VALKYRIE

Instructions for Use
Epidural Simulator
MS2-EPI

1. Preparation

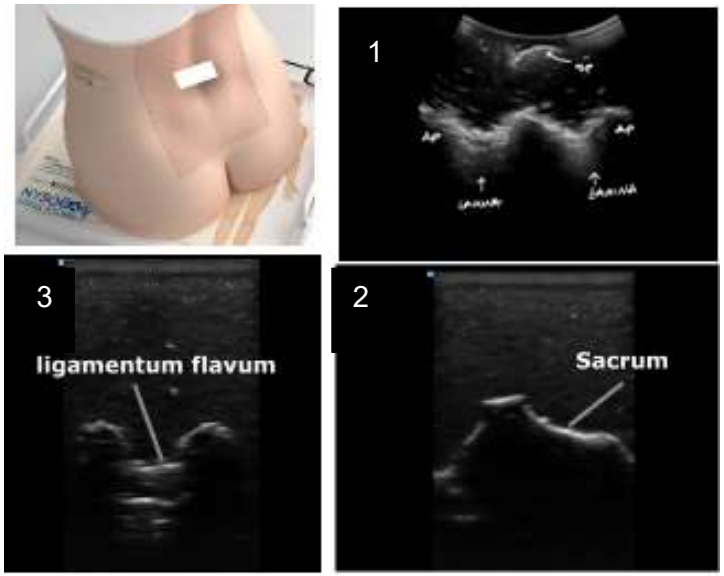
TRAINING GOAL #1: SETTING UP THE ULTRASOUND MACHINE

- Use sharp bevel needles, recommended < 22G for increased simulator lifespan (e.g. 25G) .
- Sterile water ONLY when practicing injections
- Transducer: Linear high or Curved low frequency transducer
- Depth: 4-5 cm
- Refer to section 4 for details on camera use
- **IMPORTANT: INCREASE the ultrasound gain BEFORE SCANNING (simulators are somewhat less echogenic and require more gain to obtain images similar to the human tissue)**

2. Scanning

TRAINING GOAL #2: ANATOMY RECOGNITION

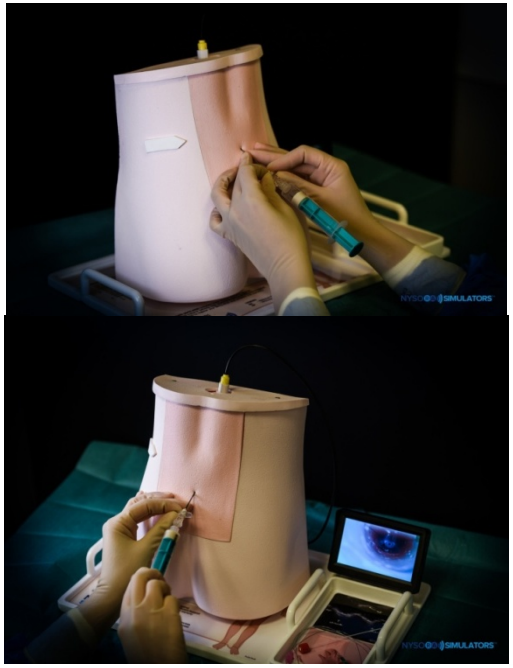
Spinous Process: Position the transducer midline in a transverse orientation at the level of the posterior superior illiac crest (marked on model). Identify the spinous process (1) at this level (typically L4),
Sacrum: Slide the probe caudad until the sacrum is identified (2).
Epidural Space: Having confirmed the position of the sacrum, slide the probe slowly cephalad counting each process until the preferred block site is confirmed (3). The block site is typically at the L3/L4 intervertebral space. With the probe in this position identify and note the depth and location of :Epidural space**,** Dura and Ligamentum Flavum .



3. Procedure

TRAINING GOAL #3: PRACTICE NEEDLE INSERTION INTO RELEVANT ANATOMY

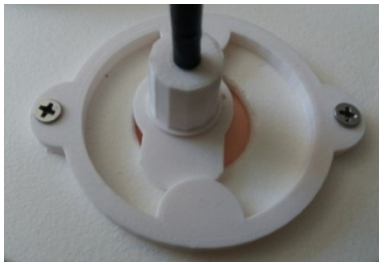
Remove the stylet from the epidural needle and attach the LOR syringe with air or saline (with or without an air bubble) firmly to the needle hub. While regularly checking for LOR, advance the epidural needle to the depth of the ligamentum flavum as previously determined by scanning. Slowly advance a few millimeters until a loss of resistance on entering the epidural space is experienced. Once inside the epidural space the needle tip will be clearly visible on the camera display.



4. Camera

TRAINING GOAL #4: SETTING UP THE CAMERA

Ensure that the camera lens is clean. Carefully insert the camera into the recess at the top of the simulator. Rotate to lock the camera in position. If required adjust the display image by rotating the camera slightly or use the display software to switch camera orientation. Further details of the camera system can be found in the included camera manual.



4. Mounting the Simulator

TRAINING GOAL #5: MOUNTING THE SIMULATOR ON THE TRAY

Slide the simulator connector under the rotary knob
Hand tighten the knob to secure the simulator to the tray.