

Ultrasound scan and X-ray scan

Doctors use scans to diagnose and find out about some types of lymphoma. This information is about ultrasound scans and X-ray scans.

We have separate information about other types of **scans, being referred for tests and scans** and **waiting for test results**.

On this page

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Frequently asked questions

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.

Ultrasound scans

An ultrasound scan is a test that uses soundwaves to take pictures inside your body.

Ultrasound is a type of sound energy. During an ultrasound scan, a 'transducer' or 'probe' makes high-energy sound waves (which are too high-pitched for humans to hear). The waves travel through your body. They bounce off tissues and organs inside your body, making echoes.

The ultrasound probe records the echoes and sends the information to a computer. The computer uses the information to build a picture of the inside of your body, which shows on the screen.

A doctor, radiographer or ultrasound technician ('sonographer') does the ultrasound.

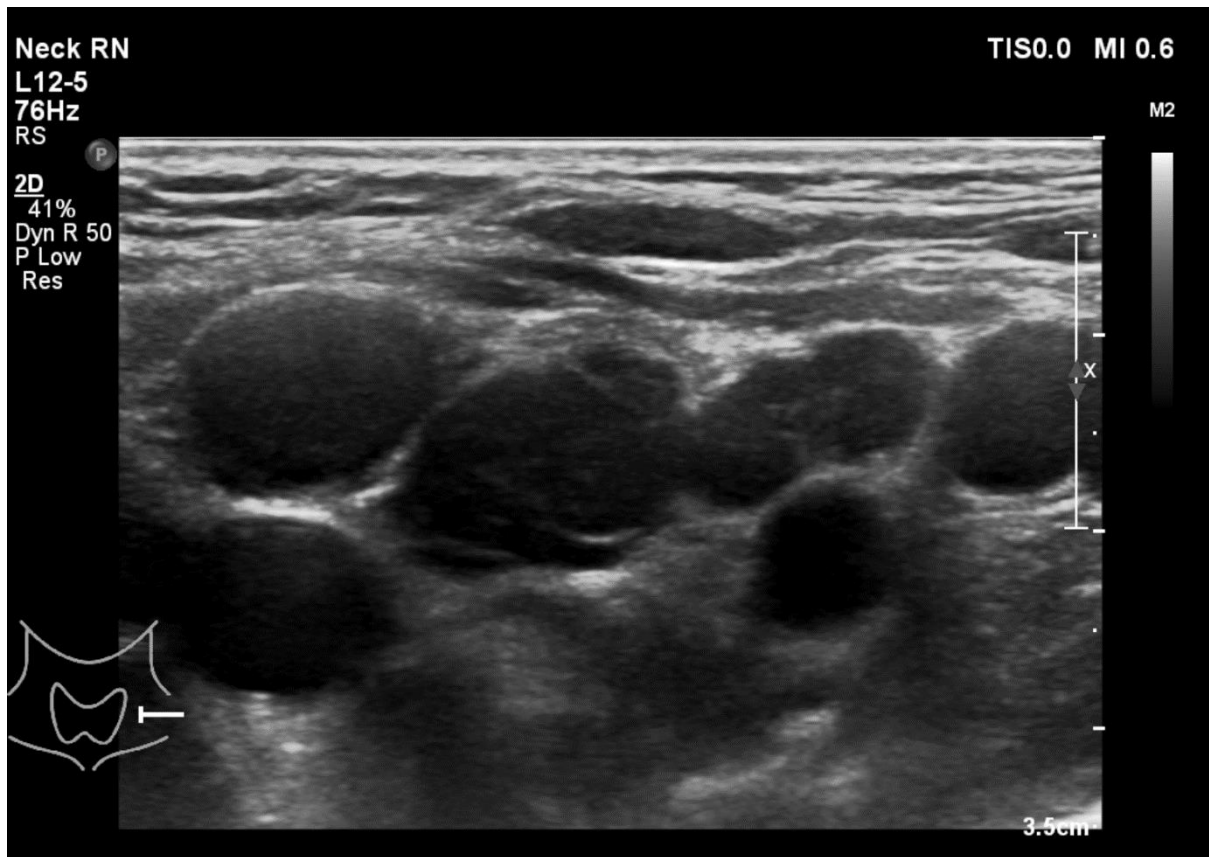


Figure: Ultrasound image of lymph glands (lymph nodes) in the neck © The Royal Marsden NHS Foundation Trust

When is an ultrasound scan used for people who have lymphoma?

If you have lymphoma, or your doctor suspects you could have, you might have an ultrasound scan to:

- examine **lymph nodes** that are near the surface of your skin
- help your doctor find the best place to take a **biopsy**.

Preparing for an ultrasound scan

You should be given information about how to prepare for the scan, including whether to have a full or an empty bladder for the scan. You might also be asked not to eat anything for a few hours beforehand.

Having an ultrasound scan

Having an ultrasound scan is painless. Usually, you have an ultrasound as an outpatient, which means you don't have to stay in hospital overnight.

The procedure depends on which type of ultrasound scan you have:

- **external ultrasound scan**
- **internal ultrasound scan**

External ultrasound scan

The most common type of ultrasound scan is an external ultrasound scan.

You might have an external ultrasound scan to examine lumps near the surface of your skin (for example, in your neck, armpit or groin) or in your tummy (abdomen). The scan takes about 15 to 30 minutes.

- You lie on a couch. The health professional carrying out the procedure rubs a cold gel onto the skin over the area of your body to be examined.
- They move a hand-held probe over your skin. The probe looks a bit like a microphone.
- As they move the probe around, a picture of the inside of your body appears on a computer screen. To help get a better picture, you might be asked to do certain things like taking a deep breath and hold it for a few seconds.

Internal ultrasound scan

Internal ultrasound scans are sometimes used in certain situations:

- It might be used in females to look at pelvic organs. The ultrasound probe is placed inside the vagina.
- It might also be used through a procedure called **endoscopy**, for example through the food pipe (oesophagus) or windpipe (trachea), usually to show the best place to do a **biopsy**. You will probably be told that you are having an endoscopy or a 'camera test'. The test will be done in the endoscopy suite. You might be given a sedative drug to relax you, to make the procedure easier and more comfortable. This type of ultrasound takes a bit longer.

You can go straight home after an ultrasound scan.

X-ray

An X-ray uses high-energy waves, similar to radio waves. These waves take pictures through your body. A radiographer does the X-ray scan.

The machine produces X-rays, which pass through the body. They are captured in a film placed underneath the X-rayed part of your body. As they pass through your body, the X-rays reduce in strength by different amounts:

- X-rays pass easily through air and soft structures, like your lungs. These areas look black on the X-ray picture.
- X-rays are partially reduced as they pass through muscle, fats and fluid. These areas show up in shades of grey.
- Bones absorb X-rays. They look white on the X-ray picture.

Modern X-ray machines send the picture straight to a computer screen.

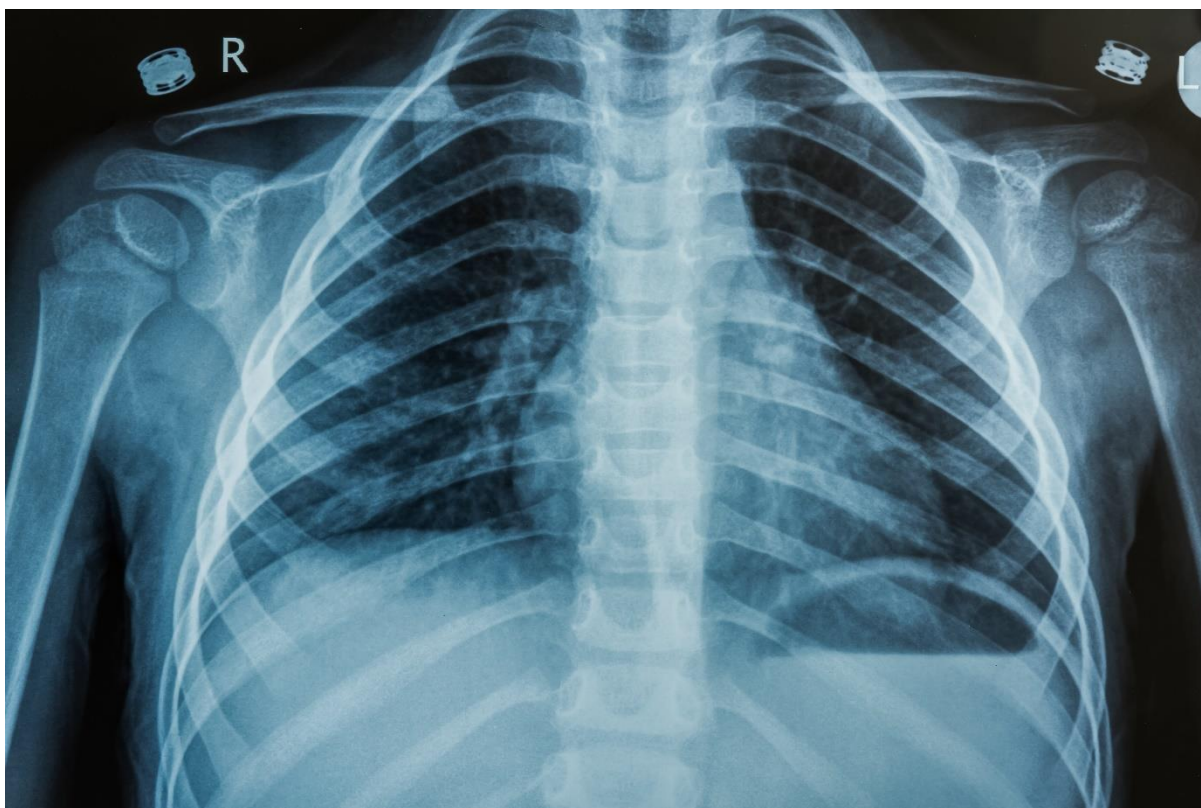


Figure: A chest X-ray scan image

When are X-rays used for people who have lymphoma?

Doctors can't tell from X-rays alone whether or not you have lymphoma. However, an X-ray could help to:

- Find out what might be causing any symptoms you have. For example, you might have a chest X-ray if you are short of breath or have a cough. You might have a tummy (abdominal) X-ray if you have pain in your tummy or a change of bowel habits, such as diarrhoea.

- Check for **swollen lymph nodes** in your chest.
- Check the position of a **central venous catheter** ('central line'), if you need one to have your **chemotherapy**.
- Check how healthy your heart and lungs are before you start some types of treatment.
- Check if there are any problems with your bones.

Preparing for an X-ray

Your medical team should tell you if you need to do anything to prepare for your X-ray.

There are two main types of X-ray:

- **Contrast X-rays** use a special dye ('contrast agent') to help certain parts of your body show up more clearly.
- **Plain X-rays** are like having a photograph taken. They don't use any dye.

Simple ('plain') X-rays

If you are having a plain X-ray, you can eat and drink as normal on the day of your scan. Your medical team should tell you if you need to stop taking any medication beforehand.

Plain X-rays usually take around 15 minutes, depending on which areas of your body need to be scanned.

Contrast X-rays

How you have your contrast agent depends on which part of your body is being X-rayed. You might be given it as a liquid to drink (sometimes called a 'barium swallow'). Contrast agents can also be injected, either into a vein in your arm or back package (an 'enema').

The NHS website has more information about **contrast agents used for X-rays**.

Allergic reactions

There is a small risk of having an **allergic reaction** to a contrast agent. Hospital staff monitor you carefully and treat you if needed. Tell the radiographer if you feel unwell.

If you have a known allergy to the contrast material being used, then you might have your scan without a contrast injection. Your doctors will choose the most appropriate scan for you.

Having an X-ray

Having an X-ray is painless. Usually, you have an X-ray at your local hospital as an outpatient, which means that you don't have to stay in hospital overnight.

Before an X-ray, you might be asked to take off any metal you're wearing, such as jewellery, a belt, watch, or underwired bra. If you wear glasses, you might need to remove these too.

The staff in the scanning department ask you whether you are, or could be **pregnant**.

- To have an X-ray, you sit, lie or stand. You are not closed in.
- The radiographer checks that that you are in the correct position.
- During the scan, the radiographer stands behind a clear screen or wears a lead apron to protect them from daily exposure to X-rays.
- You need to keep very still during the scan. You might be asked to hold your breath for a few seconds to help with this.

You can go straight home after the procedure. You won't be radioactive (giving off radiation energy) and there aren't any precautions you need to take.

Frequently asked questions about ultrasound and X-ray scans for lymphoma

In this section, we answer some of the questions people often have. Speak to your GP or a member of your medical team if you have questions or concerns specific to your situation.

Are X-ray scans safe?

Doctors only ask you to have a scan if it is considered to be safe and helpful. They weigh up the possible risks and benefits before they decide to do any type of scan.

X-rays use a small and safe amount of radiation.

You will not be radioactive after an ultrasound scan or after an X-ray scan.

Is it OK to take medication before the scan?

It is generally safe to take any prescription medication on the day of your appointment. However, follow the advice of your hospital team.

Will I be closed in when I am having an X-ray?

No, you won't be closed in.

Will I need to take my clothes off during the scan?

You might need to take off some of your clothes if they are covering the part of your body that is being scanned – hospital often offer a gown if this is the case. You can keep the rest of your clothes on. If you would prefer that the health professional doing the scan is the same sex as you, ask if this is possible before the day of your scan.

What should I do if I feel worried about having the scan?

Talk to a member of your medical team if you feel anxious about having a scan. They can answer any questions you have and might suggest ways of coping with your anxiety.

Can I take someone with me to my scan?

For most scans, friends or family members can't stay in the room with you during the scan itself. However, they can still go with you to the hospital and wait in a different room.

When will I get the results of the scan?

Your medical team should be able to give you an idea of when to expect your test results. Staff in the scanning department won't be able to give you your scan results while you're at the hospital.

The person doing the scan isn't usually trained to understand what the images mean. Instead, this information needs to be sent to a specialist. The expert uses the scan and the results of all your other tests to help them work out what your scan pictures mean.

We have more information about [waiting for test results](#).

Can I have a scan if I am pregnant or breastfeeding?

Ultrasound scans

Ultrasound scans are safe for women who are pregnant or breastfeeding. There are no known risks to babies from ultrasound.

X-rays

There is a small risk to an unborn baby exposed to radiation during an X-ray scan depending on the stage of the pregnancy and the part of the body x-rayed.

Doctors carefully assess the risks and benefits of giving people who are pregnant an X-ray scan. If it's considered to be necessary, they will protect your baby by giving you a lead apron to wear.

X-rays are inside your body only while the scan is being done; there are none left in your body afterwards. It's therefore considered to be safe to breastfeed after an X-ray scan.

What can I do to help me cope while I am waiting for my results?

For some people, **waiting for test results** can be a particularly anxious time. Although the wait might feel long, it is important that doctors collect all of the information they need so that they can plan the best **treatment** for you. If you'd like to talk about how you're feeling, our **helpline team** is here to support you.

References

The full list of references for this page is available on our website. Alternatively, email publications@lymphoma-action.org.uk or call 01296 619400 if you would like a copy.

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✓	Evidence-based
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