

## **Kidney Cancer - Diagnosis** [1]

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

**ON THIS PAGE:** You will find a list of the common tests, procedures, and scans that doctors can use to find out what's wrong and identify the cause of the problem. To see other pages, use the menu on the side of your screen.

Doctors use many tests to diagnose cancer and find out if it has spread to another part of the body, called metastasis. Some tests may also determine which treatments may be the most effective. For most types of cancer, a biopsy is the only way to make a definitive diagnosis of cancer. If a biopsy is not possible, the doctor may suggest other tests that will help make a diagnosis. Imaging tests may be used to find out whether the cancer has spread. This list describes options for diagnosing this type of cancer, and not all tests listed will be used for every person. Your doctor may consider these factors when choosing a diagnostic test:

- Age and medical condition
- Type of cancer suspected
- Signs and symptoms
- Previous test results

In addition to a physical examination, the following tests may be used to diagnose kidney cancer:

**Blood and urine tests** [3]. A blood test to check the number of red blood cells and a urine test to find blood, bacteria, or cancer cells may be done. These tests may suggest that kidney cancer is present but cannot make a definite diagnosis.

**Biopsy** [4]. A biopsy is the removal of a small amount of tissue for examination under a microscope. Other tests can suggest that cancer is present, but only a biopsy can make a definite diagnosis. The sample removed during the biopsy is analyzed by a pathologist. Then the pathologist writes a [pathology report](#) [5] that describes the laboratory test results, and it then becomes a permanent part of the person's medical record.

The pathology report identifies the type of cell involved in the kidney cancer (see the [Overview](#) [6] for a list), which is important in planning treatment. Doctors must have a pathology report before they use systemic therapy to treat kidney cancer. Systemic therapy involves using treatment(s) that affect the entire body.

The type of biopsy performed depends on the location of the cancer. A separate biopsy may not be needed if the cancer is found on a CT scan (see below) and removal of the kidney is recommended. If surgery is recommended based on the results of other medical tests, such as a CT scan, many doctors will examine the tumor after it is removed with surgery, rather than doing a separate procedure beforehand. The patient should carefully discuss the reasoning for a recommended biopsy option with his or her doctor.

## **Imaging tests**

**X-ray.** An x-ray is a way to create a picture of the structures inside of the body, using a small amount of radiation.

**Intravenous pyelogram (IVP).** A dye is injected into the patient's bloodstream to highlight the kidney, urethra, and bladder when an x-ray is taken. The picture produced can show changes in these organs and in the nearby lymph nodes.

**Bone scan** [7]. A bone scan uses a radioactive tracer to look at the inside of the bones. The tracer is injected into a patient's vein. It collects in areas of the bone and is detected by a special camera. Healthy bone appears gray to the camera, and areas of injury, such as those caused by cancer or a fracture (break), appear dark.

**Computed tomography (CT or CAT) scan** [8]. A CT scan creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors. A CT scan can also be used to measure the tumor's size. Sometimes, a special dye called a contrast medium is given before the scan to provide better detail on the image. This dye can be injected into a patient's vein or given as a pill to swallow.

**Magnetic resonance imaging (MRI)** [9]. An MRI uses magnetic fields, not x-rays, to produce detailed images of the body. MRI can also be used to measure the tumor's size. A special dye called a contrast medium is given before the scan to create a clearer picture. This dye can be injected into a patient's vein or given as a pill to swallow.

**Cystoscopy/nephro-ureteroscopy** [10]. Occasionally, special tests called a cystoscopy and nephro-ureteroscopy may be done for renal pelvic cancer. They are not used for renal cell carcinoma. During these procedures, the patient is sedated while a tiny, lighted tube is inserted into the bladder through the urethra and up into the kidney. Sedation is giving medication to become more relaxed, calm, or sleepy. The device can remove samples of cells and, in some cases, small tumors.

After diagnostic tests are done, your doctor will review all of the results with you. If the diagnosis is cancer, these results also help the doctor describe the cancer; this is called staging.

*The next section helps explain the different stages for this type of cancer. Use the menu on the side of your screen to select Stages, or you can select another section, to continue reading this guide.*

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**Links:**

- [1] <http://www.cancer.net/cancer-types/kidney-cancer/diagnosis>
- [2] <http://www.cancer.net/about-us>
- [3] <http://www.cancer.net/node/24730>
- [4] <http://www.cancer.net/node/24406>
- [5] <http://www.cancer.net/node/24715>
- [6] <http://www.cancer.net/node/18969>
- [7] <http://www.cancer.net/node/24410>
- [8] <http://www.cancer.net/node/24486>
- [9] <http://www.cancer.net/node/24578>
- [10] <http://www.cancer.net/node/24511>