

## Lymphoma

Lymphoma is a cancer that begins in the lymphatic system. There are two main types of lymphoma: non-Hodgkin's lymphoma (NHL) and Hodgkin's lymphoma (sometimes called Hodgkin's disease).

The cells of Hodgkin's lymphoma look a particular way under a microscope. Lymphoma cells that do not look like this are a non-Hodgkin's lymphoma. It is important for doctors to be able to tell the difference between the cells of Hodgkin's and non-Hodgkin's cells because they are two different diseases. They are quite similar in many ways but the treatment for each is different.

Non-Hodgkin's lymphoma is one of the most common cancers in Victoria, affecting over 1,000 people a year. It can occur in children but is more common in adults. Hodgkin's lymphoma is much less common. About 120 Victorians are affected each year.

### The lymphatic system and lymphoma

The lymphatic system is part of the immune system, which helps protect our body against infection. It consists of lymph nodes connected by lymph vessels, which branch out into all parts of the body except the brain and spinal cord. The lymphatic system also includes the bone marrow, spleen, thymus gland and tonsils. Its main jobs are to:

- Drain fluids back into the bloodstream from body tissues
- Filter the blood and lymph
- Fight infection.

The lymphatic system carries a clear fluid called 'lymph', which contains many white blood cells called lymphocytes. The lymphocytes mature within the blood and bone marrow, and are stored in the lymph nodes. Lymph nodes are found in various areas of the body, including the neck, armpits, chest, abdomen and groin. Lymph fluid is filtered through the lymph nodes and any foreign organisms (such as bacteria) are trapped and attacked by the lymphocytes.

In a person with lymphoma, large numbers of abnormal lymphocytes are made, which replace some of the normal lymphocytes. This can affect the immune system and the way the body fights infections. The lymph nodes also become swollen, forming painless lumps.

The lymphatic system runs through most of the body. This means you can get lymphoma almost anywhere. It is most commonly first seen in the lymph nodes in the neck, but it is also fairly common to find it in the liver or spleen. Other places you may find lymphoma are in the bowel, stomach, brain, skin, testicles and eye.

### Symptoms

The most common symptom of lymphoma is a swelling of the lymph nodes in the neck, armpit or groin. These swellings are usually painless. Other general symptoms include:

- Weight loss (more than one-tenth of your total weight)
- Fever that comes and goes without any obvious cause
- Heavy sweating especially at night
- Some people have unexplained itching.

Doctors call this group of symptoms 'B symptoms'. Some people with lymphoma may have them, but many don't. Sometimes lymphoma gets into the bone marrow, causing problems with low blood counts.

Most people who have any of these symptoms will not have lymphoma. They will be suffering from a much less serious problem such as a throat infection. However, it is always important to see your doctor if you have symptoms.

## Risks and causes

We don't know why most people get lymphoma. There are many different types of lymphoma and it is unlikely that there is one single cause of all lymphoma. There are some known risk factors, which include:

- Exposure to radiation
- Exposure to certain chemicals
- Infections and viruses, including the human immunodeficiency virus (HIV) and the Epstein-Barr virus in people whose immune system is suppressed.
- There are other possible causes but more research is necessary to find other definite risk factors.

## Diagnosis

Most people begin by going to see their GP with symptoms. If your doctor has concerns that you may have lymphoma, they will refer you to the hospital to have a biopsy. This means having one of the swollen lymph nodes taken out and examined under a microscope to see if it contains cancer cells.

If it does, you will need to have further tests to see where and how far the lymphoma has spread. These tests may include:

- Physical examination and blood tests.
- Chest x-ray.
- Bone marrow biopsy – some fluid is removed from the bone marrow and examined for cancer cells.
- CT scan – a specialised x-ray for building up three-dimensional pictures of the body.
- Gallium scan – a short-lived, radioactive form of gallium is injected into the body, and outlines organs in the body when viewed with a special 'gamma' camera.
- PET scan – a small amount of radioactive material is injected, which highlights cancerous areas when viewed with a special scanner.

Test results can take a few days to come back. It is very natural to feel anxious while waiting to get your results. It can help to talk to a close friend or relative about how you are feeling. You can also contact your local cancer information and support service.

## The stages of the disease

The disease is 'staged' according to its location and spread. This is important to determine the type of treatment you will need.

- **Stage I** – cancer is found in one lymph node area or one area/organ outside the lymph nodes.
- **Stage II** – cancer is found in two or more lymph node areas on the same side of the diaphragm. Cancer is found in one area/organ outside of the lymph nodes and in the lymph nodes around it. Other lymph node areas on the same side of the diaphragm may be involved (the diaphragm is a sheet of muscle slung beneath the lungs that enables breathing).
- **Stage III** – cancer is found in lymph node areas on both sides of the diaphragm. It may have spread to an area/organ near the lymph node area, or to the spleen, or both.
- **Stage IV** – cancer has spread to more than one spot within or outside the lymphatic system.

## Treatment

Treatment for lymphoma depends on the location and severity of the cancer. Treatment for Hodgkin's lymphoma is often very successful, with many people being cured. Non-Hodgkin's lymphoma is also curable but it can be harder to treat.

Treatment regimes are slightly different for Hodgkin's lymphoma and non-Hodgkin's lymphoma. Some people only need one treatment. Others will need a combination. Options include:

- **Watchful waiting** – some forms of slow-growing non-Hodgkin's lymphoma may not need active treatment when first diagnosed. Regular check-ups will be necessary.
- **Chemotherapy** – either tablets or injections of anti-cancer drugs are used.

- **Radiotherapy** – x-rays are used to target and kill cancer cells. This is used in adults, but rarely used to treat children with lymphoma.
- **Steroids** – as tablets or injections to improve how well your chemotherapy works.
- **Immunotherapy (biological therapy) with antibodies** – treatments that use natural body substances or drugs made from natural body substances. One treatment available in Australia to treat NHL is called rituximab. Several more antibody treatments are being developed.
- **Stem cell (or bone marrow) transplantation** – stem cells are the cells that blood cells evolve from. High doses of chemotherapy can damage stem cells so, during this treatment, stem cells are removed from the bone marrow before higher doses of chemotherapy are given. They are then transplanted back after the chemotherapy has finished. This treatment may be suggested if the disease comes back or does not respond to the first treatment.

All treatments have side effects. These will vary depending on the type of treatment you are having. Many side effects are temporary but some may be permanent. Your doctor will explain all the possible side effects before your treatment begins.

### Where to get help

- Your doctor
- Specialist
- The Cancer Council Victoria Information and Support Service Tel. 131 120
- Multilingual Cancer Information Line, Victoria - see the CCV website for contact details
- Leukaemia Foundation of Victoria Tel. (03) 9620 1815

### Things to remember

- Lymphoma is a group of cancers that affect the lymphatic system.
- Symptoms may include swelling of the lymph nodes, weight loss and night sweats.
- They are one of the more common types of cancer in Victoria.

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Cancer Council Victoria

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