

BJAN-D-25-00089_Supplementary Material 1

Supplemental Material 1 Examination on the anatomy and ultrasound imaging paravertebral block.

Paravertebral Block

Questions:

1. All of the following statements are true regarding the boundaries of paravertebral space except

- A. The boundaries of the three-sided wedge—posterior, medial boundary, and anterolateral— extend caudally and Cephalad, as the segmental spaces communicate up and down.
- B. The PVS is bounded posteriorly by transverse processes, the rib heads.
- C. The medial boundary is the vertebral body, the intervertebral disks, and the intervertebral foramen at each level.
- D. The anterolateral boundary is the parietal pleura.
- E. Laterally, the space tapers and closed.

2. All of the following are indications of thoracic Paravertebral block except?

- A. Thoracic surgery
- B. Breast surgery
- C. Cholecystectomy, upper abdominal surgeries
- D. Knee surgery
- E. Renal and ureteric surgery

3. All of the following are advantage of (PV) block compared to epidural block except?

- A. PVB associated with less urinary retention
- B. PVB associated with less PONV
- C. PVB associated with less hypotension
- D. PVB had less pulmonary complications
- E. All of the Above

4-. The following statement is true or false: The spinal nerves in this space are devoid of a fascial sheath, making them susceptible to local anesthetics.

1-True

2-False

5- Which statement about the Local Anesthetic Spread in the PV space is MOST likely true?

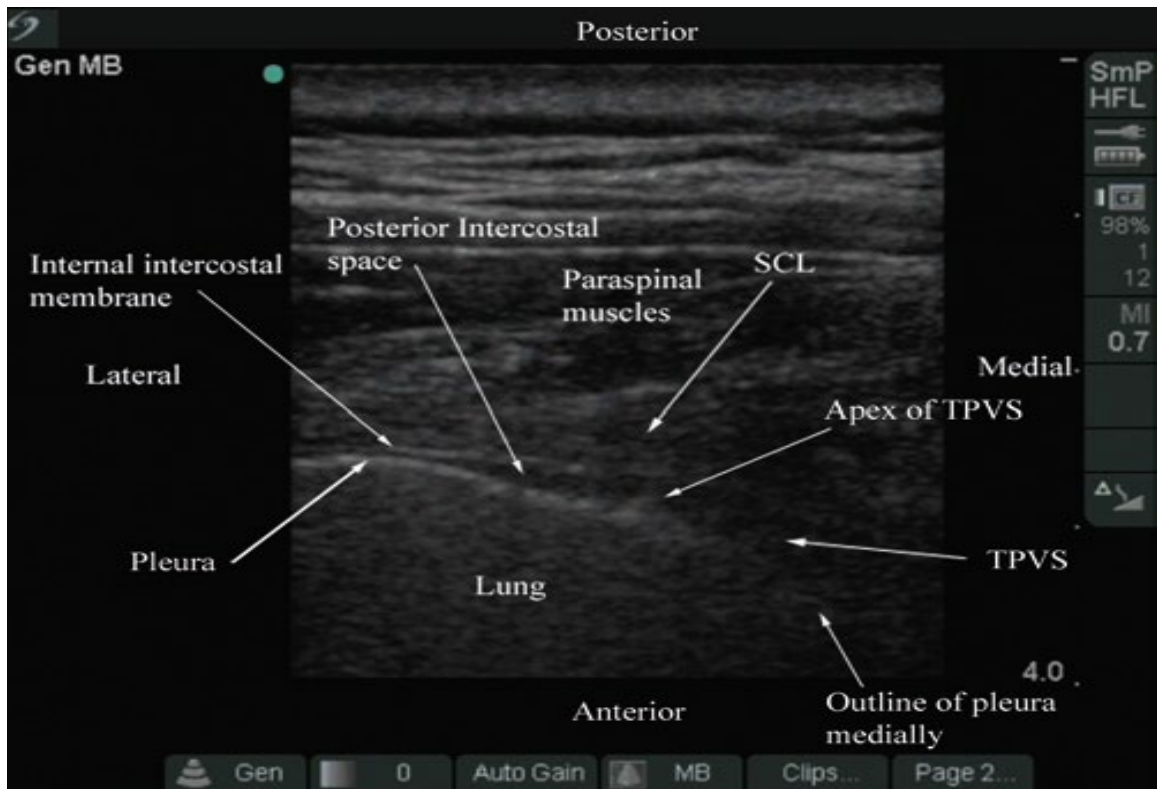
- (A) PVS communicates with spaces above and below
- (B) 15 – 20 ml injections cover approximately 4 dermatomes
- (C) Accumulation of bupivacaine occur during continuous paravertebral infusion without clinical signs of toxicity
- (D) The addition of 5 mcg/ml epinephrine to ropivacaine significantly delays its systemic absorption
- (E) The absorption of ropivacaine after TPVB is described by rapid and slow absorption phases.
- (F) All of the above

6- In Classic PVB Landmark Approach Which of the following is MOST likely true?

- A. Needle insertion 2.5 to 3 cm lateral to the cephalad edge of spinous process.
- B. The needle advanced perpendicular to the skin until transverse process contacted
- C. Needle advanced 1-1.5 cm
- D. Pop or click may be felt just prior to entry into PVS
- E. All of the above

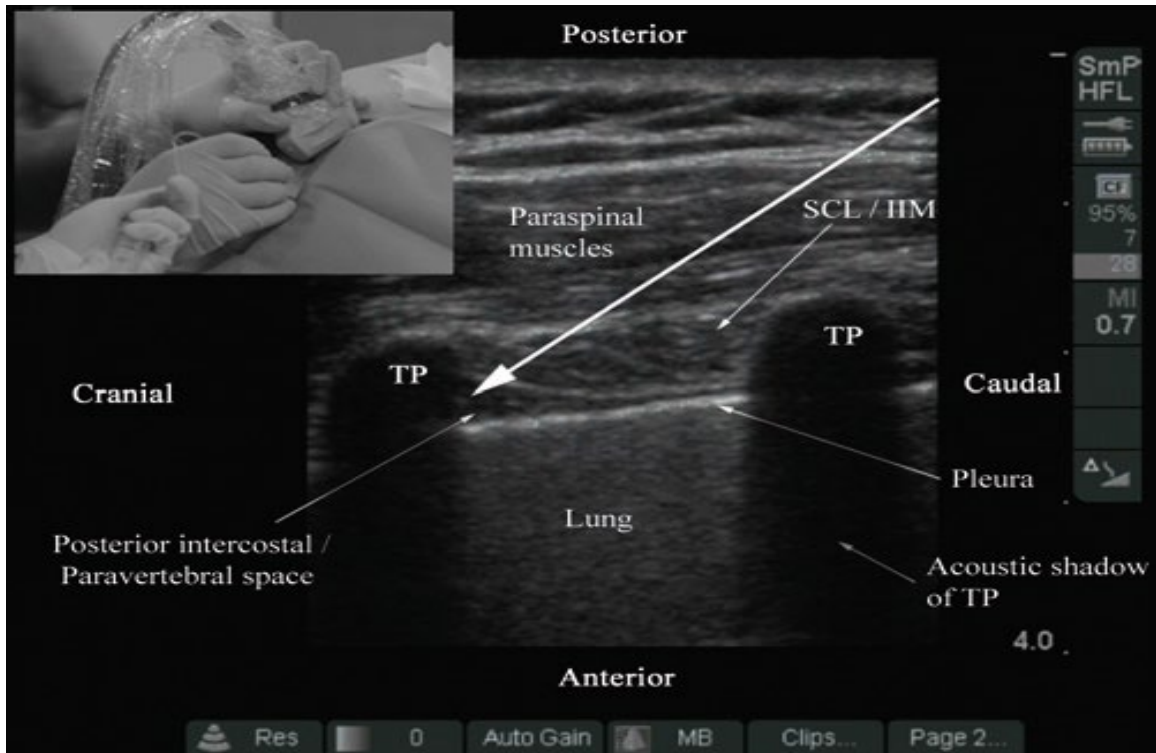
7-In this ultrasound image from the thoracic paravertebral region please identify the following:

- (A) Thoracic paravertebral space
- (B) Pleura
- (C) Paraspinal muscles
- (D) Superior costo-transverse ligament
- (E) Lung



8-In this ultrasound image from Real- time USG TPVB , Which approach used in the image:

- (A) Transverse Scan with Short-Axis Needle Insertion
- (B) Paramedian Oblique Sagittal Scan with In-Plane Needle Insertion
- (C) Transverse Scan with In-Plane Needle Insertion
- (D) The Intercostal Approach to the TPVS
- (E) None of the above



9-Which of the following is the most important ultrasonographic sign for successful PVB?

- A. Widening of the paravertebral space
- B. Anterior displacement of the pleura
- C. Spread of local anesthetic (LA) to the posterior intercostal space
- D. Increased echogenicity of the pleura
- E. All of the Above

10-In this image from the thoracic paravertebral region please identify the following:

- A. Thoracic paravertebral space
- B. External intercostal muscle
- C. Internal intercostal membrane
- D. Endothoracic fascia
- E. Ventral ramus
- F. Sympathetic chain

