What is bladder cancer?

Cancer can start any place in the body. Cancer that starts in the bladder is called bladder cancer. It starts when cells in the bladder grow out of control and crowd out normal cells. This makes it hard for the body to work the way it should.

Cancer cells can spread to other parts of the body. For instance, cancer cells in the bladder can travel to the bone and grow there. When cancer cells spread, it’s called metastasis.

Cancer is always named for the place where it starts. So when bladder cancer spreads to the bone (or any other place), it’s still called bladder cancer. It’s not called bone cancer unless it starts in the bone.

The bladder

The bladder is a hollow organ that stores urine before it leaves your body. It sits in the lowest part of your belly, called your pelvis. Urine is made in your kidneys. Tubes called ureters connect your kidneys to the bladder. Urine flows through the ureters and into
your bladder, where it's stored. When you urinate (pee), the bladder squeezes the urine out through a tube called the urethra.

Bladder cancer usually starts in the lining or inner layer of the bladder wall. As the cancer grows through the layers of the bladder wall, it becomes harder to treat.

The "transitional epithelium" on the picture is the lining layer where most bladder cancers start. Over time they can spread deeper into the other layers.

Ask your doctor to use this picture to show you where the cancer is.

Questions to ask the doctor

- Why do you think I have bladder cancer?
- Is there a chance I don't have cancer?
- Would you please write down the kind of cancer you think I might have?
What will happen next?

How does the doctor know I have bladder cancer?

Signs of bladder cancer are problems peeing, pain when peeing, needing to go more often than normal, and seeing blood in your urine.

If signs are pointing to bladder cancer, more tests will be done. Here are some of the tests you may need:

Tests that may be done

Physical exam: The doctor will check you for signs of bladder cancer and other health problems. This might include a rectal exam, during which a gloved finger is put into your rectum. If you are a woman, a pelvic exam might also be done. During these exams, the doctor can sometimes feel a bladder tumor.

Urine tests: For these tests, you'll be asked to pee in a cup. Your urine is then tested for cancer cells, blood, or certain proteins (called tumor markers).

Cystoscopy: For this exam, a doctor called a urologist looks at the inside of your bladder using a tool called a cystoscope. This is a thin tube with a tiny light and camera on its end. It's put through the opening of your urethra and moved up into your bladder.

Blue light cystoscopy: Sometimes, special drugs are put into the bladder during the exam. Cancer cells soak up these drugs and then glow when the doctor shines a blue light through the scope. This can help the doctor see cancer cells that might have been missed with the normal light.

Bladder biopsy: This is needed to know for sure if you have bladder cancer. For this test, a cystoscope is used to take a tiny piece of the bladder (called a sample). More than one sample may be taken because sometimes cancer starts in more than one part of the bladder. Salt water washings of the inside of your bladder may also be collected to look for cancer cells. Any samples are sent to a lab and tested to see if there are cancer cells in them.

X-ray: Dye is put into a vein for a special x-ray of the kidneys, ureters, and bladder (see the picture). The dye highlights these so the doctor can better see them and any tumors. This test is sometimes called an IVP.
CT scan: This is sometimes called a CAT scan. It's a kind of x-ray that takes many pictures of the inside of your body. It can show if the cancer has spread outside the bladder.

MRI scan: MRIs use radio waves and strong magnets instead of x-rays to take detailed pictures. MRI scans can be very helpful in finding cancer that has spread outside the bladder.

Ultrasound: This test uses sound waves to make pictures of the organs inside your body, like your bladder and kidneys. It can help show the size of a bladder cancer and if it has spread.

Bone scan: A bone scan can help show if bladder cancer has spread to the bones. This test is not done unless you have bone pain.

Questions to ask the doctor

- What tests will I need to have?
- Who will do these tests?
- Where will they be done?
- How and when will I get the results?
- Who can explain the results to me?
- What do I need to do next?

How serious is my cancer?

If bladder cancer is found, certain features of the cancer cells help the doctor know how best to treat it:

Invasiveness

Tests can show how deeply the cancer has grown into the bladder wall.

- If the cancer stays in the inner layer of cells without growing into the outer layers, it's called non-invasive.
- If the cancer grows into the outer layers of the bladder, it's called invasive.
- Invasive cancers are more likely to spread and can be harder to treat.
Grade

The grade refers to how the cancer looks under the microscope.

- **Low-grade** bladder cancers look a lot like normal bladder cells. They tend to grow and spread slowly.
- **High-grade** bladder cancers look less like normal bladder cells. These cancers are more likely to grow and spread. They can be harder to treat.

Stage

Your doctor will also want to find out the stage of your cancer to help decide what type of treatment is best for you. The stage describes the growth or spread of the cancer in the place it started. It also tells if the cancer has spread to other organs of your body that are close by or farther away.

Your cancer can be stage 0, 1, 2, 3, or 4. The lower the number, the less the cancer has spread. A higher number, like stage 4, means a more serious cancer that has spread from where it started. Ask the doctor about the cancer stage and what it means for you.

Questions to ask the doctor

- Is the cancer invasive?
- Do you know the stage and grade of the cancer?
- If not, how and when will you find out the stage and grade?
- Would you explain to me what these mean in my case?
- Based on what you know about my cancer, how long do you think I'll live?
- What will happen next?

What kind of treatment will I need?

There are many ways to treat bladder cancer. You might want to get a second opinion about the best treatment plan for you.

Bladder cancer is most often treated with:

- Surgery (an operation)
Radiation
● Intravesical treatment
● Chemo
● Immunotherapy

Sometimes more than one type is used. The treatment plan that’s best for you depends on:

● The stage and grade of the cancer
● Whether the cancer has spread into the bladder wall
● The chance that a type of treatment will cure the cancer or help in some way
● Other health problems you have
● Your feelings about the treatment and the side effects that come with it

Surgery for bladder cancer

Surgery is done for most bladder cancers. The type you have depends on the stage of the cancer.

Removing the tumor from the inside bladder is the most common surgery for early bladder cancer. This can be done during a cystoscopy\(^3\). A cystoscope with a looped wire on the end is used to remove the tumor.

When the cancer is more invasive, the cancer is removed along with part of the bladder or the entire bladder.

If only part of the bladder is removed, you'll still be able to hold and release urine as normal, though in smaller amounts. If the entire bladder is removed, you'll need another way to store and pass urine. Your doctor can explain the options for this.

Side effects of surgery

Any type of surgery can have some risks and side effects\(^4\). For instance, removing the bladder not only changes how your body passes urine, but it can also cause sexual side effects. If you have these or any other problems, let your doctors know. There are ways to help deal with many side effects.

Intravesical treatment
For this treatment, a drug is put inside the bladder. This might be a chemo drug or BCG, a drug that boosts the immune system. This is often done after surgery in people who still have their bladder. It can help lower the chance that the cancer will come back in the bladder.

The drug affects the cells lining the inside of the bladder, but it has little to no effect on cells in other places. This can help limit side effects. But it doesn't help treat invasive bladder cancers or those that have spread outside the bladder.

**Side effects of intravesical treatment**

Some people have a burning feeling in their bladder after treatment. Other side effects depend on which drug is used. Some side effects may feel like having the flu, such as fever, chills, and feeling tired.

**Chemo**

Chemo is the use of drugs to kill cancer cells. The drugs may be given into a vein or taken as pills. They go into the blood and spread through the body.

For early-stage bladder cancers, chemo may be used:

- Before surgery to shrink a tumor
- After surgery to kill any cancer cells that remain
- With radiation to help it work better

Chemo is usually the main treatment for advanced bladder cancers, such as those that have spread to other parts of the body.

Chemo is given in cycles or rounds. Each round of treatment is followed by a break. Most of the time, 2 or more chemo drugs are given. Treatment often lasts for many months.

**Side effects of chemo**

Chemo can make you feel very tired, sick to your stomach, and cause your hair to fall out. But these problems go away after treatment ends.

There are ways to treat most chemo side effects. If you have side effects, talk to your cancer care team so they can help.
Radiation treatment

In radiation therapy, a machine sends x-rays to a specific part of the patient's body to kill cancer cells.

Radiation treatment for bladder cancer can be used:

- To treat early-stage cancer after surgery
- As the main treatment for early-stage cancer if you can't have surgery
- As part of the treatment for advanced bladder cancer

Radiation is often given along with chemo. Certain chemo drugs can help the radiation work better.

Side effects of radiation treatments

The most common side effects of radiation to the bladder are:

- Skin changes where the radiation goes into your body, such as redness or blistering
- Nausea and vomiting
- Burning or pain when you urinate, feeling the need to go often, or blood in urine
- Diarrhea
- Feeling tired
- Easy bruising or bleeding
- Increased risk of infection

Most side effects get better after treatment ends. Some might last longer. Talk to your doctor about what you can expect.

Immunotherapy

Immunotherapy is treatment that boosts your immune system to attack the cancer cells. Different types of immunotherapy can be used to treat bladder cancer. These drugs can be put right into the bladder (as a liquid) or given into a vein.

Side effects of immunotherapy

Immunotherapy can cause different side effects depending on which drug is used. These tend to be mild, such as feeling tired or having an upset stomach, but in some
people the side effects can be serious. Most side effects go away after treatment ends.

If you have side effects, talk to your cancer care team so they can help.

**Clinical trials**

Clinical trials are research studies that test new drugs or other treatments in people. They compare standard treatments with others that may be better.

If you’d like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials. See [Clinical Trials](#) to learn more.

Clinical trials are one way to get the newest cancer treatments. They are the best way for doctors to find better ways to treat cancer. Still, they’re not right for everyone. And it’s up to you whether to take part in a clinical trial.

**What about other treatments that I hear about?**

When you have cancer you might hear about other ways to treat cancer or treat your symptoms. These may not always be standard medical treatments. These treatments can be vitamins, herbs, special diets, and other things. You may be curious about these treatments.

Some of these are known to help, but many have not been tested. Some have been shown not to be helpful. A few have even been found to be harmful. Talk to your doctor about anything you’re thinking about using, whether it’s a vitamin, a diet, or anything else.

**Questions to ask the doctor**

- What treatment do you think is best for me?
- What’s the goal of this treatment? Do you think it could cure the cancer?
- Will treatment include surgery? If so, who will do the surgery?
- What will the surgery be like?
- How will I pee after surgery?
- Will I have other types of treatment, too?
- What’s the goal of these treatments?
- What side effects could I have from these treatments?
- Is there a clinical trial that might be right for me?
• What about treatments like special vitamins or diets that friends tell me about? How will I know if they are safe?
• What should I do to be ready for treatment?
• Is there anything I can do to help the treatment work better?
• What’s the next step?

What will happen after treatment?

You'll be glad when treatment is over. But it’s hard not to worry about cancer coming back. Even when cancer never comes back, people still worry about this. For years after treatment ends, you will see your cancer doctor. Be sure to go to all of your follow-up visits. People who have had bladder cancer are at high risk of having a second bladder cancer.

If you have no signs of cancer, most experts advise seeing with your doctor every 3 to 6 months. These visits might include urine tests, blood work, and other tests. If you still have your bladder, you will need regular exams of your bladder, too. The time between doctor visits may be longer after a few years if no new cancers are seen.

Having cancer and dealing with treatment can be hard, but it can also be a time to look at your life in new ways. You might be thinking about how to improve your health. Call us or talk to your doctor to find out what you can do to feel better.

You can’t change the fact that you have cancer. What you can change is how you live the rest of your life – making healthy choices and feeling as well as you can.

Hyperlinks

1. www.cancer.org/treatment/understanding-your-diagnosis/tests/endoscopy/cystoscopy.html
3. www.cancer.org/treatment/understanding-your-diagnosis/tests/endoscopy/cystoscopy.html
5. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy/chemotherapy-side-effects.html
Words to know

**Bladder:** a hollow organ that stores urine

**Biopsy** (BY-op-see): taking out a tiny piece of tissue to see if there are cancer cells in it

**Cystectomy** (sis-TEK-tuh-mee): surgery to take out the bladder

**Cystoscopy** (sis-TAH-scuh-pee): a procedure use to look at the inside of the bladder with a thin, lighted tube called a cystoscope (sis-TOE-scope)

**Intravesical** (in-truh-VESS-uh-cull): within or inside the bladder

**Invasive cancer:** cancer that has spread beyond the layer of cells where it first began

**IVP:** a test that uses dye and x-rays to look at the kidneys, ureters, and bladder

**Kidneys:** a pair of bean-shaped organs, each about the size of a fist, that make urine

**Lymph nodes** (limf nodes): small bean-shaped parts of the immune system found all over the body and connected by lymph vessels; also called lymph glands.

**Metastasis** (meh-TAS-tuh-sis): cancer cells that have spread from where they started to other places in the body

**Non-invasive cancer:** cancer that's still only in the layer of cells where it first began

**Partial cystectomy** (sis-TEK-tuh-mee): surgery to remove only part of the bladder

**TURBT:** a procedure that removes small pieces from the inside of the bladder to see if someone has bladder cancer. It can also be used to treat some small bladder cancers.

**Ureter** (YUR-uh-tur): a tube that carries urine from each kidney to the bladder

**Urethra** (yur-EETH-ruh): the tube that carries urine from the bladder to the outside of the body
**Urine:** liquid waste made by the kidneys and stored in the bladder. Also called pee.

**Urologist** (yur-OL-uh-jist): a doctor who's an expert in treating problems of the urinary tract, as well as the genital area in men

**How can I learn more?**

We have a lot more information for you. You can find it online at www.cancer.org (http://www.cancer.org). Or, you can call our toll-free number at 1-800-227-2345 to talk to one of our cancer information specialists.

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