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# Testicular Cancer

*Understanding your diagnosis*



Let's Make Cancer History

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# Testicular 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 will have to take in and the decisions you will need to make.

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

## What is cancer?

Cancer is a disease that starts in our cells. Our bodies are made up of millions 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. 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. It is important to find and treat malignant tumours as early as possible.

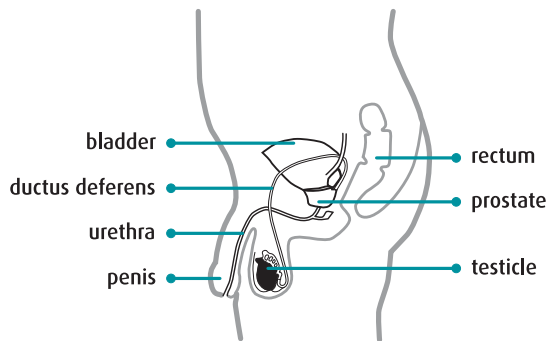
Cancers are named after the part of the body where they start. For example, cancer that starts in the testicles but spreads to the liver is called testicular cancer with liver metastases.

## What is testicular cancer?

Testicular cancer starts in the cells of a testicle. There are two testicles that are part of a man's reproductive system. These egg-shaped organs hang below the penis in a pouch of loose skin called the scrotum. The testicles are held in the scrotum by the spermatic cord. The spermatic cord contains the ductus deferens, some lymph nodes, veins and nerves.

Testicles make male sex hormones (mostly testosterone) and sperm. Sperm begins to form in "germ" cells inside the testicles.

Most testicular cancers start in the germ cells and are called *germ cell tumours*.<sup>\*</sup> There are two main types of germ cell tumours – seminomas and non-seminomas. Each type grows differently and is treated differently. Both types can be treated successfully.



<sup>\*</sup> For information about non-germ cell tumours, contact our *Cancer Information Service* at 1 888 939-3333.

## Causes of testicular cancer

There is no single cause of testicular cancer, but some factors increase the risk of developing it:

- delayed descent of the testicles (if not corrected early)
- age – between 15 and 49
- family or personal history of testicular cancer
- abnormal development of the testicle

Some men develop testicular cancer without having any of these risk factors.

## Symptoms of testicular cancer

The most common signs and symptoms of testicular cancer include:

- painless lump on a testicle
- swelling of a testicle or change in the way it feels
- pain or discomfort in a testicle or in the scrotum
- feeling of heaviness or aching in the lower abdomen (stomach area) or scrotum

Other health problems can cause some of the same symptoms. Testing is needed to make a diagnosis.

## Diagnosing testicular cancer

After taking your medical history and completing a physical examination, your doctor may suspect you have testicular cancer. To confirm the diagnosis, your doctor will arrange special tests. These tests may also be used to “stage” the cancer. You may have one or more of the following tests.

**Imaging studies:** Imaging studies allow tissues, organs and bones to be looked at in more detail. Using x-rays, ultrasounds, CT scans, MRIs or bone scans, your healthcare team can get a picture of the size of the tumour and see if it has spread. These tests are usually painless and do not require an anesthetic (freezing).

If your doctor suspects that you have testicular cancer, you may have an *ultrasound*. An ultrasound examination uses sound waves to make pictures of your testicles and scrotum. The doctor will look for anything abnormal in the pictures.

**Blood tests:** Blood is taken and studied to see if the different types of blood cells are normal in number and appearance. The results show how well your organs are working and may suggest whether or not you have cancer. Blood tests can also show if there are levels of certain substances in your blood that are higher than normal. Some substances (called *tumour markers*) are linked to certain types of cancer.

For testicular cancer, there are three tumour markers:

- AFP (alpha-fetoprotein)
- b-HCG (beta-human chorionic gonadotropin)
- LDH (lactate dehydrogenase)

**Orchiectomy and biopsy:** A biopsy is usually necessary to make a definite diagnosis of cancer. Cells are removed 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. For testicular cancer, it is usual to remove the entire testicle. This surgery is called an *orchiectomy* (or *orchidectomy*).

The surgery is done under a general anesthetic (you will be unconscious). You can usually go home from the hospital the next day. With the healthy testicle that is left, you'll still be able to have an erection and you will be able to have children.

Cells from the removed testicle are checked under a microscope. If the cells are cancerous, they may be studied further to see what type of cancer it is and how fast the cells are growing. If the cancer has not spread beyond the testicle, this may be the only treatment you need.

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

## Staging

Once a definite diagnosis of cancer has been made and your healthcare team has gathered the information it needs, the cancer will be given a stage.

The cancer stage describes the tumour size and tells whether it has spread beyond the place where it started to grow.

For testicular cancer, there are four stages.

Stage	Description
0	Abnormal cells are found only in the tiny tubes where the sperm cells begin to form. This is sometimes called a precancerous condition or <i>carcinoma in situ</i> .
1	Cancer is found in the testicle, the spermatic cord or scrotum. <b>OR</b> the level of one or more of the blood tumour markers is very high.
2	Cancer cells have spread to the lymph nodes in the abdomen, but not to more distant parts of the body.
3	Cancer cells have spread to the lymph nodes in the abdomen and levels of the blood tumour markers are high. <b>OR</b> cancer cells have spread to distant lymph nodes and may have spread to distant parts of the body, such as the lungs.

It is important to know the stage of the cancer. This information helps you and your healthcare team choose the best treatment for you.

## Treatments for testicular cancer

While a diagnosis of cancer is likely to create anxiety and fear, testicular cancer can be cured in most men, even if it has spread.

Your healthcare team will consider your general health and the type and stage of the cancer to recommend what treatments will be best for you. You will work together with your healthcare team to make the final treatment choices. Talk to them if you have questions or concerns.

Ask your team whether your treatment will affect your ability to have children. Sperm can be stored for use after treatment. Your healthcare team can help you plan ahead.

### Some procedures can cause permanent infertility.

Before you undergo any procedure, talk to your doctor about sperm banking (freezing sperm before treatment for use in the future). If you have radiation treatment, chemotherapy or certain types of surgery, you may not be able to have children. Sperm banking allows you to decide later whether or not you want to have children. Young men don't often think about having a family when they are facing a diagnosis and treatment for testicular cancer. Sperm banking gives you and your future partner important options.

Treatments affect everyone in different ways. It's hard to predict which side effects you will have. Your healthcare team will tell you what to expect with each treatment. They will also let you know which side effects you should report right away and which ones you can wait to tell them about at your next

appointment. If you notice any side effects or symptoms that you did not expect, talk to a member of your healthcare team as soon as possible.

Patients often worry about the side effects of treatment. However, side effects can often be well managed and even prevented. Be open with your healthcare team. Tell them your concerns and ask questions. They will help you get the care and information you need.

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

**Surgery:** Surgery is the main treatment for testicular cancer. The surgeon removes the entire testicle (orchiectomy). The lymph nodes near the kidneys are often removed as well. Surgery is done under general anesthetic.

If the cancer has not spread and all of it was removed with the testicle, surgery may be the only treatment you need. It is uncommon for cancer to affect both testicles at the same time, so the healthy testicle remains.

After surgery, you may have some pain or nausea, or you may not feel like eating. These side effects are temporary and can be controlled.

Having one testicle removed will not make you impotent (unable to have an erection) or make you sterile (unable to father children). As long as the remaining testicle is healthy, you will still be able to have a normal erection and usually still be able to produce sperm.

**Watchful waiting:** Watchful waiting is an option for some men with testicular cancer and begins after surgery (orchiectomy). Watchful waiting (also called *active surveillance*) means your healthcare team will watch you closely. You would be treated with chemotherapy, radiation therapy or both only if signs and symptoms of cancer appear or change.

The schedule of watchful waiting follow-up visits will be different for each person, but you might visit your doctor every 1 to 2 months for the first year. Blood tests, chest x-rays and CT scans of your abdomen will be done on a regular basis during your follow-up visits.

Watchful waiting can continue for many years. If treatment is needed at any point, research has shown that it is still as effective as treatment offered right after surgery.

**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 therapy is sometimes used to treat seminomas after surgery. Radiation can help prevent the cancer from coming back or destroy cancer cells that may have spread beyond the testicle. During radiation therapy, the remaining healthy testicle is shielded to protect it from damage.

Radiation side effects will be different depending on what part of the body receives the radiation. You may feel more tired than

usual, have some diarrhea or notice changes to the skin (it may be red or tender) where the treatment was given.

**Chemotherapy:** Chemotherapy may be given as pills or by injection. Chemotherapy drugs 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 nausea, vomiting, loss of appetite, fatigue, hair loss and an increased risk of infection.

Both seminoma and non-seminoma testicular cancers respond well to chemotherapy.

**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 for the participants. Ask your doctor if there is a clinical trial suitable as a treatment option for you. You may benefit and so may future cancer patients.

**Complementary therapies:** Complementary therapies are used *together with* conventional treatments. 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 for safety or effectiveness. It's not known whether they will harm you or be effective in the treatment of cancer.

If you are thinking about using a complementary or alternative therapy, find out 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 regular treatments.

## 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.

**Self-image and sexuality:** It is natural to be concerned about the effects of testicular cancer and its treatment on your sexuality. Your doctor can tell you about possible side effects. You may be worried about being intimate 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 testicular cancer treatment.

If you have had a testicle removed, you may wish to talk to your doctor about reconstructive surgery to help restore the appearance of the testicle. This is called a *testicular prosthesis* or implant. The prosthesis

is filled with saline and matches the look and feel of the other testicle. It is surgically implanted in the scrotum.

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.

## Living with cancer

There are many sources of help 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.

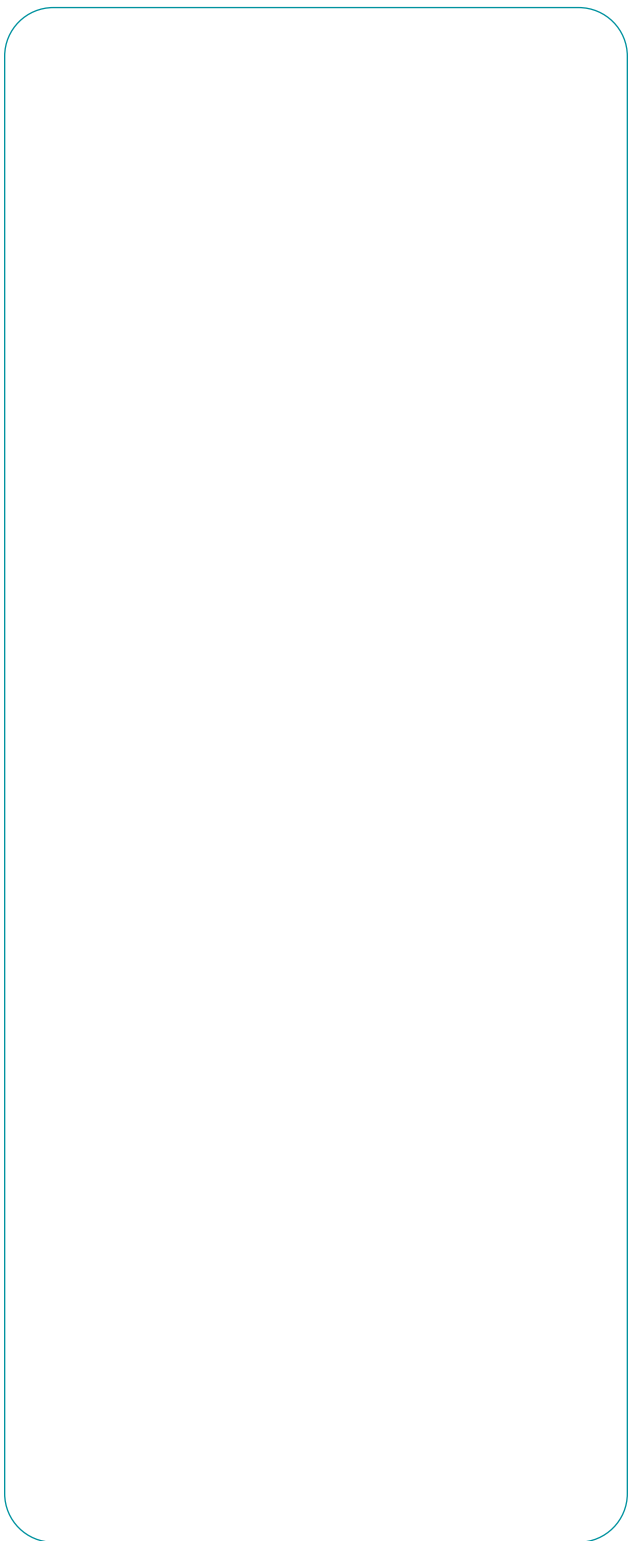
**Family and friends:** Those closest to you can be very supportive. Accept offers of help. When someone says “Let me know how I can help,” tell them what they can do. Maybe they can run errands, cook a meal or give you a ride to your doctor’s office.

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

**Yourself:** Try to stay positive. Staying positive is about figuring out how to deal with cancer in the best way that you can – and everyone will do this their own way. It doesn’t mean that you must seem happy or cheerful all the time or avoid talking or thinking about the difficulties of having cancer. But it can mean looking after yourself by finding relaxing, enjoyable activities that refresh you mentally, spiritually or physically.







## What we do

Thanks to the work of our volunteers and staff, and the generosity of our donors, the Canadian Cancer Society is leading the way in the fight against cancer. The Canadian Cancer Society:

- funds excellent research for all types of cancer
- advocates for healthy public policy
- promotes healthy lifestyles to help reduce cancer risk
- provides information about cancer
- supports people living with cancer

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



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