

Thyroid Cancer in West Virginia

Quick Facts

- The thyroid gland is located at the center of the neck, in front of the trachea (windpipe).
- Thyroid cancer is commonly diagnosed at a younger age than most other adult cancers.
- Women are three times more likely to develop thyroid cancer than men.
- Some of the risk factors for thyroid cancer include a family history of thyroid disease or cancer, age, sex, radiation exposure, and low iodine consumption.

Additional Resources:

www.thyca.org — *Thyroid Cancer Survivors' Association* — Provides information on thyroid cancer, including support for those with cancer.

www.thyroid.org — *American Thyroid Association* — Provides general information on thyroid disorders, including thyroid cancer.

For more information, please
contact the West Virginia
Cancer Registry

www.oeps.wv.gov/cancer
(304) 356-4953

Introduction

The thyroid gland is a butterfly-shaped organ located at the base of the neck, just above the collarbone¹ (Figure 1). This gland is responsible for producing hormones that are essential for several bodily functions, including regulating the brain, nerve development, skin, hair, eyes, heart, and intestine function.² In infants and children, thyroid hormones are vital for growth and muscle development. Thyroid cancer occurs when thyroid cells become cancerous and grow out of control.¹

Causes

It is not entirely clear what causes thyroid cancer. However, having certain genetic conditions inherited from parents, and exposure to radiation around the neck, especially at a young age, can increase the likelihood of developing thyroid cancer.¹

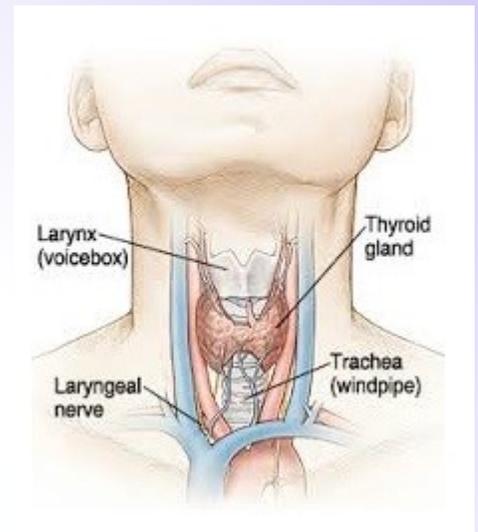


Figure 1: Anatomy of the thyroid gland

What are the different types of thyroid cancer?³

- **Papillary Thyroid Cancer (PTC):** This is the most common form of thyroid cancer. This cancer grows slowly, is highly treatable, seldom fatal, but can spread to surrounding lymph nodes.
- **Follicular Thyroid Cancer (FTC):** FTC is a subtype of PTC. It is most common in individuals with an iodine deficiency in their diet. A type of FTC, called *Hurthle cell cancer*, is rare, but may be more aggressive than typical FTC.
- **Medullary Thyroid Cancer (MTC):** MTC is more likely to run in families (i.e. passed down from parents to offspring). It can spread to other parts of the body before a nodule can be detected. It does not take in radioactive iodine, so treatment is difficult, and prognosis is not favorable.
- **Anaplastic Thyroid Cancer (ATC):** While it is very rare, it is also very aggressive. This cancer can spread quickly, is difficult to treat, and is almost always fatal.

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- The overall incidence rate of thyroid cancer has doubled between 2000-2015 (Figure 2).
- Women are three times more likely to develop thyroid cancer than men.
- Between 2011 and 2015, 1,634 cases of thyroid cancer were diagnosed. 1,251 of those were female, and 383 were male.
- Rates of thyroid cancer in males peak at 65-69 years old; for females, rates peak at 50-54 years old (Figure 3).

Risk Factors⁵

Anyone can develop thyroid cancer. However, certain factors can put an individual at higher risk:

- **Age** — Thyroid cancer can happen at any age, but risk of disease peaks earlier for women than it does for men.
- **Gender** — Women are three times more likely to develop thyroid cancer than men.
- **Radiation** — Exposure to high levels of radiation increases risk, especially if exposure happened at a young age.
- **Low Iodine** — Iodine is essential for the production of certain hormones in the thyroid gland; those who do not receive a sufficient amount of iodine in their diets have a higher risk of developing thyroid cancer.
- **Family History** — Those with a family history of thyroid disease or cancer have a higher risk of developing thyroid cancer.
- **Personal History** — Those who have had an enlarged thyroid, called goiter, may have a higher risk of developing thyroid cancer.

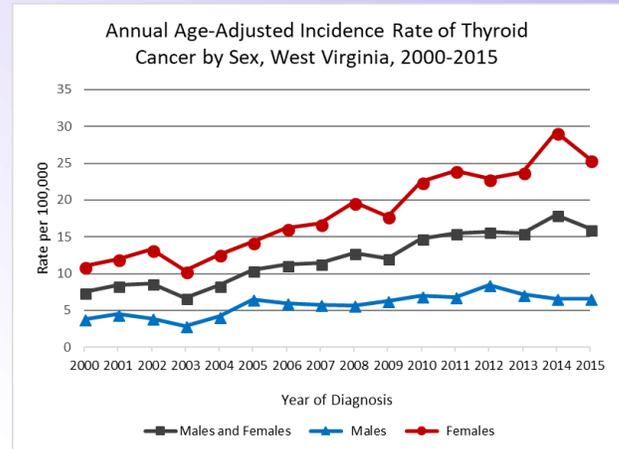


Figure 2: Incidence rates of thyroid cancer, by sex, 2000-2015

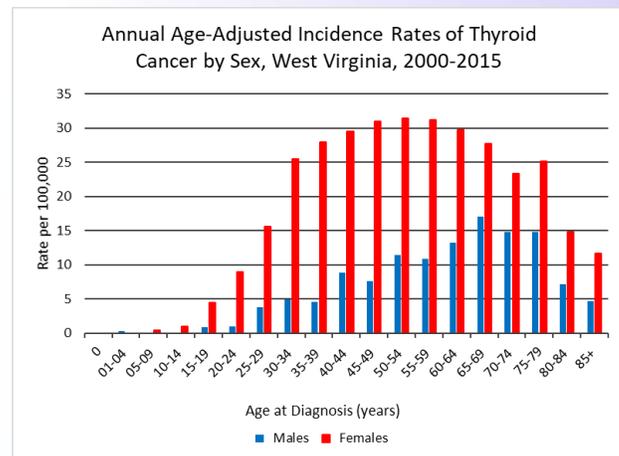


Figure 3: Incidence rates of thyroid cancer by sex and age group, 2000-2015

Symptoms³

Thyroid cancer typically does not display symptoms in the early stages of the disease. However, as thyroid cancer grows, it may cause:

- A lump or swelling that can be felt through the skin on the neck,
- Changes to voice, including increasing hoarseness,
- Difficulty swallowing and breathing,
- Pain in the front of the neck, and
- Swollen lymph nodes in the neck.

References:

- 1) Centers for Disease Control and Prevention. Thyroid Cancer. www.cdc.gov/cancer/thyroid/index.htm. Accessed December, 2018
- 2) Johns Hopkins Medicine. Thyroid Gland. www.hopkinsmedicine.org/healthlibrary/conditions/endocrinology/thyroid_gland_85,P00432. Accessed January, 2019
- 3) Mayo Clinic. Thyroid Cancer. www.mayoclinic.org/diseases-conditions/thyroid-cancer/symptoms-causes/svc-20354161. Accessed January, 2019
- 4) WV Cancer Registry, data as of January, 2019
- 5) American Cancer Society. Thyroid Cancer Risk Factors. www.cancer.org/cancer/thyroid-cancer/causes-risks-prevention/risk-factors.html. Accessed January, 2019