

Performing a Central  
Venous Catheterization with the  
**AxoTrack® System**



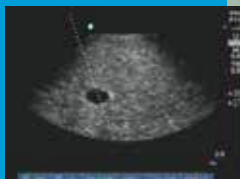
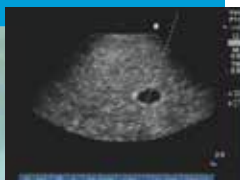
# PREPARATION

## Supply List

- P11x Transducer
- AxoTrack-equipped SonoSite Ultrasound System
- Central venous catheterization (CVC) insertion kit: typically includes guidewire, catheter, syringe, protective barriers, and scalpel
- Sterile gel: use on outside of sterile shield cover or directly on patient
- Non-sterile gel: use on transducer array inside sterile shield cover
- AxoTrack Sterile Procedure Kit:
  - Top shield with needle clamp
  - Bottom shield with needle guide and protective cap
  - AxoTrack needle assembly
  - Sterile cable sleeve
  - 2 elastic bands (includes 1 spare) to secure the sterile cable sleeve to the shield
  - Blue drape (Please note that this is not intended for use as a sterile barrier and should be discarded)

## Initial Steps

1. Attach transducer to ultrasound system.
2. Power up system.
3. Press EXAM key and select exam type.
4. Press soft key for GUIDE.
5. Confirm appearance of dashed guideline.
6. Toggle ultrasound image to ensure correct orientation.
  - If the transducer will be held in the left hand; target line, simulating the entry point and path of the needle, will enter from the right side.
  - If the transducer will be held in the right hand; target line, simulating the entry point and path of the needle, will enter from the left side.



# TRANSDUCER AND STERILE SHIELD ASSEMBLY



## **Non-sterile Assistant:**

1. Apply pea-sized volume of non-sterile gel to transducer. *Avoid excess gel.*



## **Non-sterile Assistant:**

2. Visually confirm yellow protective cap is securely on top of needle guide.
3. Lower probe into bottom half of shield. *Avoid contamination of practitioner's sterile gloves.*
4. Remove yellow protective cap. *Avoid contact with sterile shield.*

# TRANSDUCER AND STERILE SHIELD ASSEMBLY



## **Sterile Practitioner:**

5. Slide top half of sterile shield over probe and down against bottom half of sterile shield.
6. Snap in place simultaneously at front and rear (audible clicks). *Visually confirm snap closure.*

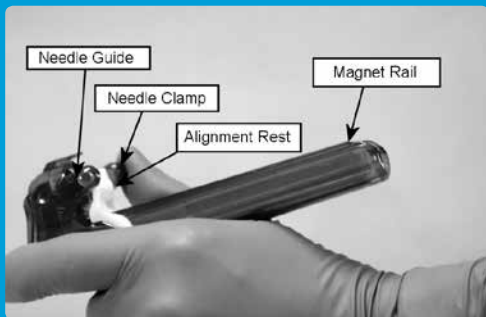
## **Non-sterile Assistant:**

7. Suspend probe with shield assembly by cable.
8. Lower probe with shield assembly into cable sleeve.

## **Sterile Practitioner:**

9. Hold sterile cable sleeve to receive probe with shield assembly.
10. Feed cable sleeve over probe with shield assembly and onto cable.
11. Grasp probe with shield assembly at distal end of sleeve.
12. Secure sleeve to shield with elastic band and pull gently on sleeve to slide elastic band back against flange at the end of the shield handle.

# PERFORMING A PROCEDURE



1. Ensure needle clamp is rotated fully forward. *Needle guide opening should be unobstructed.*



2. Place magnet against proximal end of magnet rail. *Avoid hitting needle tip against any surface.*



3. Move the tip of the needle to the center of the notch in the alignment rest. The needle is now aligned with the needle guide lumen. Slide the needle smoothly into the needle guide. *Avoid contacting any surface with the needle tip.*

## PERFORMING A PROCEDURE



- Slide needle forward and backward and observe matching virtual needle movement on sonogram. *Do not withdraw needle from needle guide.*

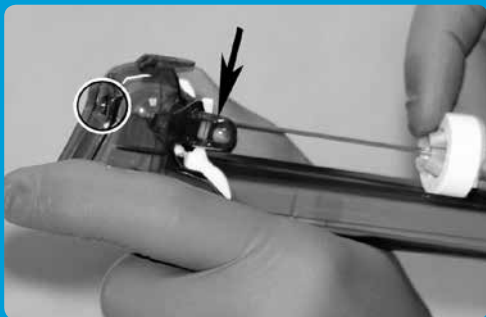


- Retract needle until its tip is just protruding from base of sterile shield. *Observe that the virtual needle tip is also just visible on the sonogram.*



- Retract needle tip into needle guide leaving a smooth bottom surface for patient scanning.
- Secure needle position by engaging and holding gentle pressure on the needle clamp.

# PERFORMING A PROCEDURE



8. Continue holding gentle pressure on needle clamp to maintain retracted needle position during scanning.
9. Apply a liberal amount of sterile acoustic gel.
10. Scan for traditional landmarks while holding gentle pressure on needle clamp.
11. Identify clear approach to vein.
12. Align target line with vein.
13. Release needle by rotating needle clamp forward with thumb.
14. Advance the needle.
15. Observe needle progression along target line and into target.

# PERFORMING A PROCEDURE



- 16.** When target is acquired, engage and hold gentle pressure on the needle clamp to secure needle position; confirm location with blood flash.
- 17.** Pop syringe off hub with thumb and forefinger.
- 18.** Insert guidewire into needle hub and observe wire passage.
- 19.** Remove entire assembly over guidewire and continue with procedure.

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