

# Thyroid Cancer: Overview



## What is thyroid cancer?

Cancer starts when cells change (mutate) and grow out of control. The changed (abnormal) cells often grow to form a lump or mass called a tumor. Cancer cells can also grow into (invade) nearby areas. They can spread to other parts of the body, too. This is called metastasis.

Thyroid cancer starts in the cells that make up your thyroid gland. The thyroid gland makes hormones that help control many processes in your body. It's part of the endocrine system. Your thyroid is in the front of your neck, over your windpipe. It's shaped like a butterfly with two lobes, a right and left lobe. The lobes are joined by a bridge of tissue, called the isthmus.

The thyroid is made up of two main types of cells. The follicular cells make and store thyroid hormones, which control your metabolism. The C cells, or parafollicular cells, make the hormone calcitonin. It helps control calcium levels in your body. Different types of thyroid cancer start in the different types of cells.

There are five main types of thyroid cancer (carcinoma):

- **Papillary carcinoma** is the most common type, accounting for about 8 out of 10 thyroid cancers. It starts in the follicular cells. It usually starts in one lobe and is slow growing.
- **Follicular carcinoma** also starts in the follicular cells, but is much less common.
- **Hurthle cell carcinoma** is rare. It starts in a certain type of follicular cell called a Hurthle cell.
- **Medullary thyroid carcinoma (MTC)** starts in the C cells. Sometimes it has spread to other parts of the body before it's found.
- **Anaplastic carcinoma** is a rare, follicular cell-derived cancer. It spreads quickly and is hard to treat.

## Who is at risk for thyroid cancer?

A risk factor is anything that may increase your chance of having a disease. The exact cause of someone's cancer may not be known. But risk factors can make it more likely for a person to have cancer. Some risk factors may not be in your control. But others may be things you can change.

The risk factors for thyroid cancer include:

- Female sex
- Middle to older age
- History of radiation exposure, for example, having medical radiation treatment to the head or neck as a child or being exposed to radiation fallout from nuclear weapons or a power plant accident all increase your risk
- Asian heritage
- Family history of thyroid cancer and thyroid disease
- Certain genetic conditions, like familial medullary thyroid cancer (FMTC), multiple endocrine neoplasia type 2A syndrome (MEN2A), or multiple endocrine neoplasia type 2B syndrome (MEN2B)
- An enlarged thyroid (goiter)

Talk with your healthcare provider about your risk factors for thyroid cancer and what you can do about them.

## What are the symptoms of thyroid cancer?

It's normal to have few or no symptoms early on. One of the most common symptoms is a lump (growth) called a nodule in the neck. This might be found during a routine physical, or you might notice it yourself. Other symptoms may start as the tumor grows and include:

- A lump or swelling over your thyroid or elsewhere in your neck
- A cough that won't go away, and you don't have a cold
- Hoarseness or other changes in your voice that don't go away
- Neck or throat pain (this is usually in the front of your neck near your Adam's apple and extends up to your ears)
- Swollen glands (lymph nodes) in the neck
- Trouble breathing that feels like you are breathing through a straw
- Trouble swallowing or pain when swallowing

Most thyroid nodules are not cancer. And many of these symptoms may be caused by other health problems. But it's important to see a healthcare provider if you have these symptoms. Only a healthcare provider can tell if you have cancer.

## How is thyroid cancer diagnosed?

If your healthcare provider thinks you may have thyroid cancer, you will need certain exams and tests to be sure. Your healthcare provider will ask you about your health history, your symptoms, risk factors, and family history of disease. A physical exam will be done. You may also have some tests done, such as blood tests or an ultrasound.

A biopsy is the only way to know for sure that you have thyroid cancer. This is usually done through fine-needle aspiration. A small needle is inserted through the skin and into the thyroid. Small pieces of tissue are taken from the thyroid and tested for cancer. Your results will come back in about a week.

After a diagnosis of thyroid cancer, you'll need more tests. These help your healthcare providers learn more about your overall health and the cancer. They're used to stage the cancer. The stage is how much cancer there is and how far it has spread (metastasized) in your body. It's one of the most important things to know when deciding how to treat the cancer.

Once your cancer is staged, your healthcare provider will talk with you about what the stage means for your treatment. Ask your healthcare provider to explain the details of your cancer to you in a way you can understand.

## How is thyroid cancer treated?

Your treatment choices depend on the type of thyroid cancer you have, test results, the stage of the cancer, and your overall health. Most thyroid cancers are slow to grow and spread (metastasize). But some kinds can grow and spread quickly. Your provider will treat these differently.

The goal of treatment may be to cure you, control the cancer, or help ease problems caused by the cancer. Talk with your healthcare team about your treatment choices, the goals of treatment, and what the risks and side effects may be. Other things to think about are if the cancer can be removed with surgery and your preferences.

Types of treatment for cancer are either local or systemic. Local treatments remove, destroy, or control cancer cells in one area. Surgery and radiation are local treatments. Systemic treatment is used to destroy or control cancer cells that may have traveled around your body. When taken by pill or injection, chemotherapy and targeted therapy are systemic treatments. You may have just one treatment or a combination of treatments.

Thyroid cancer may be treated with:

- Surgery
- Radioactive iodine

- Thyroid hormone therapy
- External radiation therapy
- Chemotherapy
- Targeted therapy

Talk with your healthcare providers about your treatment options. Make a list of questions. Think about the benefits and possible side effects of each option. Talk about your concerns with your healthcare provider before making a decision.

## What are treatment side effects?

Cancer treatment, such as chemotherapy and radiation, can damage normal cells. This can cause side effects like hair loss, mouth sores, and vomiting. Talk with your healthcare provider about side effects linked to your cancer treatment. There are often ways to manage them. There may be things you can do and medicines you can take to help prevent or control many treatment side effects.

## Coping with thyroid cancer

Many people feel worried, depressed, and stressed when dealing with cancer. Getting treatment for cancer can be hard on your mind and body. Keep talking with your healthcare team about any problems or concerns you have. Work together to ease the effect of cancer and its symptoms on your daily life.

Also:

- Talk with your family or friends.
- Ask your healthcare team or social worker for help.
- Speak with a counselor.
- Talk with a spiritual advisor.
- Ask your healthcare team about medicines for depression or anxiety.
- Keep socially active.
- Join a cancer support group online or in person.

Cancer treatment is also hard on the body. To help yourself stay healthier, try to:

- Eat a healthy diet, with as many protein foods as possible.
- Drink plenty of water, fruit juices, and other liquids.
- Keep physically active.
- Rest as much as needed.
- Talk with your healthcare team about ways to manage treatment side effects.
- Take your medicines as directed by your team.

## When should I call my healthcare provider?

Your healthcare provider will talk with you about when to call. You may be told to call if you have any of the below:

- New symptoms or symptoms that get worse
- Signs of an infection, such as a fever

- Side effects of treatment that affect your daily function or don't get better with treatment

Ask your healthcare provider what signs to watch for and when to call. Know how to get help after office hours and on weekends and holidays.

## Next steps

Tips to help you get the most from a visit to your healthcare provider:

- Know the reason for your visit and what you want to happen.
- Before your visit, write down questions you want answered.
- Bring someone with you to help you ask questions and remember what your provider tells you.
- At the visit, write down the name of a new diagnosis, and any new medicines, treatments, or tests. Also write down any new instructions your provider gives you.
- Know why a new medicine or treatment is prescribed, and how it will help you. Also know what the side effects are.
- Ask if your condition can be treated in other ways. You may be able to participate in a clinical trial looking at new treatments for your form of cancer.
- Know why a test or procedure is recommended and what the results could mean.
- Know what to expect if you do not take the medicine or have the test or procedure.
- If you have a follow-up appointment, write down the date, time, and purpose for that visit.
- Know how you can contact your provider if you have questions.

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