Cancer

Kidney Cancer

What is kidney cancer?

Cancer develops when cells grow out of control. There are several types of kidney cancer, but about eight out of 10 people with kidney cancer have renal cell carcinoma, the most common type. Cancer may also arise elsewhere in the body and spread to the kidneys, a process known as metastasis.

Who gets kidney cancer?

About 63,300 people (about 42,700 men and 22,700 women) will develop kidney cancer and nearly 15,000 people will die from it this year, according to the American Cancer Society.

Kidney cancer is among the 10 most common cancers in both men and women. The rate of new kidney cancer has been going up since the 1990s, but this has leveled off in recent years. It is thought that this rise is partly due to earlier diagnosis using newer imaging tests.

Men are two to three times more likely to get kidney cancer than women. African Americans have a slightly higher risk of renal cell carcinoma than other groups.

What are the risk factors for kidney cancer?

Cigarette smoking raises the risk of kidney cancer and contributes to as many as one third of all cases. People who are overweight or obese are more likely to develop kidney cancer than people who are not overweight. Certain inherited disorders and a family history of kidney cancer are also known to increase the risk

Other risk factors include hypertension (high blood pressure), occupational exposure to certain chemicals and long-term use of nonsteroidal anti-inflammatories.

What are the symptoms of kidney cancer?

The kidneys filter waste from the blood and get rid of excess fluid from the body by producing urine. These bean-shaped organs help regulate blood pressure and play an important role in keeping chemicals such as salt and potassium in balance.

In its early stages, kidney cancer may not cause any signs or symptoms. Tumors may not cause pain because the kidneys have few nerves. Many people are first diagnosed after they have developed more advanced disease, when it is harder to treat. Symptoms of kidney cancer may

include:

- Blood in the urine
- Pain in the back or sides of the abdomen
- A lump in the abdomen
- Swelling in the legs and ankles
- Enlarged veins on the scrotum
- Unexplained weight loss
- Anemia

How is kidney cancer diagnosed?

Early detection and treatment of cancer increases the likelihood of long-term survival. About a third of people with kidney cancer are diagnosed with no symptoms. Some unrelated medical conditions have some of the same symptoms as kidney cancer, which means other possible causes must be eliminated.

Diagnosis starts with a physical exam and health history. Tests to help diagnose kidney cancer include urine tests to measure the levels of certain substances, check for the presence of blood and determine whether there are abnormal cells that may indicate cancer. Blood tests may be done to measure chemicals that indicate whether the kidneys are functioning properly.

X-rays, computed tomography (CT), ultrasound or MRI scans may be performed to assess the kidneys and nearby structures, as well as to see how much cancer has spread. An angiography may be done to get an image of the blood vessels in the kidney and the tumor. A biopsy, or small tissue sample, may be removed to examine in a laboratory.

How is kidney cancer treated?

Treatment for kidney cancer depends on how advanced it is when it is detected, including how many tumors there are, how large they are and whether they have spread to nearby lymph nodes and other parts of the body.

Watchful waiting: Small tumors may be monitored to see if they progress, an approach known as active surveillance.

Surgery: Some small and localized kidney tumors can be surgically removed; this is known as resection. This is the most common treatment for kidney cancer.

Ablation: Kidney tumors may be ablated, or destroyed, using a variety of methods, including freezing (cryotherapy) and heating with radio waves (radiofrequency ablation).

Embolization: Chemicals may be used to block or reduce blood flow to tumors.

Radiation: Radiation may be used to shrink tumors, which can help relieve pain and other symptoms. It is often used in conjunction with other forms of treatment.

Chemotherapy: Traditional chemotherapy works by killing fast-growing cells, including cancer cells. It can also destroy rapidly dividing healthy cells, such as those in the gut or hair follicles, leading to side effects like nausea and hair loss.

Targeted therapy: Targeted drugs work against cancers with specific characteristics. For example, they may interfere with signaling pathways that regulate cell growth. Targeted treatment is often better tolerated than chemotherapy, but cancer may develop resistance over time.

Immunotherapy: The newest type of treatment helps the immune system fight cancer. For example, some tumors can turn off immune responses against them, and drugs known as checkpoint inhibitors can restore T cells' ability to recognize and destroy cancer cells. However, current immunotherapy drugs work for only a subset of patients, and it is hard to predict who will benefit.

For more information on kidney cancer, visit:

American Cancer Society

National Cancer Institute

For more information about kidney cancer, please visit our sister site Cancer Health.

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