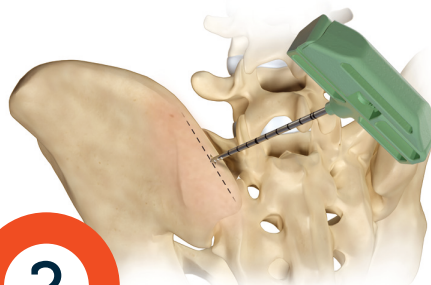


1

PALPATE

Palpate the posterior pelvic anatomy to choose an entry point. Locate the most prominent portion of the posterior superior iliac spine (PSIS).

Mark an entry point at approximately 4cm cranial to the PSIS.

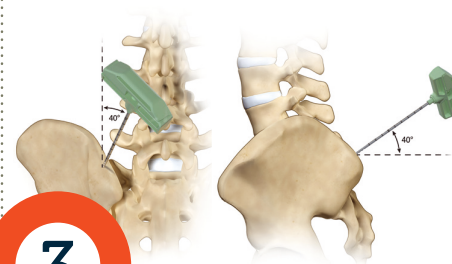


2

PUNCTURE

Make a stab incision at the identified entry point. Insert the bone marrow aspiration needle through this stab incision down to bone.

Locate the center of the PSIS by palpating (with the tip of the needle) for the inner and outer tables of the ilium.



3

ANGLE

Angle needle roughly 40° lateral from the para-sagittal plane and 40° inferior from the transverse plane, pointing toward the sciatic notch.

Seat the needle tip just into the cortical bone. Using fluoroscopy, verify the needle position between the inner and outer tables, aiming toward the iliac teardrop.

BONE MARROW ASPIRATION GUIDE

Posterior Iliac Crest

Ra'Kerry Rahman, MD

The content of this bone marrow aspiration technique guide was created in conjunction with Ra'Kerry Rahman, MD. These guidelines are not meant to define or suggest any medical or surgical technique. Proper procedure and techniques are the responsibility of the medical professional. The individual practitioner must rely on their own medical training and experience and act in consideration of patient-specific anatomical variations. This material is intended as a reference for health care professionals.

For complete product information, including indications, contraindications, warnings, precautions, and potential adverse effects, see the package insert.



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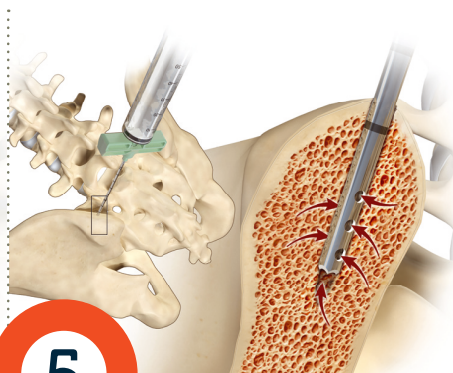
4

ADVANCE

Using a mallet, apply firm, brisk taps to the handle of the aspiration needle to advance the needle between the tables of the posterior iliac crest. Anticipate a decrease in resistance as the cortex is breached.

Use tactile feedback to verify passage of the needle tip through cancellous bone. If a second cortical breach is encountered, retract the aspiration needle and redirect. If one attempt to redirect is unsuccessful, verify the position fluoroscopically.

Once successfully positioned, the tip of the needle will be at least 2.5cm, but no more than 5-7cm, within cancellous bone.



5

ASPIRATE

Remove the stylet, connect a syringe, and aspirate approximately 10-15ml of bone marrow. Rotate the needle 90° and draw an additional 10-15ml of bone marrow.

Needle rotation repositions the fenestrations to access new regions of bone marrow.

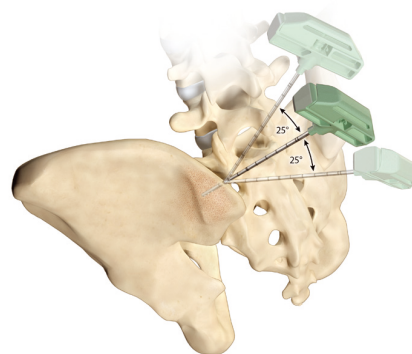


6

ADJUST

Replace the stylet and reposition the needle by either of the following:

Option A: Slowly advance the aspiration needle another 1-2cm along the same trajectory with small clockwise and counterclockwise rotations. Repeat steps 5 and 6 until the desired total bone marrow aspirate volume is obtained.



Option B: Withdraw the needle enough, staying within the marrow cavity, to reinsert downward at a new trajectory at approximately 25° cephalad or caudad. Repeat steps 5 and 6 until the desired total bone marrow aspirate volume is obtained.