

Cancer Care Services
 Royal Brisbane and Women's Hospital
 Level 4 Joyce Tweddell Building
 Oncology Procedure Unit

Bone Marrow Examination

Why is a Bone Marrow Examination performed?

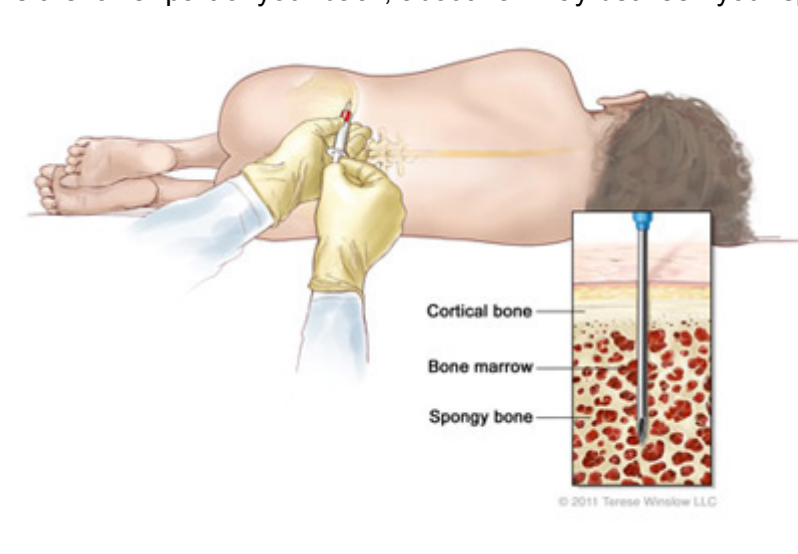
Your doctor has recommended this test as the best way to find out important information about your illness and to determine the best course of treatment. There are many reasons why your doctor may need this information. These can include:

- To determine the cause of irregular blood results
- To determine the presence or development of a blood disorder
- To monitor your response to treatment

The reasons for your test should be discussed with your referring doctor.

What is a Bone Marrow Examination?

Bone Marrow is the spongy tissue in the centre of the bone where red cells, white cells and platelets are made. The bone marrow may also contain abnormal cells that are not normally present. There are two components to a bone marrow examination. A bone marrow aspiration involves taking a sample of liquid marrow (3-4mls) and a bone marrow trephine includes extracting a small piece of bone. With an aspiration you may feel a pulling sensation as the doctor draws out the cells. If you are having a trephine collected you may feel some pressure and the needle turning. You may experience some minor discomfort during the procedure. A bone marrow sample is generally collected from the pelvic bone; this is the lower part of your back, about half way between your spine and hip.



How is a Bone Marrow Examination performed?

The doctor performing the procedure will offer different types of pain relief for the procedure, which will be one of, or a combination of these options;

- Local Anaesthetic
- Entonox Gas
- Midazolam Sedation.

Entonox gas is also known as happy gas and provides some relief from any discomfort you may experience. With this type of pain relief you will not require a cannula to be inserted and you do not require to have a support person present and you are able to drive post procedure.

Midazolam is a short acting sedative given directly into the vein via a cannula. You are not able to drive after this sedation and will require a support person to be present for 24 hours.

The procedure usually takes 30 minutes. You will be asked to lie on your side and the doctor will clean the skin over the pelvic bone with antiseptic. Local anaesthetic is injected into the skin and the tissue overlying the bone. This usually causes some brief stinging then numbness. The doctor will then use a small needle to collect the marrow samples from the bone. Most people will have some discomfort, for up to one minute whilst the samples are being collected. This settles quickly once the marrow needle is removed. The area is then cleansed and a sterile dressing applied. You will then recover in the clinic area from 30 mins – 90 mins depending on the use of sedation. The dressing will be checked before you leave. The dressing should be left on for 2 days. When the dressing is removed the area may be left uncovered.

Due to the possibility of sedation being given, you will need to arrange for someone to escort you home post procedure. You will not be able to return to work on the day of the test, and you should not drive any vehicle, operate heavy machinery, drink alcohol, perform heavy exercise, cook or use domestic appliances, care for infants or sign any legal documents for 24 hours post the procedure.

What side effects are there after Bone Marrow Aspiration?

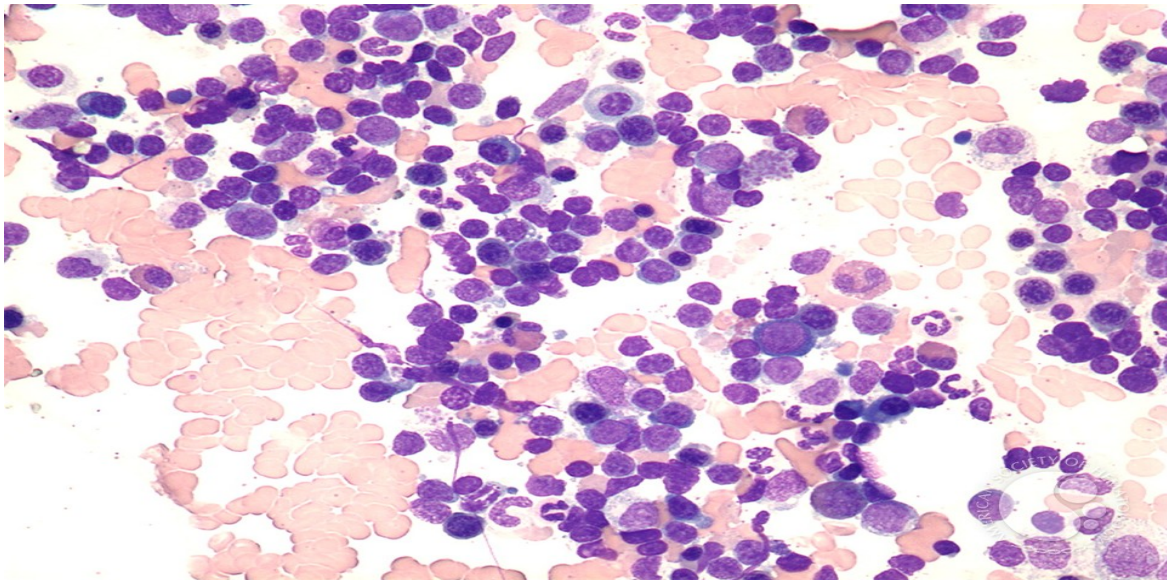
Bone marrow examination is performed frequently without any major complications. The most common side effect that may occur is mild discomfort or bruising at the site of collection. This usually settles in 1-2 days without the need for treatment. Occasionally the discomfort may last for several days and pain relief with paracetamol may be required. Other very rare problems include oozing from the collection site, bleeding and localised infection or inflammation. If you experience any of these problems or are troubled by discomfort you should consult a doctor

How long will it take to get my results?

It takes 2 to 3 days for the majority of results to be available. Your results of the bone marrow examination will be forwarded to your doctor and a follow up appointment will be arranged. If the doctors are concerned about your results you will be contacted to prior your appointment. Certain genetic testing is sometimes performed on the bone marrow examination; this test takes longer to be reported on and your doctor will advise if it is necessary.

What else should I let my doctor who is organising the Bone Marrow Aspirate know?

Please let your doctor know if you are on blood thinning medications and the reasons why as this medication may need to be withheld a few days prior to the procedure.



How Can I get more information if needed?

Please contact the Haematology clinic nurses on 36461905 if you have unanswered questions

Demand for bone marrow appointments is high. If you are unable to keep this appointment it is imperative that you contact us on Ph: 3646 1905 to alter or cancel your booking.

If you would like to provide any feedback regarding your bone marrow test or this form please contact Erin Downs, Nurse Unit Manager 36465767



Outpatient Bone Marrow Aspiration Procedure

Phone Call the day prior to the procedure

You will be called the day prior to your procedure between 3.00pm – 5.30pm.

The nurses will ask general questions about your general health, medications that you are on and preference for pain relief.

Please advise the nurse if you have anything infectious as we may ask you to come later in the morning. Regular medications can be taken at the usual time though please inform OPU nursing staff of **ALL** medication you are taking. It is important that you tell the staff about any allergies you may have. This is particularly important if you react to local anaesthetic (Lignocaine), medications, antiseptics, dressings and adhesive tapes.

Appointments are scheduled at 08.30am

Please report to Main Reception Cancer Care Outpatient Department on the day of your appointment; we encourage you to arrive 30 minutes prior to the appointment time. Please proceed to the nurse in the waiting room who will coordinate your admission and movement around to the procedure unit. We anticipate that your discharge will be by 11.30am, however this may vary depending on circumstances on the day, please be prepared to be discharged from the unit by 11.30 when you have been assessed as being suitable for discharge.

How to prepare for your Bone Marrow Aspiration

- Please wear loose fitting clothes for the procedure.
- If you are having sedation, you should not eat or drink for at least 4 hours prior to the test.
- You need a Support Person to bring you to and from the appointment if having sedation.
- Adhere to advice after having sedation.

The Procedure

The Oncology Procedure Unit performs 6 – 8 Bone Marrow Aspirates a day. Patients arrive at the same time and are prepared for their procedure. Patients are prioritised due to clinical need therefore sometimes there may be some delay; television is available in the unit; some patients find it useful to bring something to pass the time.

You will be assessed by the nursing and medical staff prior to having your bone marrow aspirate. A cannula will be inserted if you are having sedation and blood test will be taken if required.

The doctor will fill out a consent form with you and the procedure generally takes 30mins.

The Recovery Phase

After the procedure we will ask you to lay flat on your back for 1 hour. If you have had sedation the nursing staff will offer you something to eat and drink once you are awake. Your aspirate site will be assessed for bleeding at regular intervals and a new dressing applied if required. Once you are ready for discharge your cannula will be removed. Please let the nursing staff know if you have any concerns prior to your discharge time.

Discharge Information

You have undergone a Bone Marrow Aspirate at the Oncology Procedure Unit at The Royal Brisbane and Women's Hospital.

Potential Complications

Pain: You may experience a dull ache at the site for a few days. If you are on regular pain relief continue to take it as normal. Paracetamol is normally enough to ease any discomfort you may experience. If pain increases or the site becomes reddened or hot to touch, seek medical advice.

Bleeding: If you experience minimal to moderate bleeding at the site apply pressure and an icepack. If you experience large amounts of bleeding or bleeding that does not stop seek medical advice.

Information

Dressing Information: Keep dressing on for two days. The dressing may be removed in the shower after two days.

Sedation: If you have had sedation a responsible person must escort you home and stay with you for 24 hours. For 24 hours after you have had sedation, you should not:

- Drive a car
- Sign legal documents
- Drink any alcohol
- Perform heavy exercise
- Care for infants
- Operate machinery
- Cook or use domestic appliances

If it is an emergency ring 000

Contacting us if there is a Complication

<p><u>Business Hours</u></p> <p>07.00am – 5.30pm – Contact us in the Cancer Care Outpatient Department</p>	<p><u>Oncology Procedure Unit (OPU)</u> Telephone: 3646 1905</p> <p><u>Haematology Clinics</u> Telephone: 3646 7390</p>
<p><u>After Hours</u></p> <p>05.30pm – 07.00am</p>	<p>Present to your local hospital</p>



References

Cancer Research UK, (2015): 'Bone Marrow Tests- A Quick Guide' www.cruk.org/about-cancer

Melbourne Haematology (2013): 'Bone Marrow Biopsy/ Trepine Fact Sheet'
www.melbournehaematology.com.au

Pan Birmingham Cancer Network, (2010): 'Bone Marrow Aspiration and Trepine Bone Marrow Biopsy'

Royal Brisbane and Women's Hospital Health Service District, (2009), '14691/BMT: Conscious Sedation for Diagnostic Bone Marrow Aspiration Trepine Biopsy'

Zehnder, J.L, (2009), 'Bone marrow aspiration and biopsy: Indications and technique'



Partnering with Consumers National Standard 2.4.1

Consumers and/or carers provided feedback on this publication.

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