

Thyroid Cancer

Information for people with cancer

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

Thyroid cancer is rare.

The thyroid gland is part of the endocrine system (glands in your body that make hormones). It is located at the base of your throat, below your voice box (larynx) and above your collar bones.

The thyroid is shaped like a butterfly, with one lobe on each side of the windpipe (trachea). The lobes are connected by a narrow band of tissue (the isthmus). Each lobe is 4 - 6 cm (1.5 - 2.4 inches) long

Image of thyroid: visualsonline.cancer.gov/retrieve.cfm?imageid=9268&dpi=72&fileformat=jpg

The thyroid uses iodine to make hormones that regulate your body's metabolism (how your body uses energy). The thyroid makes the hormones thyroxine (T4) and triiodothyronine (T3).

Two parathyroid glands lie on the back of each lobe of the thyroid. These glands, along with C-cells in the thyroid, make calcitonin. Calcitonin controls calcium levels in your body.

Image of parathyroid:

visualsonline.cancer.gov/retrieve.cfm?imageid=9268&dpi=72&fileformat=jpg

Diagnosis and Staging

What are the signs and symptoms of thyroid cancer?

- Painless lump or swelling in your neck.
- Enlarged thyroid gland (goiter). Your shirt collar may feel tighter than normal.

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- Advanced stage thyroid cancer symptoms (from cancer spreading to surrounding tissues):
 - Difficulty breathing and swallowing.
 - Hoarseness (raspy voice).

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

How is thyroid cancer diagnosed?

Tests that may help diagnose thyroid cancer include:

- **Physical exam:** most thyroid cancers are found during routine check-ups by a doctor or nurse practitioner.
- **Thyroid function blood tests:** you should have these tests if you have an enlarged thyroid.
- **Ultrasound scan:** to see the tumour. You should have this test if you have an enlarged thyroid.
- **Thyroid scan** using a radioactive iodine tracer, to see the cancer.
- **Biopsy:** This is when a doctor takes a sample of your tissue. A specialty doctor (pathologist) then examines the tissue for cancer.

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 thyroid cancer?

There are 4 main types of thyroid tumours, based on how the cancer cells look under a microscope.

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Papillary carcinoma

- Most common type in Canada. Over 80% (80 out of 100) of thyroid cancers.
- Slow-growing. People have an excellent chance survival of diagnosed early.
- Usually found in only one of the lobes.

Follicular carcinoma

- Second most common type of thyroid cancer.
- Starts in the follicular cells of the thyroid. These cells make thyroid hormones.
- Slow-growing. People have an excellent chance survival of diagnosed early.
- Often treated with radioactive iodine since this tumour is most likely to take up radioactive iodine.

Medullary carcinoma

- Starts in C-cells of the thyroid. These cells make which the hormone calcitonin.
- Slow-growing. People have a good chance of survival if diagnosed early.
- Usually found in only one of the lobes.
- May spread to the lymph nodes or to other sites in the body.

Anaplastic carcinoma

- Least common type of thyroid cancer.
- More often in middle-aged and elderly people.
- Most aggressive type of thyroid cancer. It is fast-growing and spreads early.
- May be too advanced at the time of diagnosis to remove with surgery.
- Often treated with radiation therapy.
- Unfortunately, this type of cancer can rarely be cured.

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What are the stages of thyroid 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).

Thyroid cancer staging

- **Stage 1:** Cancer is only in the thyroid.
- **Stage 2:** Cancer has spread to regional lymph nodes
- **Stage 3:** Cancer has spread to nearby tissue.
- **Stage 4:** Cancer has spread to distant parts of the body (metastasis)

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 thyroid cancer?

Thyroid cancer is not given a grade.

Some thyroid cancers may be put into risk groups.

Talk to your health care team if you have questions about risk groups.

Treatment

What is the treatment for thyroid 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

- Main type of treatment for thyroid cancers.
- Surgical removal of the thyroid (thyroidectomy) is often the only treatment a person needs.
- Sometimes only the lobe with cancer is removed. Other times, the isthmus and much of the other lobe will need to be removed.
- Depending on the type and size of the tumour or if the cancer has spread to lymph nodes, more tissue in the neck will need to be removed.
- During thyroid operations, surgeons will work to keep the parathyroid glands and the nerves that supply the larynx (voice box).

Radioactive Iodine Therapy

- Iodine-131 is radioactive iodine. It is used to treat papillary and follicular thyroid cancers. However, only about half of these tumours can take up enough iodine for the treatment to work.
- Treatment with Iodine-131 is called iodine ablation. This treatment may be used after surgery to destroy any thyroid tissue where the cancer may come back (recur) or where the cancer has already come back.
- Radioactive iodine is given as a drink. After you drink it, you must stay in the hospital for a few days until the radioactivity of the iodine falls to a safe level.
- Before iodine ablation, you must stop taking thyroxine (T4) for at least 4 weeks and triiodothyronine (T3) for at least 2 weeks.

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Radiation therapy (high energy ex-rays that kill or shrink cancer cells)

- Used after surgery and iodine ablation when there is a high risk of the cancer coming back in the thyroid or neck.
- May be used to treat tumours that cannot be removed with surgery.
- For more information about radiation therapy go to:
www.bccancer.bc.ca/our-services/treatments/radiation-therapy

Systemic therapy (chemotherapy)

- Used when the cancer cannot be controlled with radiation therapy.
- Cannot cure thyroid cancer but may help slow the cancers growth.
- For more information about systemic therapy go to:
[www.bccancer.bc.ca/our-services/treatments/systemic-therapy-\(chemotherapy\)](http://www.bccancer.bc.ca/our-services/treatments/systemic-therapy-(chemotherapy))

After treatment: Thyroxine hormone replacement

- When you are finished treatment for thyroid cancer, you will likely have to take thyroxine hormone pills. These pills replace the hormones the thyroid would normally make.

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 for thyroid cancer are on our website:
www.bccancer.bc.ca/health-professionals/clinical-resources/cancer-management-manual/head-neck/head-neck#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.

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- **Follow-up schedule and tests:**
 - You should see your doctor every 3 to 4 months for the first two years after treatment.
 - For the next two years, you should see your doctor every 6 months.
 - After the first four years, you should see your doctor once each year.
 - At each visit, your doctor should examine the area where your thyroid was (thyroid bed) and your neck lymph nodes.
 - You should have blood tests that measure your thyroglobulin and TSH levels. You may also need your T4 checked.
- The BC Cancer Life after Cancer page has information on issues that cancer survivors may face: bccancer.bc.ca/lifeaftercancer

More Information

What causes thyroid cancer and who gets it?

Thyroid cancer is rare.

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.

- Being between 25 and 65 years old.
- Being a woman. Women are more likely to get this cancer than men. [See note below, Statistics]
- Being exposed to too much radiation
- Having radiation treatment when you are a baby or a young child.
- Having a close relative with thyroid cancer.
- Having chronic high levels of TSH.

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- Having a goiter (a non-cancerous growth on your thyroid) or a family history of a goiter.
- Some rare hereditary medical conditions can increase the risk of thyroid cancer:
 - Familial adenomatous polyposis (disease of the colon)
 - Gardner syndrome (disease of the colon)
 - Familial medullary thyroid cancer (MTCs)
 - Multiple endocrine neoplasia (MEN) syndrome

Statistics on thyroid cancer

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

Making sure you have enough iodine in your diet may lower your risk of getting thyroid cancer. Most North American diets have enough iodine as it is added to table salt.

Is there screening for thyroid cancer?

There is no screening for this type of cancer.

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Where can I find more information?

- If you have questions about thyroid 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 Thyroid 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