

Percutaneous Ablation of a Lung Tumour

This leaflet tells you about the procedure known as percutaneous ablation of a lung tumour. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion.

You should have sufficient explanation before you sign the consent form.

What is Ablation?

Ablation uses heat to kill cancer cells. The heat is applied through a needle. The needle is introduced through the skin so this is known as a percutaneous ablation.

Why do I need an Ablation?

Other tests, including a CT scan, have shown that there is an area of abnormal tissue inside your lung. Ablation is not the only treatment for cancer. After discussion with your consultant it has been decided that this is the most appropriate treatment for you. Normally when an operation or other treatments are not possible.

Who has made the decision?

The Consultant in charge of your case, and the Radiologist doing the ablation will have discussed the situation at the multidisciplinary meeting, and feel that this is the best thing to do. However, you will also have the opportunity for your opinion to be considered, and if, after discussion with your doctors, you do not want the procedure carried out, you can decide against it.

What are the options or alternatives?

The alternatives for treating cancer include: chemotherapy, radiotherapy and surgery. These options will have been considered at a multidisciplinary meeting and a treatment plan should have been discussed with you by your specialist. In your case ablation has been considered the best option.

Who will be doing the procedure?

A specially trained doctor called a Radiologist. Radiologists have special expertise in using X-ray and scanning equipment, and also in interpreting the images produced. They need to look at these images while carrying out the treatment.

Radiographers, the Anaesthetic team and Radiology Nurses will be present in the room to assist during the procedure, they will introduce themselves at the start of the procedure.

Occasionally student radiographers or medical students will be present to observe the procedure.

Where will the ablation of lung tumour take place?

Within the CT scanner in the Medical Imaging Department.

How do I prepare for the procedure?

- You will need to be an inpatient.
- You will have had some blood tests performed before the procedure to check that you do not have an increased risk of bleeding.
- You are asked not to eat for 4 hours prior to the procedure. You may drink a little water.
- You will need someone to drive you home.
- You should be prepared to stay overnight and longer if necessary.
- If you have any allergies or you have previously reacted to intravenous contrast medium, you must let the doctor know. Intravenous contrast medium is the injection we give you during some scans.
- If you are diabetic, please contact the Medical Imaging Department on **01392 402336** selecting option 2, in-patient enquiries and then option 8 for the Radiology nurses.
- If you normally take any medication to thin your blood (anticoagulation or antiplatelet drugs) such as: **warfarin / clopidogrel / aspirin / non-steroidal anti-inflammatory drugs (NSAIDS / brufen / ibrufen / nurofen) / dabigatran (Pradaxa) / rivaroxiban (Xarelto) / apixaban (Eliquis) / phendione / acenocoumarol** – then these may need to be stopped or altered. Please seek the advice of your hospital consultant or nurse specialist as soon as possible or ask your GP or contact the Radiology department on **01392 402336** selecting option 2, in-patient enquiries and then option 8 for the Radiology nurses.
- If you can safely stop these medications it is recommended that :
 - Warfarin is stopped 6 days prior to your procedure.
 - Aspirin is stopped 7 days prior to your procedure.
 - Clopidogrel is stopped 7 days prior to your procedure.
 - NSAIDS are stopped 2 days prior to your procedure.
 - Rivaroxaban (Xarelto) and apixaban (Eliquis) are stopped 2 days before your procedure.

If you are taking dabigatran (Pradaxa) please consult your doctor or telephone the Medical Imaging Department on 01392 402336 selecting option 2, in-patient enquiries and then option 8 for the Radiology nurses.

- Other medication should be taken as normal.

What actually happens during the procedure?

The procedure is performed under General Anaesthetic so you will not be aware of anything. It is done in the CT scanner which guides the Radiologist to ensure accurate placement of the needle, allowing a quick, safe and effective ablation.

The Radiologist will keep everything as sterile as possible. Your skin will be cleaned with antiseptic, and you will have some of your body covered with a theatre towel. The Radiologist will use the CT scanner to decide on the most suitable point for inserting the ablation needle.

The power is then turned on to heat and destroy the tumour cells. When the Radiologist is happy with the result the needle is removed and a dressing applied.

Will it hurt?

You will feel nothing while under the anaesthetic. When you wake up you may feel pain where the needle went through the skin but this is almost never very severe and can be controlled with simple painkillers while it lasts (a few days at most usually).

How long will it take?

Every patient's situation is different, and it is not always easy to predict how complex or how straightforward the procedure will be. Usually we would expect you to be in the Medical Imaging Department for 1-2 hours in total.

What happens afterwards?

You will be taken back to the Theatre Recovery area on a trolley. Staff there will carry out routine observations, such as taking your pulse and blood pressure to make sure that there are no problems. You will then be transferred to your ward for an overnight stay. You will generally stay in bed for a few hours, until you have recovered. You will need a chest X-ray. Usually this is done 3 or 4 hours after the procedure and then again the following morning; occasionally it is necessary for a chest X-ray to be performed immediately.

What will happen to the results?

A report of the procedure will be recorded in your notes immediately and also sent to your specialist.

What happens next?

All being well, you will be allowed home the next day, please bring your medication and an overnight bag.

We then follow you up with a CT scan at 3 months after the procedure. We then repeat the CT scans every 3 months for the first year and 6 monthly for the next year. You will also be followed up by your Oncologist. If there are signs that the treatment has been unsuccessful, it can be repeated. In certain circumstances, different scans such as a PET-CT scan may be used.

Are there any risks or complications?

Ablation is a very safe procedure, but there are a few risks or complications that can arise, as with any medical treatment.

As the lung is being punctured it is possible that air can get into the space around the lung. This generally does not cause any real problem, but if it causes the lung to collapse, then the air will need to be drained, either with a needle or a small tube, inserted into the skin (about 25% of patients).

You may cough up blood. If this happens it causes irritation and a rattling cough. You will be asked to lie onto your side on the side of the ablation and given oxygen. The bleeding usually stops after a few minutes.

After the anaesthetic has worn off you may have an ache in your chest wall for a few days. A few people feel unwell with a temperature for a few days. Infection is rare.

Despite these possible complications, percutaneous ablation of lung tumour is normally very safe.

Mild complications

- It is common to have a bruise up to the size of a 50p around the needle site; this will disappear naturally within 2/3 days. The dressing can be removed after 24 hours.
- Occasionally, one of the nerves under the skin will be damaged during the procedure. This is unavoidable as the nerves are not visible on the CT scan. This damage can cause numbness or discomfort in the area affected. These symptoms can take months to settle.

More serious complications

- Puncture of the lung can result in a small air leak and collapse of part of your lung (this is known as a pneumothorax). About 1 in 4 patients will wake from the anaesthetic with a thin tube coming out between their ribs to bring the collapsed lung back up. Usually this does not delay hospital discharge. Sometimes it is necessary to put in a tube later on because the lung has collapsed after the procedure is finished.
- We ask all patients who have had an ablation to avoid flying and scuba diving for a minimum of six weeks after the procedure. This is because there is a small risk of the lung collapsing afterwards even if it has not done so at the time of the biopsy.
- Slight bleeding may occur from the lung when biopsies are taken. Some people cough up a little blood shortly after the procedure.

Very serious complications

- Air embolism - Very rarely air can leak into the blood circulation during a lung ablation. If this occurs it can cause chest pain or serious problems like a heart attack or stroke. The risk of this complication occurring is 1 in 600 procedures.
- There is a small risk to life – the risk for this is 1 in 200 procedures.

Some of your questions should have been answered by this leaflet, 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, before you sign the consent form. The Consultant Radiologist will discuss the procedure and complications at the time of consultation.

How to get to the Royal Devon & Exeter Hospital at Wonford

Please refer to the enclosed "Welcome to the Medical Imaging Department" leaflet or use the Trusts website for the latest information:

www.rdehospital.nhs.uk/patients/where

For more information on the Medical Imaging Department, please visit our website:

www.rdehospital.nhs.uk/patients/services/medical-imaging

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