

Testicular Cancer

Information for people with cancer

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

Testicular cancer starts in the testicles. The testicles, or testes, are two oval-shaped organs that make sperm and testosterone. They are in a sac of skin called the scrotum, underneath the penis. One testicle is called a testis.

Testicular cancer is also called cancer of the testis.

Testicular cancer is not common. However, it is the most common type of cancer in young men [see note below].

Testicular cancer treatments can affect your fertility (ability to have children in the future). If this is a concern for you, please talk to your oncologist. There may be sperm banking options for you. For more information about fertility, check out our list of recommended websites:

www.bccancer.bc.ca/our-services/services/library/recommended-websites/managing-symptoms-and-side-effects-websites/fertility-and-sexuality-websites

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.

Diagnosis and Staging

What are the signs and symptoms of testicular cancer?

Sometimes there are no early symptoms of this cancer. Some of these symptoms may also be caused by something else. Talk to your doctor if you have any of these symptoms:

- An enlarged testicle (larger than is normal for you). This is the most common sign.
- A painless lump in your testicle.
- A dull ache in your groin, abdomen or back.
- A feeling of heaviness in your scrotum.

Testicular Cancer

Information for people with cancer

- A build-up of fluid or swelling in your scrotum.
- Shortness of breath. This is not common but might mean the cancer has spread to your lungs.
- Hormonal imbalance that causes breast enlargement. This is rare.

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

How is testicular cancer diagnosed?

Tests that may help diagnose testicular cancer include:

- **Physical exam** by a doctor or nurse practitioner.
- **Blood test** (tests your blood for three tumour markers made by the cancer cells):
 - **HCG (Human Chorionic Gonadotropin)**: this tumour marker may be higher in the blood of someone with testicular cancer.
 - **AFP (Alpha Feto Protein)**: this tumour marker may be higher in the blood of someone with a certain type testicular cancer called non-seminoma germ cell tumour.
 - **LDH (Lactate Dehydrogenase)**: may be higher in someone with testicular cancer. This is sometimes useful but not as useful as HCG and AFP.
- **Ultrasound imaging of scrotum**: to see the tumour.
- **Biopsy**: This is when a sample of tissue is taken. A specialty doctor (pathologist) then looks at the tissue for cancer. A biopsy is only done after a surgeon has removed your testicle.

If tests confirm you have testicular cancer, your doctor may order more tests to check if the cancer has spread to other parts of your body:

- **Chest x-ray**
- **CT (computed tomography) scan** of your pelvis, abdomen and chest.

Testicular Cancer

Information for people with cancer

- Your doctor might want to take some lymph nodes from your pelvis area to check if the cancer has spread. A surgeon would do this surgery.

For more information on tests used to diagnose cancer, see our Recommended Websites - Screening and Diagnosis section: bccancer.bc.ca/our-services/services/library/recommended-websites/screening-and-diagnosis-websites

What are the types of testicular cancer?

- **Seminomas:** This is the most common type of testicular cancer. 75% (75 out of 100) of testicular cancers are seminomas.
 - Nearly 100% of cases are curable.
 - Grow slowly.
 - Very sensitive to radiation therapy and systemic therapy (chemotherapy).
 - Most common in people between 25 and 45 years old.
- **Non-seminomas:** This is also known as mixed germ cell tumour.
 - Most common in people in their mid-twenties.
 - Can spread through your bloodstream.
 - Very sensitive to systemic therapy but less sensitive to radiation therapy.

What are the stages of testicular 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.

Staging can also tell your health care team how your cancer might respond to treatment and the chance that your cancer may come back (recur).

Testicular Cancer

Information for people with cancer

Testicular cancer staging:

- **Stage 1A:** Cancer is only in the testicle. Cancer may have spread to the inner layer of the membrane that surrounds the testicle. Tumour marker levels are normal.
- **Stage 1B:** Tumour marker levels are normal plus one of the following
 - Cancer is in the testicle and has spread to the blood vessels or lymph vessels in the testicle.
 - Cancer has grown into the outer layer of the membrane that surrounds the testicle.
 - Cancer has grown into the spermatic cord. Cancer may have spread to the blood vessels or lymph vessels in the testicle.
- **Stage 1S:** Cancer is anywhere in the testicle, spermatic cord or scrotum. One or more tumour marker levels are higher than normal.
- **Stage 2A:** Cancer has spread to one or more lymph nodes in the groin. Lymph nodes are 2 cm or smaller. Tumour marker levels may be slightly higher than normal.
- **Stage 2B:** Cancer has spread to one or more lymph nodes in the groin. Lymph nodes are between 2 and 5 cm. Tumour marker levels may be slightly higher than normal.
- **Stage 2C:** Cancer has spread to one or more lymph nodes in the groin. Lymph nodes are larger than 5 cm. Tumour marker levels may be slightly higher than normal.
- **Stage 3A:** Cancer has spread to lymph nodes outside of the groin or to the lungs. This is also called metastatic testicular cancer. One or more tumour marker levels **may be slightly higher** than normal.
- **Stage 3B** is one of the following:
 - Cancer has spread to one or more lymph nodes in the groin, and one or more tumour marker levels **may be slightly higher** than normal.
 - Cancer has spread to one or more lymph nodes outside of the groin or to the lungs. This is also called metastatic testicular cancer. One or more tumour marker levels **are somewhat higher** than normal.

Testicular Cancer

Information for people with cancer

- **Stage 3C** is any of the following:
 - Cancer has spread to one or more lymph nodes in the groin, and one or more tumour marker levels **are much higher** than normal.
 - Cancer has spread to lymph nodes outside of the groin or to the lungs. This is also called metastatic testicular cancer. One or more tumour marker levels **are much higher** than normal.
 - Cancer has spread to a distant part of the body other than lymph nodes or lungs. One or more tumour marker levels **may be higher** than normal.

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

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

Treatment

What is the treatment for testicular 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.

Treatment for testicular cancer can include surgery, radiation therapy, systemic therapy (chemotherapy) or a combination of these treatments.

Testicular cancer treatments can affect your fertility (ability to have children in the future). If this is a concern for you, please talk to your oncologist. There may be sperm banking options for you.

For more information on fertility, check out our list of recommended websites:

www.bccancer.bc.ca/our-services/services/library/recommended-websites/managing-symptoms-and-side-effects-websites/fertility-and-sexuality-websites

Testicular Cancer

Information for people with cancer

Surgery

- This is usually the first treatment for all testicular cancers.
- A surgeon removes the testicle with the cancer. This is called a radical inguinal orchiectomy. The testicle is sent to a pathologist to examine.
- Depending on your type of cancer, a surgeon may need to remove lymph nodes in your abdomen. The surgeon would do this in a second surgery.

Ongoing surveillance after surgery

- After surgery and biopsy, people with early-stage cancer may not need any more treatment.
- You will see a specialist a few times per year for the first five years after your diagnosis. After that, you will see your family doctor or nurse practitioner once per year.
- At your follow-up visits, you will be examined, have blood tests and may have some imaging tests, like a CT scan or chest x-ray.

Systemic therapy (chemotherapy)

- Some early-stage cancers may need systemic therapy.
- Patients with more advanced stage seminomas and advanced stage non-seminomas are offered systemic therapy.
- 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 (uses high energy x-rays to kill or shrink cancer)

- Used to treat people with Stage 2A seminomas. It is also an option for people with Stage 2B seminomas.
- People who cannot have systemic therapy or ongoing surveillance may have radiation therapy.
- For more information about radiation therapy, go to:
bccancer.bc.ca/our-services/treatments/radiation-therapy

Testicular Cancer

Information for people with cancer

What is the follow-up after treatment?

- Follow-up testing and appointments are based on your type of cancer.
- Guidelines for follow-up after treatment are on our website:
www.bccancer.bc.ca/health-professionals/clinical-resources/cancer-management-manual/genitourinary/testis#Follow-Up
- These are guidelines written for your doctor, nurse practitioner or specialist. You can look at them to see what appointments and tests you might need after treatment.
- 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 testicular cancer and who gets it?

This is an uncommon cancer but it is the most common cancer in men between the ages of 20 and 44 years. [See note below, Statistics].

We do not know what causes testicular cancer. These are the risk factors for this cancer. Not all of these risk factors may cause this cancer, but they may help the cancer start growing.

- White men get testicular cancer slightly more than other men [See note below, Statistics].
- People with a history of an undescended testicle or whose testicles did not develop properly, maybe have a higher risk of testicular cancer.
- Family history of testicular cancer.
- Cancer in one testicle increases your risk of cancer in the other testicle.

Testicular Cancer

Information for people with cancer

- Being overweight or obese.

Statistics

- B.C. statistics: www.bccancer.bc.ca/health-info/disease-system-statistics/statistics-by-cancer-type
- Canada: www.cancer.ca/en/cancer-information/cancer-type/testicular/statistics/?region=bc

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Can I help prevent testicular cancer?

There is no known way to prevent testicular cancer.

Is there screening for testicular cancer?

There is no screening program for this type of cancer.

People in their teenage years, 20's, and 30's should do regular testicular self-examination (TSE). Doing TSE once per month may help find this cancer early. If you do not know how to do a TSE, please talk to your family doctor or nurse practitioner.

TSE is even more important for those with:

- A history of an undescended testicle (a testicle that didn't "drop").
- A close family member who had testicular cancer.
- A previous cancer in the other testicle.



Provincial Health Services Authority

Testicular Cancer

Information for people with cancer

Where can I find more information?

- If you have questions about testicular 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 Recommended Testicular Cancer Websites: bccancer.bc.ca/our-services/services/library/recommended-websites/types-of-cancer-websites
- Managing Your Symptoms: 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