Arthrex continues to deliver on its mission statement Helping Surgeons Treat Their Patients Better™ with the introduction of the Vortex threaded recovery needle. The unique design, which includes a threaded tip and vent holes, prioritizes precise depth and directional control to allow the user to easily and accurately reposition the tip of the needle within the bone for optimal aspiration volume and maximum osteoprogenitor cell recovery.

**Product Overview**
- The unique threaded tip and vent holes in the Vortex needle allow the surgeon to control the depth and direction of aspiration within the anterior superior iliac spine (ASIS), posterior superior iliac spine (PSIS), or vertebral body.

**Key Features and Benefits**
- Precise depth control

**Technical Pearls**
- As the syringe begins aspirating bone marrow, it is recommended to change the depth of the needle after every 2 cc of aspiration to maximize the concentration of osteoprogenitor cells collected. This is done by alternating between ½ turns and 1½ turns of the needle.
- The use of a C arm is recommended to assist with proper targeting.
Use a transpedicular approach to the vertebral body. To maximize volume, it is recommended to also use a bipedicular approach.

There are three methods of needle insertion that can be used. First, the needle can be twisted manually into the bone.

Second, a specially designed power adapter connected to a power drill can be used to insert the needle.

Finally, a mallet can be used to gently tap the needle into the bone. These methods can also be used in combination.
After the needle is inserted to the desired depth, remove the stylet and connect the syringe.

Once the syringe is connected, pull back on the plunger to the 10 cc mark and rotate clockwise to lock the plunger and set the vacuum.
After 2 cc of aspiration, rotate the handle of the needle counterclockwise to reposition the tip and aspirate bone marrow from a different location. **Note: Studies have shown the first 2 cc of aspiration for any one depth and location have the highest concentration of osteoprogenitor cells.**
Continue to rotate the needle handle after every 2 cc of aspiration. You will need to reset the vacuum on the syringe after 8 cc of bone marrow has been aspirated.

Once the desired amount of bone marrow has been recovered, hold the handle of the needle in one hand for stabilization and use the other hand to twist the syringe in a counterclockwise motion to remove it from the handle.
Using the Vortex™ threaded bone marrow recovery needle, insert the needle into the ASIS. **Note:** Use an insertion point 4 cm posterior to the ASIS to avoid damaging the lateral femoral cutaneous nerve (inset).

After 2 cc of aspiration rotate the handle of the needle counterclockwise to reposition the tip and aspirate bone marrow from a different location. **Note:** Studies have shown the first 2 cc of aspiration for any one depth and location have the highest concentration of osteoprogenitor cells.¹
Using the Vortex™ threaded bone marrow recovery needle, insert the needle into the PSIS. Note: Use an insertion point 3 cm superior to the PSIS to avoid damaging the cluneal nerves.

After 2 cc of aspiration rotate the handle of the needle counterclockwise to reposition the tip and aspirate bone marrow from a different location. Note: Studies have shown the first 2 cc of aspiration for any one depth and location have the highest concentration of osteoprogenitor cells.¹
Additional Bone Marrow Aspiration Site Options

Use a 13 ga open tip needle to aspirate bone marrow from the calcaneus.

Use an 8 ga open tip needle to aspirate bone marrow from the femur.

Use a 13 ga open tip needle to aspirate bone marrow from the shoulder.
Vortex™ Threaded Recovery Needles, Accessories, and Kits

Vortex Threaded Recovery Needle Kits

Vortex Threaded Recovery Needle, 8 ga, Open Tip

Vortex Threaded Recovery Needle, 13 ga, Open Tip

Vortex Needle Power Adapter
Ordering Information

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<td>Vortex Needle Power Adapter</td>
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Reference