Sarcoma - Stages

This section has been reviewed and approved by the Cancer.Net Editorial Board [1], January / 2013

Stages

ON THIS PAGE: You will learn about how doctors describe a cancer?s growth or spread. This is called the stage. To see other pages, use the menu on the side of your screen.

Staging is a way of describing where the cancer is located, if or where it has spread, and whether 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 (chance of recovery). There are different stage descriptions for different types of cancer.

There are a number of systems used to find out the stage of sarcoma. These systems are somewhat different from each other, but all use an overall stage to help predict a person?s prognosis.

One tool that doctors use to describe the stage of common cancers is known as the TNM system. This system judges three factors: the tumor itself, the lymph nodes around the tumor, and if the tumor has spread to the rest of the body. The results are combined to determine the stage of cancer for each person. There are four stages: stages I through IV (one through four). 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)**
  Important note: Most sarcomas (except for rare exceptions, such as epithelioid sarcoma, some subtypes of rhabdomyosarcoma, and clear cell sarcoma) do not spread to lymph nodes, so surgeons do not often remove and test lymph nodes for most types of sarcoma.
- Has the cancer metastasized to other parts of the body? **(Metastasis, M)**

When staging sarcoma, another factor, **grade (G)**, is added to the TNM system. This is different than staging for many other types of cancer.

Tumor. Using the TNM system, the "T" plus a number (0 to 2) and letter (a or b) is used to describe the size and location of the tumor. The tumor (T) is further described by its depth. The tumor depth is described as either superficial (the tumor is above the body's superficial tissue) or deep (the tumor is either beneath the body's superficial tissue or invades the deep tissue). Specific tumor stage information is listed below.

TX: The primary tumor cannot be evaluated.

T0: There is no evidence of a primary tumor.

T1: The size of the tumor is 5 centimeters (cm) or smaller.

- **T1a:** The tumor is superficial.
- **T1b:** The tumor is deep.

T2: The size of the tumor is larger than 5 cm.

- **T2a:** The tumor is superficial.
- **T2b:** The tumor is deep.

Node. The "N" in the TNM staging system stands for lymph nodes, the tiny, bean-shaped organs located all over the body that normally help fight infections and cancer as part of the body's immune system. 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. As noted above, lymph node involvement is unusual for soft tissue sarcoma.

NX: The regional lymph nodes cannot be evaluated.

N0: The cancer has not spread to the regional lymph nodes.

N1: The cancer has spread to the regional lymph nodes.

Metastasis. The "M" in the TNM system indicates whether the cancer has spread to other parts of the body.

M0: The cancer has not metastasized.

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

Grade (G). The grade for sarcoma describes how aggressive a tumor is and how likely it is to grow and spread. A tumor's grade is described using the letter ?G? and a number. There are four grades for sarcoma: GX (the grade cannot be evaluated), G1, G2, and G3. The grade is determined by calculating a score based on the following factors:

- How different the cancer cells are from normal tissue cells
- How many tumor cells are dividing
- How much of the tumor has cells that are dying

The lower the combined score for these three factors, the lower the grade, meaning that the tumor is less aggressive and a patient?s prognosis is better. This is the recommended grading system, but there are others that may also be used. For instance, some doctors grade sarcomas as either ?low grade? or ?high grade,? particularly if the tumor has been treated before surgery.

Cancer stage grouping

Doctors assign the stage of the cancer by combining the T, N, and M classifications, along with G. For sarcoma, stages I and II are described in smaller groups according to the tumor's depth.

Stage IA: The tumor is 5 cm or less in size, and either superficial or deep. It has not spread to lymph nodes or to other parts of the body (T1a or T1b, N0, M0, GX or G1).

Stage IB: The tumor is more than 5 cm in size, and either superficial or deep. It has not spread to lymph nodes or to other parts of the body (T2a or T2b, N0, M0, GX or G1).

Stage IIA: The tumor is 5 cm or less in size, and either superficial or deep. It has not spread to lymph nodes or to other parts of the body. The grade is higher than the grade for stage IA (T1a or T1b, N0, M0, G2 or G3).

Stage IIB: The tumor is more than 5 cm in size, and either superficial or deep. It has not spread to lymph nodes or to other parts of the body. The grade is higher than the grade for stage IB (T2a or T2b, N0, M0, G2).

Stage III: This stage can be described by either of the following:

- The tumor is more than 5 cm in size, and either superficial or deep. It has not spread to lymph nodes or to other parts of the body. The grade is higher than the grade for stage IIB (T2a or T2b, N0, M0, G3).
- The tumor is any size, either superficial or deep, or any grade. It has spread to the regional lymph nodes but not to other parts of the body (any T, N1, M0, any G).

Stage IV: The tumor is any size, either superficial or deep, any grade, and may or may not have spread to the regional lymph nodes. It has spread to other parts of the body (any T, any N, M1, and any G).

This staging system applies to most types of soft tissue sarcoma except Kaposi sarcoma [2], GIST [3], and infantile fibrosarcoma. Also excluded from this staging system are sarcomas that begin in the central nervous system [4] (including the brain or the lining around the brain and spinal cord), and sarcomas that begin in an organ or a hollow organ, such as the bowel or urinary tract.

Recurrent: Recurrent cancer is cancer that comes back after treatment. If there is a recurrence, the cancer may need to be staged again (called re-staging) using the system above.

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* [5].

Information about the cancer?s stage will help the doctor recommend a treatment plan. The next section helps explain the treatment options for this type of cancer. Use the menu on the side of your screen to select Treatment Options, or you can select another section, to continue reading this guide.

Links:
[1] http://www.cancer.net/about-us
[2] http://www.cancer.net/node/18956
[3] http://www.cancer.net/node/18870
[4] http://www.cancer.net/node/18660
[5] http://www.cancerstaging.net