

Image guided percutaneous drainage, including permanent drains (pleurx)

Reference Number: ULHT-LFT-1166 v3

Issued: August 2026

Review Date: August 2028

Aim of the patient information

This patient information tells you about having an image guided percutaneous drain. It explains what is involved and what the possible risks are. It is not meant to replace discussions between you and your doctor but can act as a starting point. If you have any questions about the procedure, please ask the doctor who has referred you or the Interventional Radiology department.

What is percutaneous drainage?

In the past, drainage of a collection inside your body would have required an operation. Now it is possible to drain a collection directly by inserting a fine plastic tube, called a drainage catheter, into it through the skin (percutaneous). This is typically performed through a very small incision under local anaesthesia using ultrasound, X-ray, or computed tomography (CT) guidance.

Why do you need drainage?

Imaging that you have had performed, such as an ultrasound scan or a CT scan, will have shown that you have a collection that is suitable for percutaneous drainage. Infected collections, such as abscesses, can make you very ill and if they occur after surgery, can delay your recovery. Although antibiotics can help, they cannot always be effective against a large collection. Additionally, samples from the collection can be sent to the laboratory for tests to show which is the best antibiotic to treat the infection.

Who has made the decision?

The consultant in charge of your care feels that this is the best option for you. However, you will also have the opportunity for your opinion to be considered and if, after discussion with your doctors, you no longer want the procedure, you can decide against it.

Are there any risks?

Percutaneous drainage is a very safe procedure, but as with any medical procedure there are some risks and complications that can arise.

The biggest problem is being unable to place the drainage tube satisfactorily into the collection. If this happens, your consultants will arrange another method of treatment, which can involve an operation.

Placing a drain into a collection can introduce an infection, or if the collection is infected the infection can be spread. Usually this can be treated with antibiotics. An infection can spread into the blood (sepsis) which can make you very unwell and can lead to death if untreated. If you have an infection in a permanent drain (also known as a pleurx drain) this can sometimes lead to the drain having to be removed.

Depending on the location of the collection there may be important structures nearby e.g. liver, bowel, lung, kidney. This is why this procedure is performed using image guidance so these can be avoided. It is very important that you try to remain as still as possible, otherwise there can be a risk that these structures could be injured.

There is a risk of bleeding, though this is generally very slight. If the bleeding were to continue, then it is possible that you might need a blood transfusion. Very rarely, an operation or another radiological procedure is required to stop the bleeding. A small bruise (haematoma) around the site of the drain can occur, but this is quite normal. The bruise might be sore for a few days but will disappear in a few weeks.

If X-rays are used during your examination, you will receive a dose of radiation as a result of the X-rays used. There is a possible risk of cancer induction from exposure to X-rays. However, we are constantly exposed to radiation from the air we breathe, the food we eat, the ground and from space. This is known as background radiation and has a cancer risk of around 1 in 10,000 per year. Having the procedure could result in you receiving an additional dose of radiation equivalent to a few months of background radiation. The associated risk of possible cancer induction from receiving a dose of radiation equivalent to a few months of background radiation is considered to be very low. Your doctor has agreed that this procedure is the best examination for you compared with others and that the benefit of having it outweighs the risks from radiation.

Despite these possible complications, the procedure is normally very safe and should result in an improvement in your symptoms.

Are you required to make any special preparations?

It depends on the type of collection being drained as to whether you are an inpatient, day case patient, or outpatient. This procedure is carried out under local anaesthetic.

Day case patients will be asked to attend the ward early in the morning so all required paperwork can be completed.

Day case/inpatients may receive an antibiotic prior to the procedure.

All patients will be asked not to eat for four hours before the procedure, although you may take small sips of water up to an hour prior to the procedure.

You may be sent a blood form and asked to arrange a blood test prior to the procedure to check your bloods are within safe limits to have the procedure.

If you are taking anti coagulation or anti platelet medication, such as warfarin, you will be given instructions detailing if this medication needs to be stopped and for how long. If you have not been given this information, please contact the Interventional Radiology department. Unless advised otherwise please continue to take all other medication e.g. for blood pressure.

If you have previously had a reaction to the dye (contrast agent) or a local anaesthesia please contact the Interventional Radiology department.

If you are an outpatient/day case patient, you should have someone to drive you home following the procedure. Someone should be at home with you for 24 hours following the procedure. If you do not, please let the Interventional Radiology department know.

Who will you see?

A specially trained team led by an interventional radiologist, with special expertise in reading images and using imaging to guide catheters and wires to aid diagnosis and treatment.

Where will the procedure take place?

In the Interventional suite, which is located within the X-ray department and is similar to an operating theatre. Or in the CT department, located along the corridor from X-ray.

What happens during the percutaneous drainage?

Before the procedure, a member of the interventional team will explain the procedure and ask you to sign a consent form. Please feel free to ask any questions that you may have and remember that even at this stage, you can decide against going ahead with the procedure if you so wish.

You will usually be asked to get undressed and put on a hospital gown. Inpatient and day case patients may have a small cannula (thin tube) placed into the vein in their arm in case they need any medication.

The imaging used and your position will depend on the location of the collection within your body. You may have monitoring devices attached to your arm and finger.

The procedure is performed under sterile conditions and the interventional team members performing your procedure will wear sterile gloves and may also wear a sterile gown. Your skin will be cleaned with a cold antiseptic and you will be covered with sterile drapes.

The clinician will use an ultrasound probe, X-rays or the CT scanner to decide on the most suitable point for inserting the drain. Local anaesthetic will be injected into the skin to numb the area. A fine needle is inserted into the collection, and a small sample can be taken. What happens next depends on what the sample looks like. Most of the time, a guide wire will be placed into the collection to allow the correct positioning of a drainage tube (catheter). This will be connected to a drainage bag. Occasionally, the collection may simply be drained through the needle or small plastic tube, which is then completely removed.

Those patients having a permanent drain (also known as a pleurx drain), are usually used for controlling repetitive collections such as ascites. The first phase in drain insertion is the same as above. However, following this the drain will be tunnelled under the skin for approximately 5cm, under local anaesthetic and then stitched into place. The stitches are usually removed 14 to 21 days after the procedure; an appointment for this can be arranged with your district nurses or GP. An appointment to be given instructions on drain care, usage and ordering supplies will also be arranged. This may be through your GP or district nurses, or the drain supply company. If you have any issues, please contact the Interventional Radiology department.

Will it hurt?

When the local anaesthetic is injected, it will sting for a short while, but this soon wears off. Some discomfort may be felt when the drain is placed. This is more likely when infection is present and the area is generally sore.

How long will it take?

Every patient is different and it is not always easy to predict, however, expect to be in the department for about 30 to 40 minutes.

What happens afterwards?

If you are an outpatient, you will usually be in the department for 30 minutes, then you will be allowed to go home. Instructions regarding dressing or drain care will be given to you following the procedure.

If you are an inpatient or day case, you will be taken back to your ward. Nursing staff will carry out routine observations. You will generally be required to stay in bed, initially lying flat. If you have an issue lying flat, please contact the Interventional Radiology department. After which you will be allowed to sit up, then to walk around the ward, until you have recovered. Discharge is at the discretion of the ward and varies depending on the type of drainage procedure performed. You will be informed following the procedure regarding dressing or drain care and when normal daily activities should recommence. You will be able to lead a normal life with the drainage catheter in place.

Temporary drains will usually be monitored by your doctor. Once the collection has emptied, the drain can be removed. When the catheter is taken out, this does not hurt.

How long will the catheter stay in?

This question can only be answered by the doctors looking after you. It may only need to stay in a short time. It is possible that you will need further scans or X-rays to check that the collection has been drained completely. You will be able to lead a normal life with the catheter in place.

If you have any concerns after discharge; for non-urgent issues please contact your GP or 111, for urgent issues please come to A&E.

Finally, some of your questions should have been answered by this patient information but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure.

Interventional Radiology

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