters (mm) or smaller in size at its widest dimension. This stage may be broken into three substages called T1a, T1b, and T1c, depending on the size of the tumor.

T1mi: Microinvasion, or micrometastases, means a few cancer cells have spread to surrounding tissue, but none larger than 1 mm.

T2: The invasive part of the tumor is larger than 20 mm but not larger than 50 mm.

T3: The invasive part of the tumor is larger than 50 mm.

T4: The tumor has extended into the chest wall (called T4a) and/or to the skin (called T4b). If there are signs of both, it is called T4c, and [inflammatory breast cancer \[2\]](#) is referred to as T4d.

Node. The ?N? in the TNM staging system stands for lymph nodes. Lymph nodes located under the arm, above and below the collarbone, and under the breastbone are called regional lymph nodes. Lymph nodes in other parts of the body are called distant lymph nodes. If the doctor evaluates the lymph nodes before surgery, based on other tests and/or a physical examination, a letter ?c? (for ?clinical? staging) is placed in front of the ?N?. If the doctor evaluates the lymph nodes after surgery, which is a more accurate assessment, a letter ?p? (for ?pathologic? staging) is placed in front of the ?N?. The information below describes the pathologic staging.

NX: The lymph nodes cannot be evaluated.

N0: No cancer was found in the lymph nodes.

N0(i+): When very small deposits of ?isolated? tumor cells are found in a lymph node (less than 0.2 mm or less than 200 cells), the nodes are still designated N0, but an ?i+? is listed after the designation.

N1: The cancer has spread to one to three *axillary* lymph nodes under the arm. This category can include positive internal mammary lymph nodes (found under the sternum or breastbone) if detected during a sentinel lymph node procedure and not otherwise clinically detected.

N1mic: This designation is used when the cancer in the lymph nodes is greater than 0.2 mm but less than 2 mm in size (microscopic).

N2: The cancer has spread to four to nine lymph nodes under the arm (called N2a), or to clinically apparent internal mammary lymph nodes (lymph nodes under the sternum [breastbone] on the inside of the chest, called N2b) without spread to the axillary nodes.

N3: The cancer has spread to 10 or more lymph nodes under the arm or to the *infraclavicular* lymph nodes (located under the clavicle, or collarbone); this is called N3a. Or, the cancer has spread to the internal mammary nodes with axillary node involvement (N3b) or to the supraclavicular (located above the clavicle) lymph nodes (N3c).

If there is cancer in the lymph nodes, it also helps doctors to plan treatment to know how many lymph nodes are involved. The pathologist can determine the number of axillary lymph nodes affected by cancer. It is not common to remove the supraclavicular or internal mammary lymph nodes at the time of surgery. Rather, if involvement of these nodal groups is suspected or confirmed, they are included in radiation treatment fields when planning treatment.

Distant metastasis. The ?M? in the TNM system indicates whether the cancer has spread to other parts of the body.

MX: Distant spread cannot be evaluated.

M0: The disease has not metastasized.

M0 (i+): There is no clinical or radiographic evidence of distant metastases, but microscopic evidence of tumor cells are found in the blood, bone marrow, or other lymph nodes that are no larger than 0.2 mm in a patient without other evidence of metastases.

M1: There is metastasis to another part of the body.

Cancer stage grouping

Doctors assign the stage of the cancer by combining the T, N, and M classifications.

Stage 0: Stage zero (0) describes disease that is confined within the ducts and lobules of the breast tissue and has not spread into the surrounding tissue of the breast. It is also called noninvasive cancer (Tis, N0, M0).

Stage IA: The tumor is small, invasive, and has not spread to the lymph nodes (T1, N0, M0).

Stage IB: The tumor is confined within the ducts and lobules of the breast tissue and has not spread into the surrounding tissue of the breast, or it is smaller than 20 mm, with microscopic spread to the lymph nodes (T0 or T1, N1mic, M0).

Stage IIA: Any one of these conditions:

- There is no evidence of a tumor in the breast, but the cancer has spread to the axillary lymph nodes but not to distant areas of the body. (T0, N1, M0).
- The tumor is 20 mm or smaller and has spread to the axillary lymph nodes (T1, N1, M0).
- The tumor is larger than 20 mm but not larger than 50 mm and has not spread to the axillary lymph nodes (T2, N0, M0).

Stage IIB: Any one of these conditions:

- The tumor is larger than 20 mm but not larger than 50 mm and has spread to one to three axillary lymph nodes (T2, N1, M0).
- The tumor is larger than 50 mm but has not spread to the axillary lymph nodes (T3, N0, M0).

Stage IIIA: This stage describes a cancer of any size that has spread to four to nine axillary lymph nodes, but not to other parts of the body (T0, T1, T2 or T3, N2, M0). Stage IIA may also be a tumor larger than 50 mm that has spread to one to three lymph nodes (T3, N1, M0).

Stage IIIB: The tumor has spread to the chest wall or caused swelling or ulceration of the breast or is diagnosed as inflammatory breast cancer [2]. It may or may not have spread to the lymph nodes under the arm, but it has not spread to other parts of the body (T4; N0, N1 or N2; M0).

Stage IIIC: A tumor of any size that has not spread to distant parts of the body but has spread to 10 or more axillary lymph nodes or the lymph nodes in the N3 group (any T, N3, M0).

Stage IV (metastatic): The tumor can be any size and has spread to distant sites in the body, usually the bones, lungs or liver, or chest wall (any T, any N, M1). Metastatic cancer spread is found at the time of breast cancer diagnosis about 5% to 6% of the time. Most commonly, metastatic breast cancer is the result of a recurrence many months to years following the original cancer diagnosis and treatment.

Recurrent: Recurrent cancer is cancer that comes back after treatment.

Used with permission of the American Joint Committee on Cancer (AJCC), Chicago, Illinois. The original source for this material is the AJCC Cancer Staging Manual Seventh Edition (2010) published by Springer-Verlag New York, www.cancerstaging.net[3].

Links:

- [1] <http://www.cancer.net/about-us>
- [2] <http://www.cancer.net/node/18576>
- [3] <http://www.cancerstaging.net>