

Bladder Cancer

Information for people with cancer

This information should not be used to diagnose yourself or in place of a doctor's care.

The bladder is a hollow organ that stores urine (pee).

The bladder has many layers lining it. The deeper the cancer has grown into these layers, the harder the cancer is to treat and the greater the chance of it spreading.

Urothelial cells (also known as the urothelium transitional cells) line the inner surface of the bladder. This lining begins in the kidneys and goes through the ureters towards the bladder. The ureters connect the kidneys to the bladder.

Urine exits the body through a tube called the urethra. The urethra is also lined with urothelial cells.

In people with a prostate, the urethra goes through the prostate gland. In people with a vagina, the urethra is within the vaginal wall.

Cancer of the urothelial cell is the most common type of bladder cancer. This is also called urothelial cancer. 90% (90 out of 100) of bladder cancer cases are urothelial cancers.

Diagnosis and Staging

What are the signs and symptoms of bladder cancer?

Some symptoms of bladder cancer are also symptoms of a bladder infection. This can be confusing and may delay a diagnosis.

Symptoms of bladder cancer may include:

- Blood in your urine. You may see this when you urinate (go pee), or it may only be seen under a microscope. Even if this only happens one time, it may still be a sign. This is called hematuria.

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- If you have blood in your urine, the colour of your urine may be smoky, rusty, bright red or deep red.
- Having to urinate more often.
- Pain in your bladder or when you urinate.
- Needing to urinate urgently (feeling as if you have to go right away and cannot hold it in).
- If the cancer is advanced, symptoms include weight loss, loss of appetite, weakness and general discomfort.

If you have any signs or symptoms that you are worried about, please talk to your family doctor or nurse practitioner.

How is bladder cancer diagnosed?

These are tests that may be used to diagnose bladder cancer:

- **Vaginal or rectal exam:** a doctor or nurse practitioner examines the vaginal area or rectal area.
- **Urinalysis:** a lab test where your urine is looked at under the microscope to check for blood or cancer cells.
- **Urine cytology:** cells in your urine are examined. These are cells from your bladder wall or tumour.
- **Cystoscopy:** a cystoscope (thin tube with a camera and light on the end) is put up your urethra and into your bladder. A doctor uses it to examine your bladder and can also use it to take small samples of tissue. Some cancers can be partly or totally removed using a cystoscope.
- **Biopsy:** a small amount of tissue is removed. A specialist (pathologist) will examine the tissue.
- **IVP (intravenous pyelogram):** a special dye is injected into your bloodstream. The dye goes into your urine and allows your doctor to see your urinary system with an x-ray machine.

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- **Computed tomography (CT scan):** used to see the tumour and if cancer has spread.

For more information on tests used to diagnose cancer, see our Screening and Diagnosis pathfinder: bccancer.libguides.com/pathfinder-screening

What are the types of bladder cancer?

The most common type of bladder cancer is **urothelial (transitional cell) cancer**.

Less common types include:

- Squamous cell carcinomas
- Adenocarcinomas
- Mixed cell

Bladder cancers are either superficial or invasive:

- **Superficial:** cancer is only in the lining of the bladder. It is early stage and has not spread outside the lining.
- **Invasive:** cancer has invaded (spread deeper into) the bladder wall.

Bladder cancers are either low grade or high grade:

- **Low grade:** usually grow slowly and are less likely to spread. Cancer cells look different but are arranged a lot like normal cells.
- **High grade:** usually grow more quickly and more likely to spread. Cancer cells do not look normal and are not arranged like normal cells.

Superficial papillary tumours are only in the lining of the bladder. They are usually low grade.

Carcinoma in situ is a superficial high grade disease. It is more likely to be aggressive. It can be treated but if the treatments are not working, a cystectomy (removing the bladder) may be needed.

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What are the stages of bladder cancer?

Staging describes the cancer. Staging is based on how much cancer is in the body, where it was first diagnosed, if the cancer has spread and where it has spread to.

The stage of the cancer can help your health care team plan your treatment. It can also tell them how your cancer might respond to treatment and the chance that your cancer may come back (recur).

Bladder cancer staging:

- **Stage 0:** Tumour is only in the lining of the bladder.
 - **Stage 0A:** also called non-invasive papillary carcinomas. Tumour looks like a mushroom.
 - **Stage 0is:** also called carcinoma in situ. Tumour is flat.
- **Stage 1:** Tumour has grown into the connective tissue later of the bladder.
- **Stage 2:** Tumour has grown into the muscle layer of the bladder.
- **Stage 3A:** One of the following:
 - Tumour has grown into nearby tissues outside of the bladder but has not grown into the pelvic wall or abdominal wall.
 - Cancer has spread to one lymph node in the pelvis.
- **Stage 3B:** Cancer has spread to two or more lymph nodes in the pelvis or to one or more common iliac lymph nodes (just above the pelvis).
- **Stage 4A:** Tumour has grown into the pelvic wall or abdominal wall.
- **Stage 4B:** Cancer has spread to other parts of the body (distant metastasis), such as the lungs, liver or bone. This is called metastatic bladder cancer.

For more information on staging, see our About Cancer page:

bccancer.bc.ca/health-info/types-of-cancer/about-cancer

What are the grades of bladder cancer?

The grade of the cancer describes how different the cancer cells look from normal cells and how fast the cancer cells are growing. A pathologist will give the cancer a grade after looking at the cells under a microscope.

Bladder cancer can be grade 1, 2 or 3. The lower the number, the lower the grade.

Low grade: cells are abnormal but look a lot like normal cells. Low grade cancers usually grow slowly and are less likely to spread.

High grade: cells are abnormal and do not look like normal cells. High grade cancers usually grow more quickly and are more likely to spread.

The grade of the cancer can help your health care team plan your treatment.

Treatment

What is the treatment for bladder cancer?

Cancer treatment may be different for each person. It depends on your particular cancer. Your treatment may be different from what is listed here.

Surgery

Removing the tumour can often lead to cure.

The type of surgery depends on the type and stage of cancer.

- **Superficial papillary tumours:** usually treated by transurethral resection (TUR surgery). A thin tube is put up your urethra. It has a camera and a wire loop on the end. The wire loop can grab the cancerous tissue or burn the cancer with electricity through the wire.

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- This surgery can be repeated as often as needed. Regular follow-up is needed to find any new cancers. Papillary tumours will often keep coming back in different places in the bladder.
- Your doctor may give you some systemic therapy (chemotherapy) right after the surgery. The drug will be put in your bladder right after surgery. This will be removed before you leave the recovery room. This treatment helps stop new tumours from growing by killing any floating cancer cells that may be left after surgery.
- **More aggressive superficial tumours:** treated by TUR surgery then systemic therapy put into the bladder after surgery.
 - About 4-6 weeks after your surgery, your urologist may give you a treatment called BCG (Bacillus Calmette-Guerin). This is a type of immunotherapy that is used to keep the cancer from coming back. BCG is put in your bladder once a week for six weeks.
- **Invasive or high grade tumours:** usually treated by removing the bladder (cystectomy). When this happens, the surgeon will divert (re-direct) the flow of urine. This is called urinary diversion. There are different ways to divert urine. Your health care team will decide which way is best for you.
 - The prostate is often removed with the bladder. A long term complication of bladder surgery may be erectile dysfunction.
 - In other patients, the uterus, cervix, fallopian tubes, ovaries and the top of the vagina are often removed. This is done to make sure all of the cancer is removed and increase the chance of curing the cancer.

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Systemic therapy (chemotherapy)

- Can be done two ways:
 - Intravesical – treatments are injected into your bladder.
 - Intravenous or systemic – a needle is put in your vein to give you the treatments.
- Standard treatment for cancer that has already spread.
- May be given along with surgery and radiation for invasive or metastatic cancer.
- For invasive cancers, sometimes given before cystectomy.

For more information about systemic therapy go to:

[bccancer.bc.ca/our-services/treatments/systemic-therapy-\(chemotherapy\)](http://bccancer.bc.ca/our-services/treatments/systemic-therapy-(chemotherapy))

Radiation Therapy (high energy x-rays that kill or shrink cancer cells)

- For some patients, can be used to cure bladder cancer.
- In bladder cancer that cannot be cured, used to help with symptoms and pain.
- May be a different option than removing the bladder.
- Not the right treatment for all patients.

For more information about radiation therapy go to:

bccancer.bc.ca/our-services/treatments/radiation-therapy

Immunotherapy (treatments that help your immune system fight the cancer)

- BCG is a treatment that is sometimes used.
- Interferon is another type of immunotherapy that is sometimes useful in bladder cancer.

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What is the follow-up after treatment?

- Follow-up testing and appointments are based on your type of cancer.
- After treatment, you may return to the care of your family doctor or specialist for regular follow-up. If you do not have a family doctor, please talk to your BC Cancer health care team.
- The BC Cancer Life after Cancer page has information on issues that cancer survivors may face: bccancer.bc.ca/lifeaftercancer

More Information

What causes bladder cancer and who gets it?

These are some of the risk factors for this cancer. Not all of these risk factors may cause this cancer, but they may help the cancer start growing.

- Smoking tobacco and cigarettes. The risk of bladder cancer for people who smoke is three times the risk of non-smokers.
- Being over the age of 50.
- It affects men three times more than women [see note below, Statistics]
- Working at companies that make aluminum (pot room workers), paint, leather goods, petroleum and rubber compounds.
- Working in the printing industry or as a hairdresser, truck driver, or machinist.
 - If you work in these industries and you are also a smoker, your risk is even higher.
- Chronic bladder infections or irritation. These can cause changes in your bladder that increase your risk of cancer.

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- Schistosomiasis has been linked to bladder cancer. The parasitic worm called 'schistosoma haematobium', which lodges in the bladder, has been found in 97% (97 out of 100) of Egyptian patients with bladder cancer. This is not a problem for B.C and Yukon residents unless you are an immigrant from the Middle East.
- Excessive use of drugs with phenacetin. The use of phenacetin in prescription or over-the-counter drugs was discontinued in Canada in 1973. This is not a big risk factor for most of the general population. However, illegal drug dealers sometimes cut cocaine with phenacetin.

Statistics

B.C.: www.bccancer.bc.ca/health-info/disease-system-statistics/statistics-by-cancer-type

Canada: www.cancer.ca/en/cancer-information/cancer-type/bladder/statistics/?region=bc

Note: Available statistics do not have information about the inclusion of transgender and gender diverse participants. It is unknown how these statistics apply to transgender and gender diverse people. Patients are advised to speak with their primary care provider or specialists about their individual considerations and recommendations.

Can I help prevent bladder cancer?

Here are some things you can do to lower your risk of bladder cancer:

- **Do not smoke or use tobacco:** Support is available to help you successfully quit.
 - Visit the BC Cancer Tobacco and Cancer Prevention page:
www.bccancer.bc.ca/health-info/prevention/tobacco
- **Try to minimize or eliminate your exposures to environmental or work-related risk factors.**



Provincial Health Services Authority

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Is there screening for bladder cancer?

There is no screening for this cancer.

Where can I find more information?

- If you have questions about bladder cancer, please talk to your health care team.
- Our librarians can help you find the information you need. Visit our Library page: bccancer.bc.ca/our-services/services/library
- BC Cancer Library Bladder Cancer pathfinder: bccancer.libguides.com/pathfinder-bladder
- Managing Your Symptoms: <http://www.bccancer.bc.ca/health-info/coping-with-cancer/managing-symptoms-side-effects>
- Emotional Support: www.bccancer.bc.ca/health-info/coping-with-cancer/emotional-support