

Use of Superficial Cervical Plexus Block for Cervical Lymph Node Biopsy in Patient with Mediastinal Mass and Compromised Airway

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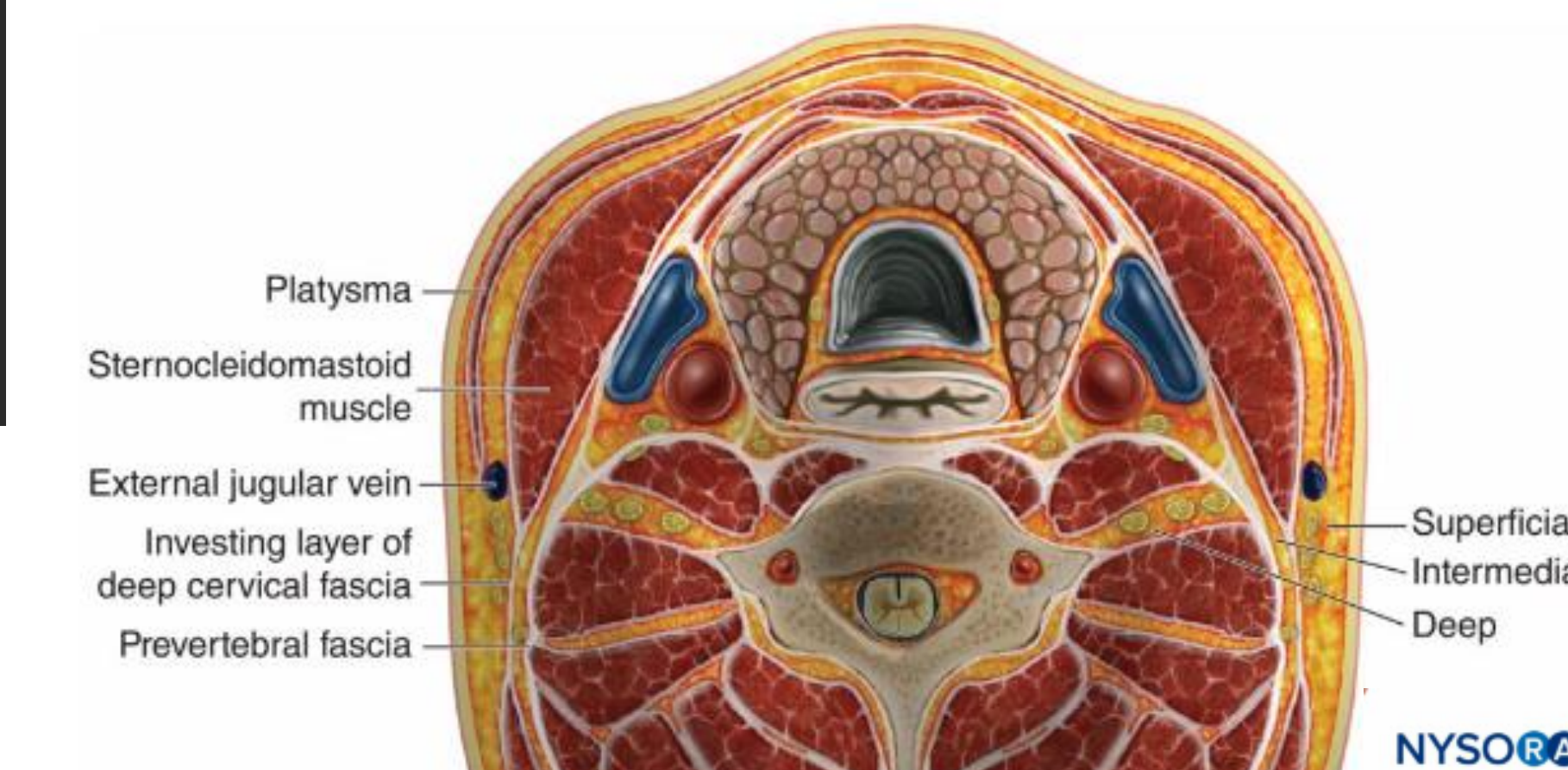
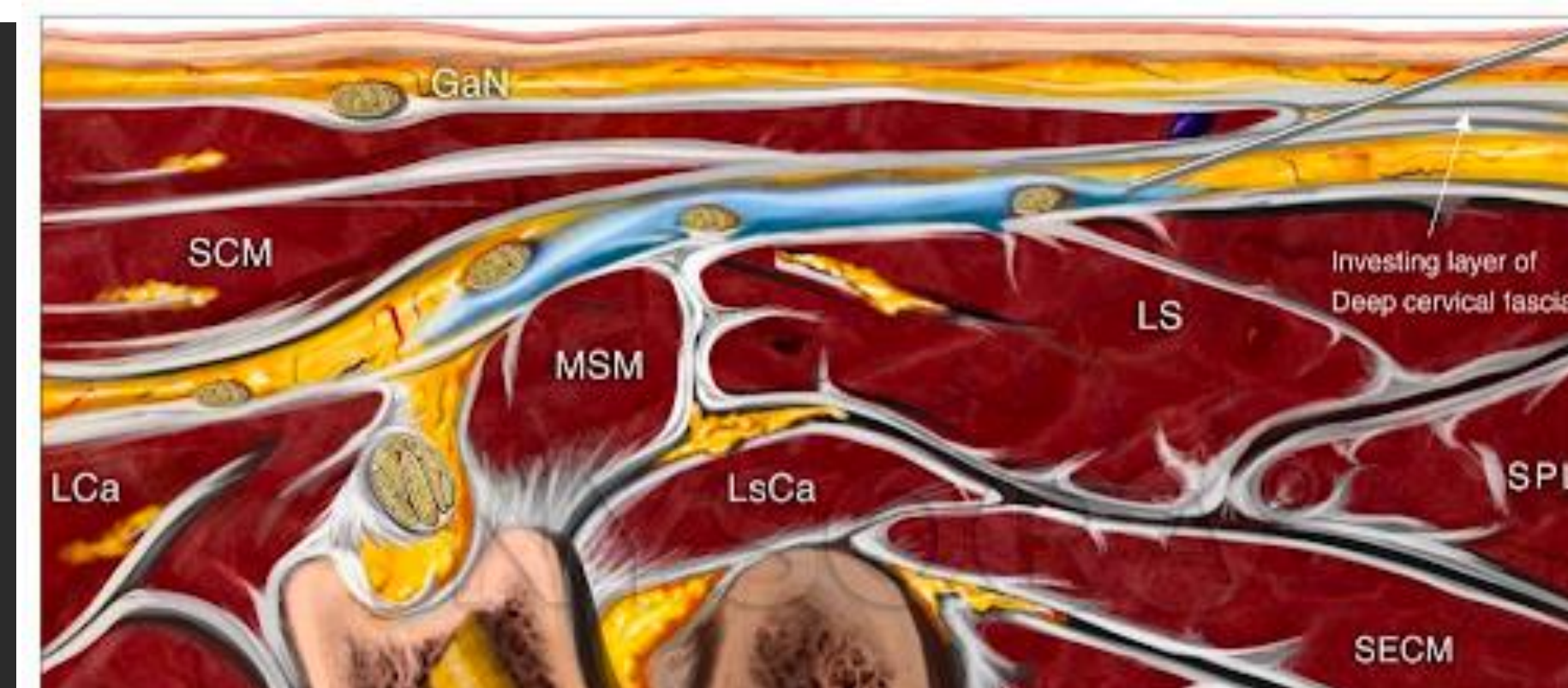
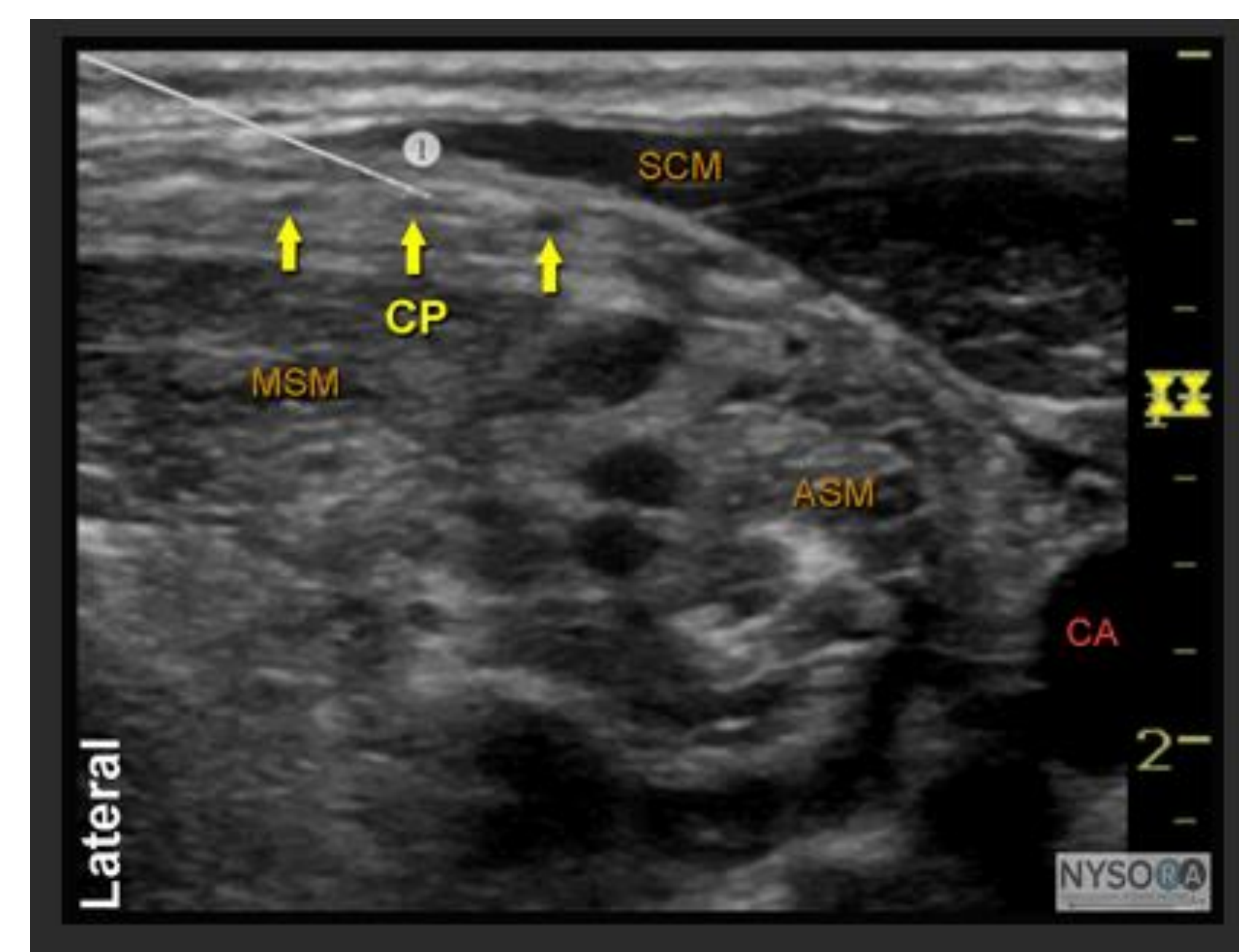
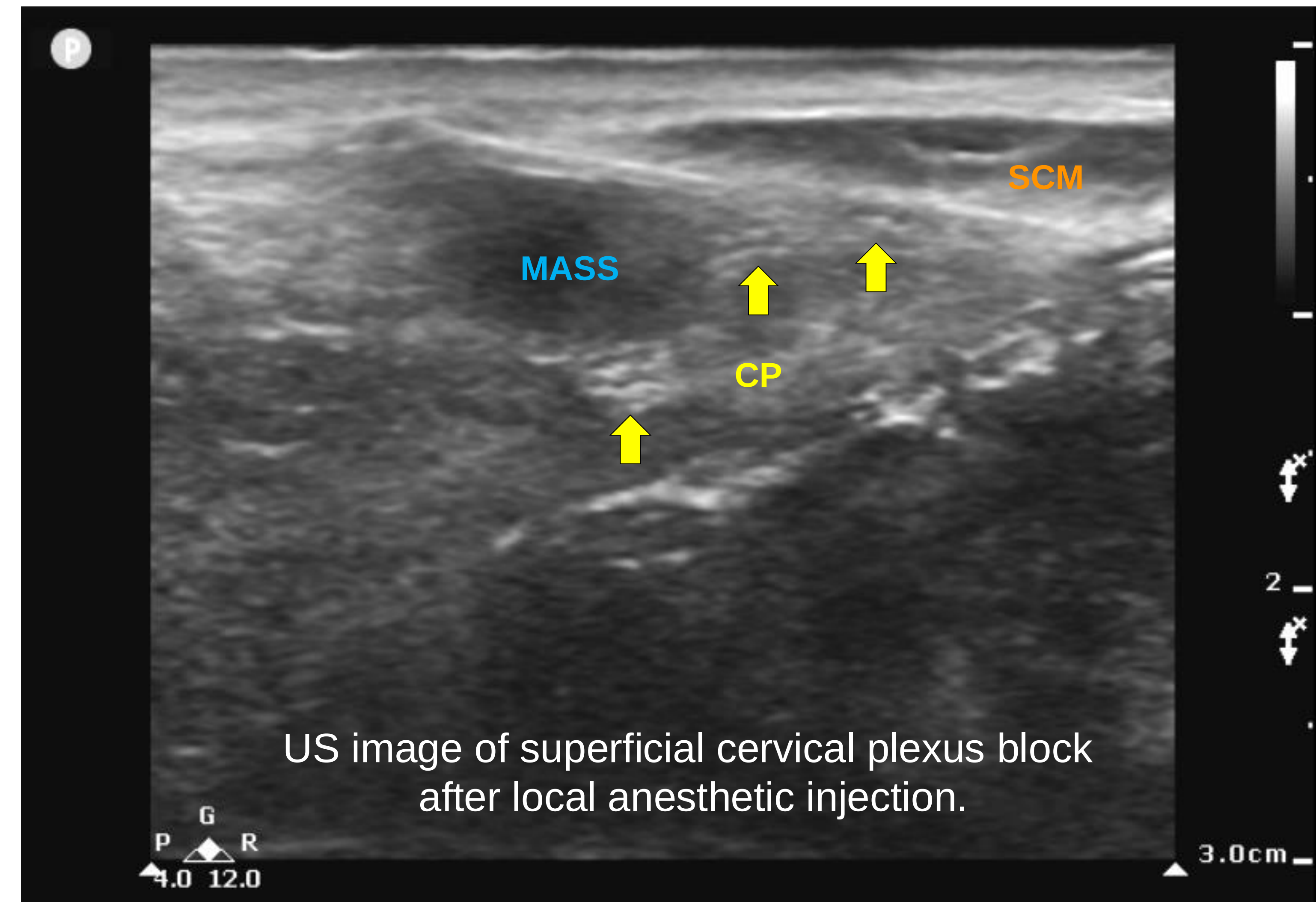
BACKGROUND

- Thoracic masses can cause distortion, compression, or obstruction of upper and lower airways, easily missed in airway examination.
- CT Thorax is useful to evaluate airway patency and possible mass effects.
- Upper airway obstruction or tracheal compression increases risk for failed intubation.
- Additionally, there is concern with deep sedation and paralysis for mass to fully obstruct airway.
- Regional anesthesia can be a useful alternative to general anesthesia in these cases.
- Superficial cervical plexus block provides good coverage for a cervical lymph node biopsy.

CASE DESCRIPTION

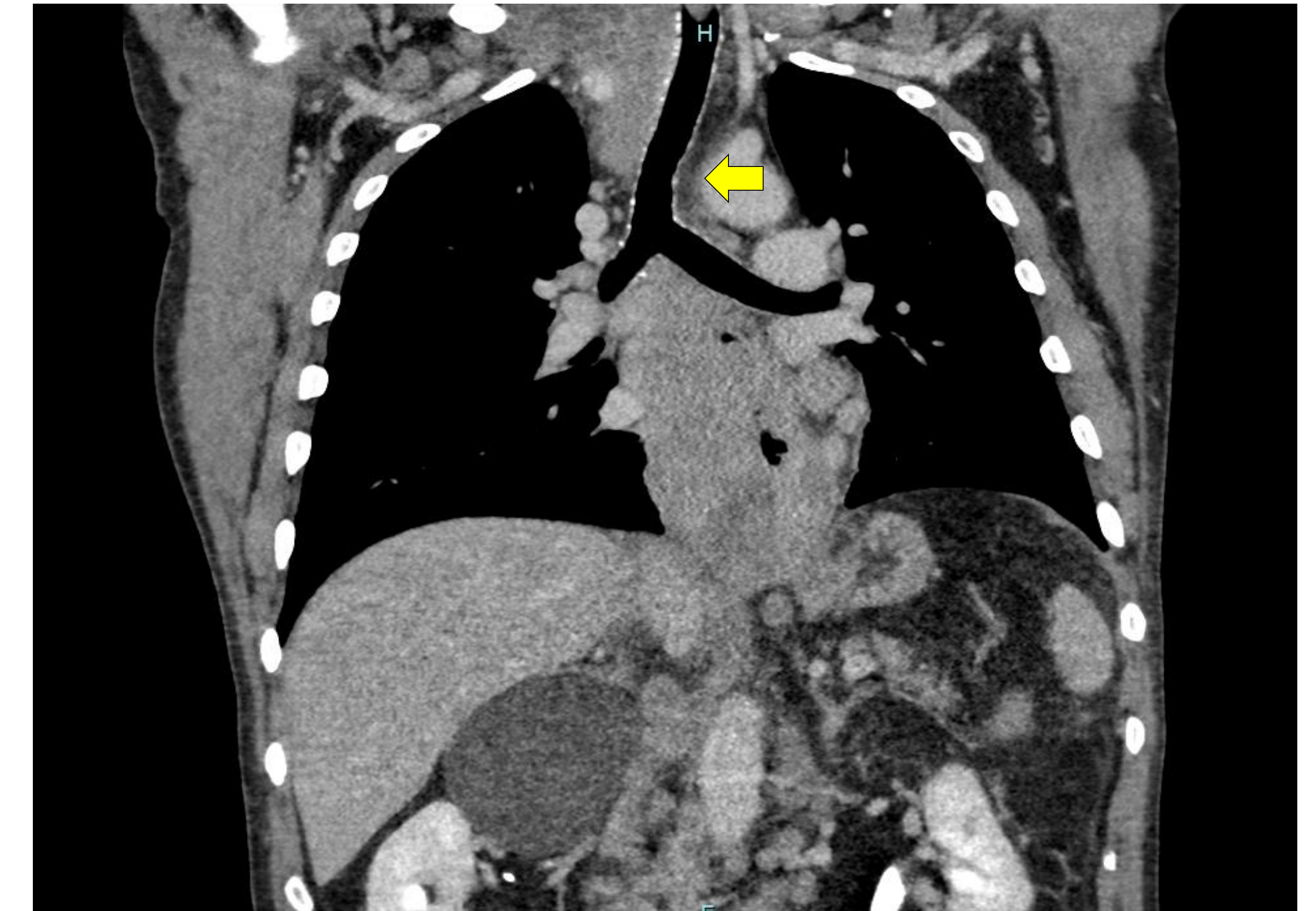
- 61 year-old male, no PMHx, with progressive dysphagia to solids and liquids, and orthopnea
- CT scan: esophageal mass, extensive lymphadenopathy, almost complete narrowing of distal esophagus, left shift of trachea
- Scheduled for lymph node biopsy by IR under MAC; due to concern for airway compromise and intolerance to laying flat, plan was changed
- Multidisciplinary review of management with Thoracic Surgery; plan to proceed in the operating room
- Cervical lymph node biopsy under superficial cervical plexus block and MAC, in a seated position with spontaneous ventilation
- Given Fentanyl and Ketamine for sedation prior to cervical plexus block with 10mL 0.5% bupivacaine and 5ml 2% lidocaine
- Patient remained with head of bed up; received moderate sedation with ketamine and propofol infusion and tolerated procedure well

FIGURES



Bottom 3 images from NYSORA².

CT THORAX



DISCUSSION

- Thoracic masses can cause proximal and distal airway compression and obstruction, often dynamic, i.e. position-related
- Regional anesthesia and spontaneous ventilation should be considered as first-choice plan for such patients.

REFERENCES

1. Ahuja V, et al. Cervical lymphadenectomy in a high-risk patient under superficial cervical plexus block as an alternative to general anesthesia. *J Anaesthesiol Clin Pharmacol*. 2021;37(3):488-489.
2. Bendtsen TF, et al. Ultrasound-guided cervical plexus nerve block. NYSORA. Accessed November 2, 2024. <https://www.nysora.com/techniques/head-and-neck-blocks/cervical/ultrasound-guided-cervical-plexus-block/>.
3. Jarvis MS, Rajan RS, Roberts AM. The Cervical Plexus. *BJA Educ*. 2023;23(2):46-51.
4. Opperer M, et al. Depth of cervical plexus block and phrenic nerve blockade: a randomized trial. *Reg Anesth Pain Med*. 2022;47(4):205-211.