

What is lymphoma?

Lymphoma occurs when abnormal cells within the lymphatic system of the body grow in an uncontrolled way.

The lymphatic system is part of the body's immune system. It includes tissues such as the bone marrow, tonsils and spleen, as well as lymphatic vessels and lymph nodes.

Lymphatic vessels are tiny vessels that collect waste products from the body's tissues in fluid called lymph. Lymph contains white blood cells including cells called lymphocytes. Lymphocytes help protect the body against infections.

Lymph nodes store white blood cells and help to filter out waste products.

About 70–80% of lymphomas develop in the lymph nodes.³ The rest develop outside the lymph nodes.³

What are the different types of lymphoma?

There are two main types of lymphoma: Hodgkin lymphoma and non-Hodgkin lymphoma.

- ▶ Hodgkin lymphoma (HL) is distinguished from other types of lymphoma by the presence of abnormal cells known as Hodgkin or Reed Sternberg cells. About 10% of all lymphomas are HL.^{3,4}
- ▶ Non-Hodgkin lymphoma (NHL) is the name for any type of lymphoma that does not contain Reed Sternberg cells. There are over 30 different types of NHL.^{3,4}

What are the symptoms of lymphoma?

The most common symptoms of lymphoma are:

- ▶ swollen or enlarged lymph nodes in the neck, underarm, groin or stomach^{1,2,4}
- ▶ unexplained fever^{2,4}
- ▶ feeling tired^{1,2}
- ▶ night sweats^{1,2}
- ▶ unexplained weight loss^{1,2,4}
- ▶ pain in the chest or abdomen
- ▶ unexplained, persistent cough.³

There are a number of conditions that may cause these symptoms, not just lymphoma. If any of these symptoms are experienced, it is important that they are discussed with a doctor.

What are the risk factors for lymphoma?

A risk factor is any factor that is associated with an increased chance of developing a particular health condition, such as lymphoma. There are different types of risk factors, some of which can be modified and some which cannot.

It should be noted that having one or more risk factors does not mean a person will develop lymphoma. Many people have at least one risk factor but will never develop lymphoma, while others with lymphoma may have had no known risk factors. Even if a person with lymphoma has a risk factor, it is usually hard to know how much that risk factor contributed to the development of their disease.



While the causes of lymphoma are not fully understood, there are a number of factors associated with the risk of developing the disease. These factors include:

- ▶ having a weakened immune system due to conditions such as an inherited immune disorder, an autoimmune disease or HIV/AIDS infection^{1,2,4}
- ▶ taking immunosuppressant drugs after an organ transplant^{1,2,4}
- ▶ infection with the Epstein-Barr virus (EBV), in conjunction with an immune deficiency^{2,3,4}
- ▶ a family history of lymphoma^{3,4}
- ▶ tobacco smoking.⁴

How is lymphoma diagnosed?

A number of tests will be performed to investigate symptoms of lymphoma and confirm a diagnosis. Some of the more common tests include:^{3,4}

- ▶ a physical examination
- ▶ examination of a blood sample
- ▶ taking a sample of tissue (biopsy) from a swollen lymph node (if present) for examination under a microscope
- ▶ imaging, which may include ultrasound, X-ray, computed tomography (CT) scan or magnetic resonance imaging (MRI)
- ▶ taking a sample of bone marrow and bone for examination under a microscope – this is called a bone marrow biopsy.⁴

Treatment options

Treatment and care of people with cancer is usually provided by a team of health professionals – called a multidisciplinary team.

Treatment for lymphoma depends on the stage of the disease, the severity of symptoms and the person's general health. Treatment options can include radiotherapy, chemotherapy, or targeted therapies to destroy cancer cells.¹⁻⁴

Research is ongoing to find new ways to diagnose and treat different types of cancer. Some people may be offered the option of participation in a clinical trial to test new ways of treating lymphoma.

Finding support

People often feel overwhelmed, scared, anxious and upset after a diagnosis of cancer. These are all normal feelings.

Having practical and emotional support during and after diagnosis and treatment for cancer is very important. Support may be available from family and friends, health professionals or special support services.

In addition, State and Territory Cancer Councils provide general information about cancer as well as information on local resources and relevant support groups. The Cancer Council Helpline can be accessed from anywhere in Australia by calling **13 11 20** for the cost of a local call.

More information about finding support can be found on the Cancer Australia website www.canceraustralia.gov.au or Leukaemia Foundation of Australia www.leukaemia.org.au

CanTeen is a national support organisation for 12 - 24 year olds who are living with cancer www.canteen.org.au

References

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