Bladder Cancer

INFORM DIAGNOSTICS
Subspecialty Anatomic Pathology

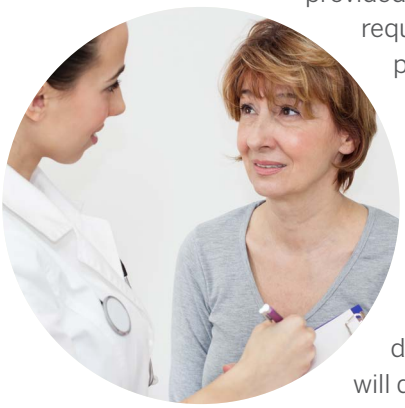
What is bladder cancer?

Cancer occurs when cells grow abnormally and divide beyond what is normal. Bladder cancer refers to cancers that form in the bladder, which is the organ that stores urine. Similar types of cancer also can occur in remaining parts of the urinary tract system that transports urine.

The majority of bladder tumors are low grade, which means that they do not look aggressive under the microscope and typically have not invaded into the wall of the bladder. It is important to remember that even after treatment, bladder cancer carries a risk of recurrence, and patients should continue very close follow-ups with a urologist.

Types of bladder cancer

Bladder cancers occur in five different types.



1. Urothelial (previously transitional cell) carcinomas

This cancer begins in the cells that make up the inner lining of the bladder. It is the most common form of bladder cancer—95% of all bladder cancers are transitional cell carcinomas which now are referred to as urothelial cell carcinomas.

2. Squamous cell carcinoma

This cancer begins in thin flat cells called squamous cells. Squamous cells usually appear in the bladder because of chronic irritation, infection, and inflammation. This type of bladder cancer is common in certain parts of the world where parasitic infection referred to as "Schistosomiasis" is common. It is relatively uncommon in United States.

3. Adenocarcinoma

This cancer begins in the cells that make and release mucus and other fluids. This type of cancer is rare; only a very small proportion (1%) of bladder cancers are adenocarcinomas.

4. Small cell carcinoma

This cancer begins in nerve-like neuroendocrine cells. This type of cancer is also rare; only a very small proportion (less than 1%) of bladder cancers are small cell carcinomas.

5. Sarcoma

This cancer begins in the muscle cells of the bladder. This type of cancer is very rare.

How is bladder cancer diagnosed at the lab?

Tissue from a biopsy is sent to a pathology lab. There the tissue is prepared on glass slides and reviewed by a pathologist, a clinician who has specialized in the diagnosis of disease.

The pathologist looks for abnormal cellular changes under a microscope. He or she interprets the findings under the microscope in the context of the clinical information provided by the healthcare provider. Some cases require additional special analysis to evaluate proteins, RNA and/or DNA.

The pathologist creates a pathology report with all the important findings, including critical information to help guide treatment and assess prognosis, which is sent back to the healthcare provider.

In addition to examining the biopsy to diagnose bladder cancer, the pathologist will determine whether bladder cancer invades the bladder wall and how deep it invades. The healthcare provider may order additional tests such as blood work, X-rays, MRI, ultrasound, and CT scan to further evaluate the stage of the bladder cancer. Each stage has different characteristics. Less advanced cancer is given lower stage numbers, while more advanced cancer is given higher stage numbers.

Bladder cancer is one of the most common cancers in the United States.

Who develops this condition and why?

Bladder cancer is one of the most common cancers in the United States. According to the National Cancer Institute, more than 81,000 new cases of bladder cancer were diagnosed in 2018.

Men are three times more likely to develop bladder cancer compared with women. However, women are more likely to have more advanced cancers at diagnosis.

The most significant risk factor for developing bladder cancer is smoking. Smokers have four times the risk of developing bladder cancer compared with a nonsmoker.

Bladder Cancer

Other risk factors include environmental or occupational exposure to chemicals or arsenic, a personal or family history of bladder cancer, and some treatments for other cancers. It is important to avoid exposure to risk factors like chemicals, cigarettes, and oil-based paints.

No one really knows why some people with these risk factors develop bladder cancer and others do not. It is also possible to develop bladder cancer and have none of these risk factors.

Treatment options

Treatment options will depend on grade and stage of bladder cancer. Bladder cancer that is not invading deeper into the bladder wall may be treated conservatively using medical management. However, multiple treatments and types of treatment may be needed. Some treatment options include surgery, chemotherapy, biological therapy, and radiation therapy.

What's next?

Bladder cancer is a lifelong condition. After cancer treatment, lifelong monitoring is needed to detect any recurrence or progression. Bladder cancer recurs in 50-80% of patients.

Many people with bladder cancer do not recognize the importance of their symptoms and wait too long to see their healthcare provider. Symptoms are often similar to those of a urinary tract infection (UTI), and may include blood in urine, back pain, pelvic pain, swelling in legs, weight loss, anemia, and rectal, anal, or pelvic bone pain. It is important to see a healthcare professional right away if a patient experiences any health changes or recurrence of symptoms.

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