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 urinate. Urine then leaves the body through the urethra.

What is Muscle Invasive Bladder Cancer (MIBC)?
Muscle-invasive bladder cancer (MIBC) is cancer that spreads into the thick muscle deep in 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.

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 with your naked eye, you should tell your health care provider 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 that 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 urination and pain when you pass urine (dysuria) are less common symptoms of bladder cancer. If you have these symptoms, it’s of great value to see your health care provider. He/she will find out if you have a urinary tract infection or something more serious, like bladder cancer.

If your healthcare provider believes you may have MIBC, you may be sent 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, or MRI
- Retrograde Pyelogram
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. You will likely have a choice of two ways to treat your MIBC:

- Cystectomy (bladder removal) with or without chemotherapy
- Chemotherapy with radiation, in addition to TURBT

How is Cystectomy used to Treat Bladder Cancer?
There are two types of cystectomy, radical cystectomy and partial cystectomy.

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. Your doctor will remove:

- The whole bladder
- Nearby lymph nodes
- Part of the urethra
- The prostate (in men)
- The uterus, ovaries, fallopian tubes and part of the vagina (in women). Other nearby tissues may also be removed.

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.

How is Chemotherapy used to treat Bladder Cancer?
Most likely, chemotherapy will be given before removing your bladder for the best chance of survival (neoadjuvant chemotherapy). About 6-8 weeks after chemotherapy, you will have your bladder surgery. 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.

If you have poor kidney function, hearing loss, heart problems or some other health problem, your doctor may not suggest chemotherapy.

How is Radiation Used to Treat Bladder Cancer?
Radiation as a single form of treatment is not given to treat MIBC. Radiation is used with chemotherapy. Before starting chemotherapy and radiation, your surgeon will resect (cut away) the tumor during a transurethral resection of bladder tumor (TURBT). This is done to try to get all of the cancer cells possible. If you get this treatment, you must make sure to follow up with your doctor. You will need to have more cystoscopy exams, imaging tests (e.g. CT scan) and other tests to check the tumor.

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 or go to UrologyHealth.org/FindAUrologist to find a doctor near you.

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.

For more information, visit UrologyHealth.org/Download or call 800-828-7866.