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Stages of Cancer

Approved by the Cancer.Net Editorial Board (http://www.cancer.net/about-us/cancernet-editorial-board) **, 02/2021**
Staging is a way to describe a cancer. The cancer's stage tells you where a cancer is located and its size, how far it has grown into nearby tissues, and if it has spread to nearby lymph nodes or other parts of the body. Before starting any cancer treatment, doctors may use physical exams, imaging scans, and other tests to determine a cancer's stage. Staging may not be completed until all the tests are finished.

RECOMMENDED FOR YOU

Cancer Stage: 5 Important Reasons to Know Yours

(https://www.cancer.net/blog/2018-04/cancer-stage-5-important-reasons-know-yours)

Diagnosing Cancer

(https://www.cancer.net/navigating-cancer-care/diagnosing-cancer)

What is Cancer?

(https://www.cancer.net/navigating-cancer-care/cancer-basics/what-cancer)
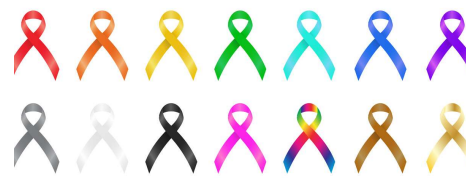
Why does cancer stage matter?

Staging helps your doctor plan the best treatment. This may include choosing a type of surgery and whether or not to use chemotherapy or radiation therapy. Knowing the cancer stage lets your entire health care team talk about your diagnosis in the same way.

Doctors can also use staging to:

- Understand the chance that the cancer will come back or spread after the original treatment.
- Help forecast the prognosis, which is the chance of recovery
- Help determine which cancer clinical trials may be open to you.
- See how well a treatment worked
- Compare how well new treatments work among large groups of people with the same diagnosis

When is cancer staging done?

Staging of a cancer can be done at different times in a person's medical care. Here are some information on when and how staging is done. You will notice that these descriptions refer to the "TNM category." This refers to the TNM system of cancer staging, which is explained in more detail further in this article.

Clinical staging. Clinical staging is staging that is done before any treatment begins. Your doctor uses information from physical exams, your medical history, and any x-rays, imaging, scans, or diagnostic tests that you had. They will also use the results of any **biopsy** (http://www.cancer.net/node/24406) that has been done of the cancer, lymph nodes, or other tissue. Clinical staging helps you and your doctor plan the initial steps in your treatment. Clinical staging is indicated with a small "c" before the TNM category.

Pathological staging. Pathological staging is based on the same information as clinical staging, plus any new information gained during surgery if surgery was the first treatment for the cancer. Pathological staging is indicated with a small "p" before the TNM category.

very important to help plan initial treatment, but pathological staging or post-therapy staging give the most information. This can help your health care team understand your prognosis.

What is the TNM staging system for cancer?

Doctors use the TNM staging system for most types of cancer. The TNM system uses letters and numbers to describe the tumor (T), lymph nodes (N), whether or not the cancer has spread or metastases (M). Each letter and number tell you something about the cancer. The specific definitions for each category are different for each type of cancer that is staged using this system. Learn more specific staging information for each **type of cancer** (https://www.cancer.net/cancer-types).

Tumor (T): The letter T and the number after it describe the tumor by answering these questions:

- How large is the primary tumor?
- Does it go into other tissues or organs in the same area?
- Where is it located?

The letter T is followed by a letter, number, or combination of letters after it. This gives additional information about the tumor. The different letters and numbers that may see include:

- **TX** means that there is no information about the tumor or it cannot be measured.
- **T0** means that there is no evidence of a tumor.
- **Tis** refers to a tumor "in situ." This means that the tumor is only found in the cells where it started. It has not spread to any surrounding tissue.
- **T1-T4** describe the size and location of the tumor, on a scale of 1 to 4. A larger tumor or a tumor that has grown deeper into nearby tissue will get a higher number.

For some types of cancer, the T stage can be broken down into subcategories for even more detail. This is noted with a lowercase letter, like an "a" or "b", such as "T2b". What these letters mean depends on the type of cancer. A lowercase "m" can also be used to show that there are multiple tumors.

Node (N): The letter N and the number after it describe if cancer has affected the lymph nodes. The lymph nodes are small, bean-shaped organs that help fight infection. They are a common spot where cancer first spreads. This part of the staging system answers these questions:

- Has the tumor spread to the lymph nodes?
- If so, which lymph nodes and how many?

Lymph nodes near where the cancer started are called regional lymph nodes. Lymph nodes in other parts of the body are called distant lymph nodes. The N category only refers to lymph nodes near the cancer (regional lymph nodes). Distant lymph nodes elsewhere in the body are included in the "M" category (see below).

After the letter N, there will be a number from 0 (zero) to 3. N0 means there are no lymph nodes with cancer. Most often, the more lymph nodes with cancer, the larger the number. But for some tumors, the location of the lymph nodes with cancer may determine the "N" category.

Metastasis (M): The letter M and the number after it describes if the cancer has spread. It answers these questions:

- Has the cancer spread to other parts of the body?
- If so, where and how much?

If cancer has not spread, the stage is M0. If the cancer has spread to other parts of the body, it is stage M1.

What other factors are used in cancer staging?

For some cancer types, factors other than the TNM categories can be included in the cancer's stage. They may include:

Grade. The grade describes how much cancer cells look like healthy cells. A pathologist will look at the cancer cells under a microscope. A pathologist is a doctor who specializes in evaluating cells, tissues, and organs to diagnose disease. They will compare the cancer tissue with healthy tissue. Healthy tissue often contains many types of cells groups together.

If the cancer looks like healthy tissue and has different cell groupings, it is called a differentiated or a low-grade tumor. If the cancer looks

help doctors choose the best treatment. For some cancers, certain tumor markers may be more helpful for staging than treatment planning. Learn more about **testing for biomarkers** (http://www.cancer.net/node/24730) .

Tumor genetics. Researchers have found ways to figure out the genes involved in many types of cancer. These genes may help predict if a cancer will spread or what treatments will work best. This information may help doctors target treatment to each person's cancer. Learn more about **personalized and targeted therapies** (http://www.cancer.net/node/30686) .

What is cancer stage grouping?

The information collected to determine the TNM stage is used to give a cancer stage specific to you. Most types of cancer have four stages: stage I (1) to IV (4). Some cancers also have a stage 0 (zero). Here is a general description of cancer stage groupings. (Please see **the guide for a specific type of cancer** (https://www.cancer.net/cancer-types) for details about its detailed staging system.)

- **Stage 0.** This stage describes cancer in situ. In situ means "in place." Stage 0 cancers are still located in the place they started. They have not spread to nearby tissues. This stage of cancer is often curable. Surgery can usually remove the entire tumor.
- **Stage I.** This stage is usually a cancer that has not grown deeply into nearby tissues. It also has not spread to the lymph nodes or other parts of the body. It is often called early-stage cancer.
- **Stage II and Stage III.** In general, these 2 stages are cancers that have grown more deeply into nearby tissue. They may have also spread to lymph nodes but not to other parts of the body.
- **Stage IV.** This stage means that the cancer has spread to other organs or parts of the body. It may be also called advanced or metastatic cancer.

What is cancer restaging?

The stage of a cancer given at the time of diagnosis and initial treatments does not change. This is so doctors can understand a person's medical progress, help understand the prognosis, and learn how treatment affects many people.

However, if the cancer comes back or spreads, restaging can be done. This is described with a small "r." For example, rN1 is restaging of the lymph nodes. Usually some of the same tests that were done when the cancer was first diagnosed will be done again. After this, the doctor can assign the cancer a restage or "r stage."

What other staging systems are there?

The TNM staging is mainly used to describe cancers that form solid tumors, such as breast, colon, and lung cancers. Doctors use other staging systems to classify other types of cancer, such as:

- **Central nervous system tumors (brain tumors).** Cancerous brain tumors do not normally spread outside the brain and spinal cord. Therefore, only the "T" description of the TNM system applies. No single staging system exists for central nervous system tumors. Learn more about **brain tumor staging and prognostic factors** (http://www.cancer.net/node/18568) .
- **Childhood cancers.** The TNM system does not include childhood cancers. Doctors stage most childhood cancers using systems that are specific to that cancer.
- **Blood cancers.** The TNM system does not describe blood cancers, such as leukemia, lymphoma, or multiple myeloma. That is because they usually do not form solid tumors. Each blood cancer has its own staging system.

Questions to ask the health care team

- What tests will I need to have to determine my cancer's stage?
- What is the stage of the cancer that I have? What does this mean?
- How did you determine the cancer's stage?
- What is the cancer's grade?
- Does the tumor have any genetic mutations?
- Are biomarkers used in determining the stage of my cancer or in defining my treatment? If so, what are those biomarkers, what are the results, and what does that mean?
- What does the stage, grade, and biomarker testing mean for my treatment plan or my prognosis?

Related Resources

Cancer Stage: 5 Important Reasons to Know Yours (http://www.cancer.net/node/37381)