

Ovarian Cancer - Stages and Grades [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 05/2013

ON THIS PAGE: You will learn about how doctors describe a cancer's growth or spread. This is called the stage. In addition, this section covers grading which describes the difference between cancerous tissue and healthy tissue. 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 other parts of the body. Doctors use diagnostic tests to determine the cancer's stage, so staging may not be complete until all of 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 and treatment recommendations may vary among these cancers despite them being of the same stage.

One tool that doctors use to describe the stage is the TNM system. 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**)

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.

Here are more details on each part of the TNM system for ovarian cancer:

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 also divided into smaller groups that help describe the tumor in even more detail. Specific tumor stage information is listed below.

TX: The primary tumor cannot be evaluated.

T0 (T plus zero): There is no tumor in the ovary.

T1: The tumor is limited to one or both ovaries.

T1a: The tumor is contained within one ovary. No part of the tumor has spread to the surface of the ovary, and no cancer cells are found in the abdominal fluid.

T1b: There are encapsulated (self-contained) tumors in both ovaries, but no tumor is touching an ovarian surface. No cancer cells are found in the abdominal fluid.

T1c: The tumor is in one or both ovaries, but the capsule has ruptured (burst), or the tumor has spread to the ovarian surface, or cancer cells are found in the abdominal fluid.

T2: The tumor involves one or both ovaries and has spread into the pelvis.

T2a: The tumor has grown into the uterus and/or fallopian tubes, but no cancer cells are found in the abdominal fluid.

T2b: There is cancer in other pelvic tissue, but no cancer cells are found in the abdominal fluid.

T2c: The tumor has grown into the pelvic area, such as in T2a or T2b, but cancer cells also are detected in the abdominal fluid.

T3: The tumor involves one or both ovaries and has spread microscopically (cancerous cells can be seen when tissue or fluid sample is viewed under a microscope) into the abdominal area outside the pelvis or has spread to pelvic lymph nodes.

T3a: Microscopic metastasis is in the peritoneal area (the tissue that lines the abdominal wall and covers most of the organs in the abdomen) beyond the pelvis.

T3b: Metastasis measuring 2 centimeters (cm) (a little less than one inch), or smaller is discovered outside the pelvis.

T3c: Metastasis larger than 2 cm is in areas outside the pelvis and/or the cancer has spread to the regional nodes (pelvic or paraortic) lymph nodes.

Node. The "N" in the TNM staging system stands for the lymph nodes, the tiny, bean-shaped organs that help fight infection. Lymph nodes in the pelvis are called regional nodes. Lymph nodes in other parts of the body are called distant lymph nodes.

NX: The regional lymph nodes cannot be evaluated.

N0 (N plus zero): No cancer was found in the regional lymph nodes.

N1: The cancer has spread to the regional nodes (pelvic or paraortic) lymph nodes. T3, T3a, and N1 are sometimes used interchangeably.

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

MX: Distant metastasis cannot be evaluated.

M0 (M plus zero): There is no cancer beyond the peritoneal area.

M1: The cancer has spread beyond the peritoneal area.

Cancer stage grouping

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

Stage I: This stage describes cancer that is located only in the ovaries (T1, N0, M0).

Stage IA: The cancer is encapsulated and is located in only one ovary with no spread to pelvic lymph nodes or other parts of the body (T1a, N0, M0).

Stage IB: The cancer is encapsulated and is located in both ovaries with no spread to pelvic lymph nodes or other parts of the body (T1b, N0, M0).

Stage IC: The cancer is in one or both ovaries with either a ruptured capsule or tumor spread to the ovarian surface or cancerous cells in the abdominal fluid (T1c, N0, M0).

Stage II: The cancer is in one or both ovaries and has grown into the pelvis (T2, N0, M0).

Stage IIA: The cancer has grown into the uterus or fallopian tubes, but not to the pelvic lymph nodes or distant organs (T2a, N0, M0).

Stage IIB: The cancer has spread to other pelvic tissue, but not to lymph nodes or distant organs (T2b, N0, M0).

Stage IIC: The cancer has spread into the pelvic area and is shedding cancer cells into the abdominal fluid (T2c, N0, M0).

Stage III: The cancer is located in one or both ovaries and the pelvis and has spread into the peritoneum (T3, N0, M0).

Stage IIIA: The cancer has spread microscopically throughout the pelvis (T3, N0, M0).

Stage IIIB: The cancer has spread into the peritoneal area with areas of tumor growth that are 2 cm or smaller (T3b, N0, M0).

Stage IIIC: This stage describes any cancer that has spread into the peritoneal area with areas of tumor growth larger than 2 cm (T3c, N0, M0). Or, the cancer has spread to the lymph nodes in the retroperitoneal or inguinal areas (any T, N1, M0).

Stage IV: This stage describes any cancer that has spread to distant organs (any T, any N, M1).

Recurrent cancer and retreatment staging. Recurrent cancer is cancer that has come back after treatment. If there is a recurrence, the cancer will be reevaluated (see [Diagnosis \[3\]](#)) and there may be more biopsies. Ovarian cancer reassessments usually include diagnostic imaging (such as CT scan, PET/CT scan, MRI, or ultrasound) and blood work (such as CA-125). Occasionally, it may include surgery, such as laparoscopy, in which a doctor inserts a thin, lighted, scope to look inside the peritoneal area to check for recurrent disease. The goal of these procedures is to establish a diagnosis and to start treatment planning for recurrent disease care. See the [Treatment Options \[4\]](#) section for more about the treatment of recurrent ovarian cancer.

Grade

In addition to the TNM system, an ovarian tumor can also be described by grade (G), which is how similar the tumor tissue is to normal tissue. Tumor grade is determined by examining the tumor tissue under a microscope. Cells that appear healthy are called well-differentiated. In general, the more differentiated the ovarian tumor, the better the prognosis.

However, a specific type of epithelial ovarian cancer called serous ovarian cancer is not graded this way and only considers a Low-grade and a High-grade classification, which is not necessarily the same as G1 and G2-3. They are specific histologies that also have a different biology and natural history.

GX: The grade cannot be evaluated.

GB: The tissue is considered borderline cancerous. This is commonly called low malignant potential (LMP).

G1: The tissue is well-differentiated (contains many healthy-looking cells).

G2: The tissue is moderately differentiated (more cells appear abnormal than healthy).

G3 to G4: The tissue is poorly differentiated or undifferentiated (all or most cells appear abnormal).

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/cancer-types/ovarian-cancer/stages-and-grades>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/19486>

[4] <http://www.cancer.net/node/19488>

[5] <http://www.cancerstaging.net/>