

Truncal Blocks

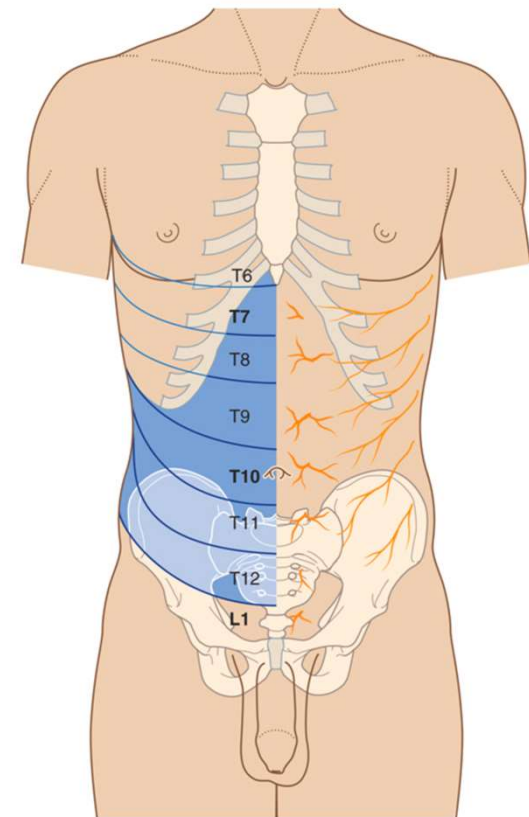
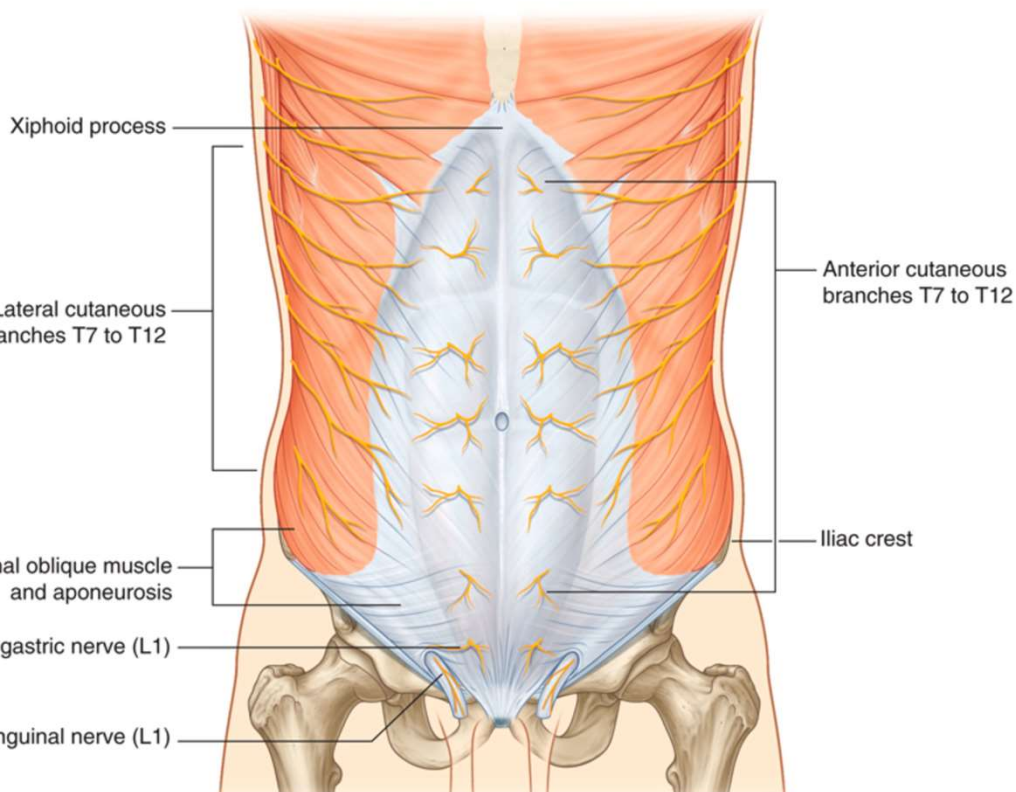
Samm Stamper MD, MEd

Objectives

Describe the correct sonographic technique for performance of truncal blocks

- Transversus Abdominis Plane block
 - Mid-axillary approach
 - Sub-costal approach (upper)
 - § Sub-costal approach (lower)
- Rectus Sheath block
- Quadratus Lumborum block
 - Anterior approach

Abdominal Wall Anatomy and Innervation



Mid-Axillary TAP Block

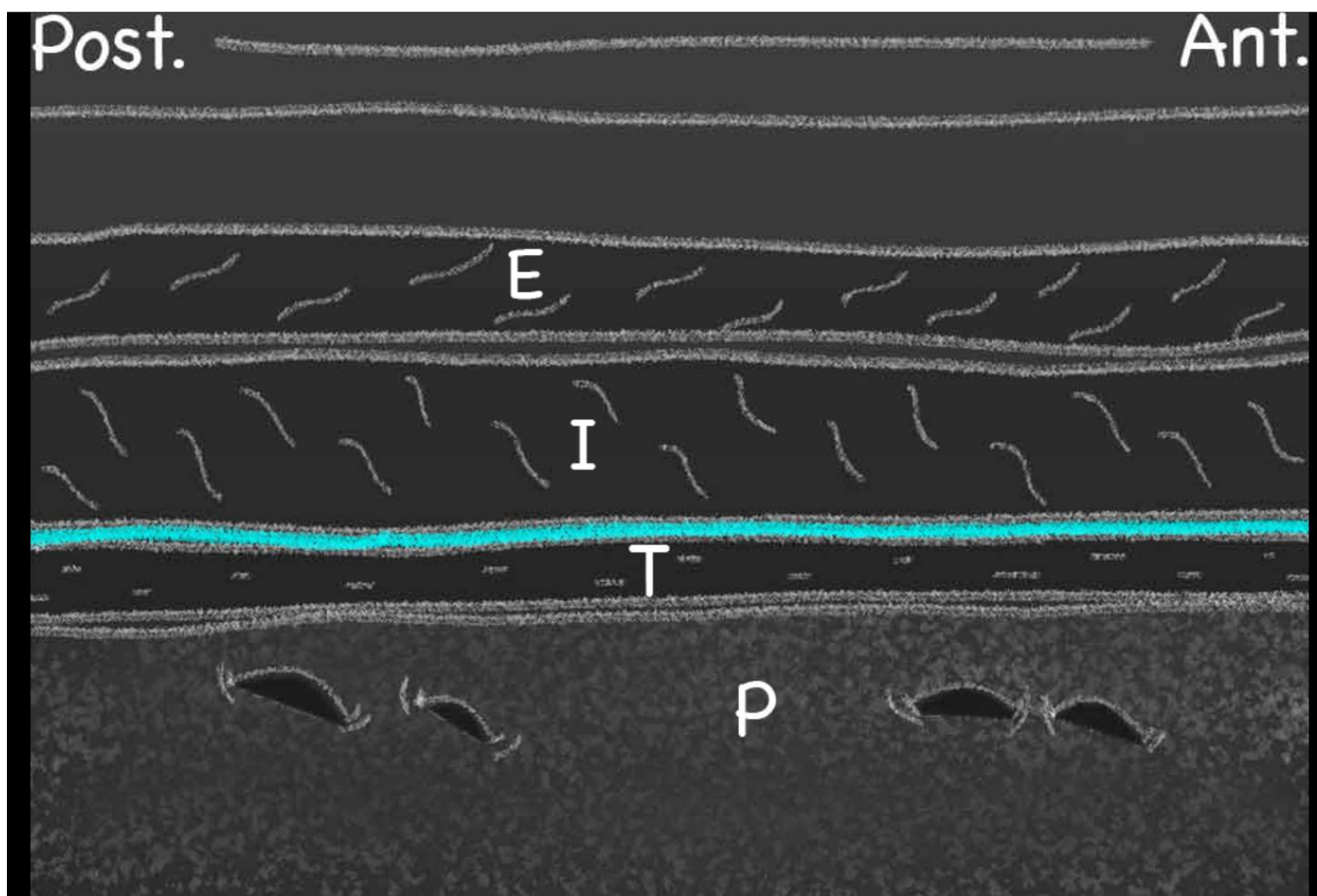


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Ergonomics – Midaxillary TAP Block



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Mid-Axillary TAP Block

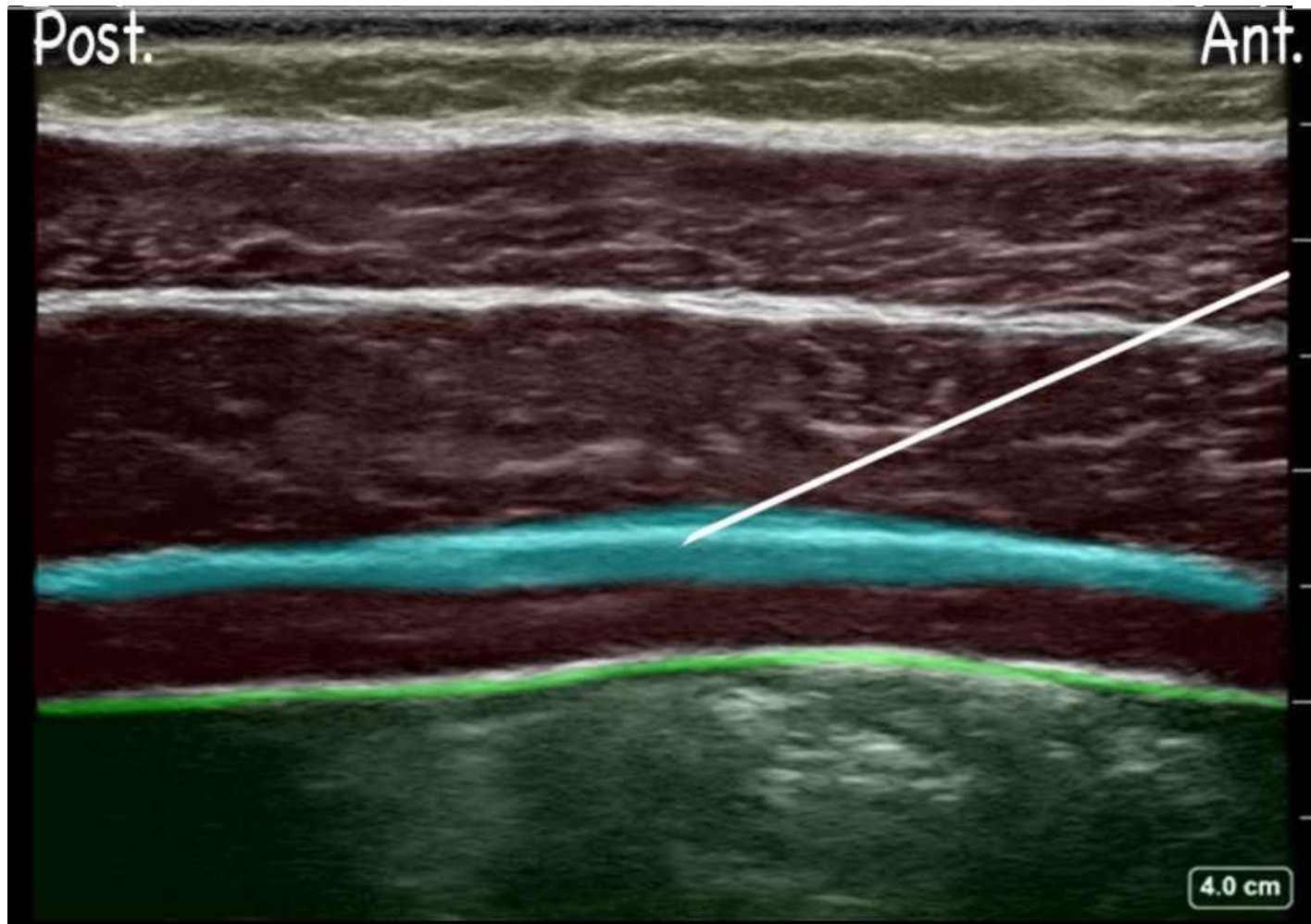


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Mid-Axillary TAP Coverage

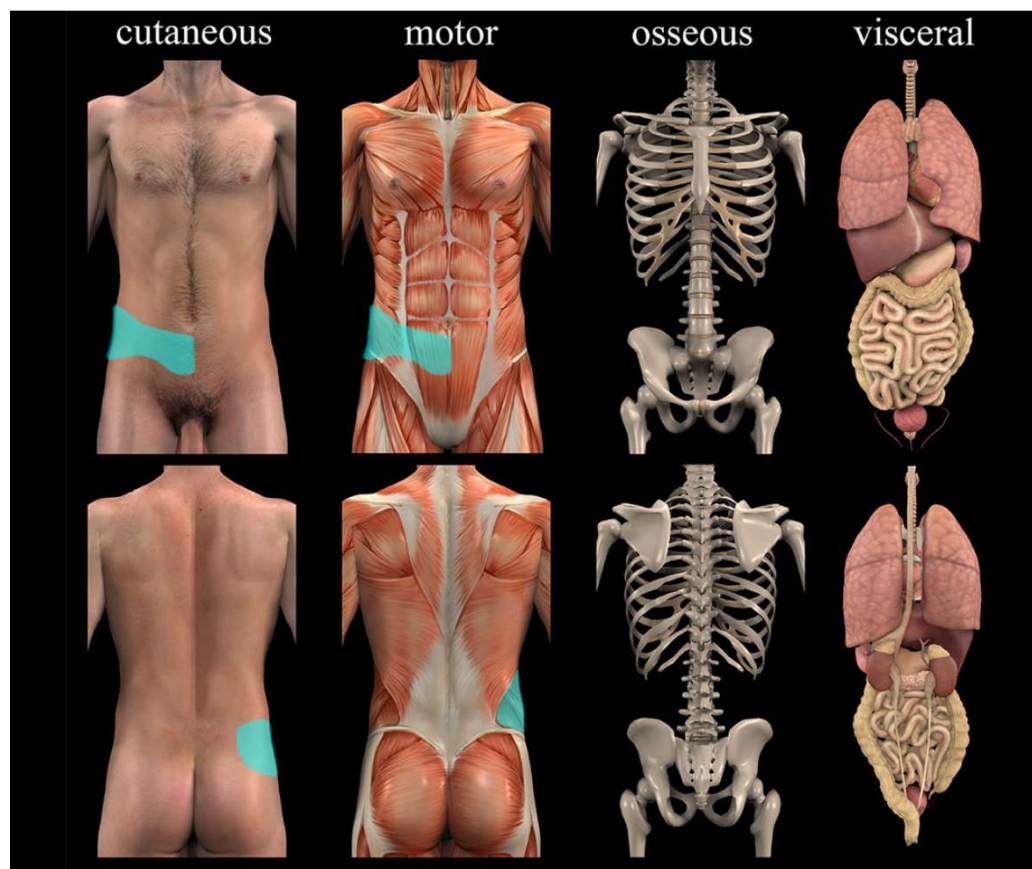


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Subcostal TAP Block (Upper)

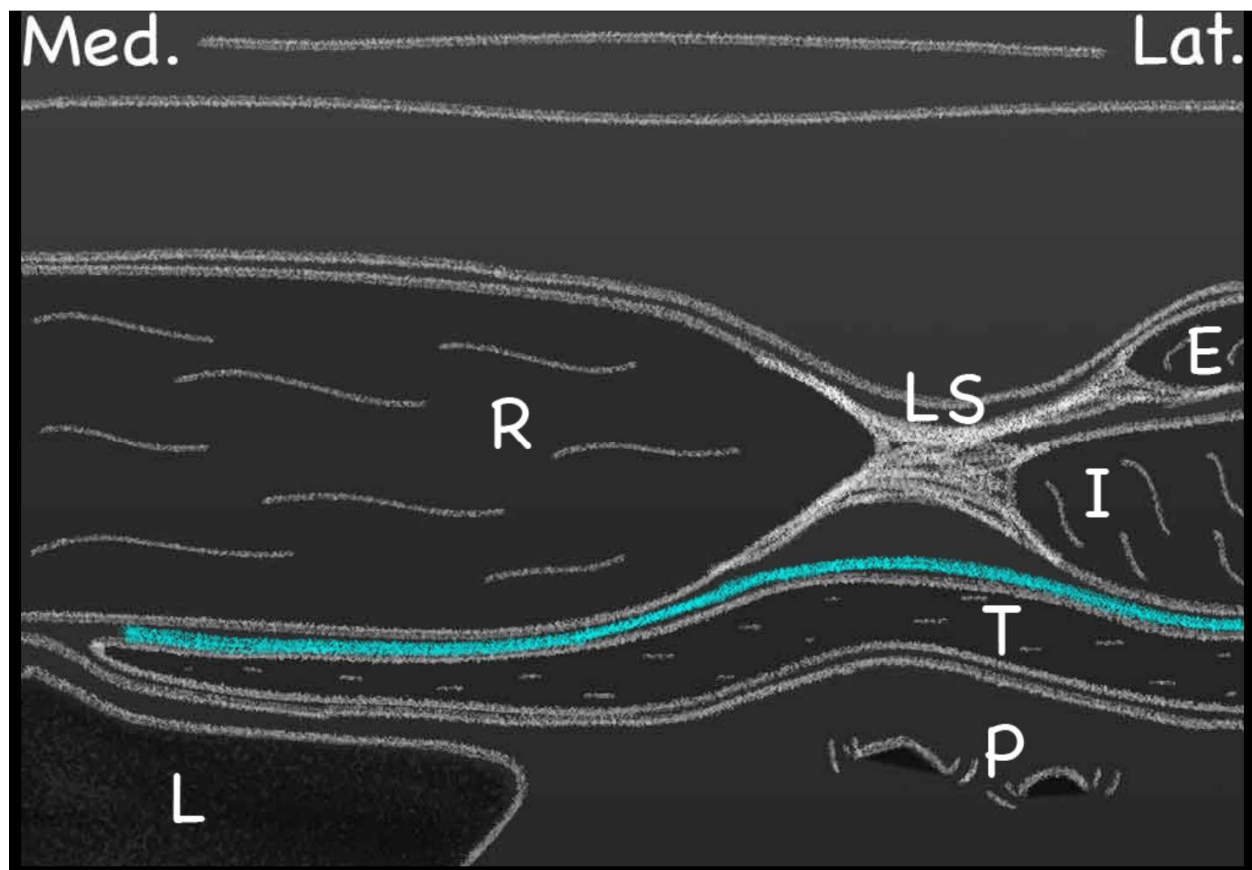


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Ergonomics – Subcostal TAP (Upper)



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Subcostal TAP Block (Upper)

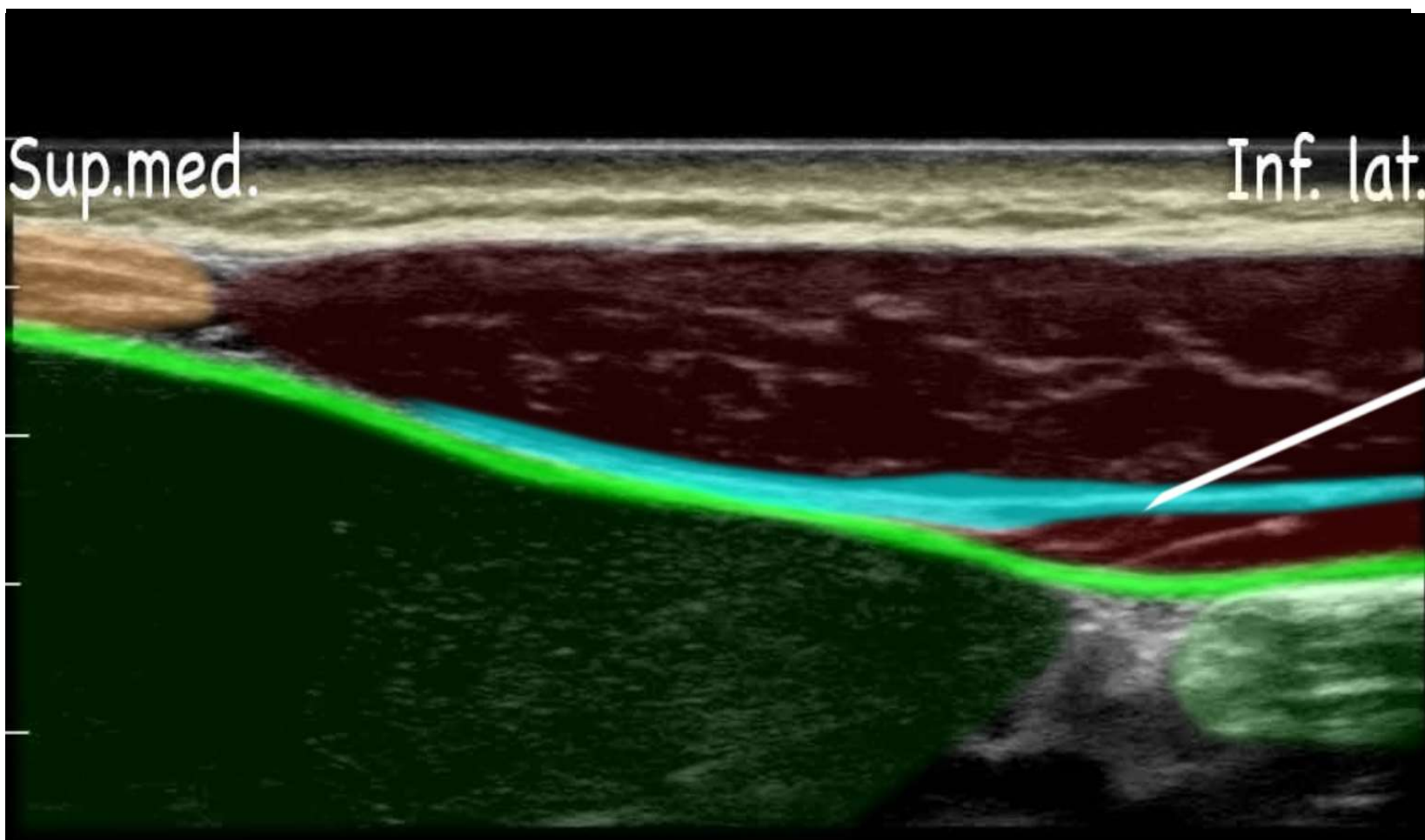


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Subcostal TAP Block (Upper)

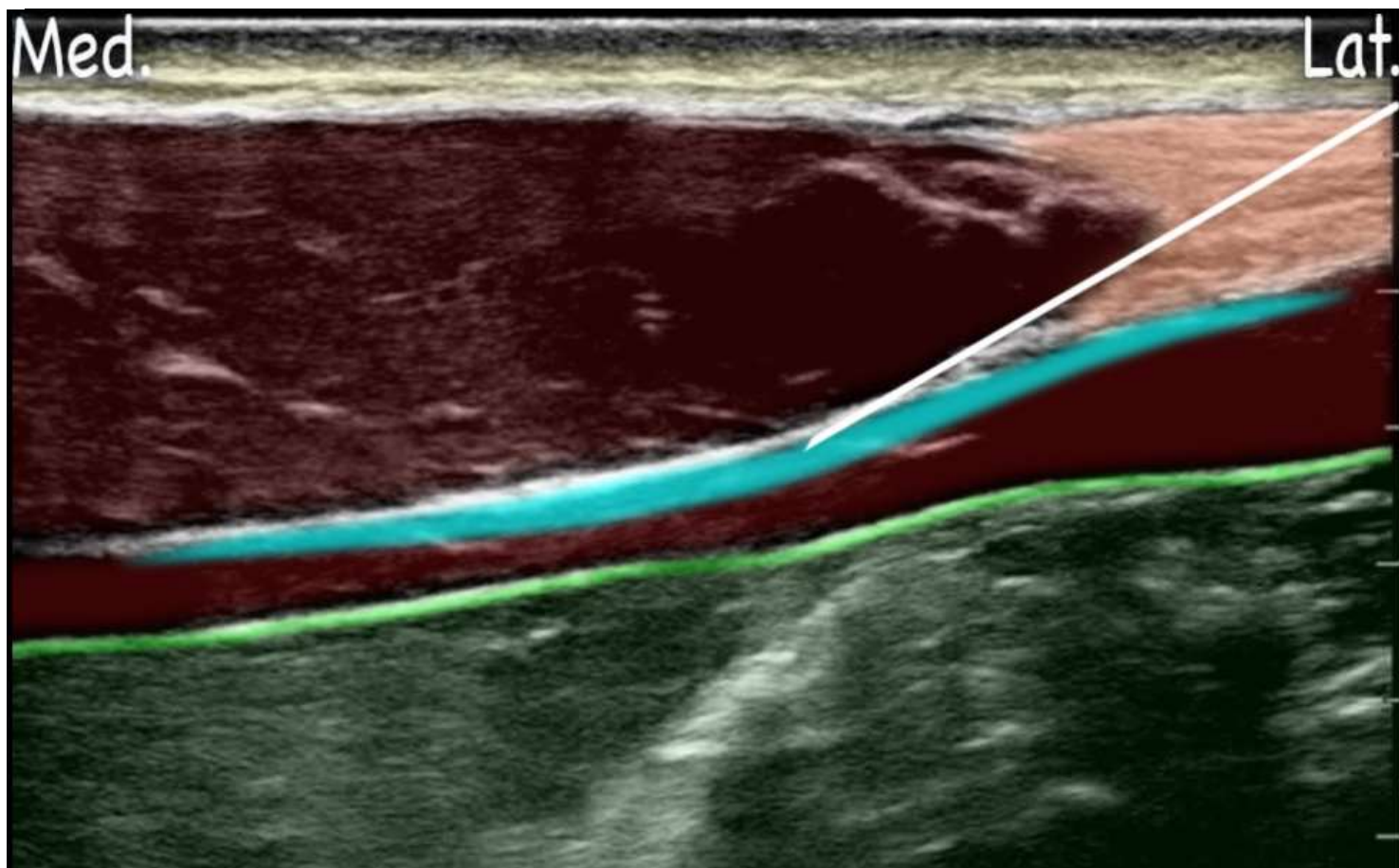


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Ergonomics - Subcostal TAP Block (Lower



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Subcostal TAP Block (Lower)

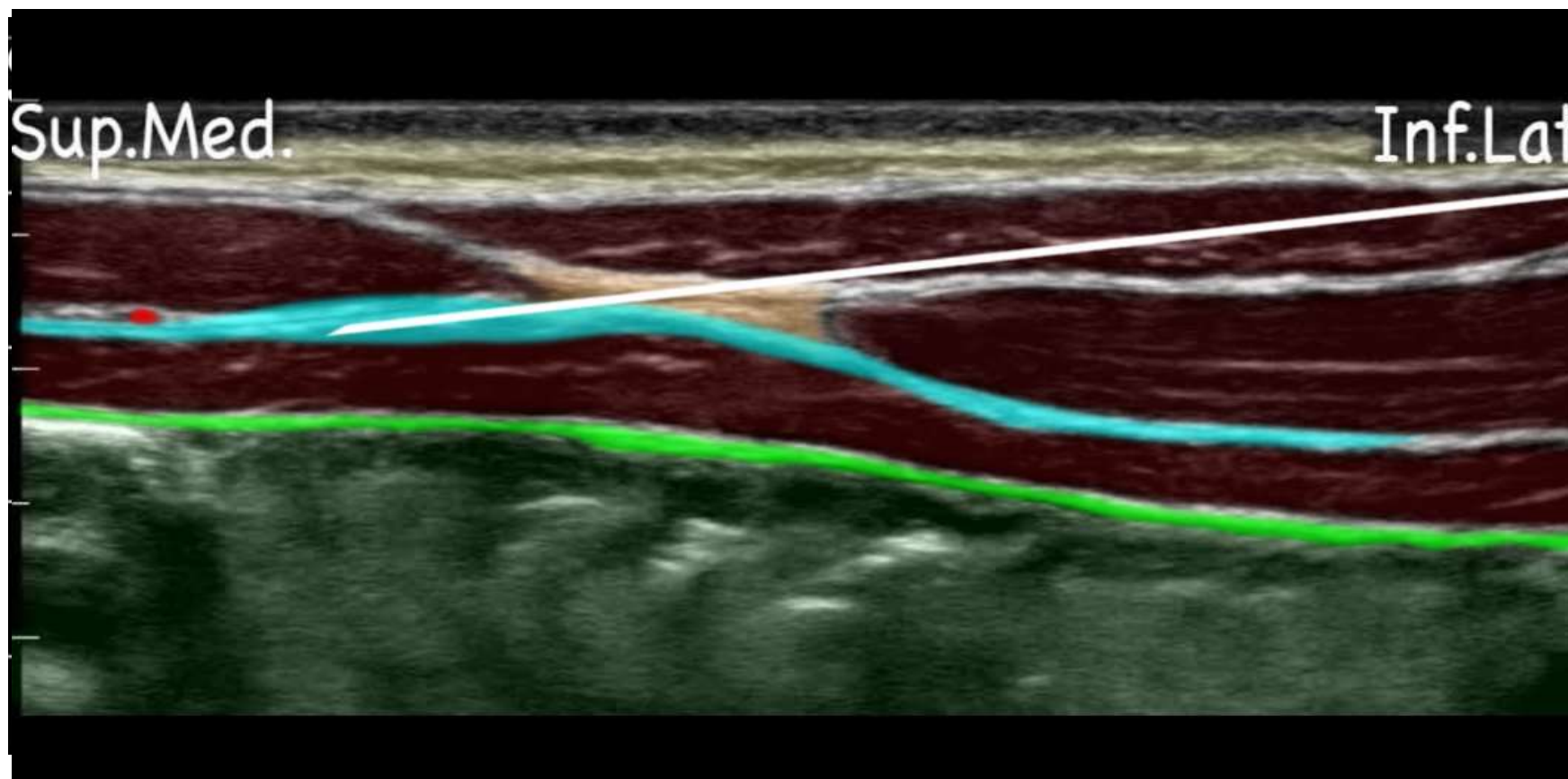


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Upper and Lower Subcostal TAP Coverage

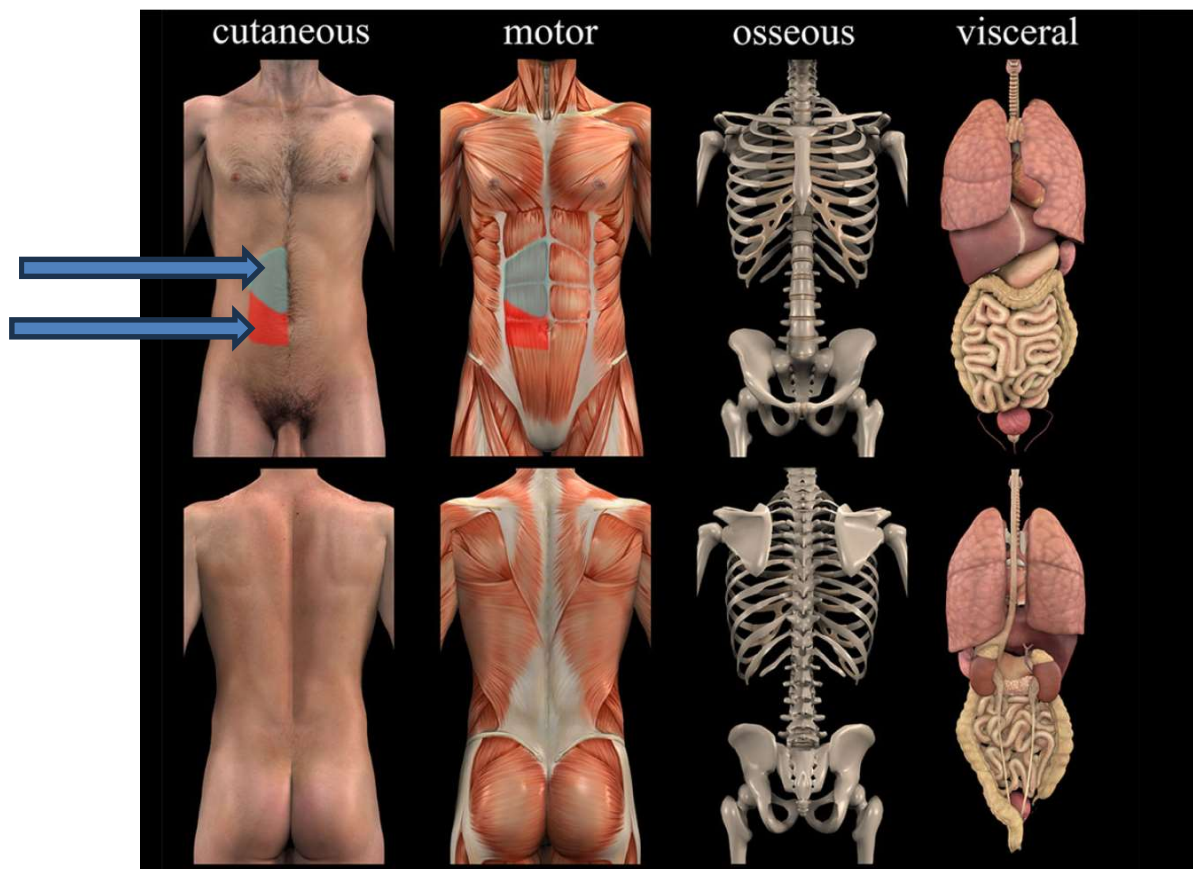
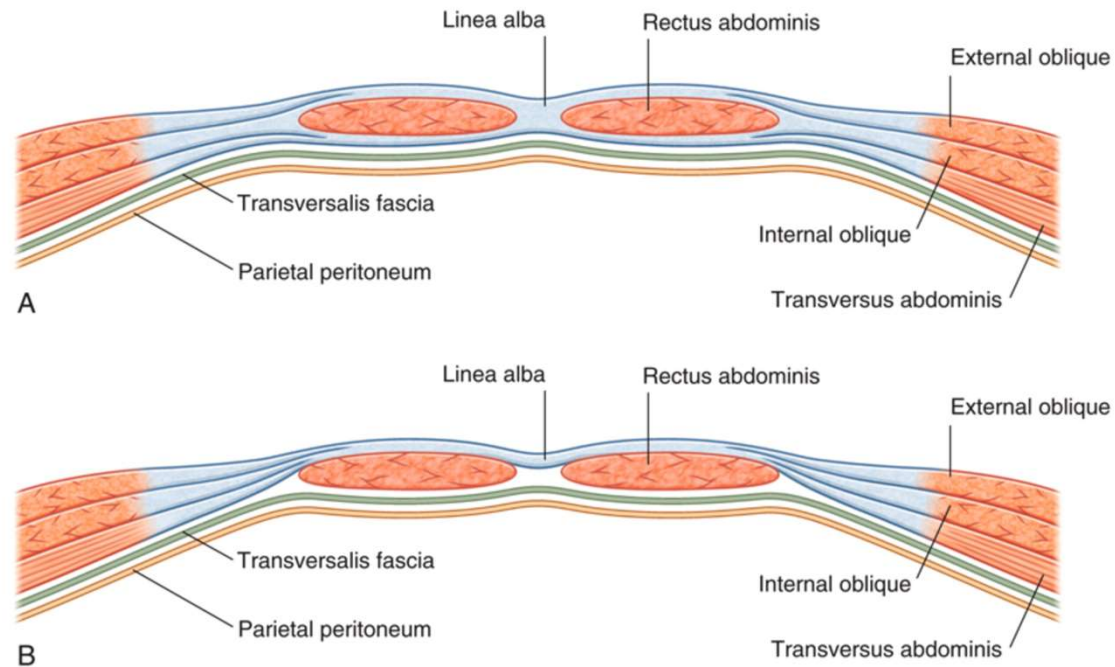


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Rectus Sheath



ization of the rectus sheath. (A) Transverse section through the upper three-quarters of the rectus sheath. (B) Transverse section through the lower one-quarter of the rectus sheath. From Drake RL, Vogl AW, Mitchell AWM. Gray's Anatomy for Students, 4th ed. Philadelphia; Elsevier; 2020.)

Ergonomics – Rectus Sheath Block

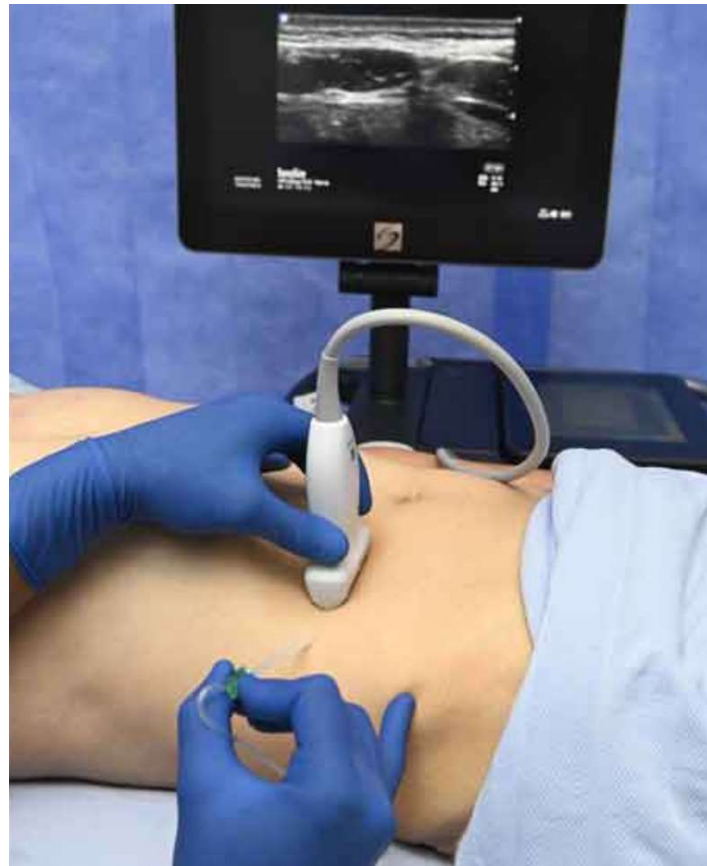


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Rectus Sheath Block

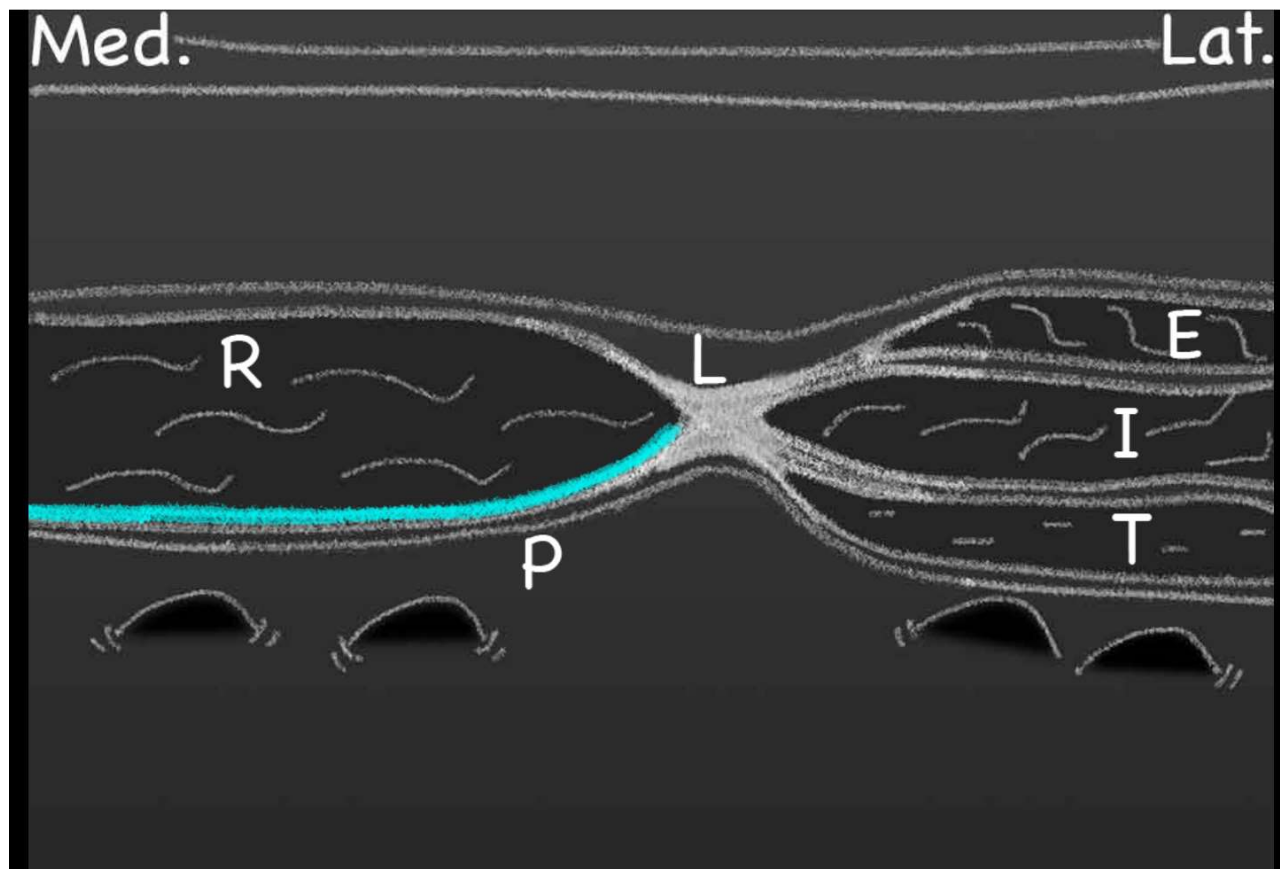


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ectus Sheath

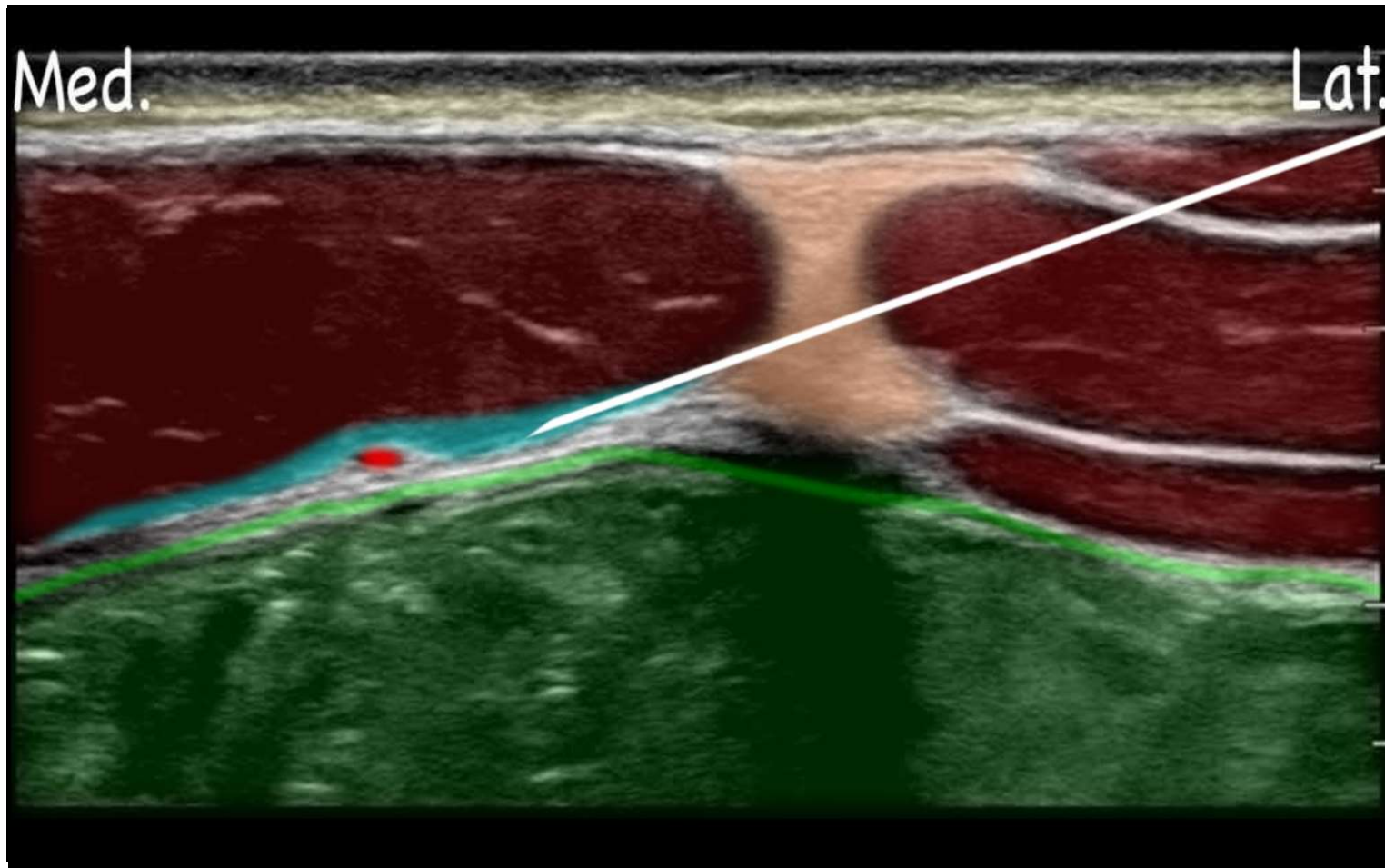


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Rectus Sheath Coverage

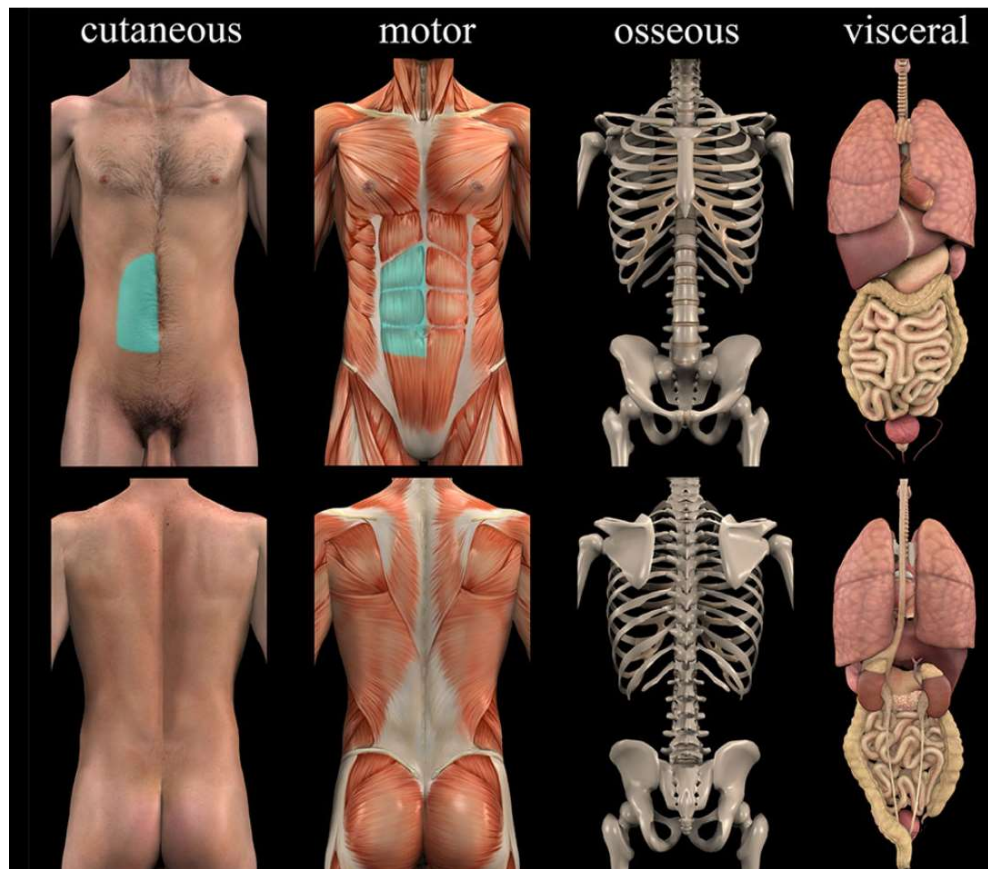
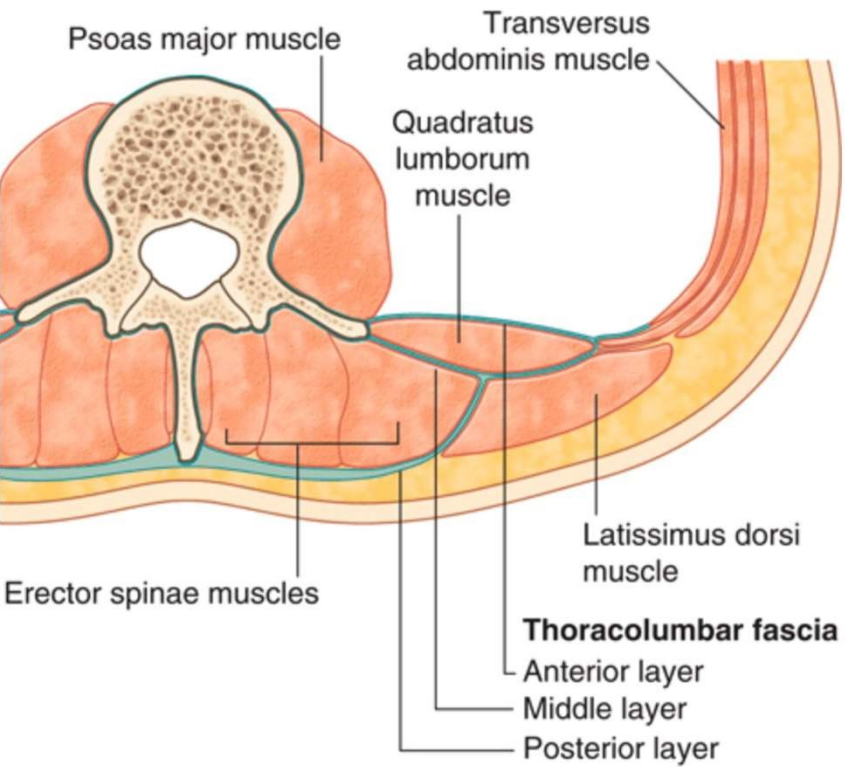
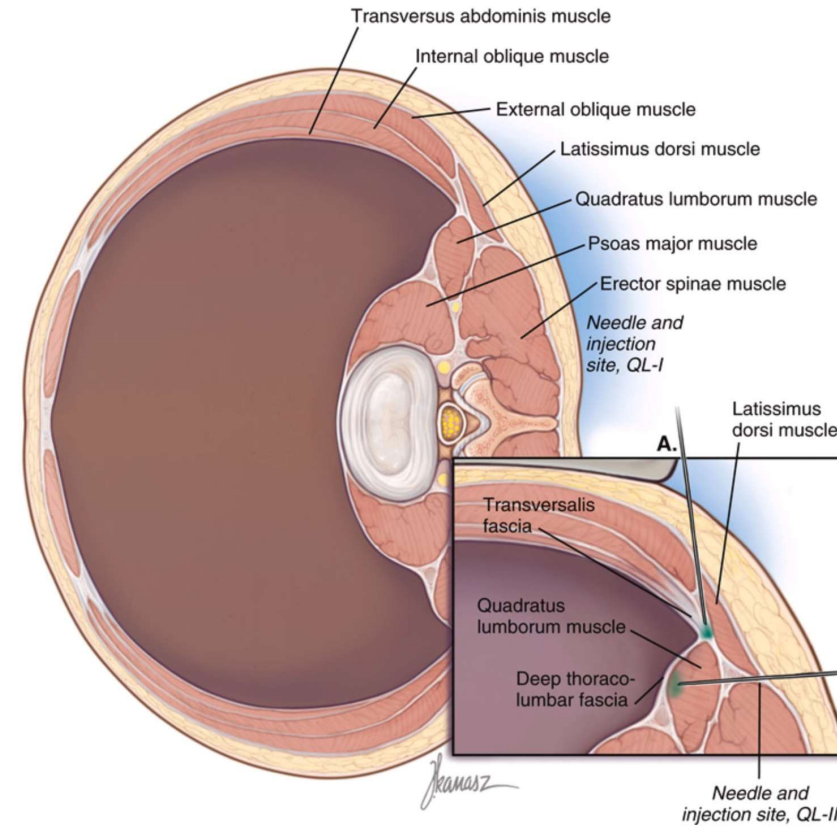


Image from AnSo-Anaesthesia Sonoanatomy

Quadratus Lumborum



From Drake RL, Vogl AW, Mitchell AWM. Gray's Anatomy for Students, 4th ed. Philadelphia; Elsevier; 2020.



From Kanasz, Joseph. **Different sites of injection in relation to the quadratus lumborum muscles.** Brown's Atlas of Regional Anesthesia 7th edition, Ehab Farag, 2024, p. 315.

Ergonomics – Anterior QL



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Anterior Quadratus Lumborum

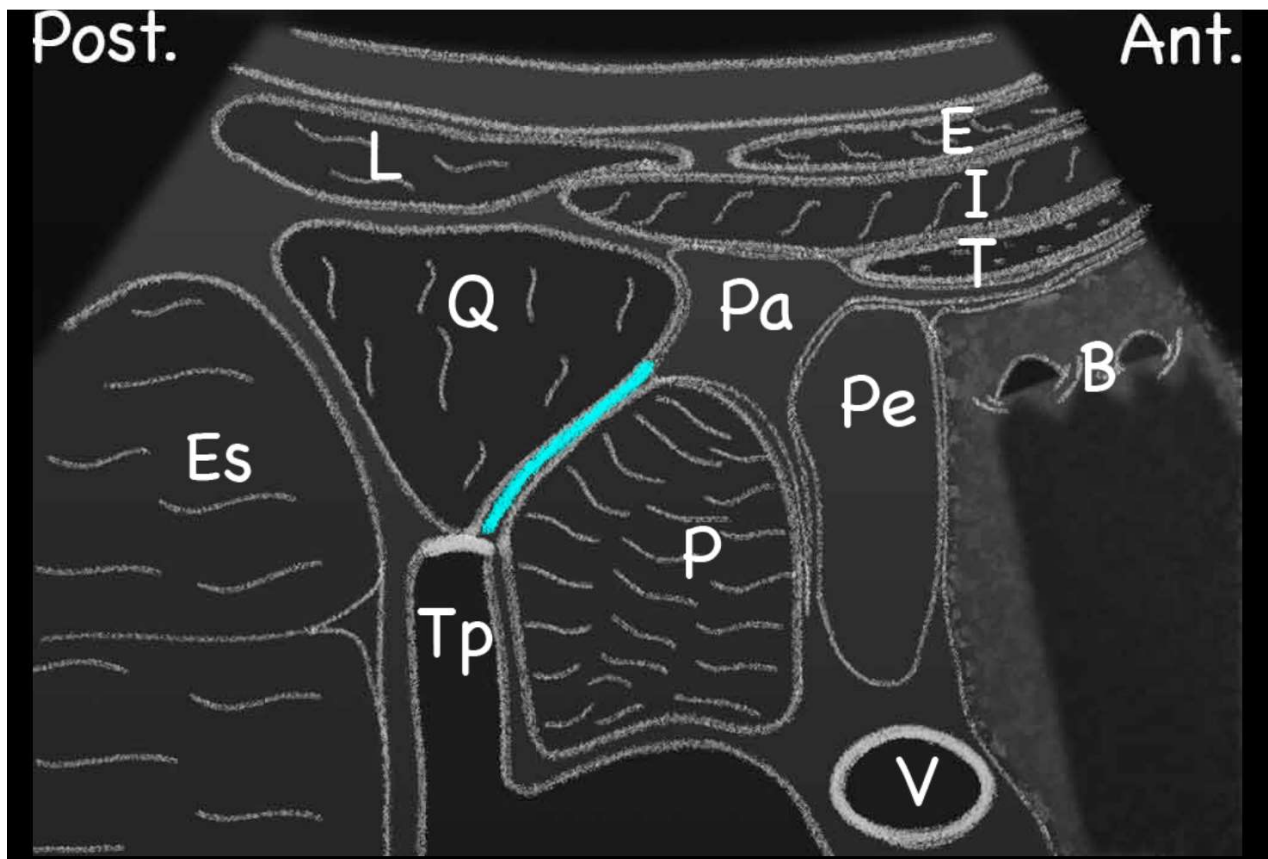


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Anterior Quadratus Lumborum

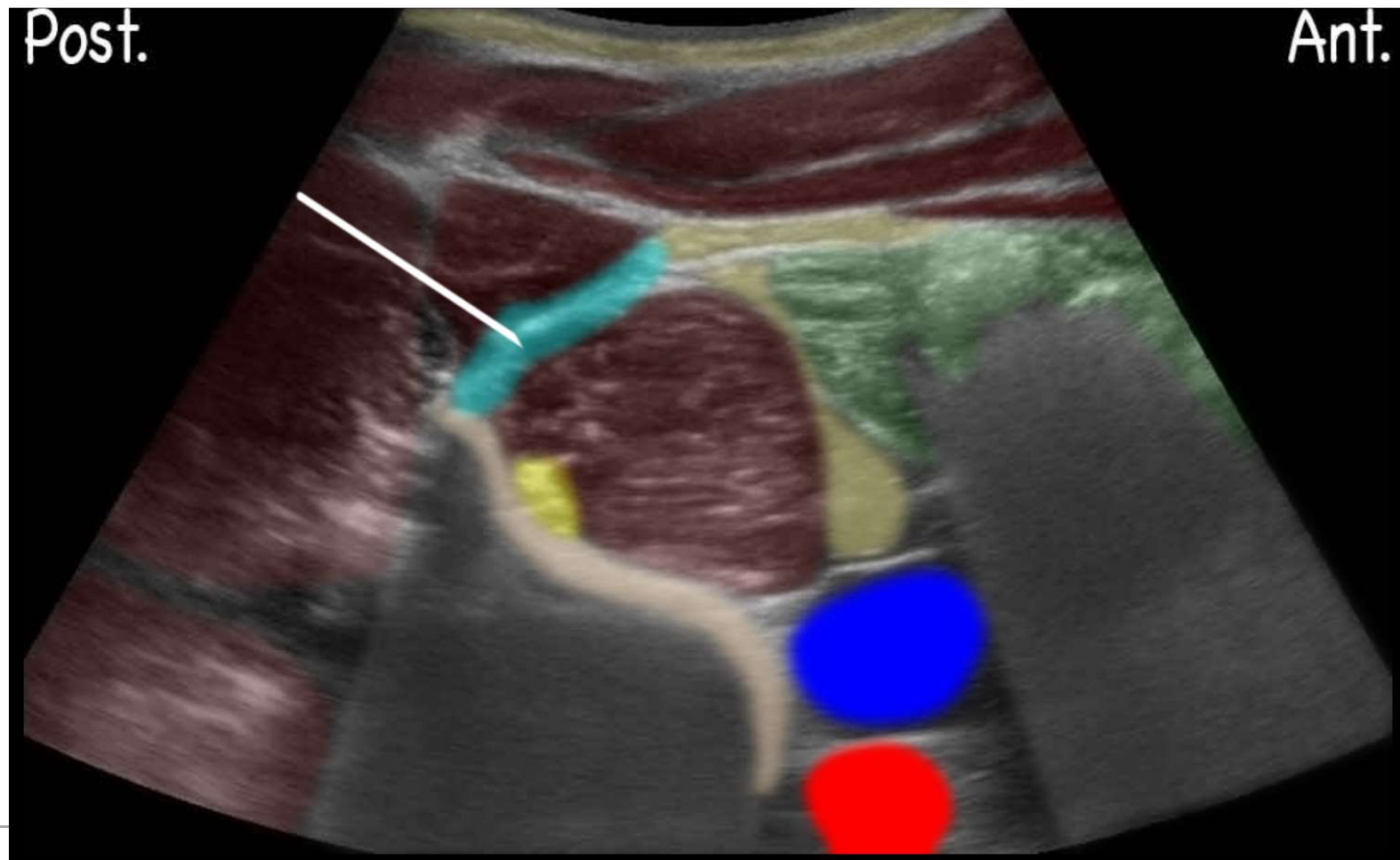


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Quadratus Lumborum Coverage

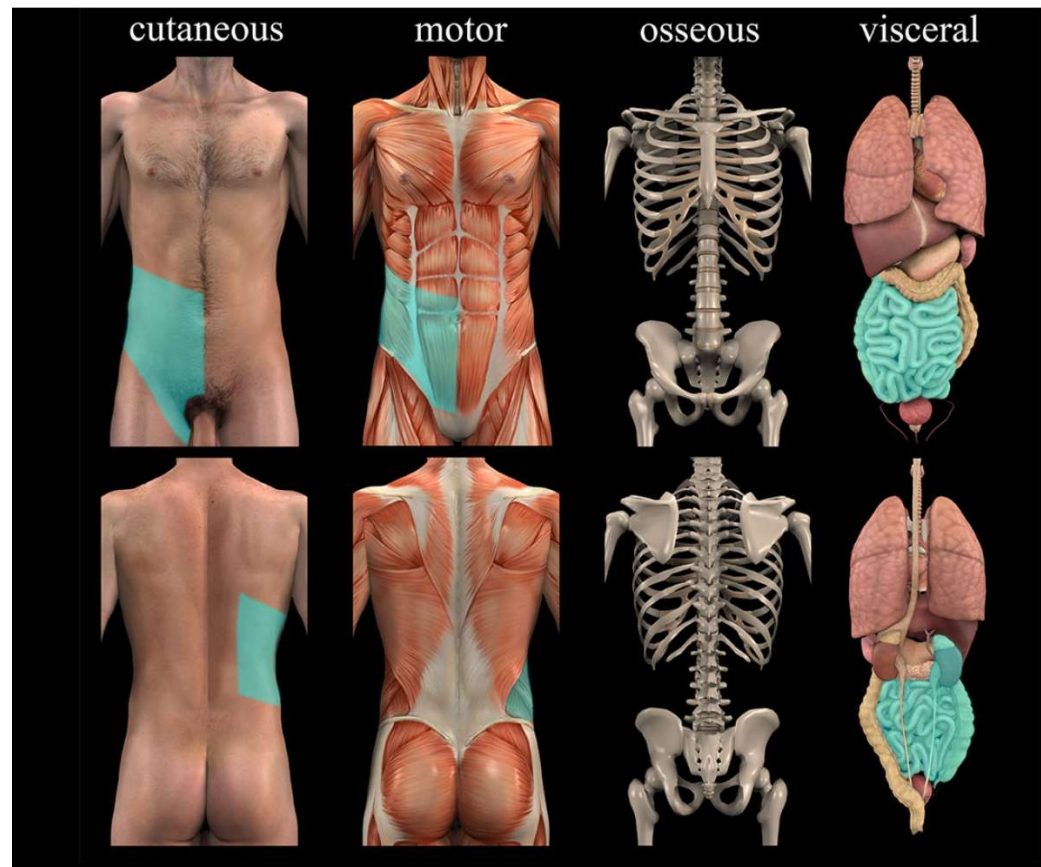


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SUMMARY

	Mid-Axillary TAP	Subcostal TAP (U)	Subcostal TAP (L)	Rectus Sheath	Anterior
Coverage	T11-12	T6-9	T9-12	T9-11	T10-L1
Cutaneous	X	X	X	X	X
Motor	X	X	X	X	X
Visceral					X
Volume (per side)	20 mL	20 mL	20 mL	10-30 mL	20-30 mL
Complications	Bowel puncture, LAST, hematoma	Bowel puncture, LAST, hematoma	Bowel puncture, LAST, hematoma	Visceral organ/bowel puncture, LAST, hematoma	Visceral organ/bowel puncture, LAST, hematoma, spread to lumbar plexus

Key Points

Truncal fascial plane blocks are dependent on adequate spread of local anesthetics, so adequate volumes must be used

Direct visualization of nerves is not required to perform these blocks

When performed appropriately, these blocks are very safe and devoid of major complications

For midline incisions, bilateral blocks are needed

Questions?

References

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- Elsharkawy, H., & Farag, E. (2024). Quadratus Lumborum. In *Brown's Atlas of Regional Anesthesia* (7th ed., pp. 313–318). chapter, Elsevier.
- "AnSo-Anaesthesia Sonoanatomy." Mobile App.
- Carney J, Finnerty O, Rauf J, Bergin D, Laffey JG, Mc Donnell JG. Studies on the spread of local anaesthetic solution in transversus abdominis plane blocks*. *Anaesthesia*. 2011;66(11):1023-1030.