Royal Devon
University Healthcare
NHS Foundation Trust

Percutaneous Bone Biopsy

Introduction

This leaflet tells you about the procedure known as bone 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 a discussion.

Whether you are having the percutaneous bone biopsy as a planned or an emergency procedure, you should have sufficient explanation before you sign the consent form.

Radiologists are doctors specially trained to interpret the images and carry out more complex examinations. They are supported by radiographers who are highly trained to carry out x-rays and other imaging procedures.

What is a percutaneous bone biopsy?

A needle biopsy is a way of taking a small piece of tissue out of your bone, using only a tiny incision, so that it can be examined under a microscope by a pathologist, an expert in making diagnoses from tissue samples. It is called a percutaneous biopsy because this biopsy is carried out through the skin.

Why do I need a percutaneous bone biopsy?

Other tests that you probably have had performed, such as an MR or a CT scan, will have shown that there is an area of abnormal tissue inside your bone. 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 piece of it away for a pathologist to examine.

What are the options or alternatives?

Realistically the only alternative procedure is an open operation.

Who has made the decision?

The consultant in charge of your case, and the radiologist performing the biopsy will have discussed the situation 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.

Who will be performing the percutaneous bone biopsy?

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 biopsy. Radiographers 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 biopsy take place?

Within the CT scanner of the Medical Imaging Department.

How do I prepare for percutaneous biopsy?

- You may need to be an inpatient in the hospital, although many biopsies can be performed as an outpatient / day case.
- 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 and to look after you for 24 hours.
- You should be prepared to stay overnight 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, option 6 Interventional Procedures**.
- 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 contact the Medical Imaging Department on 01392 402336 selecting option 2, in-patient enquiries and then option 6 for Interventional Procedures.**
- Other medication should be taken as normal.
- A pregnancy test may be performed on arrival.

What actually happens during a percutaneous bone biopsy?

You will lie on the scanning table, in the position that the radiologist has decided is most suitable. You may need to have a needle put into a vein in your arm.

The radiologist will keep everything as sterile as possible. Your skin will be cleaned with antiseptic, and you may 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 biopsy needle. Your skin will be then anaesthetised, and the biopsy needle inserted into the abnormal tissue. Two or three samples are generally taken.

Will it hurt?

Local anaesthetic may be used to minimise discomfort.

You may experience some discomfort during the procedure, however the members of staff in the room will provide pain relief and local anaesthetic.

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. It may be over in 30 minutes, although you may be in the Medical Imaging Department for about an hour altogether.

What happens afterwards?

You will be kept in the department and monitored for around one hour. If you are feeling well then you will be allowed to go home.

Do not expect to get the result of the biopsy before you leave, as it takes approximately one week for the pathologist to do all the necessary tests on the biopsy specimen.

What will happen to the results?

A report of the procedure will be recorded on your electronic patient record immediately for review by your specialist.

Do not expect to get the result of the biopsy before you leave, as it takes approximately one week for the pathologist to do all the necessary tests on the biopsy specimen. The pathology report will be sent to your specialist.

Are there any risks or complications?

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

There is a small risk (<2%) of local bleeding at the biopsy site which can usually be stopped by applying pressure. Infection is rare. There is a small risk of fracture.

Occasional site specific risks may arise these will be discussed prior to the procedure (they include: nerve pain, avulsion fractures, vertebral collapse, deep haematoma/bruising and pain. Unfortunately, not all biopsies are successful. 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 to make a definite diagnosis. Therefore a repeat maybe necessary.

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

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, before you sign the consent form.

Contact us

If you found reading your leaflet difficult, you do not understand what it means for you or if you have any queries or concerns you can contact us on: 01392 402336 and we can talk it through.

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

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

www.royaldevon.nhs.uk/our-sites

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

www.royaldevon.nhs.uk/services/medical-imaging-radiology-x-ray/medical-imaging-eastern-services/

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