



When we talk about bladder cancers, usually we're talking about cancer that has derived from the urothelium. The urothelium are the cells that line the urinary tract. The urinary tract involves the kidneys, the ureters, the bladder, the urethra. The most common place where urothelial cancer starts is in the bladder.

Sometimes the cancer can be quite advanced before there are any symptoms. However, when there are initial symptoms, the most common symptom that patients report is hematuria, or blood in the urine. Therefore, this is something that people should take very seriously and should prompt you to go and see your primary care provider for some initial tests and evaluation. Other common symptoms are frequent urination, urgency (feeling the need to urinate urgently) and painful urination.

When you visit your primary care provider, they will typically ask you about your symptoms, your medical history, and lifestyle factors such as smoking (we know that smoking is an important risk factor for developing bladder cancer). When patients present with those irritative symptoms of the bladder such as needing to urinate more frequently or feeling like they can't empty completely, this might prompt the primary care provider to test for a urinary tract infection. In women, the symptom of hematuria may also prompt testing or questioning other causes of bleeding such as vaginal or uterine bleeding. Your provider may also recommend further tests of the urine and possibly an ultrasound.

If these tests present new findings, patients are then sent to a urologist. A urologist is a surgeon who specializes in the urinary tract. The first investigation they would do is called a cystoscopy, which is a procedure where a thin tube with a camera is inserted through the urethra to examine the inside of the bladder. There's a bit of sedation that is used to keep patients comfortable during the procedure, but this gives the urologist a good look inside the bladder to see any abnormal areas.

If the cystoscopy shows something suspicious, the patient would then need to be booked for another procedure, called a trans urethral resection of the bladder tumor or 'TURBT'. The TURBT procedure itself is when the abnormal area is 'scraped out' and is then sent to the pathologist who looks at it under the microscope. This testing can take 1-2 weeks to get a result but the procedure itself is usually short and most patients would go home the same day. What's really important to know is if the abnormal area is cancerous and if so, how deep is the invasion into the bladder. The pathology report will give us this information.

Determining the stage of bladder cancer looks at how deep the tumor has gone into the urothelium. T-1 bladder cancer is non muscle invasive and is on that superficial lining inside the wall of the bladder. Muscle invasive tumors are cancers that have gone a little bit deeper. The



vast majority of bladder cancers are what we call non muscle invasive or T-1 disease or less. These tumors are treated by the urologist.

Depending on the stage of the tumor and the grade, other treatments may be recommended. Additional tests may be needed including CT scans.

Most bladder cancers are superficial or have not invaded into the muscle. Additional treatments might include medications that are instilled directly into the bladder like BCG. Patients with muscle invasive bladder cancer may be treated with chemotherapy and removal of the bladder with some patients eligible for bladder preservation treatments (which involves radiation therapy as well). Sometimes bladder cancer has spread and we call this metastatic disease. This is considered stage 4 bladder cancer and that's something that is typically not curable and as such treatment for this is very different. There are many treatment options, which go throughout the body, to try to control the cancer.

What is important to remember is that bladder cancer is treatable, especially when caught early and it is very important to follow through on the recommended tests and treatments. Bladder cancer diagnosis usually starts with recognizing symptoms, then additional testing. Don't hesitate to seek medical attention if you notice symptoms.

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