Bone Marrow Aspiration and Biopsy

This information will explain your bone marrow aspiration and biopsy procedure at Memorial Sloan Kettering (MSK).

Bone marrow is a thick liquid inside your bones. Your blood cells are made in your bone marrow.

Your healthcare provider may need to take a sample of your bone marrow in order to see:

- How many blood cells you have.
- If there are any cancer cells or scar tissue in your bone marrow.
- If the chemotherapy that you are getting has affected your bone marrow cells.
- If you have had an allogeneic stem cell transplant, to see how much of your bone marrow is from your donor.

There are 2 different procedures to get a sample of bone marrow:

- In a bone marrow aspiration, your healthcare provider will use a narrow needle to draw out some of the bone marrow liquid.
- In a bone marrow biopsy, your healthcare provider will use a slightly larger needle to take a small sample of the bone marrow core and the surrounding bone.

If you are having both procedures done, the aspiration will be done first. The procedure usually takes 15 to 20 minutes.
Before Your Procedure

Tell your healthcare provider if you are:

- Allergic to chlorhexidine (used in disinfectants) or local anesthetics (medications used to make an area numb).
- Sensitive or allergic to latex.
- Sensitive or allergic to any adhesives, such as tape.

Ask about your medications

You may need to stop taking some of your medication before your procedure. If you take medication to thin your blood, such as to treat blood clots or to prevent a heart attack or stroke, ask your healthcare provider when to stop taking it. Some examples are aspirin, warfarin (Coumadin®), dalteparin (Fragmin®), heparin, tinzaparin (Innohep®), enoxaparin (Lovenox®), clopidogrel (Plavix®), cilostazol (Pletal®), dabigatran (Pradaxa®), and apixaban (Eliquis®).

For more information about aspirin and medications that contain it, ask your nurse for the resource Common Medications Containing Aspirin and Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs) (www.mskcc.org/pe/common_meds).

During Your Procedure

Most often, the bone marrow sample is taken from the back of the hip bone. You will lie on your stomach or on your side for this. In rare cases, the sample can be taken from the breastbone or the front of the hip bone. In this case, you will lie on your back for the procedure.

First, your healthcare provider will clean your skin with a disinfectant solution. Then, they will inject you with anesthesia [such as procaine (Novocain®) or lidocaine] to numb the site of your procedure. You may feel some burning during the injection. This will go away in a few seconds.

Once the anesthesia starts working, your healthcare provider will insert a needle into your bone. This can be done using different techniques. Your healthcare provider will talk with you about which option is right for you. You will feel pressure as the needle is inserted. If you are experiencing pain, tell the
If you are having a bone marrow aspiration, your healthcare provider will draw a small amount of bone marrow through the needle. This is the “aspirate” or “aspiration.” You may feel a pulling or drawing sensation moving down your leg at this time. Some people feel very brief pain when the aspirate is taken. The anesthetic cannot help with this pain.

If you are having a bone marrow biopsy, a different needle will be used. It will be inserted into the same area as the aspiration. A small core of bone and bone marrow will be taken. You may feel more pressure during this procedure.

Depending on the type of cancer you have, you may need to have the bone marrow aspiration and biopsy done on both your right and left hip bones on the same day.

When your procedure is finished, a small bandage will be applied to the area(s).

After Your Procedure

- Some people feel slightly light-headed for a few minutes after the procedure. This will go away. Don’t walk until the feeling passes.

- Some people experience numbness in their leg or foot on the side of the procedure immediately after the procedure. If this happens, tell your healthcare provider. Don’t try to stand up on your own. This usually goes away in a few minutes.

- You may feel some soreness at the area where the bone marrow was taken. Ask your healthcare provider about medication to relieve the discomfort.

- Don’t take aspirin or products that contain it for 24 hours after your procedure. If you must take aspirin after your procedure, speak with your healthcare provider.

- If you stopped taking medications that thin your blood, ask your healthcare provider when you should restart taking them.

- Keep your bandage on for 24 hours.

- Don’t shower or bathe for 24 hours after your procedure. After 24 hours, you can take a bath or shower.
• If you have bleeding at the site of your procedure, apply pressure and call your healthcare provider.

**Call Your Healthcare Provider if You Have:**

• Persistent pain or redness at the site of your procedure
• Persistent pain down your leg
• Temperature of 100.4°F (38°C) or higher
• Bleeding at the site of your procedure

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.