

Bladder Cancer

Overview:

- Bladder cancer tumors most often begin in the cells that line the innermost layer of the bladder and can spread to other layers.
- The exact cause has not yet been identified; however, there are risk factors that may increase the risk of developing bladder cancer.
- Smoking is the most common risk factor for bladder cancer.
- Symptoms of bladder cancer are similar to those of other urinary tract diseases, so it is important to consult your doctor to confirm the diagnosis.
- Seek immediate medical help upon noticing blood in the urine, even if it only appears intermittently.
- There is no guaranteed way to prevent bladder cancer, but you can reduce your risk of developing it by avoiding certain risk factors.

Definition of Cancer:

Cancer is a broad term given to a collection of related diseases, characterized by the abnormal growth of tumors on the organs of the body. There are two types of tumors: benign tumors and malignant tumors (which are known as cancerous tumors). The two types are distinguished by examining the tissue (biopsy).

The Bladder:

A hollow, muscular organ in the pelvis (lower abdomen) that has flexible walls that can stretch to collect and store urine from the kidneys before disposal by urination.

Definition of Bladder Cancer:

Most cancers are named after the location where they develop, so when a tumor appears in the bladder it is called bladder cancer. Most types of

bladder cancer start in the innermost lining of the bladder. Bladder cancer gets worse when it grows in size, or as it grows into or through other layers of the bladder. Over time, the tumor may even grow outside the bladder to reach the lymph nodes and other organs (such as the bones, lungs, liver, etc.).

Types of Bladder Cancer:

- The most common type of bladder cancer is urothelial carcinoma, (also known as transitional cell carcinoma (TCC)): This type occurs in the cells that line the inside of the bladder and can spread to other parts of the urinary system.
- Other less common types of bladder cancer: Squamous cell carcinoma, adenocarcinoma, and others.

Bladder cancers are also described based on how far they have spread into the layers of the bladder:

- Non-invasive cancers: They occur only in the inner layer of cells, and they have not grown into the deeper layers.
- Invasive cancers: They have grown into deeper layers of the bladder wall. These cancers are more likely to spread and are harder to treat.

Bladder cancers are also classified based on how they grow:

- Papillary carcinomas: Tumors that grow in cylindrical projections from the inner surface of the bladder toward the hollow center. Papillary tumors often grow toward the center of the bladder without growing into the deeper bladder layers. These tumors are called non-invasive, papillary cancers.
- Flat carcinomas (flat carcinoma in situ (CIS)): The tumor does not grow beyond the bladder wall.

Cause:

The actual cause of bladder cancer is still unknown, but there are some factors that increase the risk of developing it.

Risk Factors:

- Smoking: Smoking is the most common risk factor for bladder cancer.
- Family history.
- Radiation exposure aimed directly at the pelvis.
- Radiation therapy used to treat other cancers in an area that is close to the bladder (such as the colon).
- Chemotherapy to treat another type of cancer.
- Exposure to certain pollutants and carcinogens at the workplace (such as certain industrial chemicals like plastic, rubber, dyes and others).
- Chronic or repeated urinary infections (such as urinary tract infections, kidney and bladder stones, bladder catheters left in place for a long time, and others).
- Certain types of parasitic infections.

Groups most at risk of developing bladder cancer:

Gender: Bladder cancer occurs in men more frequently than it does in women.

Age: Bladder cancer can occur at any age; however, the risk of bladder cancer increases as you age.

Symptoms:

Blood in the urine (hematuria) is the most common sign of bladder cancer. It is mostly not accompanied by pain, and the blood may not be very clear.

- Frequent urination.
- Painful urination.
- Pain in the lower abdomen.

- Back pain.
- Sudden urge to urinate.

In advanced cases, the following symptoms may occur:

- Inability to urinate.
- Loss of appetite and weight.
- Fatigue.
- Swollen feet.
- Bone pain.

Exhibiting any of the previous symptoms does not necessarily mean you have bladder cancer, and you may be suffering from other health problems. This is why it is important to undergo medical examination to get an accurate diagnosis and receive proper treatment.

When to See a Doctor?

Seek immediate medical help upon noticing blood in the urine, (even if it only appears intermittently). Also make an appointment with your doctor if you have other signs or symptoms that worry you.

Complications:

- Psychological effects: Higher risk of depression.
- Urinary Tract Infection (UTI)
- Urinary retention.
- Hydronephrosis.
- Cancer recurrence.
- Sexual problems: Erectile dysfunction, vaginal stenosis.
- Urinary incontinence.
- Common complications after surgery: Surgical site infection.

Diagnosis:

- Medical history.
- Physical examination.
- Laboratory tests: A urinalysis is done to check for cancer cells or other causes for the symptoms.
- Cystoscopy.
- Bladder biopsy.
- Other tests: Imaging tests, such as CT scan, MRI, bone scan, and chest X-ray.

Bladder cancer may recur, so it is essential to have a follow-up plan with your doctor in order to get regular diagnostic tests and checkups.

Treatment:

Depending on the stage, size and type of the cancer as well as the patient's overall health, treatment options for people with bladder cancer can include:

- Surgery, including cystectomy to remove all or part of the bladder.
- Neobladder reconstruction: After a radical cystectomy, the surgeon must create a new way for urine to leave your body.
- Radiation therapy.
- Chemotherapy.
- Immunotherapy.
- Palliative care.

Prevention:

Although there is no guaranteed way to prevent bladder cancer, you can take the following steps to help reduce your risk:

- Avoid smoking or quit entirely.



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- Take caution around chemicals. If you work with chemicals, follow all safety instructions to avoid exposure.
- Maintain a healthy diet, rich in a variety of fruits and vegetables.
- Make sure to drink plenty of fluids (especially water).

Misconceptions:

❖ **Refraining from urination can cause bladder cancer.**

Fact: This is not true at all; however, it can be a cause of other cancer-causing factors (For instance, the spread of parasitic and bacterial infections that can affect the lining of the bladder). This, combined with other genetic factors, may increase the individual's risk of developing the disease.

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