



Royal Berkshire
NHS Foundation Trust

Bone marrow aspirate and trephine biopsy

Information for patients

A bone marrow aspiration and biopsy appointment has been arranged for you, to be performed on

_____ at _____.

This will be carried out in the West Ward Day Bed Unit, North Block, Royal Berkshire Hospital (London Road entrance).

The procedure will be carried out using a local anaesthetic.

This leaflet aims to answer some frequently asked questions about bone marrow biopsies. The clinical team can answer any other questions you may have.

What is bone marrow?

Bone marrow is the spongy tissue and blood inside the bones, where red blood cells, white blood cells and platelets (needed for clotting) are made.

Why is this test performed?

- To investigate a low number of red blood cells (anaemia), a low number of white blood cells (leucopaenia), or a low number of platelets (thrombocytopenia).
- To investigate raised blood cell levels.
- To look for abnormal cells in the marrow.
- To look for a response to treatment of certain bone marrow conditions.

How are these tests done?

Bone marrow samples are usually taken from the hip bone, which is the bone that you can feel just below each side of your waist. Other large bones may be used, such as the sternum (breastbone).

You will be asked to lie on your side, curled up in a ball. The skin is cleaned with antiseptic. Local anaesthetic is then injected into the skin and soft tissue over the bone. This stings a little at first, but soon goes numb. Anaesthetic is then injected on the surface of the bone. This can be uncomfortable until the anaesthetic starts to work on the bone surface.

- **Aspiration:** a needle is pushed through the numbed skin into the bone. A syringe is used to suck out some liquid bone marrow. You may feel a sharp pressure sensation that may run up and down your leg.

- **Biopsy:** another needle is inserted into the bone, slightly deeper than the aspirate needle. Pressure is applied to get a core of bone, the size of half a match-stick. This is rotated around as it is pushed slightly forward to force a small sample of bone into the hollow middle of the needle. This is then removed with the needle. This part of the procedure may be painful, but it is over quickly. The test will leave a small opening in the skin to which a dry dressing will be applied. The bone usually regenerates and the tests leave no defects.

In most patients both procedures are performed initially. In patients with acute leukaemia, only the aspirate may be performed subsequently, for re-assessment of the effects of treatment.

What preparation is needed?

All invasive procedures carry a risk of haemorrhage (severe bleeding). If you are on any anticoagulants or antiplatelet agents, this will increase your risk of haemorrhage. If you take any of the following, please let your doctor know: Aspirin, Clopidrogel, Warfarin, Rivaroxaban, Pradaxa, Apixaban and Heparin.

- Tell your doctor if you have previously had an allergic reaction to local anaesthetic.
- We will ask you to sign a consent form before the procedure to say that you understand what it involves and the risks (see overleaf).
- Please bring a list of all your current medication with you.
- If this appointment is inconvenient, please contact us on 0118 322 8247 in order to arrange an alternative appointment.

After the test

- You will need to lie on your back for about 15 minutes.
- A member of the team will then check that you have had no serious bleeding. Although oozing may occur at the site, serious bleeding is uncommon (less than one in 100 cases).
- Patients can drive afterwards.
- Keep your dressing dry. This can be taken off after 24 hours.

- Discomfort, 2-3 hours after the bone marrow procedures when the local anaesthetic wears off, is normal. Although you may only have a small bruise at the site the first few days, the underlying bone may be tender for a few weeks. Painkillers such as paracetamol should be adequate so make sure you have a supply at home.

When will I get the result?

The results of the test will usually be given to you at a clinic appointment. Full bone marrow report results can take 2 weeks.

Risks of the test

Bleeding: Slight bleeding at the site is common but if bleeding continues, please contact West Ward for advice on 0118 322 7464.

Symptoms/signs of internal haemorrhage include:

- Feeling light-headed / faint.
- Abdominal or flank pain.
- Shortness of breath.
- Sweatiness.
- Palpitations or a weak 'thready' or rapid pulse.
- Chest pain.

If you have one or more of these symptoms or signs within 72 hours of your biopsy, please contact West Ward on 0118 322 7464 9am-5pm. Out of hours either contact NHS 111, your GP's out of hours service or go to your nearest emergency department (A&E).

Infection: There is a small risk of infection. If the site becomes red, hot and tender, please ring West Ward for advice on 0118 322 7464.

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

Haematology Unit, reviewed: August 2021. Next review due: August 2023