



[cancer.org](https://www.cancer.org) | 1.800.227.2345

Bladder Cancer Early Detection, Diagnosis, and Staging

Detection and Diagnosis

Finding cancer early, when it's small and hasn't spread, often allows for more treatment options. Some early cancers may have signs and symptoms that can be noticed, but that's not always the case.

- [Can Bladder Cancer Be Found Early?](#)
- [Bladder Cancer Signs and Symptoms](#)
- [Tests for Bladder Cancer](#)

Stages and Outlook (Prognosis)

After a cancer diagnosis, staging provides important information about the extent (amount) of cancer in the body and the likely response to treatment.

- [Bladder Cancer Stages](#)
- [Survival Rates for Bladder Cancer](#)

Questions to Ask About Bladder Cancer

Here are some questions you can ask your cancer care team to help you better understand your cancer diagnosis and treatment options.

- [Questions To Ask About Bladder Cancer](#)

Can Bladder Cancer Be Found Early?

Bladder cancer can sometimes be found early -- when it's small and hasn't spread beyond the bladder. Finding it early improves your chances that treatment will work.

Screening for bladder cancer

Screening is the use of tests or exams to look for a disease in people who have no symptoms. At this time, no major professional organizations recommend routine screening of the general public for bladder cancer. This is because no screening test has been shown to lower the risk of dying from bladder cancer in people who are at average risk.

Some providers may recommend bladder cancer tests for people at **very high risk**, such as:

- People who **had bladder cancer before**
- People who had certain **birth defects of the bladder**
- People exposed to certain **chemicals at work**

Tests that might be used to look for bladder cancer

Tests for bladder cancer look for different substances and/or cancer cells in the urine.

Urinalysis: One way to test for bladder cancer is to check for blood in the urine (**hematuria**). This can be done during a urinalysis, which is a simple test to check for blood and other substances in a sample of urine. This test is sometimes done as part of a general health check-up.

Blood in the urine is usually caused by benign (non-cancer) problems, like infections, but it also can be the first sign of bladder cancer. Large amounts of blood in urine can be seen if the urine turns pink or red, but a urinalysis can find even small amounts.

Urinalysis can help find some bladder cancers early, but it has not been shown to be useful as a routine screening test.

Urine cytology: In this test, a microscope is used to look for cancer cells in urine. Urine cytology does find some cancers, but it's not reliable enough to make a good screening test.

Urine tests for tumor markers: Newer tests look for certain substances in urine that might be a sign of bladder cancer. These include:

- UroVysion™: This test looks for chromosome changes that are often seen in bladder cancer cells.
- BTA tests: These tests look for a substance called **bladder tumor-associated antigen** (BTA), also known as CFHrp, in the urine.
- ImmunoCyt™: This test looks at cells in the urine for the presence of substances such as mucin and carcinoembryonic antigen (CEA), which are often found on cancer cells.
- NMP22 BladderChek®: This test looks for a protein called **NMP22** (nuclear matrix protein 22) in the urine. People who have bladder cancer often have higher levels .

These tests might find some bladder cancers early, but they can miss some as well. And in some cases, the test result might be abnormal even in people who do not have cancer. At this time, the tests are used mainly to look for bladder cancer in people who already have signs or symptoms of it, or to watch for signs that the cancer has come back (recurred) in people who have had a bladder cancer removed. More research is needed to know if these or other tests are useful as screening tests.

Watching for possible symptoms of bladder cancer

No screening tests are recommended for people at average risk, but bladder cancer can be found early because it causes blood in the urine or other urinary symptoms. (See [Bladder Cancer Signs and Symptoms](#) for details.) Many of these symptoms often have less serious causes, but it's important to have them checked right away so the cause can be found and treated, if needed. If the symptoms are from bladder cancer, finding it early offers the best chance for successful treatment.

References

Cheng X, Liu X, Liu X, et al. Metabolomics of Non-muscle Invasive Bladder Cancer: Biomarkers for Early Detection of Bladder Cancer. *Front Oncol.* 2018;8:494.

National Cancer Institute. Bladder and Other Urothelial Cancers Screening (PDQ®)—Patient Version. October 23, 2018. Accessed at www.cancer.gov/types/bladder/patient/bladder-screening-pdq on December 7, 2018.

See all references for Bladder Cancer (www.cancer.org/cancer/bladder-cancer/references.html)

Last Medical Review: January 30, 2019 Last Revised: January 30, 2019

Bladder Cancer Signs and Symptoms

Bladder cancer can often be found early because it causes blood in the urine or other urinary symptoms that cause a person to see a health care provider.

Blood in the urine

In most cases, blood in the urine (called **hematuria**) is the first sign of bladder cancer. There may be enough blood to change the color of the urine to orange, pink, or, less often, dark red. Sometimes, the color of the urine is normal but small amounts of blood are found when a urine test (urinalysis) is done because of other symptoms or as part of a general medical check-up.

Blood may be present one day and absent the next, with the urine remaining clear for weeks or even months. But if a person has bladder cancer, at some point the blood reappears.

Usually, the early stages of bladder cancer (when it's small and only in the bladder) cause bleeding but little or no pain or other symptoms.

Blood in the urine doesn't always mean you have bladder cancer. More often it's caused by other things like an infection, benign (not cancer) tumors, stones in the kidney or bladder, or other benign kidney diseases. Still, it's important to have it checked by a doctor so the cause can be found.

Changes in bladder habits or symptoms of irritation

Bladder cancer can sometimes cause changes in urination, such as:

- Having to urinate more often than usual
- Pain or burning during urination

- Feeling as if you need to go right away, even when your bladder isn't full
- Having trouble urinating or having a weak urine stream
- Having to get up to urinate many times during the night

These symptoms are more likely to be caused by a urinary tract infection (UTI), bladder stones, an overactive bladder, or an enlarged prostate (in men). Still, it's important to have them checked by a doctor so that the cause can be found and treated, if needed.

Symptoms of advanced bladder cancer

Bladder cancers that have grown large or have spread to other parts of the body can sometimes cause other symptoms, such as:

- Being unable to urinate
- Lower back pain on one side
- Loss of appetite and weight loss
- Feeling tired or weak
- Swelling in the feet
- Bone pain

Again, many of these symptoms are more likely to be caused by something other than bladder cancer, but it's important to have them checked.

If there's a reason to suspect you might have bladder cancer, the doctor will use one or more [exams or tests](#)¹ to find out if it's cancer or something else.

Hyperlinks

1. www.cancer.org/treatment/understanding-your-diagnosis/tests.html

References

American Society of Clinical Oncology. Bladder Cancer: Symptoms and Signs. 10/2017. Accessed at www.cancer.net/cancer-types/bladder-cancer/symptoms-and-signs on December 19, 2018.

DeGeorge KC, Holt HR, Hodges SC. Bladder Cancer: Diagnosis and Treatment. *Am Fam Physician*. 2017;96(8):507-514.

National Cancer Institute. Bladder Cancer Symptoms, Tests, Prognosis, and Stages (PDQ®)—Patient Version. October 19, 2018. Accessed at www.cancer.gov/types/bladder/patient/about-bladder-cancer-pdq#section/all on December 19, 2018.

See all references for Bladder Cancer (www.cancer.org/cancer/bladder-cancer/references.html)

Last Medical Review: January 30, 2019 Last Revised: January 30, 2019

Tests for Bladder Cancer

Bladder cancer is often found because of signs or symptoms a person is having. Or it might be found because of lab tests a person gets for another reason. If bladder cancer is suspected, exams and tests will be needed to confirm the diagnosis. If cancer is found, more tests will be done to help find out the extent ([stage](#)) of the cancer.

Medical history and physical exam

Your doctor will want to get your medical history to learn more about your symptoms. The doctor might also ask about possible risk factors and your family history.

A physical exam can provide information about possible signs of bladder cancer and other health problems. The doctor might do a digital rectal exam (DRE), during which a gloved, lubricated finger is put into your rectum. If you are a woman, the doctor might do a pelvic exam as well. During these exams, the doctor can sometimes feel a bladder tumor, determine its size, and feel if and how far it has spread.

If the doctor finds things that aren't normal, you may to have lab tests done and you might be referred to a urologist for further tests and treatment. (A urologist is a doctor who specializes in diseases of the urinary system and male reproductive system.)

Urine lab tests

Urinalysis

This is a simple lab test to check for blood and other substances in a sample of urine.

Urine cytology

For this test, a sample of urine is looked at with a microscope to see if there are any cancer or pre-cancer cells in it. Cytology is also done on any bladder washings taken during a cystoscopy (see below). Cytology can help find some cancers, but it isn't perfect. Not finding cancer on this test doesn't always mean you are cancer free.

Urine culture

If you're having urinary symptoms, this test may be done to see if an infection (rather than cancer) is the cause. Urinary tract infections and bladder cancers can cause the same symptoms. For a urine culture, a sample of urine is put into a dish in the lab to allow any bacteria that are present to grow. It can take time for the bacteria to grow, so it may take a few days to get the results of this test.

Urine tumor marker tests

Different urine tests look for specific substances made by bladder cancer cells. One or more of these tests may be used along with urine cytology to help see if you have bladder cancer. These include the tests called NMP22[®] (or BladderChek[®]), BTA Stat[®], Immunocyt[®], and UroVysion[®], which are discussed in [Can Bladder Cancer Be Found Early?](#)

Some doctors find these urine tests useful in looking for bladder cancers, but they may not help in all cases. Most doctors feel that cystoscopy is still the best way to find bladder cancer.

Some of these tests are more helpful for finding bladder cancer that has come back in someone who has already had it, rather than first diagnosing it.

Cystoscopy

If bladder cancer is suspected, most doctors will recommend a cystoscopy. . A urologist uses a cystoscope, which is a long, thin, flexible tube with a light and a lens or a small video camera on the end. For details on how this procedure is done, see [Cystoscopy](#)¹.

Fluorescence cystoscopy (also known as **blue light cystoscopy**) may be done along with routine cystoscopy. For this exam, a light-activated drug is put into the bladder

during cystoscopy. It's taken up by cancer cells. When the doctor then shines a blue light through the cystoscope, any cells containing the drug will glow (fluoresce). This can help the doctor see abnormal areas that might have been missed by the white light normally used.

Transurethral resection of bladder tumor (TURBT)

If an abnormal area (or areas) is seen during a cystoscopy, it needs to be biopsied to see if it's cancer. A biopsy is when tiny pieces (called samples) of the abnormal-looking tissue are taken out and tested for cancer cells. If bladder cancer is suspected, a biopsy is needed to be sure of the diagnosis.

The procedure used to biopsy an abnormal area is a **transurethral resection of bladder tumor (TURBT)**, also known as just a **transurethral resection (TUR)**. During this procedure, the doctor removes the tumor and some of the bladder muscle around the tumor. The removed samples are then sent to a lab to look for cancer. If cancer is found, testing can also show if it has invaded (spread into) the muscle layer of the bladder wall. For more on how this procedure is done, see [Bladder Cancer Surgery](#)².

Bladder cancer can sometimes start in more than one area of the bladder (or in other parts of the urinary tract). Because of this, the doctor may take samples from many different parts of the bladder, especially if cancer is strongly suspected but no tumor can be seen. Salt water washings of the inside the bladder may also be collected and tested for cancer cells.

Biopsy results

The biopsy samples are sent to a lab, where they are looked at and tested by a pathologist, a doctor who specializes in diagnosing diseases with lab tests. If bladder cancer is found, 2 important features are its invasiveness and grade.

Invasiveness: The biopsy can show how deeply the cancer has grown into the bladder wall. This is very important in deciding treatment.

- If the cancer stays in the inner layer of cells without growing into the deeper layers, it's called **non-invasive**.
- If the cancer grows into the deeper layers of the bladder, it's called **invasive**.

Invasive cancers are more likely to spread and are harder to treat.

You may also see a bladder cancer described as **superficial** or **non-muscle invasive**. These terms include both non-invasive tumors as well as any invasive tumors that have not grown into the main muscle layer of the bladder.

Grade: Bladder cancers are also assigned a grade, based on how the cancer cells look under a microscope.

- **Low-grade cancers** look more like normal bladder tissue. They're also called **well-differentiated** cancers. People with these cancers usually have a good prognosis (outlook).
- **High-grade cancers** look less like normal tissue. These cancers may also be called **poorly differentiated** or **undifferentiated**. High-grade cancers are more likely to grow into the bladder wall and spread outside the bladder. These cancers can be harder to treat.

Imaging tests

[Imaging tests](#)³ use x-rays, magnetic fields, sound waves, or radioactive substances to make pictures of the inside of your body.

If you have bladder cancer, your doctor may order some of these tests to see if the cancer has spread to tissues and organs near the bladder, to nearby lymph nodes, or to distant parts of your body. If an imaging test shows enlarged lymph nodes or other possible signs of cancer spread, some type of biopsy might be needed to confirm the findings.

Intravenous pyelogram (IVP)

An intravenous pyelogram (IVP), also called an **intravenous urogram** (IVU), is an x-ray of all of the urinary system taken after injecting a special dye into a vein. This dye is removed from the bloodstream by the kidneys and then passes into the ureters and bladder. X-rays are done while this is happening. The dye outlines these organs on the x-rays and helps show urinary tract tumors.

It's important to tell your doctor if you have any allergies or have ever had a reaction to x-ray dyes, or if you have any type of kidney problems. If so, your doctor might choose to do another test instead.

Retrograde pyelogram

For this test, a catheter (thin tube) is put in through the urethra and up into the bladder or into a ureter. Then a dye is injected through the catheter to make the lining of the bladder, ureters, and kidneys easier to see on x-rays.

This test isn't used as often as IVP, but it may be done (along with ultrasound of the kidneys) to look for tumors in the urinary tract in people who can't have an IVP.

Computed tomography (CT) scan

A [CT scan](#)⁴ uses x-rays to make detailed cross-sectional pictures of your body. A CT scan of the kidney, ureters, and bladder is called a **CT urogram**. It can provide detailed information about the size, shape, and position of any tumors in the urinary tract, including the bladder. It can also help show enlarged lymph nodes that might contain cancer, as well as other organs in the abdomen (belly) and pelvis.

CT-guided needle biopsy: CT scans can also be used to guide a biopsy needle into a suspected tumor. This is not done to biopsy tumors in the bladder, but it can be used to take samples from areas where the cancer may have spread. To do this, you lie on the CT scanning table while the doctor advances a biopsy needle through your skin and into the tumor.

Magnetic resonance imaging (MRI) scan

Like CT scans, [MRI scans](#)⁵ show detailed images of soft tissues in the body. But MRI scans use radio waves and strong magnets instead of x-rays.

MRI images are very useful in showing cancer that has spread outside of the bladder into nearby tissues or lymph nodes. A special MRI of the kidneys, ureters, and bladder, known as an **MRI urogram**, can be used instead of an IVP to look at the upper part of the urinary system.

Ultrasound

[Ultrasound](#)⁶ uses sound waves to create pictures of internal organs. It can be useful in determining the size of a bladder cancer and whether it has spread beyond the bladder to nearby organs or tissues. It can also be used to look at the kidneys.

This is usually an easy test to have, and it uses no radiation.

Ultrasound-guided needle biopsy: Ultrasound can also be used to guide a biopsy needle into a suspected area of cancer in the abdomen or pelvis.

Chest x-ray

A [chest x-ray](#)⁷ may be done to see if the bladder cancer has spread to the lungs. This test is not needed if a CT scan of the chest has been done.

Bone scan

A [bone scan](#)⁸ can help look for cancer that has spread to bones. This test usually isn't done unless you have symptoms such as bone pain, or if blood tests show the cancer might have spread to your bones.

For this test, you get an injection of a small amount of low-level radioactive material, which settles in areas of damaged bone throughout your body. A special camera detects the radioactivity and creates a picture of your skeleton.

A bone scan may suggest cancer in the bone, but to be sure, other imaging tests such as plain x-rays, MRI scans, or even a bone biopsy might be needed.

Biopsies to look for cancer spread

If imaging tests suggest the cancer might have spread outside of the bladder, a [biopsy](#)⁹ might be needed to be sure.

In some cases, biopsy samples of suspicious areas are taken during surgery to remove the bladder cancer.

Another way to get a biopsy sample is to use a long, thin, hollow needle to take a small piece of tissue from the abnormal area. This is known as a **needle biopsy**, and by using it the doctor can take samples without surgery. Sometimes a CT scan or ultrasound is used to help guide the biopsy needle into the changed area.

Hyperlinks

1. www.cancer.org/treatment/understanding-your-diagnosis/tests/endoscopy/cystoscopy.html
2. www.cancer.org/cancer/bladder-cancer/treating/surgery.html
3. www.cancer.org/treatment/understanding-your-diagnosis/tests/imaging-radiology-tests-for-cancer.html
4. www.cancer.org/treatment/understanding-your-diagnosis/tests/ct-scan-for-cancer.html

5. www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-cancer.html
6. www.cancer.org/treatment/understanding-your-diagnosis/tests/ultrasound-for-cancer.html
7. www.cancer.org/treatment/understanding-your-diagnosis/tests/x-rays-and-other-radiographic-tests.html
8. www.cancer.org/treatment/understanding-your-diagnosis/tests/nuclear-medicine-scans-for-cancer.html
9. www.cancer.org/treatment/understanding-your-diagnosis/tests/testing-biopsy-and-cytology-specimens-for-cancer.html

References

American Society of Clinical Oncology. Bladder Cancer: Diagnosis. 10/2017. Accessed at www.cancer.net/cancer-types/bladder-cancer/diagnosis on December 19, 2018.

DeGeorge KC, Holt HR, Hodges SC. Bladder Cancer: Diagnosis and Treatment. *Am Fam Physician*. 2017;96(8):507-514.

Narayan VM, Adejoro O, Schwartz I, et al. The Prevalence and Impact of Urinary Marker Testing in Patients with Bladder Cancer. *J Urol*. 2018;199(1):74-80.

National Cancer Institute. Bladder Cancer Symptoms, Tests, Prognosis, and Stages (PDQ®)—Patient Version. October 19, 2018. Accessed at www.cancer.gov/types/bladder/patient/about-bladder-cancer-pdq#section/all on December 19, 2018.

National Comprehensive Cancer Network, Clinical Practice Guidelines in Oncology (NCCN Guidelines®), Bladder Cancer, Version 5.2018 -- July 3, 2018. Accessed at www.nccn.org/professionals/physician_gls/pdf/bladder.pdf on December 19, 2018.

See all references for Bladder Cancer (www.cancer.org/cancer/bladder-cancer/references.html)

Last Medical Review: January 30, 2019 Last Revised: January 30, 2019

Bladder Cancer Stages

After someone is diagnosed with bladder cancer, doctors will try to figure out if it has spread, and if so, how far. This process is called **staging**. The stage of a cancer describes the extent (amount) of cancer in the body. It helps determine how serious the cancer is and [how best to treat it](#)¹. **The stage is one of the most important factors in deciding how to treat the cancer and determining how successful treatment might be.**

To find the cancer's stage, doctors try to answer these questions:

- How far has the cancer grown into the wall of the bladder?
- Has the cancer reached nearby tissues or organs?
- Has the cancer spread to the nearby lymph nodes or to distant organs?

The stage of bladder cancer is based on the results of physical exams, biopsies, and imaging tests (CT or MRI scan, x-rays, etc.), which are described in [Tests for Bladder Cancer](#), as well as the results of [surgery](#)².

Understanding your bladder cancer stage

A staging system is a standard way for the cancer care team to describe how far a cancer has spread. The staging system most often used for bladder cancer is the American Joint Committee on Cancer (AJCC) **TNM** system, which is based on 3 key pieces of information:

- **T** describes how far the main (primary) **tumor** has grown through the bladder wall and whether it has grown into nearby tissues.
- **N** indicates any cancer spread to lymph **nodes** near the bladder. Lymph nodes are bean-sized collections of immune system cells, to which cancers often spread first.
- **M** indicates if the cancer has spread (**metastasized**) to distant sites, such as other organs, like the lungs or liver, or lymph nodes that are not near the bladder.

Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced. Once a person's T, N, and M categories have been determined, usually after surgery, this information is combined in a process called **stage grouping** to assign an overall stage.

The earliest stage cancers are called stage 0 (or carcinoma in situ), and then range from stages I (1) through IV (4).

As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means a more advanced cancer. And within a stage, an earlier letter means a lower stage. Cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

The staging system in the table below uses the **pathologic stage**. It's based on the results of the physical exam, biopsy, imaging tests, and the results of surgery. This is likely to be more accurate than **clinical staging**, which only takes into account the tests done **before** surgery.

Bladder cancer staging can be complex. If you have any questions about your stage, please ask your doctor to explain it to you in a way you understand. (An explanation of the TNM system also follows the stage table.)

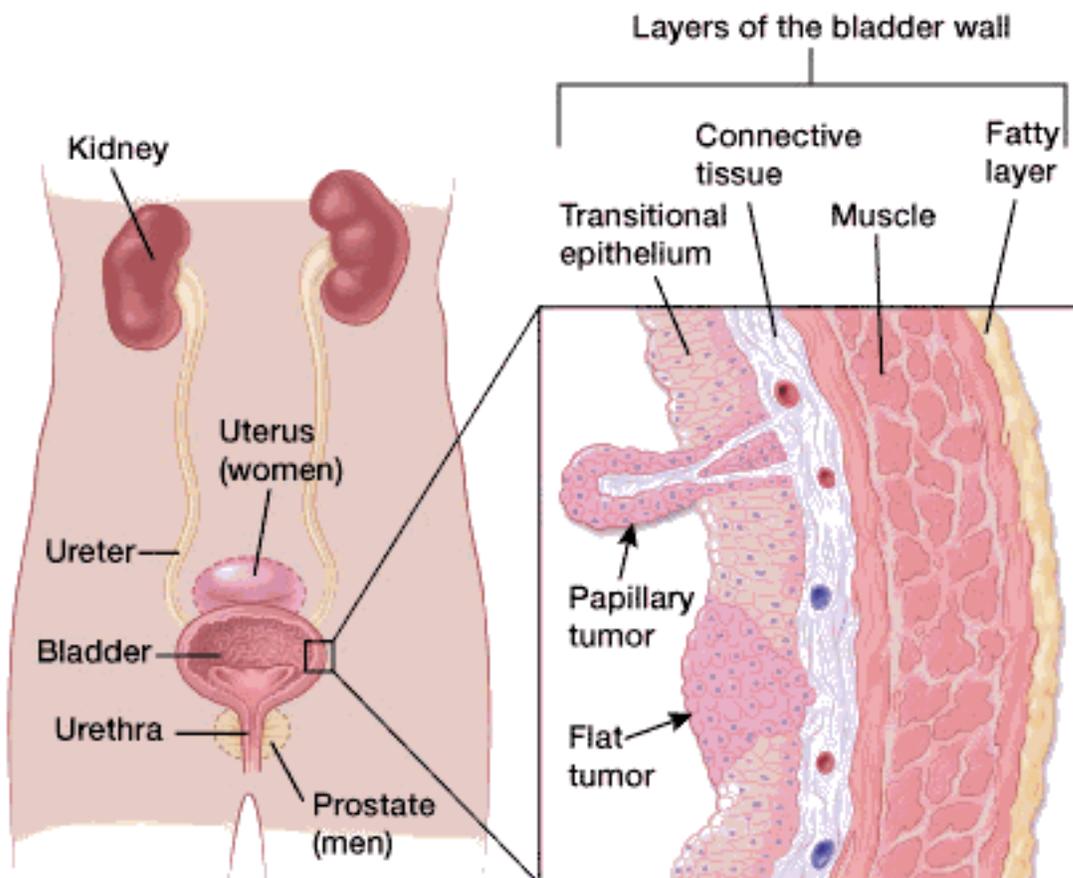
Stage	Stage grouping	Stage description
0a	Ta	The cancer is a non-invasive papillary carcinoma ³ (Ta). It has grown toward the hollow center of the bladder but has not grown into the connective tissue or muscle of the bladder wall.
	N0	
	M0	It has not spread to nearby lymph nodes (N0) or distant sites (M0).
0is	Tis	The cancer is a flat, non-invasive carcinoma ⁴ (Tis), also known as <i>flat carcinoma in situ (CIS)</i> . The cancer is growing in the inner lining layer of the bladder only. It has not grown inward toward the hollow part of the bladder, nor has it invaded the connective tissue or muscle of the bladder wall.
	N0	
	M0	It has not spread to nearby lymph nodes (N0) or distant sites (M0).
I	T1	The cancer has grown into the layer of connective tissue under the lining layer of the bladder, but has not reached the layer of muscle in the bladder wall (T1).
	N0	
	M0	The cancer has not spread to nearby lymph nodes (N0) or to distant sites (M0).
II	T2a or T2b	The cancer has grown into the inner (T2a) or outer (T2b) muscle

	N0 M0	layer of the bladder wall, but it has not passed completely through the muscle to reach the layer of fatty tissue that surrounds the bladder. The cancer has not spread to nearby lymph nodes (N0) or to distant sites (M0).
IIIA	T3a, T3b or T4a N0 M0	The cancer has grown through the muscle layer of the bladder and into the layer of fatty tissue that surrounds the bladder (T3a or T3b). It might have spread into the prostate, seminal vesicles, uterus, or vagina, but it's not growing into the pelvic or abdominal wall (T4a). The cancer has not spread to nearby lymph nodes (N0) or to distant sites (M0).
	OR	
	T1-4a N1 M0	The cancer has: <ul style="list-style-type: none"> • grown into the layer of connective tissue under the lining of the bladder wall (T1), OR • into the muscle layer of the bladder wall (T2), OR • into the layer of fatty tissue that surrounds the bladder, (T3a or T3b) OR • it might have spread into the prostate, seminal vesicles, uterus, or vagina, but it's not growing into the pelvic or abdominal wall (T4a). AND the cancer has spread to 1 nearby lymph node in the true pelvis (N1). It has not spread to distant sites (M0).
IIIB	T1-T4a N2 or N3 M0	The cancer has: <ul style="list-style-type: none"> • grown into the layer of connective tissue under the lining of the bladder wall (T1), OR • into the muscle layer of the bladder wall (T2), OR • into the layer of fatty tissue that surrounds the bladder (T3a or T3b), OR • it might have spread into the prostate, seminal vesicles,

		<p>uterus, or vagina, but it's not growing into the pelvic or abdominal wall (T4a).</p> <p>AND the cancer has spread to 2 or more lymph nodes in the true pelvis (N2) or to lymph nodes along the common iliac arteries (N3).</p> <p>It has not spread to distant sites (M0).</p>
IVA	<p>T4b</p> <p>Any N</p> <p>M0</p>	<p>The cancer has grown through the bladder wall into the pelvic or abdominal wall (T4b).</p> <p>It might or might not have spread to nearby lymph nodes (Any N).</p> <p>It has not spread to a distant sites (M0).</p>
	OR	
	<p>Any T</p> <p>Any N</p> <p>M1a</p>	<p>The cancer might or might not have grown through the wall of the bladder into nearby organs (Any T).</p> <p>It might or might not have spread to nearby lymph nodes (Any N).</p> <p>It has spread to distant lymph nodes (M1a).</p>
IVB	<p>Any T</p> <p>Any N</p> <p>M1b</p>	<p>The cancer might or might not have grown through the wall of the bladder into nearby organs (Any T).</p> <p>It might or might not have spread to nearby lymph nodes (Any N).</p> <p>It has spread to 1 or more distant organs, such as the bones, liver, or lungs (M1b).</p>

T categories for bladder cancer

The T category describes how far the main tumor has grown into the wall of the bladder (or beyond).



The wall of the bladder has 4 main layers.

- The innermost lining is called the **urothelium** or **transitional epithelium**.
- Beneath the urothelium is a thin layer of connective tissue, blood vessels, and nerves.
- Next is a thick layer of muscle.
- Outside of this muscle, a layer of fatty connective tissue separates the bladder from other nearby organs.

Nearly all bladder cancers start in the lining or urothelium. As the cancer grows into or through the other layers in the bladder, it becomes more advanced (the stage goes up).

The T categories are described in the table above, except for:

TX: Main tumor cannot be assessed due to lack of information

T0: No evidence of a primary tumor

N categories for bladder cancer

The N category describes spread only to the lymph nodes near the bladder (in the true pelvis) and those along the blood vessel called the **common iliac artery**. These lymph nodes are called **regional lymph nodes**. Any other lymph nodes are considered distant lymph nodes. Spread to distant nodes is considered metastasis (described in the M category). Surgery is usually needed to find cancer spread to lymph nodes, since this is seldom seen on imaging tests.

The N categories are described in the table above, except for:

NX: Regional lymph nodes cannot be assessed due to lack of information.

N0: There's no regional lymph node spread.

M categories for bladder cancer

The M categories are described in the table above.

Hyperlinks

1. www.cancer.org/cancer/bladder-cancer/treating.html
2. www.cancer.org/cancer/bladder-cancer/treating/surgery.html
3. www.cancer.org/cancer/bladder-cancer/about/what-is-bladder-cancer.html
4. www.cancer.org/cancer/bladder-cancer/about/what-is-bladder-cancer.html

References

National Comprehensive Cancer Network, Clinical Practice Guidelines in Oncology (NCCN Guidelines®), Bladder Cancer, Version 5.2018 -- July 3, 2018. Accessed at www.nccn.org/professionals/physician_gls/pdf/bladder.pdf on December 19, 2018.

See all references for Bladder Cancer (www.cancer.org/cancer/bladder-cancer/references.html)

Last Medical Review: January 30, 2019 Last Revised: January 30, 2019

Survival Rates for Bladder Cancer

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can't tell you how long you will live, but they may help give you a better understanding of how likely it is that your treatment will be successful.

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can't predict what will happen in any particular person's case. These statistics can be confusing and may lead you to have more questions. Talk with your doctor about how these numbers may apply to you, as he or she is familiar with your situation.

What is a 5-year relative survival rate?

A **relative survival rate** compares people with the same type and stage of bladder cancer to people in the overall population. For example, if the **5-year relative survival rate** for a specific stage of bladder cancer is 90%, it means that people who have that cancer are, on average, about 90% as likely as people who don't have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the SEER* database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for bladder cancer in the United States, based on how far the cancer has spread. The SEER database, however, does not group cancers by [AJCC TNM stages](#) (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

- **Localized:** There is no sign that the cancer has spread outside of the bladder. This includes stage 0 (in situ), I and II cancers.
- **Regional:** The cancer has spread from the bladder to nearby structures or lymph nodes. This includes mainly stage III and IVA cancers.
- **Distant:** Includes cancers that have spread to distant parts of the body such as the lungs, liver or bones. For bladder cancer, this includes stage IVB cancers.

5-year relative survival rates for bladder cancer

(Based on people diagnosed with bladder cancer between 2008 and 2014.)

SEER Stage	5-year Relative Survival Rate
Localized	69%
In situ alone	95%
Regional	35%
Distant	5%
All SEER stages combined	77%

Understanding the numbers

- **People now being diagnosed with bladder cancer may have a better outlook than these numbers show.** Treatments improve over time, and these numbers are based on people who were diagnosed and treated at least five years earlier.
- **These numbers apply only to the stage of the cancer when it is first diagnosed.** They do not apply later on if the cancer grows, spreads, or comes back after treatment.
- **These numbers don't take everything into account.** Survival rates are grouped based on how far the cancer has spread, but your age, overall health, how well the cancer responds to treatment, and other factors will also affect your outlook.

*SEER= Surveillance, Epidemiology, and End Results

References

American Cancer Society. Cancer Facts & Figures 2019. Atlanta, Ga: American Cancer Society; 2019.

Noone AM, Howlader N, Krapcho M, Miller D, Brest A, Yu M, Ruhl J, Tatalovich Z, Mariotto A, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). SEER Cancer Statistics Review, 1975-2015, National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/csr/1975_2015/, based on November 2017 SEER data submission, posted to the SEER web site, April 2018.

See all references for Bladder Cancer (www.cancer.org/cancer/bladder-cancer/references.html)

Last Medical Review: January 30, 2019 Last Revised: February 4, 2019

Questions To Ask About Bladder Cancer

It's important to have honest, open talks with your cancer care team. Ask any question, no matter how small it might seem. Here are some examples of things you might want to ask:

When you're told you have bladder cancer

- What [type of bladder cancer](#)¹ do I have?
- Do you think the cancer has spread beyond my bladder?
- What is the [stage](#) and grade of the cancer, and what does that mean?
- Will I need any other tests before we can decide on treatment?
- Do I need to see any other doctors?
- Does my insurance cover treatment? How much will I have to pay? Who can help me find out more about this?

When deciding on a treatment plan

- How much experience do you have treating this type of cancer?
- What are my [treatment options](#)² ?
- What do you recommend and why?
- What is the goal of each treatment?
- Should I get a second opinion ? How do I do that? Can you recommend someone?
- What are the chances my cancer can be cured?
- If my bladder is removed, what are my options for passing urine? What are the pros and cons of each?
- How soon do I need to start treatment?
- What can I do to get ready for treatment?

- How long will treatment last? What will it be like? Where will it be done?
- What risks or side effects should I expect? How long are they likely to last?
- Will treatment affect my daily activities?
- How likely is it that the cancer will come back? Is there anything I can do to help lower this risk?
- What will we do if the treatment doesn't work or if the cancer comes back?

During treatment

Once treatment starts, you'll need to know what to expect and what to look for. Not all of these questions may apply, but getting answers to the ones that do may be helpful.

- How will we know if the treatment is working?
- Is there anything I can do to help manage side effects?
- What symptoms or side effects should I tell you about right away?
- How can I reach you on nights, holidays, or weekends?
- Do I need to change what I [eat during treatment](#)³?
- Are there any limits on what I can do?
- Should I exercise? What should I do, and how often?
- Can you suggest a mental health professional I can see if I start to feel overwhelmed, depressed, or distressed?

After treatment

- Are there any limits on what I can do?
- What signs and symptoms should I watch for?
- What kind of exercise should I do now?
- What type of [follow-up](#)⁴ will I need after treatment?
- How often will I need to have follow-up exams and tests?
- How will we know if the cancer has come back? What should I watch for?
- What would my options be if the cancer does come back?

Along with these sample questions, be sure to write down any of your own.

Keep in mind that doctors aren't the only ones who can give you information. Other health care professionals, such as nurses and social workers, can answer a lot of your

questions. To find more about working with your health care team, see [The Doctor-Patient Relationship](#)⁵.

Hyperlinks

1. www.cancer.org/cancer/bladder-cancer/about/what-is-bladder-cancer.html
2. www.cancer.org/cancer/bladder-cancer/treating.html
3. www.cancer.org/treatment/survivorship-during-and-after-treatment/staying-active/nutrition/nutrition-during-treatment.html
4. www.cancer.org/cancer/bladder-cancer/after-treatment/follow-up.html
5. www.cancer.org/treatment/understanding-your-diagnosis/talking-about-cancer/the-doctor-patient-relationship.html

References

See all references for Bladder Cancer (www.cancer.org/cancer/bladder-cancer/references.html)

Last Medical Review: January 30, 2019 Last Revised: January 30, 2019

Written by

The American Cancer Society medical and editorial content team
(www.cancer.org/cancer/acs-medical-content-and-news-staff.html)

Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as journalists, editors, and translators with extensive experience in medical writing.

American Cancer Society medical information is copyrighted material. For reprint requests, please see our Content Usage Policy (www.cancer.org/about-us/policies/content-usage.html).

cancer.org | 1.800.227.2345