

# CT guided lung biopsy

A patient's guide and  
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 until 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 doctors 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 we remove a small sample from your lung with a fine needle and send it to the laboratory, where it is examined in detail under a microscope. 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 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 biopsy will help 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 obtained 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 from the CT is similar to that of other X-ray examinations and poses only a very small risk.

#### **Mild complications**

- It is common to have a small bruise around the needle biopsy site. This should not be painful and it will heal over a couple of days.

#### **More serious complications**

- A puncture of the lung resulting in a small air leak (pneumothorax) can occur when biopsies are taken. This can cause a sharp pain in the chest and you might feel short of breath. The risk of this is about 1 in 3 patients. However, in most cases the air leak is very small and it heals up itself, without the need for further treatment.
- Occasionally, a larger air leak can occur (around 1 in 20 procedures). If this happens we may need to put a small drain (a thin tube) between the ribs and into the space around the lung, to remove the air and relieve the pressure. This would mean that you had to stay in hospital overnight.
- Slight bleeding can 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. This is very rare (less than 1 in 1000 procedures).
- Air embolism. Very rarely a small amount of air can leak into the blood circulation following a lung needle biopsy. If this occurs it may cause chest pain or serious problems like a heart attack or stroke. The risk of this complication occurring is 1 in 1,000 procedures.
- Death as a result of the procedure is extremely uncommon. The risk of this complication occurring is 1 in 5000 procedures.

## **Your admission to hospital**

If you are having a CT guided lung 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 will advise you where to go on arrival at the hospital. You should plan to arrive for 08:00 to allow plenty of time for us to get everything ready for the procedure which may start at 09:00.

You will usually be able to go home a few hours after the procedure on the condition that you do not drive yourself and you will not be alone when you return 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 07:00 on the day of your admission.

Please bring all the medication that you normally take with you. You are advised to leave any valuables, such as jewellery, at home. Please bring your toiletries and nightwear with you in case you need to stay in overnight.

Please let us know if you have any allergies or if you could 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 any blood thinning medication such as aspirin, warfarin, or heparin, you should have been given instructions to stop taking them temporarily before your biopsy.

If you are taking oral diabetic tablets, you may need to stop these on the morning of your biopsy. If you are taking insulin you would need to discuss this with the diabetic nurse or GP to sort out what dose you would need to take before the procedure.

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

## **What happens during the procedure**

You will need to change into a hospital gown, and you will be brought round to Radiology for the biopsy, which will take place in a CT scanner.

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 because you will need to lie still during the biopsy.

The CT 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 follow the breathing instructions on when to hold your breath and when to breath normally, to help the procedure go smoothly. Try not to cough during the biopsy.

The doctor will clean the skin and inject a local anaesthetic to numb the area. The injection may sting initially, but the area will quickly become numb.



Please affix patient label or complete details below.

Full name:

Hospital number:

NHS number:

DOB:

# PIC 79: patient agreement to PI 79 - CT guided lung biopsy

## Intended procedure/surgery

### Statement of healthcare professional

(To be filled in by healthcare 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.

#### Significant, unavoidable or frequently occurring risks:

- Bruising
- Coughing up some blood
- Pneumothorax
- Bleeding requiring surgery
- Air embolus
- Death

Additional risks specific to you or your operation - please specify below:

.....  
.....  
.....

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

- Chest drain
- Other procedure - please specify below:

.....  
.....

I have also discussed what the procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient.

**This procedure will involve local anaesthesia.**

### Healthcare professional

Signed: .....

Date: .....

Name (PRINT): .....

Job title: .....

#### Contact details

.....  
.....

**Has a ReSPECT form been considered and, if relevant, appended to this form? (See page 10 for further details on ReSPECT)**

- Yes
- No

### Statement of patient

Please read the patient information and this form carefully. If the treatment has been planned in advance, you should already have your own copy of 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.

**Yes No**

**I agree** to the procedure or course of treatment described on this form and have read this information leaflet on insert title (PI 79) and had the opportunity to ask questions.

**I agree** to the use of photography for the purpose of diagnosis and treatment and I agree to photographs being used for medical teaching and education.

- **I understand** what the procedure is and I know why it is being done, including the risks and benefits.

Please affix patient label or complete details below.

Full name:

Hospital number:

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- **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:

.....

.....

.....

.....

**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       No

(Where patient indicates 'yes' health professional to refer to Trust CJD procedure DN092)

### Statement of interpreter (where appropriate)

If an interpreter was present to support this consent, please state the name and number of the interpreter present:

Date: .....

Interpreter's number:.....

Name (PRINT): .....

If a telephone / video service has been used, please document the name of the interpreter and company below

.....

.....

.....

### 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: .....

### Important notes (tick if applicable).

- Patient has advance decision to refuse treatment
- Patient has withdrawn consent (ask patient to sign/date here)

Patient signature: .....

Date: .....

Name (PRINT): .....

*Please use and attach Consent form C for a young person who is not Gillick competent.*



A thin needle is then passed into the lung to the site of the abnormality. The actual biopsy may feel a little uncomfortable and you may feel a pushing sensation when the biopsy is being taken. The whole procedure usually takes approximately 30-45 minutes.

### **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. Your vital signs will be monitored. After this you will be able to eat and drink. Please tell the nurse if you have any pain or feel short of breath. 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 arrange for someone to drive you home, and make sure that there is someone who can stay with you overnight. Rest at home for the remainder of the day, and possibly the next day, depending on how you recover.

You can eat and drink normally following your procedure. Continue taking your normal medication.

We advise you not to undertake strenuous exercise for 24 hours following the procedure. You should not 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 into your chest. Rarely the biopsy site on the skin can bleed after you have left the hospital. If this happens ask someone to press on the bleeding spot for 10 minutes continuously. If the bleeding continues, please contact your GP.

It is normal to bring up streaks of blood in your phlegm following a lung biopsy. As the biopsy site heals this should stop. If it persists, please seek advice from your GP.

Internal bleeding is very rare, but if you feel faint or ill, you should contact your GP or the nearest accident and emergency department.

If you experience symptoms of chest pain, coughing up a large amount of blood, or new shortness of breath contact your GP as soon as possible, or go straight to the nearest accident and emergency department. If you experience mild discomfort, painkillers such as paracetamol can be taken if needed.

### **Contact information**

If you have any questions or problems after returning home please call day ward on 01223 638553. This ward is staffed Monday to Friday from 08:00 until 18:00.

Outside these hours please ring the main hospital switchboard on 01223 638000 and ask to speak to the on-call doctor for thoracic medicine.

If you experience symptoms of chest pain, coughing up a large amount of blood and/or 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 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 day ward.

# Recommended summary plan for emergency care and treatment (ReSPECT)

## What is ReSPECT?

ReSPECT stands for 'Recommended summary plan for emergency care and treatment'. It is a process that helps people to think about what treatment is suitable in an emergency, should they be unable to make decisions at the time.

## Why is it important?

We know that, when people are very unwell, they are often unable to think clearly about what treatment they may or may not want because their brain and body are overwhelmed by the illness. It is also normal for people to feel anxious about what is happening when they are sick and in hospital, and this can also make it difficult to think clearly. This is why we think it is a good idea, where possible, for decisions about medical treatment to be made in advance – before there is an emergency situation or crisis.

## How does it work?

The ReSPECT process is designed to help conversations between you and your healthcare professionals: they need to make sure you understand your health problems and which treatments may or may not benefit you. You need to make sure the healthcare professionals understand what matters most to you and whether there is anything you are particularly worried about or would want to avoid.

This conversation is used to complete a ReSPECT form that records a person's health problems, their preferences and which medical treatments may or may not be suggested. The original form should stay with the patient, though it is extremely helpful to have a record of the content of the form on their electronic patient record.

**A ReSPECT form is NOT a legally binding document and can be changed or withdrawn at any point.**

The ReSPECT form is often used to indicate treatments that someone may not want and/or treatments that their healthcare professionals consider would no longer be of benefit to them.

If people are getting worse from progressive conditions, it may be helpful to consider in advance about things such as whether they would wish to go back into hospital and, if in hospital, what sort of treatments might or might not be helpful for them.

This often includes a decision on whether or not they should have attempted cardiopulmonary resuscitation (CPR) if their heart was to stop.

## Who is it for / is this relevant for me?

This process has increasing relevance for people who have complex health needs, people who may be nearing the end of their lives and those who are at risk of sudden deterioration or cardiac arrest.

However, many people come to Royal Papworth to have major procedures or surgery with the intention of curing a progressive disease or with the intention of substantially prolonging their life and, if that is you, you may wonder how a ReSPECT discussion applies to you and others like you. One of the key things to understand about the ReSPECT process is that it can be used simply to document a person's wishes and priorities, without setting any limitations on what treatment they should have.

This is important because all the procedures and operations we do here come with the risk of complications. In the unlikely event that things do not go as planned, it is really helpful to have some idea about a person's preferences and about their fears, worries and hopes.

Once again, the document is not legally binding, but it can help those looking after you to know what you might want if you weren't able to say for yourself.

**The ReSPECT form is a separate document.**

**It is possible that your clinical team will start a conversation about the ReSPECT process with you. Equally you can ask any member of your medical team if you would like to start this conversation yourself.**



# Royal Papworth Hospital NHS Foundation Trust

A member of Cambridge University Health Partners



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## Alternative versions of this leaflet

Large print copies and alternative language versions of this leaflet can be made available on request.

View a digital version of this leaflet by scanning the QR code.



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