RIVANNA®
Guiding Advancements In Ultrasound

FAQ: Epidural and spinal anesthesia guidance with Accuro®

Is Accuro intended to replace my palpation or loss of resistance skills?
No. It is intended to augment, and not replace, your existing skills. Palpate first, then use Accuro to make the fine adjustments to locate exact spinal midline and evaluate the interlaminar space location and approximate depth. Use your loss of resistance techniques as normal.

What are the benefits of using the sterile cover and Accuro Locator™ kit?
Sterile technique with Accuro improves performance because it limits the opportunity for the patient to move between the time Accuro is used to identify the needle insertion site and the time of needle insertion. Additionally, sterile use is necessary if re-scanning after initial needle placement is desired.

Should I expect Accuro's automated depth estimate to exactly match the depth of my needle when loss of resistance is first detected?
Accuro's automated depth estimate (orange number) uses detection of the articular process bone surfaces to measure the distance from the skin surface to the epidural space. On average, this measurement has been shown to underestimate the actual epidural depth by approximately 0.5 cm. Larger deviations can occur (1.5 cm or more) if the Accuro measurement is obtained while compressing the skin surface. Skin compression will shorten the skin-to-epidural distance when using Accuro compared to when the needle is advanced.

To optimize results, use minimal skin compression with Accuro. Use the Accuro measurement obtained after careful angle adjustments that allow the interlaminar space to be most clearly visible (orange interlaminar space overlay is least transparent).

How long will it take me to become proficient using Accuro?
The learning curve is expected to take between 5 and 10 procedures. Initial device usage should be on healthy subjects of normal BMI.

What is the maximum depth that Accuro can image?
Maximum imaging depth for Accuro is 12.5 cm.

How many saved images can Accuro store?
Accuro has maximum storage capacities of 10,000 images, 300 videos, and 999 exams.

Are there any training videos I can watch before using Accuro?
Yes. Visit www.rivannamedical.com/accuro/.

Why is there a lag in the automated graphics?
Unlike conventional ultrasound, Accuro collects three-dimensional image information and automatically makes "decisions" about the image contents which are conveyed through graphical overlays and measurements that are updated in real-time. If scanning too quickly over large scan areas, then these graphics may appear delayed.

Are there any helpful techniques when scanning very low BMI patients?
Spinous process bones can protrude from the skin surface in very low BMI patients and make it challenging to maintain coupling of the Accuro probe to the skin. In these cases, use less compression and apply more ultrasound gel. The ultrasound will image through the gel and into the patient while avoiding direct contact with the spinous process protrusions.

How do you hold Accuro if your patient is positioned lateral decubitus?
Raise the patient bed and/or use Accuro while seated to ensure that the Accuro display screen is near eye level. Ensure a stable hand grip by holding Accuro near the transducer probe end with the same hand anchored to the patient. Use two hands if necessary.

What can I do to make the automated graphics more stable? They seem to change too fast.
Because the spinal anatomy has very fine features, even very small adjustments in the angle and position of Accuro can lead to large changes in the image and automated graphics.

For best results, use "micro-movements" when scanning with Accuro. Ensure a stable hand grip by holding Accuro near the transducer probe end with the same hand anchored to the patient. Use two hands if necessary.

What should I do if I cannot find an orange interlaminar space overlay?
If no orange interlaminar space overlay is found when scanning a particular intervertebral level, then the interlaminar space is not easily accessible with a midline approach. Inaccessibility can be caused by spinal stenosis, osseous growths, or calcifications of surrounding ligaments. It occurs most often in the elderly population.

In these instances, identification of the interlaminar space may be attempted again after re-positioning the patient or moving to a different intervertebral level. Alternatively, Accuro can be used to identify the spinous process position as a means to guide a paramedian lumbar epidural technique.

Rivanna Medical, LLC Charlottesville, Virginia USA **T: 800-645-7508** **rivannamedical.com**

736-00036 Rev. A **MADE IN USA**