lymphoma
What is the lymphatic system?

- The lymphatic system is made up of tubes (lymph vessels), glands (lymph nodes) and other organs including the spleen. The vessels and glands hold a fluid called lymph.

- The lymphatic system helps us to fight infection – it carries white blood cells called lymphocytes. It is part of our immune system, the body’s natural defence against infection. It has a number of other jobs including:
  - draining waste products from around the body
  - draining fluid when there is too much in some parts of the body
  - moving waste products and fluid to the bloodstream to be dealt with elsewhere
  - moving around cells and other substances needed in different parts of the body.

- The lymph nodes act as a sieve in the lymphatic system and are home to large numbers of lymphocytes. They help to ‘kick start’ your body’s fight against infection.

- You might have noticed that you develop lumps in your neck when you have a sore throat. This is because more lymphocytes have been made to fight the infection and these have collected in the lymph nodes nearby.

- You have lymph nodes and lymph vessels throughout your body.

- The lymph nodes are often found in groups. Some of these may be easily felt, particularly under the arms, in the neck and in the groin; others are deep inside us and can only be seen on scans.
What is lymphoma?

Lymphomas are the fifth most common cancer in the UK. They can occur in any age group, even children. They are nearly always treatable; most people live for many years after being diagnosed with lymphoma.

Lymphomas are cancers of the lymphatic system.

When you have lymphoma, some of your lymphocytes (specialized white blood cells that normally fight infection) are ‘out of control’.

Lymphoma can affect lymph nodes in all parts of your body. It can also involve other organs, such as the spleen (part of the immune system) or your bone marrow.

Although lymphoma is a disease of the lymphatic system, it can also arise in other parts of your body. For example, lymphoma can affect your breast, stomach, bowel, skin or liver. Lymphoma that occurs in areas such as these is said to be ‘extra nodal’, meaning ‘outside of lymph nodes’.
Lymphoma is a cancer of blood cells called lymphocytes.

Lymphocytes are cells that are part of our immune system – they normally help the body to fight infection.

When lymphocytes grow out of control and become cancerous they can collect in almost any part of the body – anywhere where lymphocytes are made or where they normally collect to fight infections.

The most common place for abnormal lymphocytes to collect is in lymph nodes (glands).

Lymph nodes are found throughout the body, often in groups – particularly under the arms, in the neck and in the groin.

Lymphoma can also develop in deeper lymph nodes, in the spleen or in the bone marrow. Less commonly, lymphoma can start in other areas of the body, for example in the breast, stomach, bowel, skin, brain or liver.

In most cases, the cause of the lymphoma is not known.

There is no evidence to suggest that anything you have done – or not done – has caused you to develop lymphoma. You can't catch lymphoma from someone and you can't give it to anyone else. It is not inherited, so you won't pass it on to your children.
**What causes lymphoma?**

Lymphomas develop as a result of one or more events that cause changes in the genes of a lymphocyte. This change in the genes interferes with cell division and cell death.

Some people are more at risk of lymphoma. This is usually because of another medical condition, in particular medical conditions that interfere with the immune system (a system in the body that fights infections). For example, being infected with HIV (human immunodeficiency virus) or having AIDS (acquired immune deficiency syndrome) puts people at increased risk of developing some lymphomas.

People who have had an organ transplant are also more likely to develop lymphoma. This is because the drugs that prevent rejection of the organ interfere with the immune system. Lymphomas that develop in this situation are sometimes called post-transplant lympho-proliferative disorders (PTLDs).

Doctors also know that certain lymphomas grow as a result of particular viral infections, for example the virus that causes glandular fever, the Epstein–Barr virus (EBV).

Lymphoma is not inherited – it is not passed down from generation to generation. Most people with lymphoma have no family history of the disease. In a few types of lymphoma having a brother, sister or parent with lymphoma gives you a slightly higher risk of developing lymphoma too.

All these ‘risk factors’ account for a very small proportion of cases, however.

In most cases, the cause of lymphoma is not known. There is no evidence to suggest that anything you have done – or not done – has caused you to develop lymphoma. You can’t catch lymphoma from someone and you can’t give it to anyone else.
What are the symptoms of lymphoma?

The most common sign of lymphoma is:

- a painless lump or swelling, often in the neck, armpit or groin.

Some lymphomas can develop without any obvious lump. Instead, the first thing noticed may be symptoms (a symptom is a sign of illness that is felt by a person).

➡️ Other common symptoms include:

- excessive sweating (drenching sweats), especially at night
- fevers
- an unexplained loss of weight (loss of weight without any reason)
  ❖ (the above three are known as ‘B symptoms’)
- unusual tiredness (fatigue)
- persistent itching
- coughing or breathlessness
- abdominal pain or diarrhea.

The symptoms you have will depend on where your lymphoma is growing. For example, if you have a lymphoma growing in your stomach, this might cause stomach ache, diarrhea or constipation. If you have lymphoma in the bone marrow, you may get symptoms of anaemia.
When all the test results are ready, your doctor will be able to tell what parts of your body are affected by your lymphoma.

This is called the stage of your lymphoma.

Your lymphoma will be given a number between one and four and this is usually written using Roman numerals.
Stage I

*Stage I* One group of lymph nodes is affected
Stage II

Stage II Two or more groups of lymph nodes are affected on one side of the diaphragm
Stage III

Stage III Lymph nodes are affected on both sides of the diaphragm (ie above and below it)
Stage IV Lymphoma can be found in organs or tissues that are outside the lymph nodes, eg the lungs, liver or bone marrow.
In addition to these four numbered stages, doctors also add the letters ‘A’ or ‘B’ to describe the stage of your lymphoma.

‘B’ means that you have lost weight or had night sweats or fevers.

‘A’ means that you have not had these symptoms.

Most people with stage I or stage II lymphoma are said to have ‘early-stage’ lymphoma.

Anyone with stage III or stage IV lymphoma has ‘advanced-stage’ lymphoma.

The word ‘advanced’ sounds alarming but lymphomas at this stage can still be treated very successfully.
What kinds of lymphoma are there?

There are many different types of lymphoma. Lymphomas are classified (sorted and grouped) by:

➡️ what the cells look like under a microscope
➡️ what chemicals or proteins are on the surface of the cells
➡️ what changes have happened to the genes in the cells.

This information helps your specialist know exactly which lymphoma you have. This is important because some types can affect the body differently and they often need to be treated differently too.
There are many different kinds of lymphoma but there are two main types:

- Hodgkin lymphoma
- Non-Hodgkin lymphoma