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# Thymus Cancer Causes, Risk Factors, and Prevention

Learn about the risk factors for thymus cancer and if there are things you can do that might lower your risk.

## Risk Factors

A risk factor is anything that affects your chance of getting a disease such as cancer. Learn more about the risk factors for thymus cancer.

- [What Are the Risk Factors for Thymus Cancer?](#)
- [Do We Know What Causes Thymus Cancer?](#)

## Prevention

Because we do not know what causes most thymic cancers, it is not yet possible to know how to prevent them.

- [Can Thymus Cancer Be Prevented?](#)

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# What Are the Risk Factors for Thymus Cancer?

No specific inherited, environmental, or lifestyle risk factors have been strongly linked to thymoma or thymic carcinoma. Some studies have suggested a possible link with exposure to radiation to the upper chest area, but this has not been confirmed.

- [What is a risk factor?](#)



Meneshian A, Oliver KR, Molina JR. Clinical presentation and management of thymoma

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## **Do We Know What Causes Thymus Cancer?**

- Changes in genes that normally help cells grow, divide, or stay alive can lead to these genes being more active than they should be, causing them to become **oncogenes**. These genes can result in cells growing out of control.
- Genes that normally help keep cell division under control or cause cells to die at the right time are known as **tumor suppressor genes**. Changes that turn off these genes can result in cells growing out of control.
- Some genes normally help repair mistakes in a cell's DNA. Changes that turn off these **DNA repair genes** can result in the buildup of DNA changes within a cell, which might lead to them growing out of control.

Any of these types of DNA changes might lead to cells growing out of control and forming a tumor. To learn more, see [Oncogenes, Tumor Suppressor Genes, and DNA Repair Genes](#)<sup>1</sup>.

### **Inherited versus acquired gene mutations**

People have 2 copies of each gene in their cells. One copy comes from each parent.

Some people **inherit**

## Hyperlinks

1. [www.cancer.org/cancer/understanding-cancer/genes-and-cancer/oncogenes-tumor-suppressor-genes.html](http://www.cancer.org/cancer/understanding-cancer/genes-and-cancer/oncogenes-tumor-suppressor-genes.html)

## References

National Cancer Institute. Thymoma and Thymic Carcinoma Treatment (PDQ®)—Health Professional Version. 2024. Accessed at [www.cancer.gov/t\(h\)ymo/hp/t\(h\)ymo-treatment-pdq](http://www.cancer.gov/t(h)ymo/hp/t(h)ymo-treatment-pdq) on C

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# Can Thymus Cancer Be Prevented?

Professional Version. 2024. Accessed at