

Kidney Cancer - Staging With Illustrations [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 06/2014

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 other parts of the body. Doctors use diagnostic tests to find out 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, which is the chance of recovery. There are different stage descriptions for different types of cancer.

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 five stages: stage 0 (zero) and stages I through IV (one through four), although stage 0 kidney cancer is extremely rare. The stage provides a common way of describing the cancer so doctors can work together to plan the best treatments.

It is important for doctors to learn as much as possible about the tumor because this information can help them predict if the cancer will grow and spread or how it will respond to treatment. This information includes:

- Cell type
- Grade, which describes how similar the cancer cells are to healthy cells
- Presence of specific proteins on the cancer cells, such as carbonic anhydrase IX
- Personal information, such as the person's activity level and weight loss
- Presence or absence of fevers, sweats, and other symptoms

Here are more details on each part of the TNM system for kidney 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. This helps the doctor develop the best treatment plan for each patient. If there is more than one tumor, the lowercase letter "m" (multiple) is added to the "T" stage category. Specific tumor stage information for kidney cancer is listed below.

TX: The primary tumor cannot be evaluated.

T1: The tumor is found only in the kidney and is 7 centimeters (cm) or smaller at its largest area. There has been much discussion among doctors about whether this classification should only include a tumor 5 cm or smaller.

T1a: The tumor is found only in the kidney and is 4 cm or smaller at its largest area.

T1b: The tumor is found only in the kidney and is between 4 cm and 7 cm at its largest area.

T2: The tumor is found only in the kidney and is larger than 7 cm at its largest area.

T2a: The tumor is only in the kidney and is more than 7 cm but not more than 10 cm at its largest area.

T2b: The tumor is only in the kidney and is more than 10 cm at its largest area.

T3: The tumor has grown into major veins or perinephric tissue, the connective, fatty tissue around the kidneys. However, it has not grown into the adrenal gland on the same side of the body as the tumor. The adrenal glands are located on top of each kidney and produce hormones and adrenaline to help control heart rate, blood pressure, and other body functions. In addition, the tumor has not spread beyond Gerota's fascia, an envelope of tissue that surrounds the kidney.

T3a: The tumor has spread to the large vein leading out of the kidney, called the renal vein, or the muscles of the vein, or it has spread to the fat surrounding the kidney and/or the fat inside the kidney. The tumor has not grown beyond Gerota's fascia.

T3b: The tumor has grown into the large vein leading out of the heart, called the vena cava, below the diaphragm, the muscle under the lungs that helps breathing.

T3c: The tumor has spread to the vena cava above the diaphragm or the walls of the vena cava.

T4: The tumor has spread to areas beyond Gerota's fascia and extends into the adrenal gland on the same side of the body as the tumor.

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

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 regional lymph nodes.

Distant metastasis. The "M" in the TNM system indicates whether the cancer has spread to other parts of the body. Common areas where kidney cancer may spread include the bones, liver, lungs, brain, and distant lymph nodes.

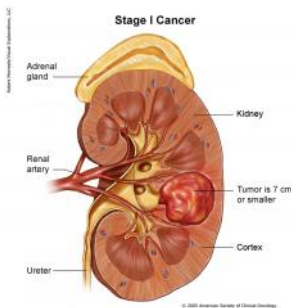
M0: The disease has not metastasized.

M1: The cancer has spread to other parts of the body beyond the kidney area.

Cancer stage grouping

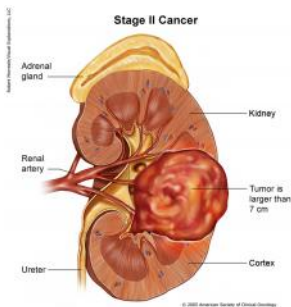
Doctors assign the stage of the cancer by combining the T, N, and M classifications.

Stage I: The tumor is 7 cm or smaller and is only located in the kidney. It has not spread to the lymph nodes or distant organs (T1, N0, M0).



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Stage II: The tumor is larger than 7 cm and is only located in the kidney. It has not spread to the lymph nodes or distant organs (T2, N0, M0).

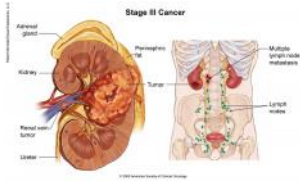


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Stage III: Either of these conditions:

- A tumor of any size is located only in the kidney. It has spread to the regional lymph nodes but not to other parts of the body (T1, T2; N1; M0).
- The tumor has grown into major veins or perinephric tissue and may or may not have spread

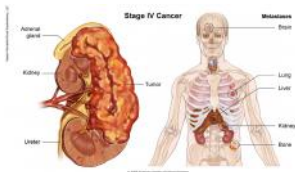
to regional lymph nodes. It has not spread to other parts of the body (T3; any N; M0).



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Stage IV: Either of these conditions:

- The tumor has spread to areas beyond Gerota's fascia and extends into the adrenal gland on the same side of the body as the tumor, possibly to lymph nodes, but not to other parts of the body (T4; any N; M0).
- The tumor has spread to any other organ, such as the lungs, bones, or the brain (any T, any N, M1).



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Recurrent: Recurrent cancer is cancer that has come back after treatment. It may be found in the kidney area or in another part of the body. 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 [3].

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/kidney-cancer/stages>

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

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