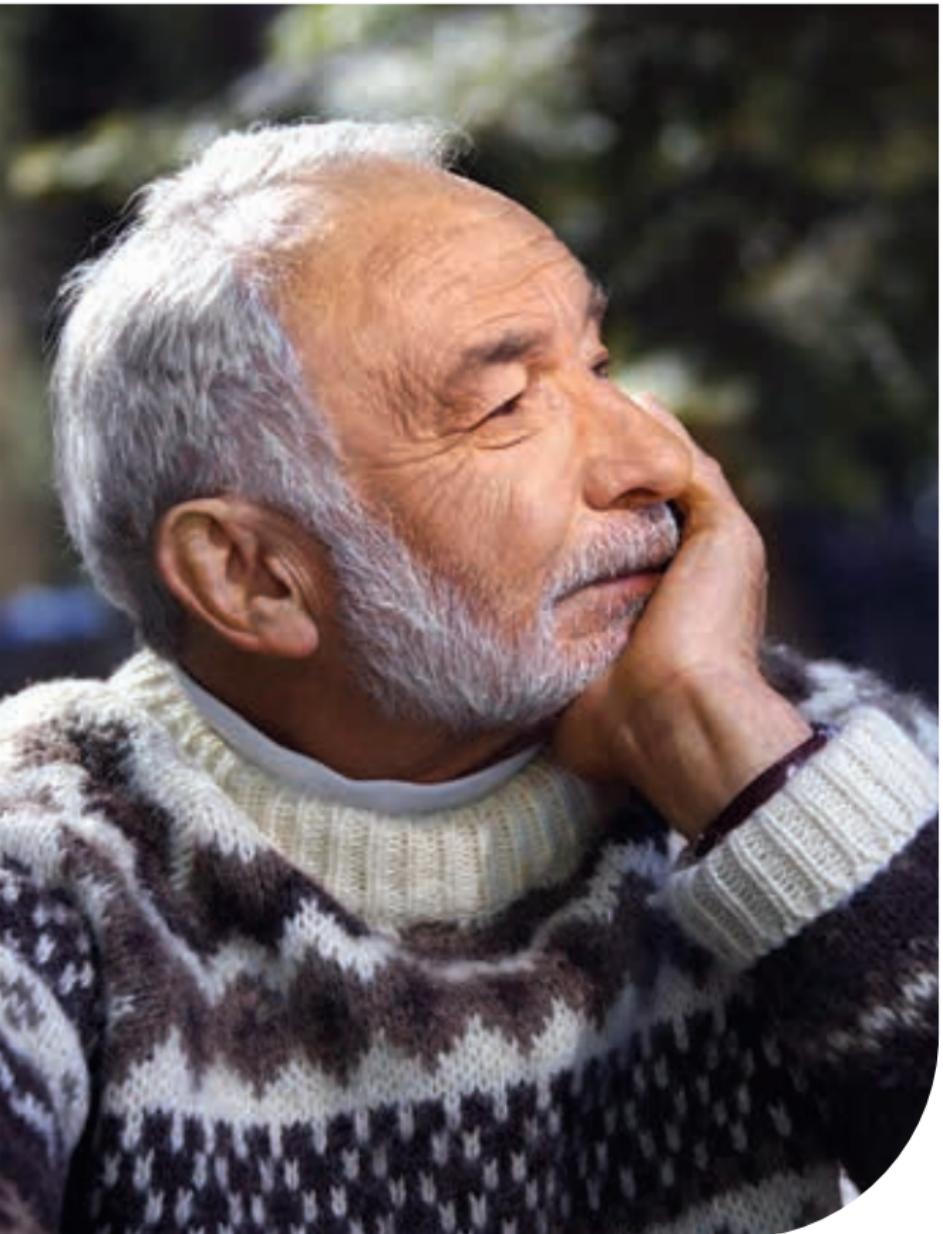




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# Bladder Cancer

*Understanding your diagnosis*



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# Bladder Cancer

## *Understanding your diagnosis*

When you first hear that you have cancer, you may feel alone and afraid. You may be overwhelmed by the large amount of information you have to take in and the decisions you need to make.

*“All I could hear was ‘cancer.’ I heard my doctor say something like, ‘We’re going to try and get the surgery done as soon as possible.’ I didn’t hear one word after that.*

The introductory information in this brochure can help you and your family take the first steps in learning about bladder cancer. A better understanding may give you a feeling of control and help you work with your healthcare team to choose the best care for you.

### **For more information**

The information in this brochure provides an introduction to bladder cancer. More in-depth information is available on [cancer.ca](http://cancer.ca). You can also call our Cancer Information Service at 1-888-939-3333 to learn more about cancer, diagnosis, treatment, support and the services we offer.

## What is cancer?

Cancer is a disease that starts in our cells. Our bodies are made up of trillions of cells, grouped together to form tissues and organs such as muscles and bones, the lungs and the liver. Genes inside each cell order it to grow, work, reproduce and die. Normally, our cells obey these orders and we remain healthy.

But sometimes the instructions in some cells get mixed up, causing them to behave abnormally. These cells grow and divide uncontrollably. After a while, groups of abnormal cells form lumps, or tumours.

Tumours can be either benign (non-cancerous) or malignant (cancerous). Benign tumour cells stay in one place in the body and are not usually life-threatening. Malignant tumour cells are able to invade nearby tissues and spread to other parts of the body. It's important to find and treat malignant tumours as early as possible. In most cases, finding cancer early increases the chances of successful treatment.

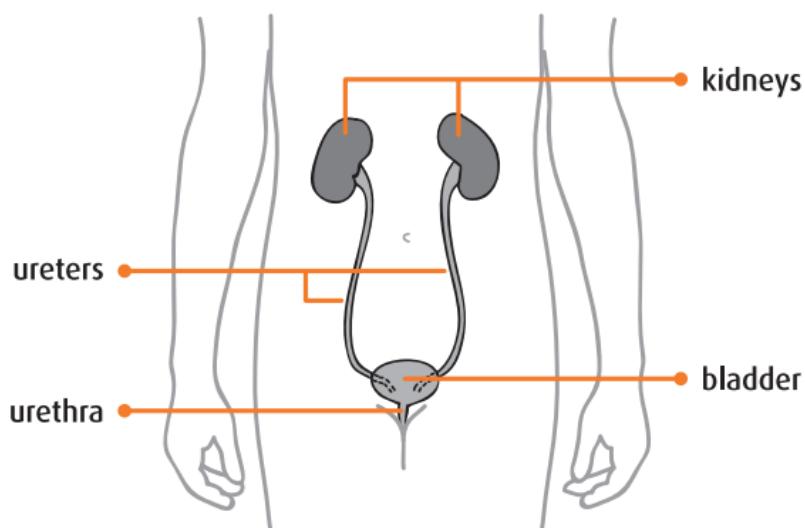
Cancer cells that spread to other parts of the body are called metastases. The first sign that a malignant tumour has spread (metastasized) is often swelling of nearby lymph nodes, but cancer can spread to almost any part of the body.

Cancers are named after the part of the body where they start. For example, cancer that starts in the bladder but spreads to the lungs is called bladder cancer with lung metastases.

## What is bladder cancer?

Bladder cancer starts in the cells of the bladder. The bladder is in the lower part of the abdomen. It is a hollow, balloon-shaped organ with a flexible, muscular wall. The bladder collects and stores urine, which is made by the kidneys. Urine then travels to the bladder through 2 tubes called ureters. When the bladder is full, the muscles in the bladder wall tighten to make the urine leave the body. The urine leaves the body through a tube called the urethra.

Location of the Bladder



Nearly all bladder cancers start in the lining of the bladder. Cancer that is only in the lining is called superficial bladder cancer. If the cancer spreads into the muscle wall of the bladder, it is called invasive bladder cancer.

## **Diagnosing bladder cancer**

Your doctor may suspect you have bladder cancer after taking your medical history and doing a physical exam of the area around your stomach (the abdomen and pelvis). The physical exam may include an examination of the rectum for men and the rectum and vagina for women. To confirm the diagnosis, your doctor will arrange special tests. These tests may also be used to “stage” and “grade” the cancer and to help plan the treatment.

**Symptoms of bladder cancer:** The most common symptom of bladder cancer is blood in the urine (called hematuria). The blood can change the colour of the urine to anything from slightly rusty to bright red. The urine may always be bloody, or it may come and go.

Other symptoms of bladder cancer include:

- the need to urinate often (frequency)
- an intense need to urinate (urgency)
- trouble urinating
- a burning sensation or pain during urination

Other health problems can cause some of the same symptoms. The process of diagnosis may seem long and frustrating, but it is important for the doctor to make sure there are no other possible reasons for a health problem.

Your doctor will do one or more of the following tests to make a diagnosis.

**Cystoscopy:** Cystoscopy uses a thin tube with a light at the end (called a cystoscope) to look inside the bladder. The cystoscope is passed into the urethra for the doctor to look at the lining of the bladder and urethra. Sometimes the tube has a camera on it to take pictures. During a cystoscopy, you will probably be given a mild anesthetic (freezing). If a biopsy is done at the same time, you will have a general anesthetic (you will be unconscious).

**Biopsy:** A biopsy is usually needed to make a definite diagnosis of cancer. Cells are taken from the body and checked under a microscope. If the cells are cancerous, they may be studied further to see how fast they are growing. There are many ways to do a biopsy. A biopsy is usually taken during a cystoscopy.

**Imaging studies:** Imaging studies let your healthcare team look at your tissues, organs and bones in more detail. Using x-rays, ultrasounds, CT scans, MRIs or bone scans, they can see the size of the tumour and if it has spread. These tests are usually painless, and you don't need an anesthetic.

You may have a special x-ray called an IVP (intravenous pyelogram). A special dye is injected into a vein (usually in your arm). The dye passes through the bloodstream into the kidneys and through the urinary system. The doctor can watch the passage of the dye on an x-ray screen and look for problems in the kidneys, ureters and bladder.

**Urine tests:** Urine samples are checked for small amounts of blood, cancer cells and other signs of disease.

**Blood tests:** Blood is taken and studied to see if the different types of blood cells are normal in number and how they look. The results show how well your kidneys and other organs are working. Your red blood cell count may also be checked to see if you have anemia (low red blood cell count). Anemia may be caused by blood loss from a bladder tumour.

**Further testing:** Your doctor may order more tests to find out if the cancer has spread and to help plan your treatment.

## Will I be OK?

Most people with cancer want to know what to expect. Can they be cured?

A prognosis is your doctor's best estimate of how cancer will affect you and how it will respond to treatment. A prognosis looks at many factors including:

- the type, stage and grade of cancer
- the location of the tumour and whether it has spread
- your age, sex and overall health

Even with all this information, it can still be very hard for your doctor to say exactly what will happen. Each person's situation is different.

Your doctor is the only person who can give a prognosis. Ask your doctor about the factors that affect your prognosis and what they mean for you.

## Staging and grading

Once a definite diagnosis of cancer has been made, the cancer is given a stage and a grade. This information helps you and your healthcare team choose the best treatment for you.

The cancer stage describes the tumour size and tells whether it has spread.

For bladder cancer, there are 5 stages.\*

Stage	Description
0	Cancer is found only on the surface of the inner lining of the bladder. This may also be called superficial cancer or carcinoma in situ.
1	Cancer is found deep in the inner lining of the bladder but has not spread to the muscle of the bladder.
2	Cancer has spread to the muscle of the bladder.
3	Cancer has spread through the muscular wall of the bladder to the layer of tissue surrounding the bladder. Cancer may have spread to the prostate or seminal vesicles (in men) or to the uterus or vagina (in women).
4	The cancer extends to the wall of the abdomen or to the wall of the pelvis. The cancer may have spread to the prostate or seminal vesicles (in men) or to the uterus or vagina (in women). The cancer cells may have spread to lymph nodes and other distant parts of the body, such as the lungs, liver or bones.

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\* This table summarizes the stages of bladder cancer according to the Union for International Cancer Control (UICC). For more in-depth information, visit [cancer.ca](http://cancer.ca).

A grade is given based on how the cancer cells look and behave compared with normal cells. This can help your healthcare team know how quickly the cancer might grow. To know the grade of a tumour, the biopsy sample is examined under a microscope.

There are 4 grades for bladder cancer.<sup>†</sup>

Grade	Description
1	Low grade – slow growing, less likely to spread
2	Moderate grade
3 and 4	High grade – tend to grow quickly, more likely to spread

## Treatments for bladder cancer

Your healthcare team considers your general health and the type, stage and grade of the cancer to recommend the best treatments for you. You'll work together with your healthcare team to make the final treatment choices. Talk to them if you have questions or concerns.

For bladder cancer, you might receive one or more of the following treatments.

**Surgery:** A decision to have surgery depends on the size of the tumour and where it is. During the operation, all or part of the tumour and some healthy tissue around the tumour are removed. Surgery may be done under a local

<sup>†</sup> This table summarizes the grades of bladder cancer as described by the Union for International Cancer Control (UICC). For more in-depth information, visit [cancer.ca](http://cancer.ca).

or general anesthetic. You may stay in the hospital for several days after the surgery.

Surgery is one of the main treatments for bladder cancer. There are 3 types of bladder cancer surgery. What type you have depends on the stage of the cancer.

*Transurethral resection (TUR) with fulguration* is often used to treat superficial cancer that hasn't spread to the muscle wall. A tool with a small wire loop on the end is inserted into the bladder through a cystoscope. The loop is used to remove the tumour. The area is then burned with an electric current (fulguration) or special high-energy laser. This helps stop the bleeding and burns away any remaining cancer cells. Your doctor will probably advise you to have regular cystoscopies after you have a TUR. At each cystoscopy, your doctor looks for any new tumours. After a TUR, you may have some pain or difficulty when urinating. You may also notice some blood in your urine. These problems go away after a few days.

A *partial, or segmental, cystectomy* may be used to treat invasive cancer that is low grade and has invaded only one area of the bladder wall. This type of surgery removes only part of the bladder. After a partial cystectomy, your bladder will be smaller, and you may not be able to hold as much urine as you used to. You may need to urinate more often. This problem is usually temporary, but for some people it may be permanent.

During a *radical cystectomy*, the entire bladder is removed. Some surrounding tissue, nearby lymph nodes and organs are also removed to get rid of all the possible cancer cells. In men, the nearby organs include the prostate, seminal vesicles and part of the urethra. In women, the uterus, cervix, Fallopian tubes, ovaries, front of the vaginal wall and urethra are also removed.

After a radical cystectomy, you need a new way to store and pass urine. Your doctor will discuss the choices with you before your surgery to help you make this important decision. Your surgeon may construct an artificial bladder or redirect the flow of urine through an opening (stoma) in the abdominal wall. The urine is then collected in a bag outside the body. The operation to make the stoma is called a urostomy.

**Chemotherapy:** Chemotherapy uses drugs to treat cancer. Chemotherapy drugs may be given as pills or by injection (with a needle). They interfere with the ability of cancer cells to grow and spread, but they also damage healthy cells. Although healthy cells can recover over time, you may experience side effects from your treatment like a sore mouth, nausea, vomiting, loss of appetite, fatigue, hair loss and an increased risk of infection. Some drugs used to treat bladder cancer can damage the kidneys. Drinking plenty of fluids helps protect the kidneys.

For superficial bladder cancer, intravesical chemotherapy is commonly used. For this

type of chemotherapy, the drugs are put directly into the bladder through a catheter (tube) passed through the urethra. The catheter usually has an anesthetic applied to it to numb (freeze) the urethra. The drugs must stay in the bladder for about 2 hours to affect the cancer cells on the bladder wall.

**Biological therapy:** Biological therapy (sometimes called immunotherapy) uses your immune system to fight cancer or to help control side effects of cancer treatments. Natural body substances or drugs made from natural body substances boost the body's own defences against illness.

Biological therapy is most often used for superficial bladder cancer after TUR. This helps prevent the cancer from coming back. The most commonly used drug is Bacillus Calmette-Guérin (BCG). A bacillus is a type of bacteria. BCG contains live, weak bacteria that stimulate the immune system to destroy cancer cells in the bladder. Usually the BCG solution is put directly into the bladder through a catheter passed through the urethra. The solution must stay in the bladder for about 2 hours. The catheter usually has an anesthetic applied to it to numb the urethra.

BCG may irritate the bladder. You may feel an urgent need to urinate or need to urinate frequently. It may also be painful to urinate. You may feel tired. Some people may have blood in their urine, nausea, fever or chills. These side effects usually go away when the treatment is over.

**Radiation therapy:** In external beam radiation therapy, a large machine is used to carefully aim a beam of radiation at the tumour. The radiation damages the cells in the path of the beam – normal cells as well as cancer cells.

Radiation side effects depend on what part of the body receives the radiation. You may feel more tired than usual or notice changes to the skin (it may be red or tender) where the treatment was given. You may also need to pass urine more often. Radiation for bladder cancer may irritate the rectum and cause abdominal cramping or changes to your bowel movements. These side effects are a result of damage to normal cells. The side effects usually go away when treatment is over and the normal cells repair themselves.

Radiation therapy can affect sexuality. For women, it may cause vaginal dryness or make your vagina narrower. This can make sex difficult or uncomfortable. For men, damage to the nerves and blood vessels in the penis may make it difficult to have an erection. Your healthcare team can suggest ways to treat or control these side effects.

**For more information on treatment**, you may want to read our booklets *Chemotherapy and Other Drug Therapies* and *Radiation Therapy*.

**Clinical treatment trials:** Clinical treatment trials investigate new approaches to treating cancer, such as new drugs, new types of treatments or combinations of existing treatments. They are closely monitored to make sure that they are safe and effective for the participants.

Ask your doctor if any clinical trials are available as a suitable treatment option for you. You may benefit and so may future cancer patients.

**Our brochure** *Clinical Trials* has more information, including how to find a clinical trial.

**Complementary therapies:** Complementary therapies – for example, massage therapy or acupuncture – are used *together with* conventional cancer treatments, often to help ease tension and stress as well as other side effects of treatment. They don't treat the cancer itself. More research is needed to understand if these therapies are effective and how they work.

Alternative therapies are used *instead of* conventional treatments. Alternative therapies haven't been tested enough for safety or effectiveness. Using alternative treatments alone for cancer may have serious health effects.

If you're thinking about using a complementary or alternative therapy, learn as much as you can about the therapy and talk to your healthcare team. It's possible that the therapy might interfere with test results or other treatments.

**Our booklet** *Complementary Therapies* has more information.

**Side effects of treatment:** Some cancer treatments cause side effects, such as fatigue, hair loss or nausea. Because treatments affect everyone differently, it's hard to predict which side effects – if any – you may have.

Side effects can often be well managed and even prevented. If you're worried about side effects, tell your healthcare team about your concerns and ask questions. They can tell you which side effects you should report right away and which ones can wait until your next appointment.

If you notice any side effects or symptoms that you didn't expect, talk to a member of your healthcare team as soon as possible. They'll help you get the care and information you need.

There are possible long-term side effects of bladder cancer treatment. Both men and women can have urinary incontinence.

Women who have part of the uterus and ovaries removed will go into menopause right away (if you haven't gone through menopause already). Menopause means you will no longer menstruate (have your period). The symptoms of menopause caused by surgery are likely to be more severe than if you had gone into menopause naturally. These may include hot flashes, night sweats, vaginal dryness and loss of desire for sex.

For men, a radical cystectomy can sometimes damage the nerves that control your ability to have or keep an erection (erectile dysfunction). Improved surgical methods may help avoid this problem. Men who have had their prostate and seminal vesicles removed no longer produce semen, so they have dry orgasms. Your healthcare team can suggest ways to cope with these side effects.

## **After treatment**

Follow-up care helps you and your healthcare team monitor your progress and your recovery from treatment. At first, your follow-up care may be managed by one of the specialists from your healthcare team. Later on, it may be managed by your family doctor.

The schedule of follow-up visits is different for each person. You might see your doctor more often in the first year after treatment and less often after that. After treatment has ended, you should report new symptoms and symptoms that don't go away to your doctor without waiting for your next scheduled appointment.

Follow-up appointments are important. Bladder cancer can return in the bladder or in another part of the body. If your bladder was not removed, you will likely have a cystoscopy every 3 months for the first 2 years.

**Self-image and sexuality:** It's natural to be concerned about the effects of bladder cancer and its treatment on your sexuality. You may be worried about how your body looks and works after treatment, especially if you had a urostomy. And you may worry about having sex with a partner or that you may be rejected.

It may help to talk about these feelings with someone you trust. Your doctor can also refer you to specialists and counsellors who can help you with the emotional side effects of bladder cancer treatment.

**Our booklet** *Sexuality and Cancer* has more detailed information.

The end of cancer treatment may bring mixed emotions. You may be glad the treatments are over and look forward to returning to your normal activities. But you could feel anxious as well. If you are worried about your treatment ending, talk to your healthcare team. They are there to help you through this transition period.

Adjusting to life after cancer treatment is an important part of your care, especially if your bladder was removed. If you had a urostomy, you might need to make changes to your diet and lifestyle. Before your surgery, your healthcare team will talk to you about what to expect. They will also teach you how to care for the stoma after surgery. Learning to look after a stoma takes time and patience. Your healthcare team can answer any questions you may have about lifestyle changes or help you manage your emotional, physical and sexual concerns. Most people who have a urostomy get back to a normal life, returning to their jobs and favourite activities.

## Living with cancer

Our booklet *Coping When You Have Cancer* has more detailed information and resources.

Many sources of help are available for people with cancer and for their caregivers.

**Your healthcare team:** If you need practical help or emotional support, members of your healthcare team may be able to suggest services in your community or refer you to cancer centre staff or mental health professionals.

**Family and friends:** People closest to you can be very supportive. Accept offers of help. When someone says, “Let me know how I can help,” tell them what they can do. Maybe they can run errands, cook a meal or drive you to your doctor’s office.

**People who’ve had a similar experience:** Talking with and learning from others who’ve had similar experiences can be helpful. Consider visiting a support group or talking with a cancer survivor in person, over the telephone or online. Try more than one option to see which one works best for you.

**Yourself:** Coping well with cancer doesn’t mean that you have to be happy or cheerful all the time. But it can mean looking after yourself by finding relaxing, enjoyable activities that refresh you mentally, spiritually or physically. Take some time to find coping strategies to help you through this experience. You may also want to talk to a counsellor for more help.

## **Talking to someone who's been there**

If you would like to talk to someone who's had a similar cancer experience, you can connect by phone with a trained volunteer who will listen, provide hope and suggest ideas for coping – all from the unique perspective of someone who's been there.

Register for this free program at [match.cancer.ca](http://match.cancer.ca) or call us at 1-888-939-3333.

## **Want to connect with people online?**

If you'd like to join our online community, visit [CancerConnection.ca](http://CancerConnection.ca). You can read news, join discussion groups, get support and help others at the same time. You'll find caring, supportive people there.

## **What causes bladder cancer?**

There is no single cause of bladder cancer, but some factors increase the risk of developing it. Some people can develop bladder cancer without any risk factors, while others who have these factors do not get it.

Smoking is the most common risk factor for bladder cancer in Canada. The tars and chemicals in the smoke pass quickly from the lungs into the bloodstream and then into the urine, which collects in the bladder.

Men develop bladder cancer more often than women.

Other factors that appear to increase the risk of developing bladder cancer are:

- age – particularly over 65
- exposure to certain chemicals, such as those used in the dye industry
- chronic bladder irritation
- exposure to arsenic in drinking water
- treatment with certain medicines, such as cyclophosphamide, which is used to treat cancer and some other conditions
- having had bladder cancer before
- bladder birth defects
- aristolochic acids, which are found in some plants used in herbal medicine

# Canadian Cancer Society

*We're here for you.*

When you have questions about treatment, diagnosis, care or services, we will help you find answers.

**Call our toll-free number 1 888 939-3333.**



**Ask** a trained cancer information specialist your questions about cancer. Call us or email [info@cis.cancer.ca](mailto:info@cis.cancer.ca).



**Connect** with people online to join discussions, get support and help others. Visit [CancerConnection.ca](http://CancerConnection.ca).



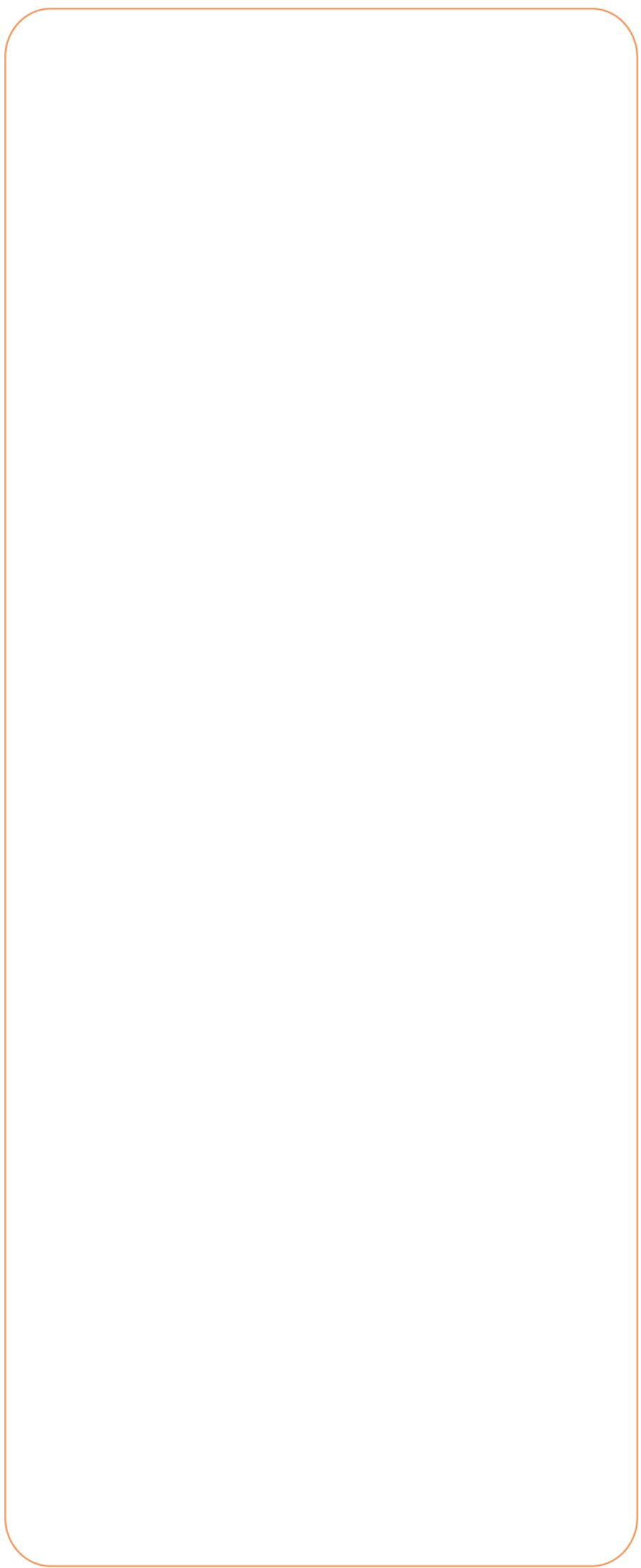
**Browse** Canada's most trusted online source of information on all types of cancer. Visit [cancer.ca](http://cancer.ca).

Our services are free and confidential. Many are available in other languages through interpreters.

## Tell us what you think

Email [cancerinfo@cancer.ca](mailto:cancerinfo@cancer.ca) and tell us how we can make this publication better.

## Notes



## What we do

The Canadian Cancer Society fights cancer by:

- doing everything we can to prevent cancer
- funding research to outsmart cancer
- empowering, informing and supporting Canadians living with cancer
- advocating for public policies to improve the health of Canadians
- rallying Canadians to get involved in the fight against cancer

Contact us for up-to-date information about cancer and our services or to make a donation.



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