



**Royal Papworth Hospital**  
NHS Foundation Trust

# CT guided lung needle biopsy

Patient's guide and  
agreement to consent form



This information booklet has been prepared to help you and your relatives understand more about your planned procedure. It also gives you general information about what to expect from the time of your admission to your discharge home from Royal Papworth Hospital, and some practical advice on what to do when you get home.

### **Reasons for needing a CT guided lung needle biopsy**

The doctors' examination and other tests, such as an X-ray or CT scan have detected an abnormality in your lungs. A lung biopsy is a procedure where a small sample of abnormal tissue is obtained to help diagnose the cause of the abnormality. It can also help the doctor decide whether you need further treatment. It is usually performed as a day case procedure.

### **What is a CT guided lung needle biopsy?**

It is a procedure where a tiny sample of cells is removed from the lung and sent to the laboratory for examination. It involves inserting a fine needle through the chest wall and into the lung under local anaesthetic.

### **What does a lung needle biopsy involve?**

The biopsy and collection of cells from your lung is obtained with the help of a CT scanner. The CT scan is used to identify the best approach and site for taking the biopsy. The entire procedure takes place in the CT scanning room.

### **What are the benefits of having a lung needle biopsy?**

Your chest physician has recommended a lung needle biopsy because they feel that the benefit to you of having this test outweighs any risks. The benefit to you will be in obtaining a diagnosis of your chest problem so that the right treatment can be given. In cases where nothing abnormal is found we can reassure you of this fact. The decision to offer you a lung needle biopsy has been carefully considered by your doctors. Occasionally the sample is too small to fully evaluate.

### **What are the potential risks of having a lung needle biopsy?**

This is a relatively safe procedure but, as with any medical procedure, there may be small risks involved. The radiologist that performs the test will discuss all the risks and benefits of the procedure with you as part of the consenting process. The radiation dose is similar to that of other X-ray examinations and poses only a very small risk.

#### **Mild complications**

It is common to have a bruise up to the size of a 50p around the needle biopsy site; this will disappear naturally within 2/3 days. The plaster can be removed after 24 hours.

#### **More serious complications**

A puncture of the lung resulting in a small air leak (or pneumothorax) can occur when biopsies are taken. This can cause a sharp pain in the chest and some breathlessness. The risk of this is about 1 in 3 patients. However, in most cases the air leak is very minor and heals up itself without the need for further intervention.

Occasionally, (around 1 in 20 procedures) a larger pneumothorax occurs and you may need to stay in hospital and have a chest drain (a thin tube) inserted in between two ribs under local anaesthetic to remove any air leaking from the lung.

Slight bleeding may occur from the lung when biopsies are taken. Some people cough up a little blood during or shortly after the procedure.

#### **Very serious complications**

Internal bleeding requiring an operation to stop it is very rare (1 in 1000 procedures).

Air embolism. Very rarely air can leak into the blood circulation following a lung needle biopsy. 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 3,000 procedures.

Death as a result of the procedure is extremely uncommon. The risk of this complication occurring is one in 5000 procedures.

### **Your admission to hospital**

If you are having a CT guided biopsy you will be admitted to the day ward.

Please follow the instructions on the letter that you are sent or in the phone call that you received which advised you where to go on arrival at the hospital. Your arrival should be planned for 8:00am to allow time for preparation in readiness for a procedure that may start at 9:00am.

You will usually be able to go home a few hours after the procedure on the conditions that you do not drive yourself and you will not be alone on return to your home and for the night following your procedure.

### **Preparation for your procedure**

Your letter or phone call will advise you not to have anything to eat or drink after 7:00am on the day of your admission. Please bring any medication that you normally take with you. You are advised to leave any valuables at home. Please bring your toiletries and nightwear with you in case you need to stay in overnight.

Please also tell us if you have any allergies or if you may be pregnant. The nursing staff on the ward will welcome you, admit you and prepare you for the procedure.

### **Medication instructions in preparation for your procedure**

If you are taking aspirin, clopidogrel, warfarin, heparin or any other medication to thin your blood or any oral diabetic tablets you may be given an instruction by nursing staff in a telephone call to stop taking them for a period of time before your biopsy.

If you have not been given any instructions, please call the Day Ward on 01223 638194.

### **What happens during the procedure**

Radiology staff will accompany you to the CT scanner. You will be dressed in a hospital gown.

The radiologist (doctor) who will perform the biopsy will explain the procedure and answer any questions or concerns you may have. You will then be asked to lie on the CT table on your back, front or side. The radiographers assisting with the procedure will make you as comfortable as possible. This is important to ensure you can lie still during the biopsy.

The CT scanner is not enclosed. The table on which you are lying will move into the scanner and the radiologist will take a series of pictures to check the position of the abnormality in your lung.

It is important to try to lie very still, follow any breathing instructions and try not to cough during the test. The doctor will then clean your skin at the site of the biopsy and use a local anaesthetic to numb the skin before a thin needle is passed into the lung. The local anaesthetic injection may sting initially but this will soon pass.

The actual biopsy may feel a little uncomfortable and you may feel a pushing sensation when the biopsy is being taken. The procedure usually takes approximately 30-45 minutes.



Please affix patient label or complete details below.

Full name:

Hospital number:

NHS number:

DOB:

# Consent 023 Patient agreement to CT guided lung needle biopsy

## Intended procedure/surgery

### Statement of health professional

(To be filled in by a health professional with appropriate knowledge of proposed procedure, as specified in consent policy). I have explained the procedure to the patient. *In particular I have explained:*

#### The intended benefits

- A clear diagnosis that will inform future treatment options

#### Mild complication

- Bruising

#### More serious complications

- Coughing up some blood
- Pneumothorax

#### Very serious complications

- Bleeding requiring surgery
- Air embolus
- Death

The overall risk of a serious complication or death is one in 5,000.

#### Any extra procedures, which may become necessary during the procedure:

- Chest drain
- Other procedure - please specify below:

.....  
I have discussed what the procedure is likely to involve, including the benefits and risks, and any particular concerns of this patient.

**This procedure will involve:** local anaesthesia.

**Consultant/Performer**

Signed: .....

Date: .....

Name (PRINT): .....

Job title: .....

**Contact details**  
(If patient wishes to discuss options later)

.....

### Statement of patient

*Please read the patient information and this form carefully.*

If your treatment has been planned in advance, you should already have your own copy which describes the benefits and risks of the proposed treatment. If not, you will be offered a copy now.

If you have any further questions, do ask - we are here to help you. *You have the right to change your mind at any time, including after you have signed this form.*

- **I understand** what the procedure is and I know why it is being done, including the risks and benefits.
- **I agree** to the procedure or course of treatment described on this form and have read this information leaflet on CT guided lung needle biopsy (PI 79) and had the opportunity to ask questions.
- **I agree** to the use of CT scans for the procedure and I agree that images can be used for medical teaching and education.
- **I understand** that any tissue removed as part of the procedure or treatment may be used for diagnosis, stored or disposed of as appropriate and in a manner regulated by appropriate, ethical, legal and professional standards.
- **I understand** that any procedure in addition to those described on this form will be carried out only if necessary to save my life or to prevent serious harm to my health.
- I have listed below any procedures **which I do not wish to be carried out** without further discussion:

.....  
.....

Please affix patient label or complete details below.

Full name:

Hospital number:

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- I have been told in the past by Public Health that I am at increased risk of CJD (Creutzfeldt-Jakob disease) or vCJD (variant Creutzfeldt-Jakob disease).

Yes (*Health professional to refer to Trust CJD procedure DN92.*)

No

### Patient

Patient signature: .....

Date: .....

Name (PRINT): .....

### Confirmation of consent

(To be completed by a health professional when the patient is admitted for the procedure, if the patient has signed the form in advance).

*On behalf of the team treating the patient, I have confirmed with the patient that they have no further questions and wish the procedure to go ahead.*

Signed: .....

Date: .....

Name (PRINT): .....

Job title: .....

### Statement of interpreter (where appropriate).

I have interpreted the information above to the patient to the best of my ability and in a way which I believe he/she can understand.

Signed: .....

Date: .....

Name (PRINT): .....

**A witness should sign below if the patient is unable to sign but has indicated his or her consent. Young people/children may also like a parent to sign here (see notes).**

Signed: .....

Date: .....

Name (PRINT): .....

### Important notes (tick if applicable).

Patient has advance decision to refuse treatment (e.g. Jehovah's Witness form)

Patient has withdrawn consent (ask patient to sign/date here)

Patient signature: .....

Date: .....

Name (PRINT): .....





## **What to expect afterwards**

After the procedure you will be taken back to the ward and asked to lie on your side or back for an hour. After this you will be able to eat and drink. Please tell the nurse if you have any pain. You will be offered painkillers if you need them. After two hours a routine chest X-ray will be performed. This will be checked by a doctor and if everything is OK you will be able to go home.

## **Care on discharge home from hospital**

Please make sure that you arrange for someone to drive you home. Please make sure that someone is available to stay with you overnight. You should be able to return to normal activities the next day. You can eat and drink normally following your procedure.

We advise you not to undertake the following activities for 24 hours following the procedure:

- Shopping
- Heavy lifting
- Gardening
- Sexual intercourse
- Drink alcohol
- Driving
- Decorating
- Operate machinery

You should not attempt to return to work on the day of your needle biopsy.

## **Following lung needle biopsy**

You may experience bruising at the site where the needle was put in your chest. Rarely the biopsy site can bleed after you have left the hospital. If this happens ask someone to get a flannel or small towel and press this gently on the bleeding spot for 10 minutes continuously. If the bleeding continues please contact your GP.

Internal bleeding is rare, but if you feel faint or ill, you should contact your GP or the Accident and Emergency department. There is a possibility that you may cough up a little blood, very rarely surgery is required to stop the bleeding.

If you experience symptoms of any chest pain, bleeding and/or suffer shortness of breath contact your GP as soon as possible or go straight to the nearest Accident and Emergency Department.

## **Dial 999 if you have no one to take you.**

Explain that you have been a patient at Royal Papworth Hospital and have undergone a CT guided needle biopsy of the lung.

If you experience mild discomfort, painkillers such as paracetamol can be taken if needed.

If you are worried about any of the above please contact your GP and pass on to him the letter we gave you on your discharge from the Day Ward.

### **Contact information**

If you have any questions or problems after returning home please call the Day Ward on 01223 638553. This ward is staffed Monday to Friday from 8:00am until 6:00pm.

Outside these hours please ring the main hospital switchboard on 01223 638000 and ask to speak to the on call doctor for the Chest Medical Unit.



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