

This leaflet tells you about having a percutaneous biopsy. 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 discussions. If you have any questions about the procedure please ask the doctor who has referred you for the test or the department which is going to perform it.

### **What is a percutaneous biopsy?**

A needle biopsy is a way of taking a small sample of tissue out of your body, using a special needle. This allows the doctors to look at the sample under a microscope to find out what it is. This will allow an accurate diagnosis and treatment plan for you. As this biopsy is done through the skin, it is called a percutaneous biopsy.

### **Why do you need a biopsy?**

Other tests that you have already had performed, such as an ultrasound scan or a computed tomography (CT) scan, will have shown that there is an area of abnormal tissue inside your body. From the scan, it is not always possible to say exactly what the abnormality is due to, and the simplest way of finding out is by taking a tiny sample and to look at it under a microscope.

### **Are there any risks?**

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

If you are having a liver, kidney or spleen biopsy, then there is a risk of bleeding, although 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.

If you are having a lung biopsy performed, it is possible that air can get into the space around the lung (pneumothorax). This generally does not cause any real problems, but if it causes the lung to collapse, the air will need to be drained, either with a needle, or else with a small plastic tube, inserted through the skin.

Unfortunately, some biopsies fail to give an answer. This may be because, despite taking every possible care, the piece of tissue which has actually been obtained is normal tissue rather than abnormal. Alternatively although abnormal tissue has been obtained, it may not be enough for the pathologist (an expert in making diagnoses from tissue samples) to make a definite diagnosis. The radiologist doing your biopsy may be able to give you some idea as to the chance of obtaining a satisfactory sample.

Despite these possible complications, percutaneous biopsy is normally very safe and is designed to save you from having a bigger procedure.

### **Who has made the decision?**

The consultant in charge of your care and the interventional radiologist performing the procedure have discussed your case and feel that this is the best option. 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 you required to make any special preparations?**

You may need to be an inpatient in the hospital, although some biopsies are performed as an outpatient. You will probably have had some blood tests performed beforehand to check that you do not have an increased risk of bleeding. You may be asked not to eat for four hours before the procedure, although you may still drink clear fluids such as water.

### **Who will you see?**

A specially trained doctor called an interventional radiologist. They have special expertise in reading the images and using imaging to guide the needle to the abnormal area.

### **Where will the procedure take place?**

In the radiology department – either in the ultrasound room, CT scanner or a special X-ray room. It all depends on where the abnormal tissue is in the body and which imaging the radiologist feels is best for you.

### **What happens during the biopsy?**

You will be asked to get undressed and put on a hospital gown. You may be given a sedative to relieve anxiety.

What happens does depend on where the abnormal tissue is in your body and which type of imaging is being used. Usually, you will lie on your back or front in the position that the radiologist has decided is most suitable. The radiologist will explain this to you before performing the biopsy. You may need to have a needle put into a vein in your arm, so that the radiologist can give you a sedative or painkillers if required.

A biopsy is performed under sterile conditions and the interventional radiologist will wear a sterile gown and gloves to carry out the procedure.

Your skin will be swabbed with antiseptic and you will be covered with sterile drapes. The radiologist will use an ultrasound probe, X-rays or the CT scanner to decide on the most suitable point for inserting the biopsy needle. Your skin near the point of insertion will be numbed using local anaesthetic, and the biopsy needle inserted into the abnormal tissue.

### **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 biopsy sample is taken.

### **How long will it take?**

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

### **What happens afterwards?**

You will be taken back to your ward. Nursing staff will carry out routine observations including pulse and blood pressure. You will generally stay in bed for a few hours, until you have recovered and are ready to go home.

### **Finally**

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.

### **Contact:**

The British Society of Interventional Radiology  
[www.bsir.org](http://www.bsir.org)

This leaflet has been prepared by the British Society of Interventional Radiology (BSIR) and the Clinical Radiology Patients' Liaison Group (CRPLG) of The Royal College of Radiologists. Approved by the Board of the Faculty of Clinical Radiology: 25 February 2011

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**British Society of Interventional  
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**Percutaneous biopsy**

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