**What is the doctor looking for when staging cancer?**

Doctors look for the primary cancer (the original tumor) and also check for other tumors. They will look at the size, number, and location of any tumors, to see if the cancer has spread far away. Doctors use staging information to plan treatment and to help predict a person’s outlook (prognosis). Cancers with the same stage tend to have similar outlooks and are often treated the same way. The cancer stage is also a way for doctors to describe the extent of the cancer when they talk with each other about a person’s cancer.

Doctors also look at nearby lymph nodes, to find out if cancer has spread into them. Lymph nodes are small bean-shaped collections of immune system tissue found along lymphatic vessels. They remove cell waste, germs, and other harmful substances from lymph. They help fight infections and also have a role in fighting cancer, but cancers can spread through them.

**The TNM system**

The American Joint Committee on Cancer (AJCC) and the International Union for Cancer Control (UICC) maintain the *TNM classification system* as a tool for doctors to stage different types of cancer based on certain standards. It’s reviewed every 6 to 8 years to include advances in our understanding of cancer.

In the TNM system, each cancer is assigned a letter or number to describe the tumor, node, and metastases.

* **T** stands for **t**umor. It’s based on the size of the original (primary) tumor and whether it has grown into nearby tissues
* **N** stands for **n**ode. It tells whether the cancer has spread to the nearby lymph nodes
* **M** stands for **m**etastasis. It tells whether the cancer has spread to distant parts of the body

The **T** category describes the original (primary) tumor. The tumor size is usually measured in centimeters or cm (2½ cm = about 1 inch) or millimeters or mm (10 mm = 1 cm).

* **TX** means the tumor can’t be measured.
* **T0** means there is no evidence of primary tumor (it cannot be found).
* **Tis** means that the cancer cells are only growing in the most superficial layer of tissue, without growing into deeper tissues. This may also be called *in situ*cancer or *pre-cancer.*
* Numbers after the T –**T1, T2, T3, and T4** – describe the tumor size and/or amount of spread into nearby structures. The higher the T number, the larger the tumor and/or the more it has grown into nearby tissues.

The **N**category describes whether the cancer has spread into nearby lymph nodes.

* **NX**means the nearby lymph nodes cannot be evaluated.
* **N0** means nearby lymph nodes do not contain cancer.
* Numbers after the N –**N1, N2, and N3** – describe the size, location, and/or the number of lymph nodes involved. The higher the N number, the more lymph nodes there are that contain cancer.

The **M** category tells whether there are distant metastases (spread of cancer to other parts of body).

* **MX**means metastasis can’t be evaluated.
* **M0** means that no distant cancer spread was found.
* **M1** means that the cancer has spread to distant organs or tissues (distant metastases were found).

Each cancer type has its own version of this classification system, so letters and numbers don’t always mean the same thing for every kind of cancer. For example, in some types of cancer T1 means the tumor is smaller than a centimeter, but in another type a T1 may be up to 2 centimeters. In still another cancer type, T may tell how far the cancer has invaded into the layers of tissue.

Some cancer types also have special groupings that are different from other cancer types. For instance, for some cancers, classifications may have subcategories, such as T3a and T3b, while others may not have an N3 category.

**Stage grouping**

Once the values for T, N, and Mhave been determined, they are combined, and an overall stage is assigned. For most cancers, the stage is a Roman numeral from I to IV, where stage IV (4) is the highest and means more cancer is present than in the lower stages. Sometimes stages are subdivided as well, using letters such as A and B.

For instance, a T1, N0, M0 breast cancer would mean that the primary breast tumor is less than 2 cm across (T1), does not have lymph node involvement (N0), and has not spread to distant parts of the body (M0). This would make it a stage I cancer. A T3, N1, M1 breast cancer, on the other hand, would be a stage IV cancer. In this case the tumor would be more than 50mm (2 inches) across (T3), it would have spread to nearby lymph nodes (N1), and the cancer would have also been found in another part of the body (M1).

Stage 0 is *carcinoma in situ* for most cancers. This means the cancer is at a very early stage, is only in the area where it first developed, and has not spread. Not all cancers have a stage 0.

Stage I cancers are the next least advanced and often have a good prognosis (outlook for survival). As the stage number goes up the cancers are more advanced (bigger and more widespread). The outlook is usually not as good as it is for the lower stages, but most of these cancers can still be treated.

**A cancer’s stage does not change**

An important point some people have trouble understanding is that the stage of a cancer does not change over time, even if the cancer progresses. A cancer that comes back or spreads is still referred to by the stage it was given when it was first found and diagnosed—information about the current extent of the cancer is added to it.

For example, let’s say a woman was first diagnosed with stage II breast cancer and the cancer went away with treatment. But then it came back with spread to the bones. The cancer is still called a stage II breast cancer, now with recurrent disease in the bones. If the breast cancer did not respond to treatment and spread to the bones it’s called a stage II breast cancer with bone metastasis. In either case, the original stage does not change and it’s*not* called a stage IV breast cancer. A stage IV breast cancer refers to a cancer that has already spread to a distant part of the body when it’s first diagnosed. A person keeps the same diagnosis stage, but more information is added to the diagnosis to explain the current state of the disease.

This is important to understand because survival statistics and information on treatment by stage for specific cancer types refer to the stage when the cancer was first diagnosed. The survival statistics related to stage II breast cancer that has recurred in the bones may not be the same as the survival statistics for stage IV breast cancer.

At some point you may hear the term “restaging.”Restaging is the term sometimes used fordoing tests to find the extent of the cancer after treatment. This is rarely done, but it may be used to measure the cancer’s response to treatment or to assess cancer that has come back (recurred) and will need more treatment. Often this involves the same tests that were done when the cancer was first diagnosed: physical exams, imaging tests, biopsies, and maybe surgery. After these tests a new stage may be assigned. It’s written with a lower-case “r” before the new stage to note that it’s different from the stage at diagnosis. The original stage at diagnosis always stays the same. While testing to see the extent of cancer is common during and after treatment, actually assigning a new stage is rarely done, except in clinical trials.

**References**

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