

Muscle-Invasive Bladder Cancer

What You Should Know



How does the Urinary Tract Work?

Many of our body parts work with each other to form the urinary system. For both men and women, the main parts of the system are kidneys, ureters, bladder and urethra. The kidneys are fist-size organs that make urine. The urine then flows through tubes called ureters, and into the bladder.

The bladder is a hollow, balloon-shaped organ. It is mostly made of muscle. It stores urine until you are ready to go to the bathroom to release it. The bladder helps you pass urine. Urine then leaves the body through the urethra.

What is Muscle-Invasive Bladder Cancer (MIBC)?

Muscle-invasive bladder cancer (MIBC) is cancer found in the thick muscle of the bladder wall. Over time, the tumor may grow outside the bladder into tissues close by. Untreated MIBC may spread to lymph nodes, the lungs, the liver and other parts of the body. This serious and more advanced stage of bladder cancer should be treated right away. This type of bladder cancer needs more aggressive treatment.

What Causes MIBC?

There are a number of things that may raise your risk of getting bladder cancer:

- Smoking is a big risk factor
- Workplace exposure to chemicals used to make plastics, paints, leather and rubber
- Cancer drugs
- Radiation to the pelvis
- There may be a genetic link

What are the Symptoms of Bladder Cancer?

How do you know that you have bladder cancer? Some people may have symptoms that suggest they have bladder cancer. Others may feel nothing at all. Some symptoms should never be ignored.

Blood in the urine is the most common symptom of bladder cancer. It is often painless. Often, you cannot see blood in your urine without a microscope. If you can see blood in your urine, you should tell your doctor at once. Even if the blood goes away, you should still talk to your doctor about it.

Blood in the urine does not always mean you have bladder cancer. There are a number of reasons why you may have blood in your urine. You may have an infection or kidney stones. A very small amount of blood might be normal in some people.

Frequent need to pass urine and pain when you pass urine (dysuria) are less common symptoms of bladder cancer. If you have these symptoms, it is of great value to see your doctor. They will find out if you have a urinary tract infection or something more serious, like bladder cancer.

If your doctor believes you may have MIBC, you may be sent you to see a urologist. A urologist is a doctor who specializes in diseases of the urinary tract. The doctor may order these tests:

- Urinalysis
- Blood Tests
- Imaging Tests like X-rays, CT scan, MRI
- Retrograde Pyelogram
- Cystoscopy
- PosiET-scan
- Transurethral Resection of Bladder Tumor (TURBT)



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The Role of Imaging in MIBC

Imaging plays a key role in both the diagnosis and follow-up care for MIBC. It is used to stage the cancer, check how it may spread, watch for how treatment is working and/or detect if the cancer has come back after treatment.

- **CT (Computed Tomography)** of the chest, abdomen and pelvis with intravenous contrast is the standard approach. It helps to assess the size and extent of the tumor and check for any spread to nearby organs, lymph nodes or distant sites like the lungs.
- **MRI (Magnetic Resonance Imaging)** may be used, mostly for patients who cannot tolerate CT contrast agents. MRI is highly effective in showing detailed images of the pelvic region to assess the local spread of the tumor.
- **PET/CT (Positron Emission Tomography/Computed Tomography)** is mostly reserved for cases where there are abnormal findings in other imaging tests or when biopsy of lymph nodes in question is not feasible.

How is MIBC Treated?

Your treatment will depend on what your doctor finds when you are diagnosed. Treatment also depends on your health and age. Treatment options may include:

- **Cystectomy (bladder removal) with or without chemotherapy**
There are two types of cystectomy, radical and partial. For *partial cystectomy*, your doctor removes only part of your bladder. For MIBC, partial cystectomy is less likely because the cancer may be more advanced. A *radical cystectomy* is when your whole bladder is removed. Radical cystectomy is the most common treatment for MIBC. When the whole bladder is removed, the surgeon makes some other way for urine to be gathered from the kidneys and stored before leaving your body.
- **Chemotherapy with radiation, in addition to TURBT**
Chemotherapy may be given before removing your bladder for the best chance of survival (neoadjuvant chemotherapy). If you don't have chemotherapy before surgery, then you may need it after surgery based on your tumor stage. This is called adjuvant chemotherapy. Radiation may also be used with chemotherapy.

- **Immunotherapy**

Immunotherapy (IO) is a type of cancer treatment that helps the body's immune system fight cancer. IO is often used after bladder surgery (cystectomy) for patients with high-risk MIBC. It can also be offered to patients who are not able to receive chemotherapy due to other health issues.

To learn more about MIBC treatment, go to UrologyHealth.org/MIBCTreatment for free PDF download.

About the Urology Care Foundation

The Urology Care Foundation is the world's leading urologic foundation – and the official foundation of the American Urological Association. We provide information for those actively managing their urologic health and those ready to make health changes. Our information is based on the American Urological Association resources and is reviewed by medical experts.

To learn more, visit the Urology Care Foundation's website, UrologyHealth.org/UrologicConditions.

Disclaimer

This information is not a tool for self-diagnosis or a substitute for professional medical advice. It is not to be used or relied on for that purpose. Please talk to your urologist or health care provider about your health concerns. Always consult a health care provider before you start or stop any treatments, including medications.

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