

# MARROW CELLUTION™

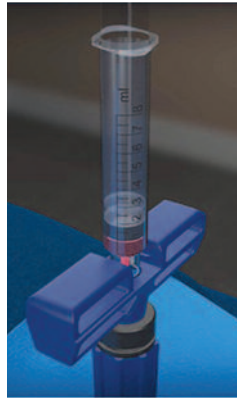
BONE MARROW ASPIRATION PROCESS\* FOR MARROW CELLUTION™ MC-RAN-11C, MC-RAN-11CSTS

Prior to aspiration procedure, please follow heparin flush procedure steps on reverse of page.

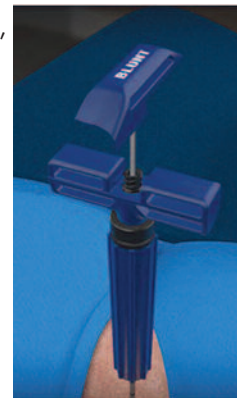
1. Insert Access Needle past cortex just into medullary space. Ensure longitudinal orientation.



2. Remove Sharp Stylet, attach Syringe, draw 1 mL to test proper localization of Access Needle tip.



3. Remove Syringe, Insert Blunt Stylet, continue to advance Access Needle to desired depth.



4. Rotate Outer Housing clockwise to skin level and remove Blunt Stylet.



5. Insert Aspiration Cannula & Attach to Access Needle.



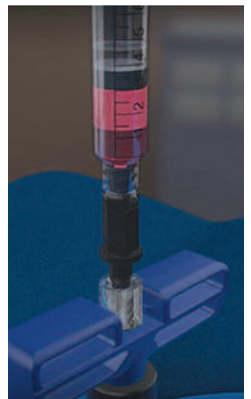
6. Attach syringe & draw 1 mL of marrow.



7. While holding Outer Housing in place, rotate handle 360° counterclockwise with opposite hand to raise Cannula tip into new geography.



8. Draw 1 mL of marrow.



9. Repeat steps 7 & 8 until desired volume is attained.

\*Abbreviated Instructions. Please refer to the package insert for complete instructions for use.



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# Suggested Heparin Flush Procedure for Bone Marrow Aspirate

1. Withdraw 2,000 units/mL\* of Heparin from sterile bowl into 10mL syringe
2. Remove Stylets from Introducer Needle and Aspiration Cannula with distal end of needle inside sterile bowl
3. Connect Heparin-filled syringe to the shorter Introducer needle and inject Heparin until needle is fully rinsed (is flowing through end of needle). Aspirate Heparin back into syringe and disconnect from needle.
4. Repeat step 3 for the longer aspiration needle.
5. Rinse each stylet (3), short introducer sharp (1) and blunt (2), longer aspiration stylet (3).
6. With needle guards in place, rinse the outside of each needle by injecting Heparin into the open end of the guard.

BEGIN ASPIRATION PROCEDURE FOR IMMEDIATE USE (EX. MIXING WITH BONE GRAFT)

OR

CONTINUE FOLLOWING STEPS FOR BONE MARROW ASPIRATE INJECTION THROUGH 22 GAUGE NEEDLE

7. Rinse 22 Gauge Needle with 2,000 units of Heparin
8. Add ½ mL of Heparin into collection syringe

\*It is important that the strength per mL of the Heparin rinse is at least 1,000/mL but preferably 2,000/mL and that you have adequate volume (10mL) to rinse all needles and syringes. Using a sterile bowl, add sterile Saline or PBS to dilute Heparin to 2,000 units/mL.

The tables below detail the amount of Heparin and Saline or PBS needed to dilute the Heparin to 2,000 units/mL.

Using 5,000/mL Heparin				
mL of Heparin Required	mL of Saline or PBS	Total Heparin Units	Total mL	Heparin/mL
4	6	20,000	10	2,000

Using 10,000/mL Heparin				
mL of Heparin Required	mL of Saline or PBS	Total Heparin Units	Total mL	Heparin/mL
2	8	20,000	10	2,000