

What is kidney cancer?

Kidney cancer is an abnormal, uncontrolled growth of cells in the kidney. According to the American Cancer Society, the most common type is renal cell cancer (also called renal cell carcinoma), which accounts for 85 percent of all kidney tumors.

Renal cell cancer may develop in one or both kidneys. In the early stages, kidney cancer usually causes no obvious signs or symptoms. As kidney cancer grows, it may invade organs near the kidney such as the liver, colon or pancreas. Kidney cancer cells may also break away from the original tumor and spread (or metastasize) to other parts of the body such as the lymph nodes, bones or lungs, with about one third of cases showing metastasis at the time of diagnosis.

How many people get kidney cancer?

The American Cancer Society predicts that there will be more than 35,700 new cases of kidney cancer in the United States this year, with almost 12,500 people dying from the disease.

What causes kidney cancer?

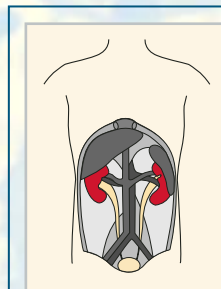
The exact cause of renal cell cancer is not known. However, certain risk factors are known to be associated with it, including smoking, overuse of certain painkillers, long-term dialysis, exposure to asbestos or cadmium, being overweight and eating a diet high in fat. In addition, some genetic factors and diseases such as tuberous sclerosis may increase one's risk. Renal cell carcinoma typically occurs in people over the age of 50 and is twice as likely to occur in men than in women.

How is kidney cancer diagnosed?

In most cases, renal cell cancer is found only after a person has some sort of symptom of a problem. Because there are no blood or urine tests to specifically screen for renal cell cancer, it is sometimes found by accident when a person is having tests for something else.

Blood in the urine is the most common sign of kidney cancer, although this may also be caused by a bladder infection or some other less serious condition. Signs and symptoms of renal cell carcinoma can include:

- Blood in the urine
- Low back pain that is not caused by an injury
- Mass or lump in the abdomen
- Tiredness/fatigue
- Rapid, unexplained weight loss
- Fever that is unrelated to a cold, the flu or other infection
- Swelling of ankles and legs
- High blood pressure



The kidneys (*shown in red*) are a pair of waste-removing organs located in the abdomen near the spinal column. They are bean-shaped and consist chiefly of excretory units that filter waste liquid from the blood, which is subsequently excreted from the body as urine.

In people with symptoms, a doctor may perform imaging tests such as CT scan, MRI or ultrasound to produce a detailed picture of the inside of the body. Laboratory tests such as urine and blood tests may also be performed to check for problems that may occur along with kidney cancer such as too few or too many red blood cells.

How is kidney cancer evaluated?

Treatment and prognosis generally depend on the stage of the cancer, which describes how far the cancer has spread.

- STAGE I** The cancer has not spread and is only in the kidney.
- STAGE II** The cancer has spread to the fatty tissue around the kidney, but not to the capsule around the kidney.
- STAGE III** The cancer has spread to blood vessels or lymph nodes around the kidney.
- STAGE IV** The cancer has spread to nearby organs such as the bowel or pancreas, or to distant organs such as the lungs.

How is kidney cancer treated?

Nephrectomy, or surgery to remove all or part of the kidney, is the main treatment for renal cell carcinoma, although a combination of treatments can be used. Tumor growth may be controlled by arterial embolization, a procedure that blocks the artery leading to the kidney to eliminate blood supply to the tumor. Radiation therapy may be used to reduce metastasis, although often renal cell carcinoma does not respond well to this type of treatment. In addition, hormonal therapy, chemotherapy and immunotherapy may be used to treat this disease.