

## Biopsy

A biopsy is a procedure that is usually used to confirm whether or not you have lymphoma. During a biopsy, doctors take cells from your body to look at under a microscope. A biopsy can also give further information about the specific type of lymphoma and how fast it's growing. We have separate information about **bone marrow biopsy**, a test used to check whether you have lymphoma in your bone marrow.

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We have separate information about the topics in **bold font**. Please get in touch if you'd like to request copies or if you would like further information about any aspect of lymphoma. Phone 0808 808 5555 or email [information@lymphoma-action.org.uk](mailto:information@lymphoma-action.org.uk).

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## What is a biopsy?

A biopsy is a minor operation. It involves taking a sample of tissue cells from your body for examination in a laboratory. The tissue sample itself is sometimes also known as a 'biopsy' or a 'biopsy sample'.

A specialist doctor called a pathologist looks at the sample under a microscope to check for lymphoma cells. If you already have a lymphoma diagnosis, they look at the cells to find out more about the **type of lymphoma**. They can also advise on whether you need further specialised diagnostic **tests**.

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## Why might I need a biopsy?

A biopsy can help **to diagnose lymphoma**. It can also help doctors **find out more about the lymphoma** to plan your **treatment**.

### Biopsy to diagnose lymphoma

Usually, a biopsy is the only way to confirm a diagnosis of lymphoma.

To diagnose lymphoma, a biopsy sample is often taken from a gland (**lymph node**). Very occasionally, you might instead have a sample removed from an organ, such as your liver, or another site, such as part of your skin.

### Biopsy to find out more about a confirmed lymphoma

If lymphoma is already confirmed, a biopsy might also be used to check:

- which **type of lymphoma** you have, including how fast it is growing (the grade)
- how far your lymphoma has spread (the **stage**), which helps your medical team plan your **treatment**
- how well your lymphoma has responded to treatment
- if the lymphoma has come back (**relapsed**) – though biopsy is not usually needed for this.

**The doctor explained that I needed a biopsy and that she was going to insert a needle into the lump to take a sample of cells so that they could be tested. After a short while, the results came back as 'inconclusive'. As a consequence, I was scheduled for an ultrasound-guided biopsy in a few days' time. My consultant explained that the results of the biopsy showed I had a particular type of non-Hodgkin lymphoma called follicular lymphoma. Further testing would be needed to identify the stage of the lymphoma so that treatment options could be explored. Once scans and a bone marrow biopsy had been taken the doctors would have a clearer picture of what they were dealing with.**

Mary, diagnosed with lymphoma

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## Types of biopsy

There are different types of biopsy, including:

- an **excision biopsy**, which removes a whole lymph node
- an **incisional biopsy**, which removes a very small part of a lymph node, or a piece of skin
- a needle core biopsy, which takes a small sample of a lymph node; this type of biopsy is also known as a 'core biopsy' or a 'needle biopsy'
- a **laparoscopic** (keyhole) biopsy, which removes all or part of a lymph node from a site deep within the body
- a biopsy using a technique called 'endoscopy' (**endoscopic biopsy**), which uses a thin, flexible tube with a tiny camera to look inside your body – this helps to guide the taking of a tiny sample from an internal organ such as lung, stomach, bladder or intestine.

**The type of biopsy you have depends on where in your body any enlarged gland(s) or other abnormal areas of tissue are and the information doctors need to get from the sample. It also depends on your overall health – for example, whether you are physically fit enough for a general anaesthetic.**

**Dr Bridget Wilkins, Consultant Haematopathologist**

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You might be interested in listening to our **podcast** in which Consultant Haematopathologist, Dr Bridget Wilkins, answers some of the most **commonly asked questions** about pathology and the diagnosis of lymphoma, including types of biopsies and what the pathologist is looking for. You can hear it on **our website**, on **Apple podcasts** or on **Spotify**.

### Excision biopsy

An excision biopsy is a very common type of biopsy used to diagnose lymphoma. Your surgeon removes a whole lymph node. This gives doctors a large enough sample to tell whether or not you have lymphoma. There is also enough tissue for any additional tests you might need and often for future research into lymphomas, if you agree to your tissue being used in this way.

An excision biopsy is a minor operation. If the **lymph node** is near the surface of your skin, you usually have a local anaesthetic. If it is deeper inside your body, you might have a general anaesthetic. You go to hospital as an outpatient and the visit takes a few hours.

You might have a **CT, PET, ultrasound, X-ray** or **MRI scan** before an excision biopsy. The images from the scan help guide your surgeon to the exact place to take the biopsy sample from. They then clean and numb the area, remove a lymph node and send it to a laboratory for a pathologist to examine it.

**I had an ultrasound scan and a needle biopsy through my spine using a CT scan to ensure the sample was being taken from the right place. I then needed a bone marrow biopsy and, as the needle biopsy had been painful, I asked for sedation.**

*Caroline, diagnosed with lymphoma*

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After an excision biopsy, your wound is stitched and dressed. You should be given information about **how to care for the biopsied area** to reduce the risk of **infection**. If you are not offered this advice, ask a member of your medical team for it.

You are allowed to go home as soon as you can pass urine and walk. If you had a general anaesthetic, it won't be safe for you to drive yourself home. You might be able to drive if you had local anaesthetic; however, the general advice is to have someone collect you from the hospital. Speak to your medical team in advance if this is likely to be difficult to arrange.

Around a week later, your stitches are removed, either at your GP surgery or at the hospital. Your medical team can give you more information about arranging this appointment.

## **Incisional biopsy**

An incisional biopsy is often used when lymph nodes are particularly large or 'matted'. This means that they are stuck together or stuck to nearby structures. In these cases, surgery to remove a whole lymph node gland might be difficult, or simply not needed for a diagnosis.

The procedure is similar to that of an **excision biopsy**, although only part (instead of all) of a lymph node is removed. It is also the biopsy of choice if your lymphoma is in the skin or in an organ very close to the skin, such as a salivary gland.

## Laparoscopic (keyhole) biopsy

You might have a laparoscopic biopsy if the lymph nodes affected are deep within your body, for example, in your tummy (abdomen).

A laparoscopic (keyhole) biopsy is carried out under general anaesthetic. A surgeon cleans the area before making a small cut (incision) through your skin. They pass a very narrow instrument through the incision and remove all or part of the **lymph node** to send to a laboratory for a pathologist to examine it.

After a laparoscopic biopsy, your wound is dressed. You should be given information about **how to care for the biopsied area**. If you are not offered this advice, ask a member of your medical team for it.

You might need to stay in hospital overnight. Generally, you can go home the next day. It might be safe for you to drive, although the general advice is to have someone collect you from the hospital. Speak to your medical team in advance if this is likely to be difficult to arrange.

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## Caring for the biopsied area

After your biopsy, a medical professional checks that it is safe for you to go home. They cover the biopsied area with a protective dressing. Most dressings are waterproof, although they might not withstand a high pressure 'power' shower. In general, the guidance is to leave the dressing on for a few days.

Before you leave the hospital, your **medical team** should give you clear advice on how to care for the biopsied area. Usually, this includes avoiding swimming pools, saunas and hot tubs until the wound heals (normally after around 7 to 10 days after the procedure). This is to avoid **infection** and to stop the dressing from coming off.

### It is important to contact:

- **your medical team straightaway if you notice any signs of infection including bleeding, swelling, discharge from the biopsied area, fever (a temperature above 38°C), chills and sweating**
- **the surgical team at your hospital if you have any problems with the wound, such as swelling, soreness, redness, oozing or weeping.**

## Getting your biopsy results

Ask your doctor how long it will be before you get the results of your biopsy. Sometimes results come through within a few days. Other times, they take around a week. Your biopsy sample might need to be sent for **further laboratory tests**, which could mean a slightly longer wait.

It can be hard **waiting for results** and for information about your treatment plan. Your medical team will talk to you about your individual treatment as soon as they're sure that they have a confirmed diagnosis.

While you are waiting for your results, it might be possible to have some **staging** tests and other assessments. Your medical team will organise any that are appropriate for you. Your team can also give you some general information about possible **treatment types** once a diagnosis of lymphoma is confirmed.

Many people feel anxious while **waiting for test results**. Contact your GP if you are concerned about the length of time you have been waiting. If you'd like to talk to someone about how you're feeling, or about any aspect of lymphoma, please call **our helpline freephone** on 0808 808 5555. There are many ways we can **support you**.

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## Will I need further tests?

If your doctors think that other areas of your body could be affected by lymphoma, they might ask you to have another biopsy to check.

You might also have further **tests and scans** to give doctors information about the exact **type** and **stage** of your lymphoma. These investigations help your medical team decide how best to treat you and when to begin treatment.

Other investigations you might have include:

- **fine needle aspiration cytology** (FNAC or FNA)
- **endobronchial ultrasound-guided fine needle aspiration** (EBUS-FNA).

## Fine needle aspiration cytology

Fine needle aspiration cytology (FNA or FNAC) is occasionally done if doctors suspect that you could have lymphoma.

Your surgeon, or a specially trained pathologist (a 'cytopathologist') collects a small amount of tissue from a lymph node using a very thin needle.

The needle is put into a lymph node for 30 to 40 seconds. A small sample of cells is taken and sent to a laboratory for a cytopathologist to examine it.

For lymph nodes just under the skin, the procedure is done without an anaesthetic. For deeper lymph nodes, or where **ultrasound** or **CT** image guidance is used, it is done under a local anaesthetic or, very occasionally, under general anaesthetic.

Although FNA can help doctors find out whether you might have lymphoma, it is rarely enough on its own. Further tests (such as an **excision** or **incisional biopsy**) can confirm the diagnosis.

In general, you can go home straightaway after an FNA.

## **Endobronchial ultrasound-guided fine needle aspiration**

Endobronchial ultrasound-guided fine needle aspiration (EBUS-FNA) is sometimes used if the affected lymph nodes are deep within your chest, which makes them difficult to biopsy.

A flexible tube is passed down your windpipe. The tube contains a needle and an instrument called an 'ultrasound probe'. **Ultrasound** helps to guide the needle to the lymph nodes within your chest. Your surgeon uses the needle to collect tissue before sending it to a laboratory for a pathologist to examine it.

EBUS-FNA is done under local anaesthetic, with sedation and pain relief that is given into a vein (intravenously). The procedure takes about 30 minutes. You are then usually kept in hospital for 2 to 3 hours to check your recovery. It's generally advised that you do not drive after sedation and that you should arrange for someone to collect you and take you home. Speak to a member of your medical team in advance if this will be difficult for you.

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## FAQs about biopsy and lymphoma

We address some of the common questions and concerns people have about biopsies. Your medical team can give advice specific to your situation.

### Is a biopsy painful?

Lymph node biopsies are done under anaesthetic so that you do not feel pain during the procedure. Once the anaesthetic wears off, you might feel some discomfort, such as soreness or aching in the biopsied area. Usually, doctors advise that you take paracetamol or ibuprofen to relieve any pain. They might also give you other pain relief medication on prescription. Any pain should go away completely after a few days. If you continue to feel pain, contact a member of your medical team at your hospital for a medical review.

We have separate information about [bone marrow biopsy](#) (where the sample is taken from your bone marrow).

### Can removing a lymph node affect my immunity?

Lymph nodes are an important part of your [immune system](#). However, the human body has a network of several hundred lymph nodes and removing a small number does not affect your immunity.

### Can removing an affected lymph node in a biopsy remove the lymphoma?

A lymph node biopsy cannot remove the lymphoma completely, even if it is mostly in one area. Even for lymphomas that appear to be in only one area, surgery usually leaves some lymphoma cells behind. For this reason, treatments such as [chemotherapy](#), [radiotherapy](#), [targeted treatments](#) (including immunotherapy) and [CAR T-cell therapy](#) are much more effective.

### Are biopsy results double-checked?

This isn't usually necessary but pathology colleagues often check one another's work – this is good practice to share learning, as well as to help ensure accuracy of results. If the diagnosis is proving difficult, the pathologist will always seek advice from other expert colleagues.



## Could the cells in the biopsy sample change?

Some people wonder whether cells in the sample could change because of the laboratory procedures undertaken on them. They worry that this could affect the test result. Although cells do change quickly once they are taken out of your body, techniques are used to preserve them. Usually, this includes pathologists applying a liquid ('fixative') as soon as possible, which prevents further changes happening to them. The laboratory procedures can then all be done without changing the samples in ways that would affect the accuracy of the diagnosis.

## Can you always find out the exact type of lymphoma from a biopsy?

Most of the time, pathologists can diagnose the type of lymphoma from a biopsy sample. However, it is not always possible. This might be because the sample size is too small. You might therefore need to have another biopsy to gain a larger amount.

Even with a large enough sample size, pathologists are occasionally not able to tell the exact type of lymphoma from a biopsy. In these cases, they can guide cancer doctors (oncologists) about appropriate treatment for you. They do this using any information they have from your sample. For example, larger cells indicate **fast-growing ('aggressive' or high grade) lymphoma**, while smaller cells suggest a **slower-growing (low grade) lymphoma**.

## Is a biopsy used to tell whether lymphoma has come back (relapsed)?

Often, a biopsy isn't needed to tell whether lymphoma has come back (**relapsed**). If you have already had a lymphoma diagnosis in the past, a **PET scan** usually shows clearly whether lymphoma has returned – the images might show 'hotspots' of activity, indicating a recurrence.

## What happens to my biopsy tissue?

Tissue samples are kept for a long time, currently 30 years, in line with UK law. With your consent, your stored tissue can be made available for research purposes. This can help to further knowledge within the medical field and bring benefit to other people affected by lymphoma in future.

Another advantage of keeping tissue is that people are now **living for longer, with and beyond lymphoma**. If lymphoma comes back (relapses), it can be helpful to doctors to look at your original sample material to help to guide your treatment plan. For example, there may be new drugs, not originally available, that can now treat the relapsed lymphoma.

## References

The full list of references for this page is available on our website. Alternatively, email [publications@lymphoma-action.org.uk](mailto:publications@lymphoma-action.org.uk) or call 01296 619409 if you would like a copy.

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✓	Evidence-based
✓	Approved by experts
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