
Bladder Cancer Early Detection, Diagnosis, and Staging

Know the signs and symptoms of bladder cancer. Find out how bladder cancer is tested for, diagnosed, and staged.

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](#)
- [Watching for possible symptoms of bladder cancer](#)

Screening for bladder cancer

Screening is the use of tests or exams to look for a disease such as cancer in people who have no symptoms.

For people at average risk

At this time, major professional organizations don't recommend routine screening for bladder cancer for most people. This is because screening has not been shown to lower the risk of dying from bladder cancer in people at average risk.

For people at high risk of bladder cancer

Some doctors or other providers may recommend bladder cancer screening for people who have factors that strongly increase their [risk of bladder cancer](#)¹, such as:

- Having had bladder cancer before
- Having had certain birth defects of the bladder
- Exposure to certain chemicals at work

While screening might be helpful for some people with these risk factors, this hasn't been proven in large studies.

Tests that might be used to look for bladder cancer

Most 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 can find some bladder cancers, but it's not reliable enough to make a good screening test.

Urine tests for biomarkers: Newer tests look for certain substances in urine (known as biomarkers or tumor markers) that might be a sign of bladder cancer. These include tests such as:

- **UroVysion**
- **Bladder tumor antigen (BTA) tests**
- **ImmunoCyt**
- **NMP22 BladderChek**

Many other urine biomarker tests are being developed as well. These types of tests might find some bladder cancers early, but they can miss some as well. And sometimes a test result might be abnormal even in people who do not have cancer.

At this time, these 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 bladder cancer has come back (recurred) in people who have had it removed. To learn more about these tests, see [Tests for Bladder Cancer](#).

More research is needed to know if these or other tests are useful as screening tests.

Watching for possible symptoms of bladder cancer

While screening isn't recommended for people at average risk, bladder cancer can still sometimes be found early if 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.

Hyperlinks

1. www.cancer.org/cancer/types/bladder-cancer/causes-risks-prevention/risk-factors.html

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Bladder Cancer Signs and Symptoms

Bladder cancer can often be found early because it can cause signs or symptoms that lead a person to see a health care provider.

- [Blood in the urine](#)
- [Changes in bladder habits or symptoms of irritation](#)
- [Symptoms of advanced bladder cancer](#)

Blood in the urine

Most often, blood in the urine (**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 symptoms a person is having or as part of a general medical check-up.

Blood might not be visible in the urine every day if a person has bladder cancer. It might go away and then come back at some point.

Usually, early bladder cancer (cancer that is small and still only in the bladder) causes bleeding but little or no pain or other symptoms.

Most often, having blood in your urine doesn't mean you have bladder cancer. It's more likely to be due to something else like an infection, a benign (not cancer) tumor, a stone in the kidney or bladder, or some other benign kidney disease. Still, it's important to have it checked by a doctor so the cause can be found and treated, if needed.

Changes in bladder habits or symptoms of irritation

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

- Having to go 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 going or having a weak urine stream
- Having to get up to go many times during the night

These symptoms are more likely to be caused by something other than cancer, such as 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/cancer/diagnosis-staging/tests.html

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Tests for Bladder Cancer

Bladder cancer is often found because of [signs or symptoms](#) a person is having. Sometimes it might be found because of the results of a lab test 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](#)
- [Urine lab tests](#)
- [Cystoscopy](#)
- [Transurethral resection of bladder tumor \(TURBT\)](#)
- [Biopsy results](#)
- [Genetic testing for some people with bladder cancer](#)
- [Imaging tests](#)
- [Biopsies to look for cancer spread](#)

Medical history and physical exam

Your doctor will ask about your medical history to learn more about your symptoms. The doctor might also ask about possible [risk factors for bladder cancer](#)¹, including 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 results of the history and exam suggest bladder cancer might be the cause, the doctor will order lab tests to help find out for sure.

If you're seeing your primary care doctor, you might also 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 they're from an infection. Urinary tract infections (UTIs) and bladder cancers can cause many of 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 (biomarker) tests

Different urine tests can be used to look for specific substances made by bladder cancer cells (known as **tumor markers** or **biomarkers**). One or more of these tests may be used, often along with urine cytology, to help see if you have bladder cancer:

- **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 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 the NMP22 protein in the urine. People who have bladder cancer often have higher levels of this protein.

Other biomarker tests might be used as well, and many new biomarker tests are now being developed.

Some doctors find urine biomarker tests to be useful in looking for bladder cancers, but these tests may not always be helpful. Most doctors feel that cystoscopy is still the best way to find bladder cancer.

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

Cystoscopy

If bladder cancer is suspected, your doctor will likely recommend a cystoscopy, which is a procedure done by a urologist.

For this test, a **cystoscope**, which is a long, thin, flexible tube with a light and a lens or a small video camera on the end, is inserted through the urethra and up into the bladder. This lets the doctor look at the inner lining of the bladder, as well as take **biopsy** samples from abnormal areas, if needed (see “Biopsy results” below). For details on how this procedure is done, see [Cystoscopy²](#).

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. This drug is taken up by cancer cells. When the doctor 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.

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 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.

Transurethral resection of bladder tumor (TURBT)

A cystoscopy can often be used to make the initial diagnosis of bladder cancer, but this typically needs to be confirmed with a **transurethral resection of bladder tumor (TURBT)**, also known as just a **transurethral resection (TUR)**.

During this procedure, the doctor removes any tumors from the bladder lining, as well as some of the bladder muscle around the tumors. 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. This is important in determining the [stage](#) (extent) of the cancer, which can help determine the best treatment options.

As with cystoscopy, the doctor might use a special light source to find tumors in the bladder:

- **Fluorescence endoscopy** is much like fluorescence cystoscopy, which is described above.
- For **narrow band imaging (NBI)**, a special wavelength of light is used to help show tumors and nearby blood vessels in the bladder lining.

TURBT can also be thought of as part of the treatment for most early-stage bladder cancers (see [Treatment of Bladder Cancer, by Stage](#)³).

For more on how this procedure is done, see [Bladder Cancer Surgery](#)⁴.

Biopsy results

Biopsy samples (from a cystoscopy or TURBT) are sent to a lab, where they are looked at and tested by a **pathologist**, a doctor trained in diagnosing diseases such as cancer with lab tests. If bladder cancer is found, 2 important features are its invasiveness (part of the stage) and grade.

Invasiveness

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

Bladder cancers are often grouped based on if they have invaded into the main muscle layer of the bladder wall:

Non-muscle invasive bladder cancer (NMIBC) has *not* grown into the muscle layer. This is also sometimes described as **superficial bladder cancer**. Included in this group

are:

- **Non-invasive (stage 0) bladder tumors:** These tumors have not grown deeper than the layer of cells they started in.
- **Early invasive (stage I) bladder cancers:** These tumors have grown into the layer of connective tissue under the lining layer of the bladder, but have not reached the muscle layer in the bladder wall.

Muscle invasive bladder cancer (MIBC) has grown into the muscle layer of the bladder wall, and possibly deeper. These cancers are more likely to spread, and they tend to be harder to treat.

For more on how bladder cancers might be described on a biopsy, see [What Is Bladder Cancer?](#)⁵

Grade

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

- **Low-grade cancers** (also called **well-differentiated cancers**) look more like normal bladder tissue. These cancers tend to grow slowly.
- **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. In fact, most invasive bladder cancers are high grade. These cancers tend to be harder to treat.

Testing bladder cancer cells for gene or protein changes

If you have advanced bladder cancer, your cancer cells might be tested for certain gene or protein changes that could affect your treatment options. This type of testing might go by different names, such as **molecular**, **genomic**, or **biomarker testing**. It might be done on cells from a biopsy sample or from a sample of your blood.

For example, testing might be done to check the cancer cells for changes in the *FGFR3* gene. Cancers with changes in this gene are more likely to be helped by treatment with a [targeted drug](#)⁶. Tests might also be done to look for other gene or protein changes that could affect your treatment.

To learn more about this type of testing, see [Biomarker Tests and Cancer Treatment](#)⁷.

Genetic testing for some people with bladder cancer

Not everyone with bladder cancer might need genetic testing. But some people might have an inherited gene change that greatly increased their risk of bladder cancer. This is more likely in people who:

- Are diagnosed with bladder cancer at a younger age (typically before age 45)
- Also have a family history of colon or bladder cancer (and therefore might have [Lynch syndrome](#)⁸)

For many people with bladder cancer, genetic counseling and/or testing might be recommended to look for certain [inherited gene changes](#)⁹. Before being tested, it's important to understand what genetic testing might or might not tell you, as well as what the results might mean for you (and possibly your family members). This is why it's important to speak with your doctor or a genetic counselor before being tested.

For more on genetic testing in general, see [Understanding Genetic Testing for Cancer Risk](#)¹⁰.

Imaging tests

[Imaging tests](#)¹¹ use x-rays, magnetic fields, sound waves, or radioactive substances to make pictures of the inside of your body.

If your doctor thinks you might have bladder cancer, one or more of these tests might be done to look for tumors in the bladder (or in other parts of the urinary tract), which can then be biopsied to find out for sure.

If you've been diagnosed with 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.

Computed tomography (CT) scan

A [CT scan](#)¹² 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.

A CT scan of the chest might also be done to look for tumors in the lungs, especially for bladder cancers that are at higher risk of spreading.

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, such as a lymph node. To do this, you lie on the CT scanning table while the doctor advances a biopsy needle through your skin and into the tumor.

Before having a CT scan, it's important to tell your doctor if you have any allergies or have ever had a reaction to CT or x-ray dyes, or if you have any type of kidney problems, such as chronic kidney disease or an elevated creatinine blood test.

Magnetic resonance imaging (MRI)

Like CT scans, [MRIs](#)¹³ show detailed images of soft tissues in the body. But MRIs use radio waves and strong magnets instead of x-rays to make the images.

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**, might be used instead of a CT urogram to look at the upper part of the urinary system, especially in people with poor kidney function or who have had reactions to x-ray contrast dyes in the past.

Ultrasound

[Ultrasound](#)¹⁴ uses sound waves and their echoes 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.

Intravenous pyelogram (IVP)

An intravenous pyelogram (IVP), also called an **intravenous urogram** (IVU), is an x-ray 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.

This test isn't done as much as it was in the past, as often a CT scan (see above) can be done to provide the same information.

Before having an IVP, it's important to tell your doctor if you have any allergies or have ever had a reaction to CT scan or 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 often, 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.

Chest x-ray

A [chest x-ray](#)¹⁵ 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.

Positron emission tomography (PET) scan

A [PET scan](#)¹⁶ is not commonly done in people with bladder cancer, but it might be used to see if the cancer has spread to lymph nodes or other parts of the body. It is more likely to be useful in people whose cancer is at higher risk for spreading.

For this test, you are injected with a slightly radioactive form of sugar (known as FDG), which collects mainly in cancer cells. A special camera is then used to create a picture of areas of radioactivity in the body. A PET scan doesn't show as much detail as an MRI or CT scan, but it can often show cancer spread in any part of the body.

PET/CT scan: Many centers have special machines that do both a PET and CT scan at

the same time (PET/CT scan). This lets the doctor compare areas of higher radioactivity on the PET scan with the more detailed appearance of that area on the CT scan.

Bone scan

A [bone scan](#)¹⁷ 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 that 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](#)¹⁸ 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 abnormal area.

Hyperlinks

1. www.cancer.org/cancer/types/bladder-cancer/causes-risks-prevention/risk-factors.html
2. www.cancer.org/cancer/diagnosis-staging/tests/endoscopy/cystoscopy.html
3. www.cancer.org/cancer/types/bladder-cancer/treating/by-stage.html
4. www.cancer.org/cancer/types/bladder-cancer/treating/surgery.html
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18. www.cancer.org/cancer/diagnosis-staging/tests/biopsy-and-cytology-tests.html

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Bladder Cancer Stages

After a person 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.

- [Staging bladder cancer](#)
- [Understanding your bladder cancer stage](#)
- [T categories for bladder cancer](#)
- [N categories for bladder cancer](#)
- [M categories for bladder cancer](#)
- [Risk groups for non-muscle invasive bladder cancer](#)

Staging bladder cancer

The stage of a bladder cancer is one of the most important factors in deciding how best to treat it and in 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 a bladder cancer is based on the results of physical exams, biopsies (from

a cystoscopy or TURBT), and imaging tests (CT or MRI scan, x-rays, etc.), which are described in [Tests for Bladder Cancer](#). The results of [surgery](#)¹ (a partial or radical cystectomy), if it has been done, can also be used to help determine the stage of the cancer.

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 parts of the body, 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 (non-invasive) cancers are stage 0, 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 (for example, stage IIIA is less advanced than stage IIIB).

Cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

There are 2 types of staging for bladder cancer:

- The **clinical stage** is your doctor's best estimate of the extent of your cancer, based on the results of physical exams, any biopsies that have been done (during a cystoscopy or TURBT), and any imaging tests you've had. The clinical stage is

used to help determine which treatments are likely to be best.

- If you've had surgery to remove your cancer (a partial or radical cystectomy), your doctors can also determine the **pathological stage**. The pathological stage is likely to be more accurate than the clinical stage, as it's done after the surgical specimen has been examined in the lab.

The staging system in the table below describes the pathological stages for bladder cancer. (More information about the TNM categories follows the stage table.)

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.

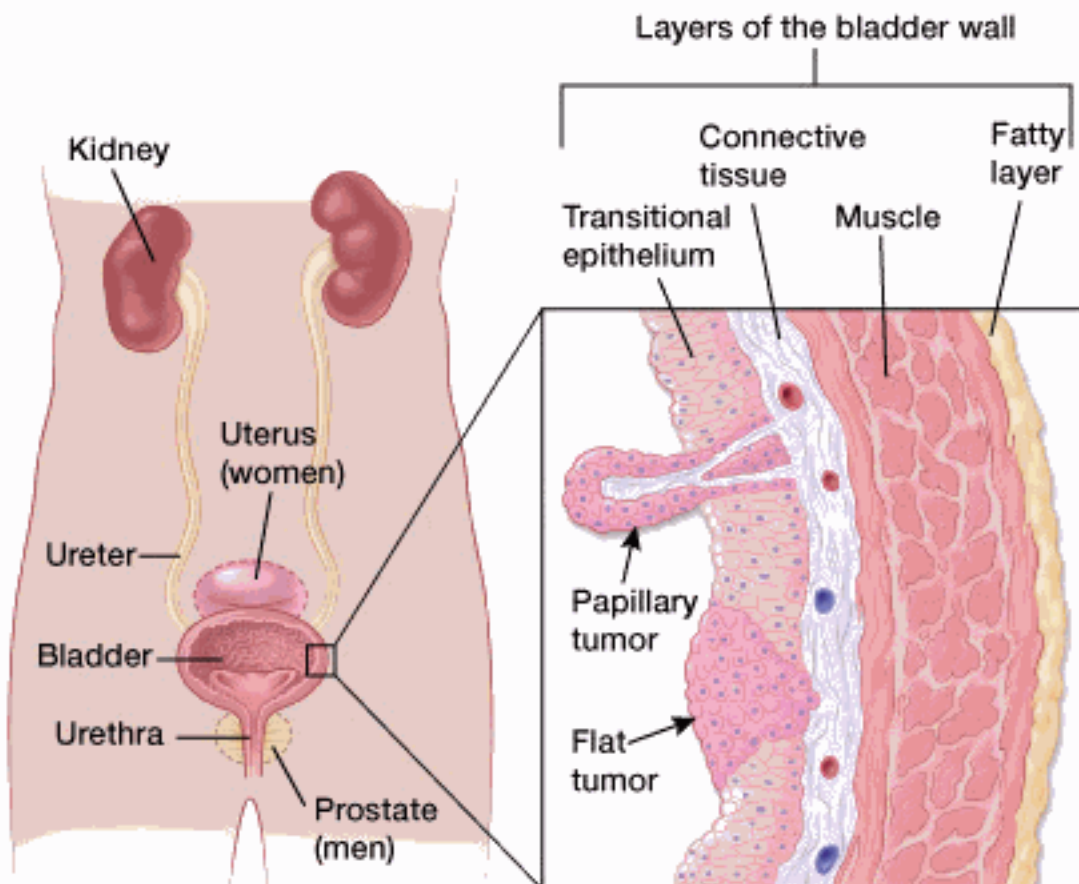
Stage	Stage grouping	Stage description
0a	Ta	The cancer is a non-invasive papillary carcinoma ² (Ta). It has grown toward the hollow center of the bladder but has not grown deeper into the connective tissue or muscle of the bladder wall (see image below). It has not spread to nearby lymph nodes (N0) or distant parts of the body (M0).
	N0	
	M0	
0is	Tis	The cancer is a flat, non-invasive carcinoma ³ (Tis), also known as carcinoma in situ (CIS) . 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 deeper into the connective tissue or muscle of the bladder wall. It has not spread to nearby lymph nodes (N0) or distant parts of the body (M0).
	N0	
	M0	
I	T1	The cancer has grown into the layer of connective tissue under the lining layer of the bladder, but it has not reached the layer of muscle in the bladder wall (T1). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
	N0	
	M0	
II	T2a or T2b	The cancer has grown into the inner (T2a) or outer (T2b) muscle 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.
	N0	

	M0	The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (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 parts of the body (M0).
	OR	
	T1-4a N1 M0	The cancer has at least grown into the layer of connective tissue under the lining of the bladder wall (and may have grown farther), but it's not growing into the pelvic or abdominal wall (T1-T4a), AND the cancer has spread to 1 nearby lymph node in the true pelvis (N1). It has not spread to distant parts of the body (M0).
IIIB	T1-T4a N2 or N3 M0	The cancer has at least grown into the layer of connective tissue under the lining of the bladder wall (and may have grown farther), but it's not growing into the pelvic or abdominal wall (T1-T4a), 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). It has not spread to distant parts of the body (M0).
IVA	T4b Any N M0	The cancer has grown through the bladder wall into the pelvic or abdominal wall (T4b). It might or might not have spread to nearby lymph nodes (Any N). It has not spread to distant parts of the body (M0).
	OR	
	Any T	The cancer might or might not have grown through the wall of the

	Any N M1a	bladder and into nearby organs (Any T). It might or might not have spread to nearby lymph nodes (Any N). It has spread to distant lymph nodes (M1a).
IVB	Any T Any N M1b	The cancer might or might not have grown through the wall of the bladder and into nearby organs (Any T). It might or might not have spread to nearby lymph nodes (Any N). It has spread to 1 or more distant organs, such as the bones, liver, or lungs (M1b).

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.

Risk groups for non-muscle invasive bladder cancer

For treatment purposes, bladder cancers are typically divided into 2 main groups:

- **Non-muscle invasive bladder cancer (NMIBC)** has not yet grown deep enough into the bladder wall to reach the muscle layer.
- **Muscle invasive bladder cancer (MIBC)** has grown into the muscle layer of the bladder wall (and possibly deeper). These cancers typically require more extensive treatment.

NMIBC is often further divided into **low-, intermediate-, and high-risk groups**. This is based on factors such as:

- The size and depth of the tumor(s)
- The [grade](#) of the tumor(s)
- How many tumors there are
- Whether a tumor is new or if it has recurred (come back)
- If the tumor has certain other high-risk features

Doctors use these risk groups to get an idea of how likely it is that a bladder cancer will come back or progress further, which in turn might affect a person's treatment options.

The risk groups for NMIBC can be complex. If you have NMIBC and want to know more, ask your doctor to explain your risk group to you in a way you understand.

Hyperlinks

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

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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.

- [What is a 5-year relative survival rate?](#)
- [Where do these numbers come from?](#)
- [5-year relative survival rates for bladder cancer](#)
- [Understanding the numbers](#)

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. Ask your doctor how these numbers might apply to you.

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 a similar group of 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 Surveillance, Epidemiology, and End Results (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.
- **Regional:** The cancer has spread from the bladder to nearby structures or lymph

nodes.

- **Distant:** The cancer has spread to distant parts of the body such as the lungs, liver, or bones.

5-year relative survival rates for bladder cancer

These numbers are based on people diagnosed with bladder cancer between 2013 and 2019.

SEER* Stage	5-year Relative Survival Rate
In situ alone	96%
Localized	71%
Regional	39%
Distant	8%
All SEER stages combined	78%

Understanding the numbers

- **People now being diagnosed with bladder cancer may have a better outlook than these numbers show.** Treatments for bladder cancer have improved 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 a person's age and overall health, how well the cancer responds to treatment, and other factors can also affect their outlook.

References

American Cancer Society. *Cancer Facts & Figures 2024*. Atlanta : American Cancer Society; 2024.

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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](#)
- [When deciding on a treatment plan](#)
- [During treatment](#)
- [After treatment](#)

When you're told you have bladder cancer

- What [type of bladder cancer](#)¹ do I have?
- What is the [stage](#) and grade of the cancer, and what does that mean?
- Do you think the cancer has spread beyond my bladder?
- Will I need any other [tests](#) before we can decide on treatment?
- Do I need to see any other doctors?
- If I'm concerned about the [costs and insurance coverage](#)² for my diagnosis and treatment, who can help me?

When deciding on a treatment plan

- How much experience do you have treating this type of cancer?
- What are my [treatment options](#)³?
- What do you recommend and why?
- What is the goal of each treatment?
- Should I get a [second opinion](#)⁴? How do I do that? Can you recommend a doctor or cancer center?

- What are the chances my cancer can be cured?
- Does my bladder need to be removed? Are there other treatment options that do not include bladder removal?
- 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 or someone on your team on nights, holidays, or weekends?
- Do I need to change what I [eat during treatment](#)⁵?
- Are there any limits on what I can do?
- Should I exercise? What should I do, and how often?
- Do you know of any local or online support groups where I can talk to others who have been through this?
- 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 kind of exercise should I do now?
- What type of [follow-up](#)⁶ 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. For instance, you might want to ask about recovery times so that you can plan your work or activity schedule, or you may want to ask if there are [clinical trials](#)⁷ you might be eligible for.

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](#)⁸.

Hyperlinks

1. www.cancer.org/cancer/types/bladder-cancer/about/what-is-bladder-cancer.html
2. www.cancer.org/cancer/financial-insurance-matters.html
3. www.cancer.org/cancer/types/bladder-cancer/treating.html
4. www.cancer.org/cancer/managing-cancer/finding-care/seeking-a-second-opinion.html
5. www.cancer.org/cancer/survivorship/coping/nutrition.html
6. www.cancer.org/cancer/types/bladder-cancer/after-treatment/follow-up.html
7. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
8. www.cancer.org/cancer/managing-cancer/finding-care/the-doctor-patient-relationship.html

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