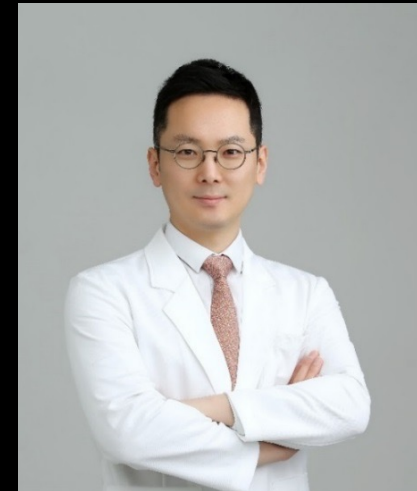


POSTERIOR CERVICAL FORAMINOTOMY BY UBE (DUAL PORTAL SURGERY)



Nam Lee, MD
Master's Degree of Yonsei University

Neurosurgery, Yonsei-Cheek Hospital, Busan, Korea

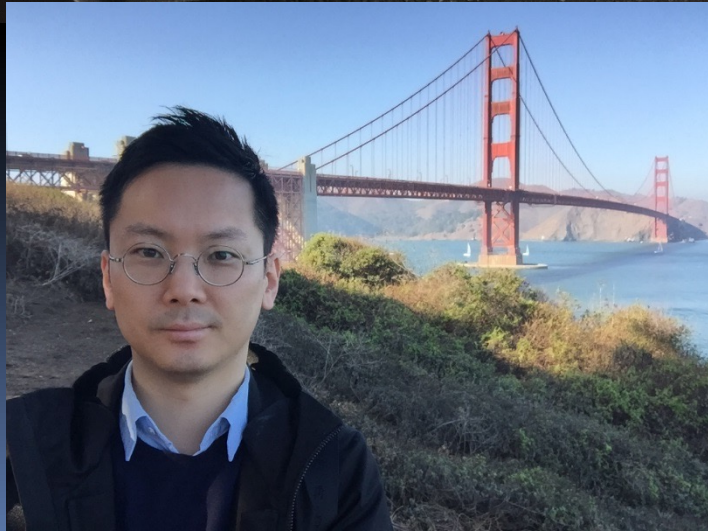
2ND ANNUAL AMPLIFY SURGICAL
ENDOSCOPIC SPINE SYMPOSIUM
FEATURING dualPortal™ AND dualX® SYSTEMS
MARCH 4, 2023 | LOS ANGELES, CA

Curriculum Vitae

- 2014 Clinical fellowship in Spinal Neurosurgery, Severance Hospital, Seoul, Korea.
- 2015 Clinical research assistant professor in Spinal Neurosurgery, Severance Hospital, Seoul, Korea.
- 2019 Clinical assistant professor in Spinal Neurosurgery, Severance Hospital, Seoul, Korea.
- 2021 – 2023 Clinical associate professor in Spinal Neurosurgery, Severance Hospital, Seoul, Korea.
- Korean minimal invasive spinal surgery society (KOMISS) executive director.
- Korean spinal endoscopic surgery society (KOESS) academic secretary.
- The world UBE research society executive director.
- Busan-Ulsan spinal endoscopy research society general affairs director.
- *Master's Degree of Yonsei University*

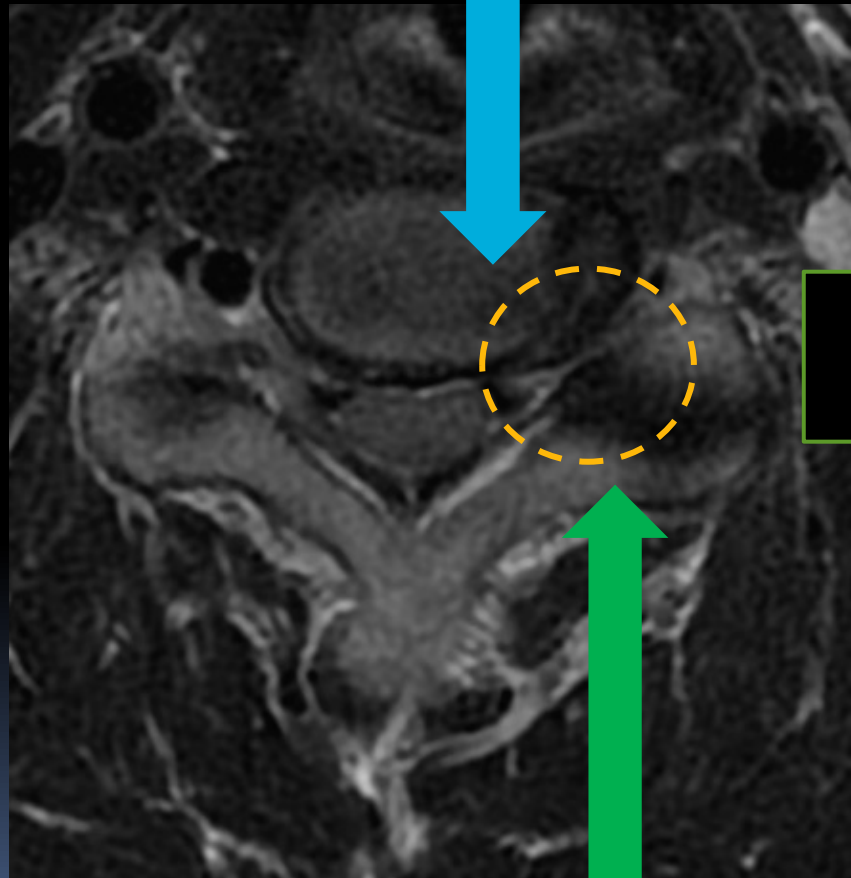


Stanford visiting fellow(2015.11)



Which approach is better??

Anterior?



*Foraminal
lesion*

Posterior?

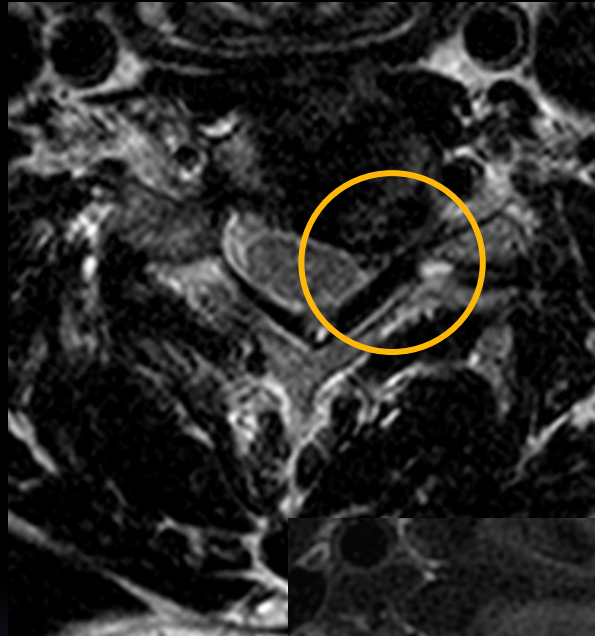
Anterior approach.....



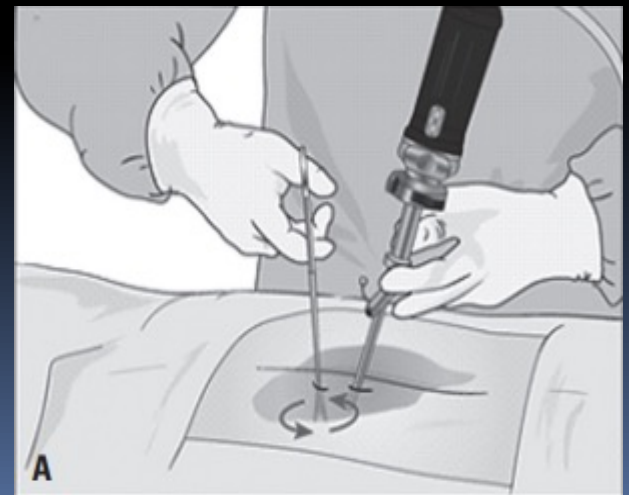
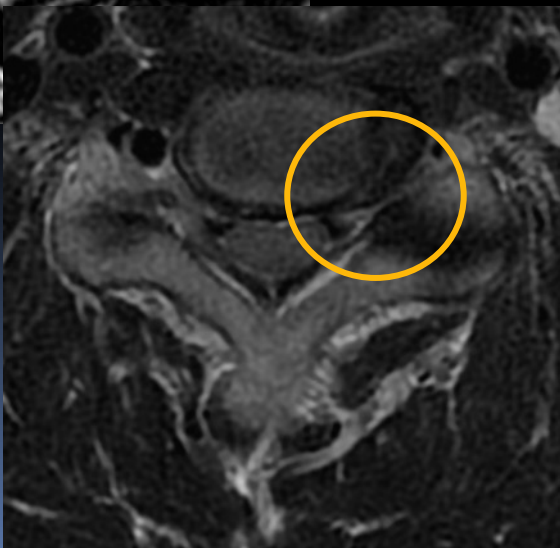
*...is
Gold standard.*

*However, now..
It w.a.s.
Gold standard!!*

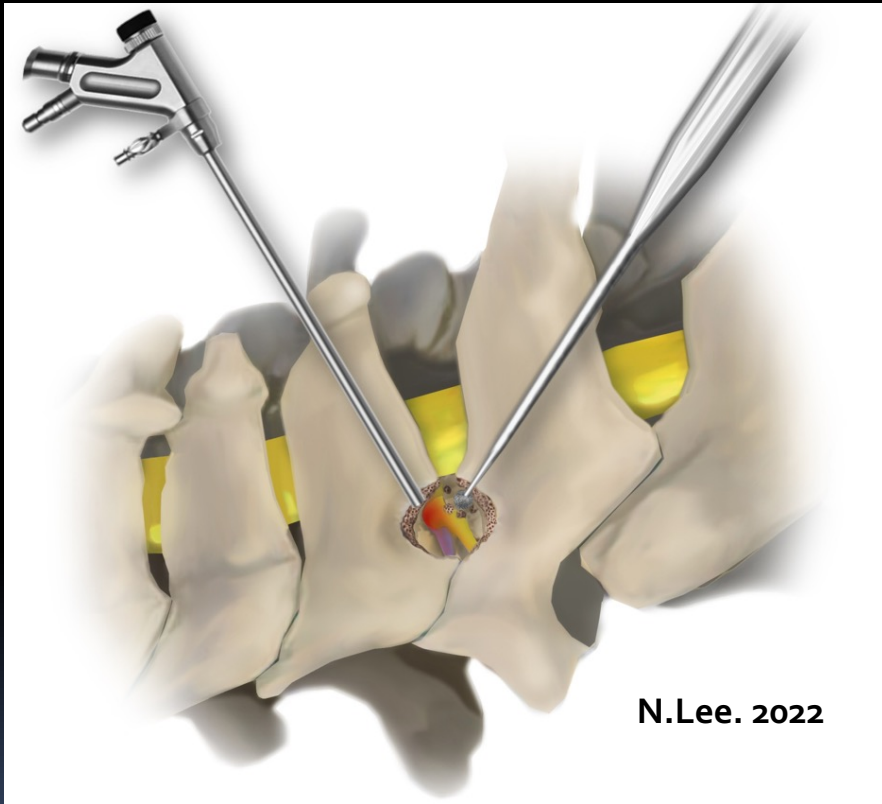
The mainstream is changing



Cervical **paracentral/foraminal** lesion can be treated by UBE surgery (dual portal surgery)



Posterior UBE key-hole surgery

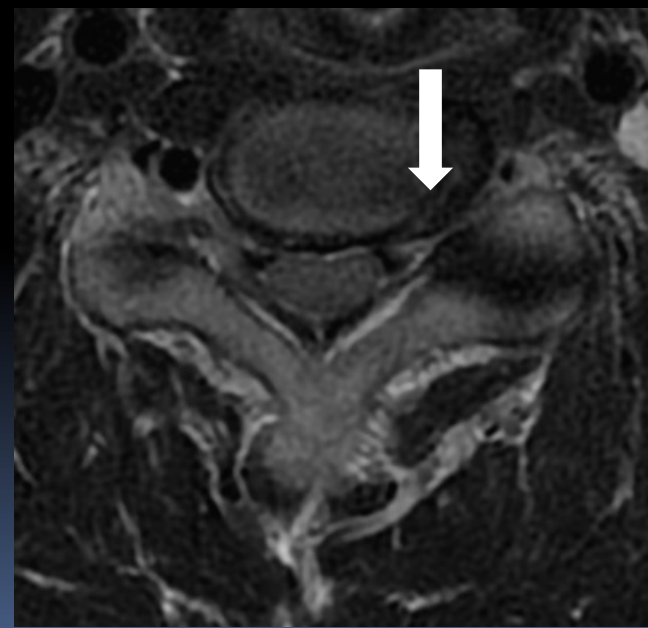
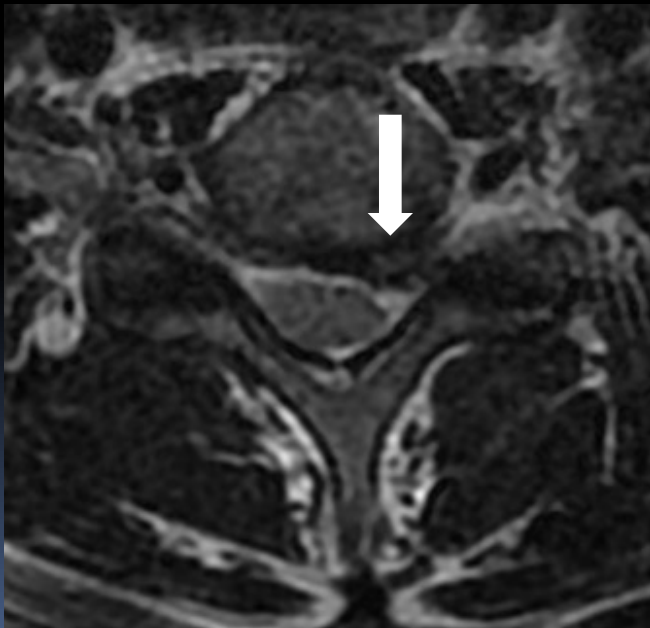


#Step

- Setting/Position
- Portal location
- Making portals
- Initial working space
- Bone work (**Unroofing**)
- Foraminotomy
- Discectomy (if needed)
- Finish

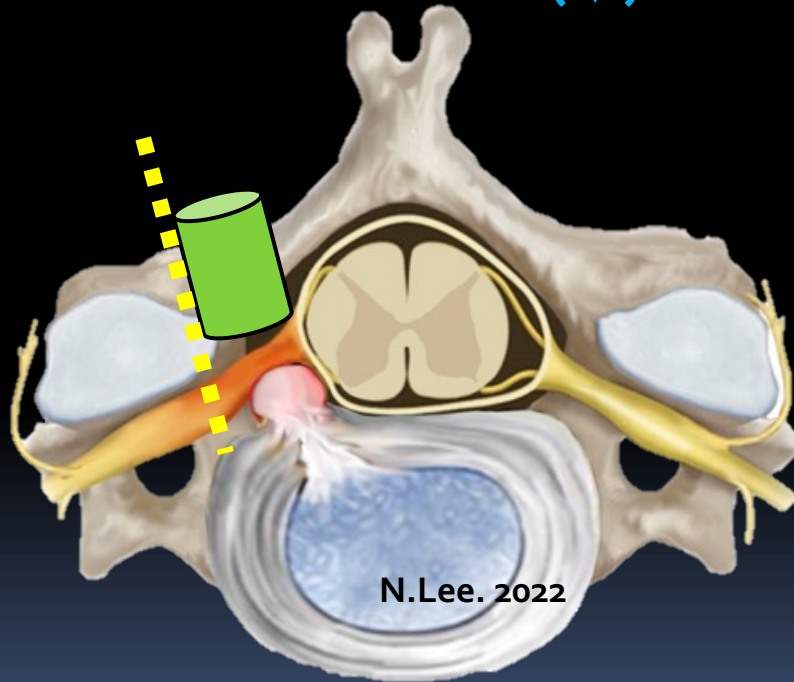
Posterior UBE key-hole surgery

- **PECD** (posterior endoscopic cervical discectomy)
- **PECF** (posterior endoscopic cervical foraminotomy)



Key-hole size & location

- PECD
- **Narrow - medial**
- Facet resection (↓)



- PECF
- **Wide - lateral**
- Facet resection (↑)

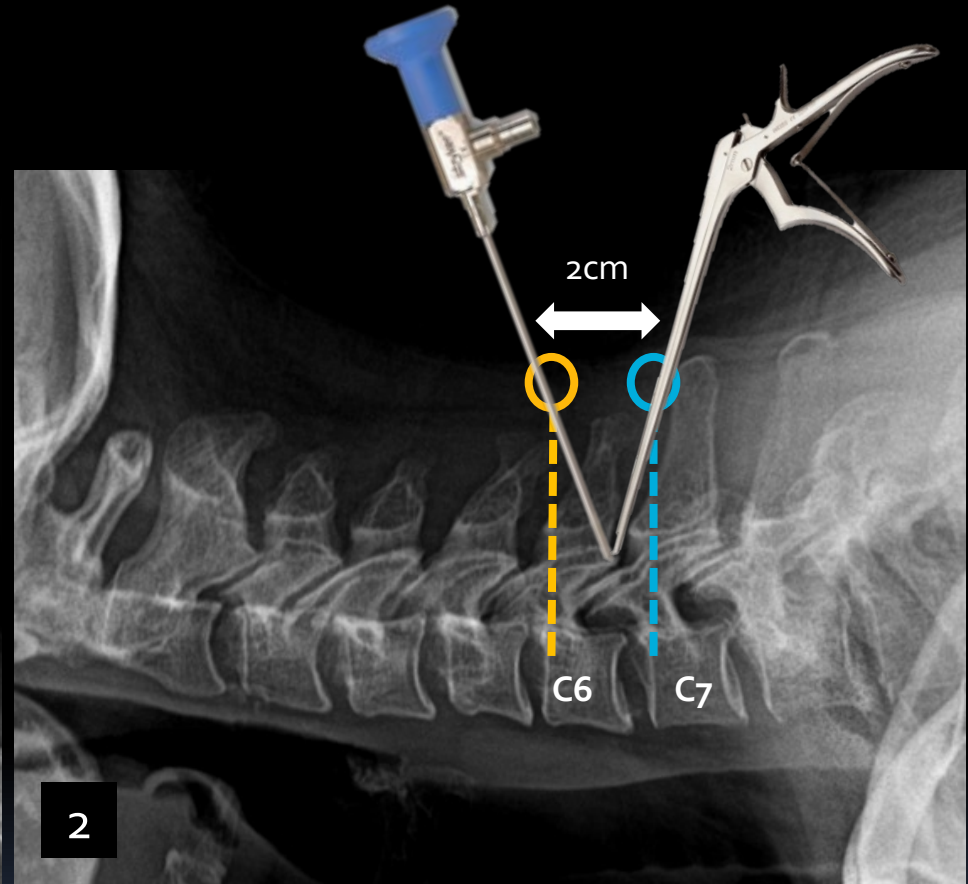
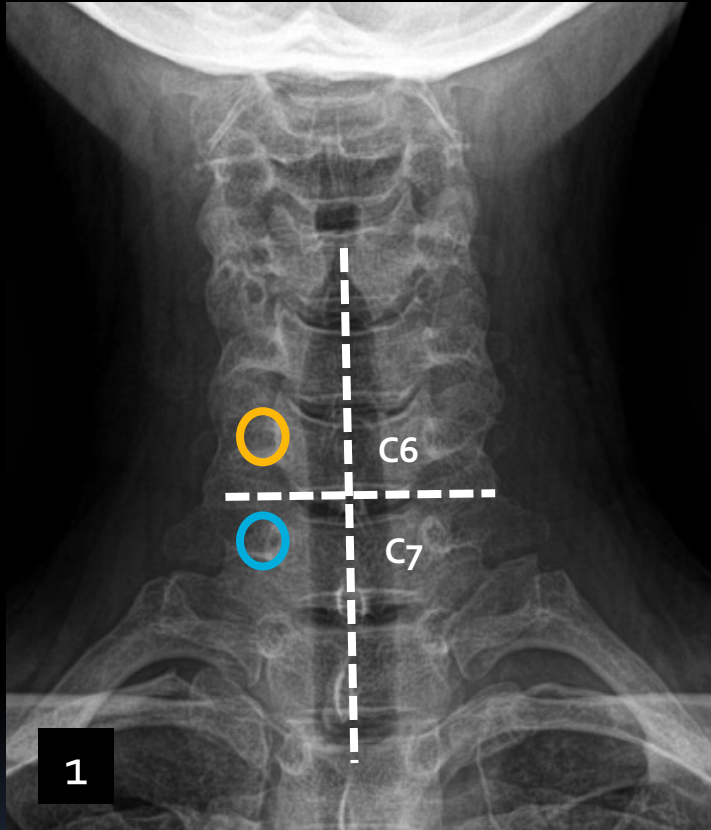


Position: Reverse Trendelenburg



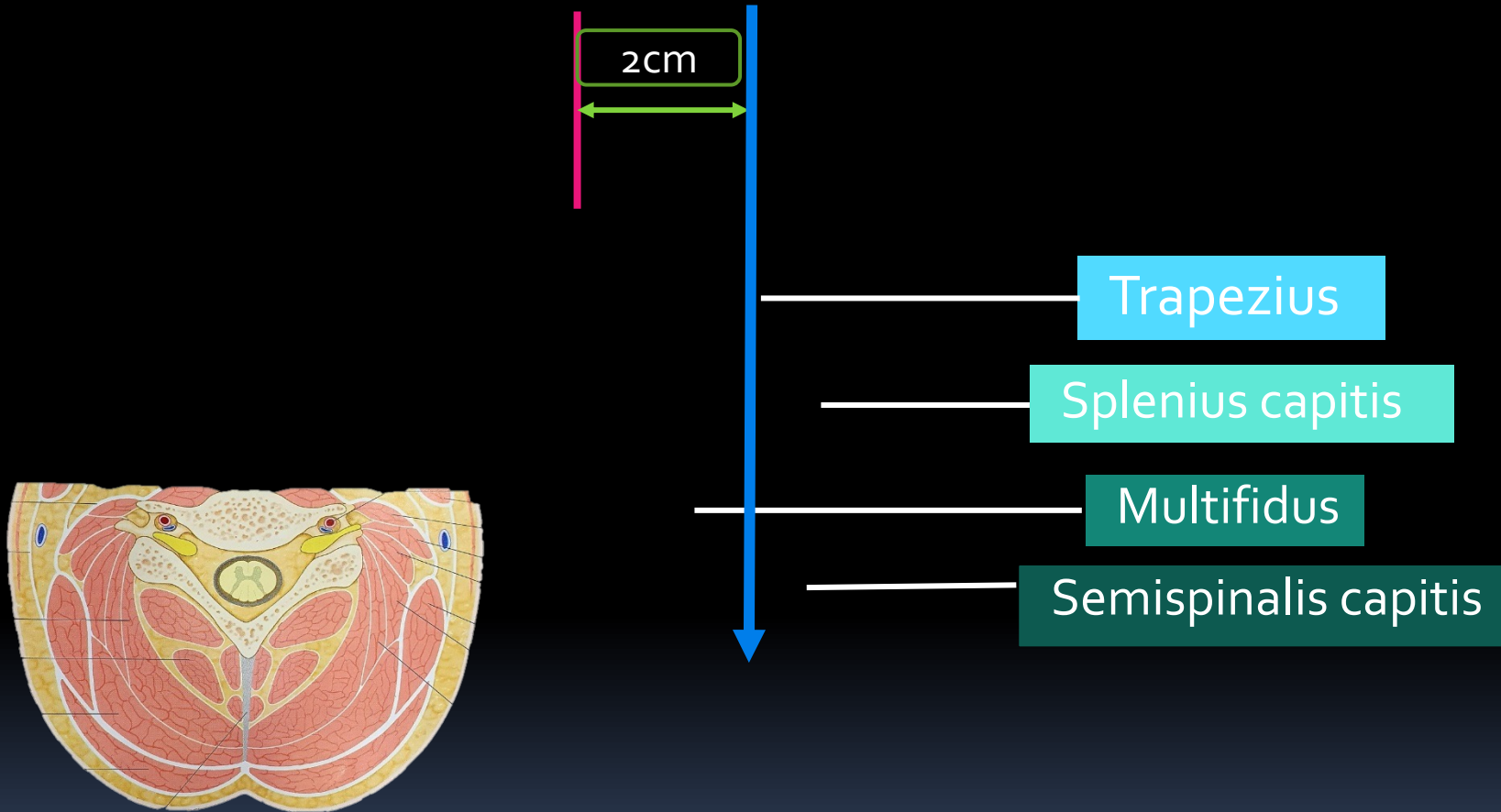
1. **Reverse Trendelenburg** position with endotracheal general anesthesia for UBE cervical decompression. 2. The surgical field should be parallel to the floor with **slight neck flexion**.

Portal location

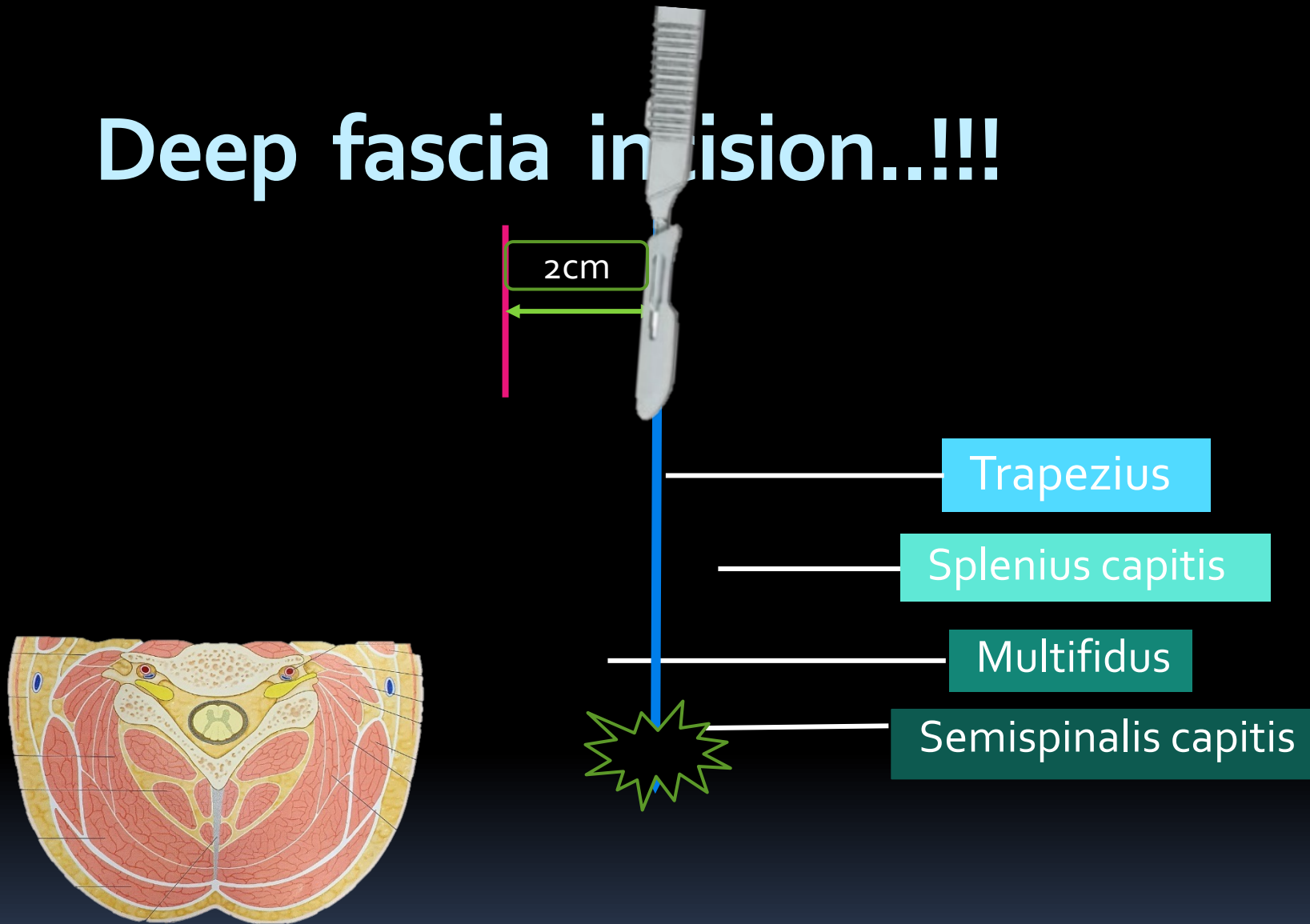


1. True A-P view. Pedicle of C6 is for **scope portal (yellow circle)** and pedicle of C7 is for **instrument portal (blue circle)**. 2. Lateral view. The distance between two portals is about 2-centimeters.

Deep fascia incision..!!!



Deep fascia incision...!!!



*Very important that surgical knife
'penetrates' the muscle layers*

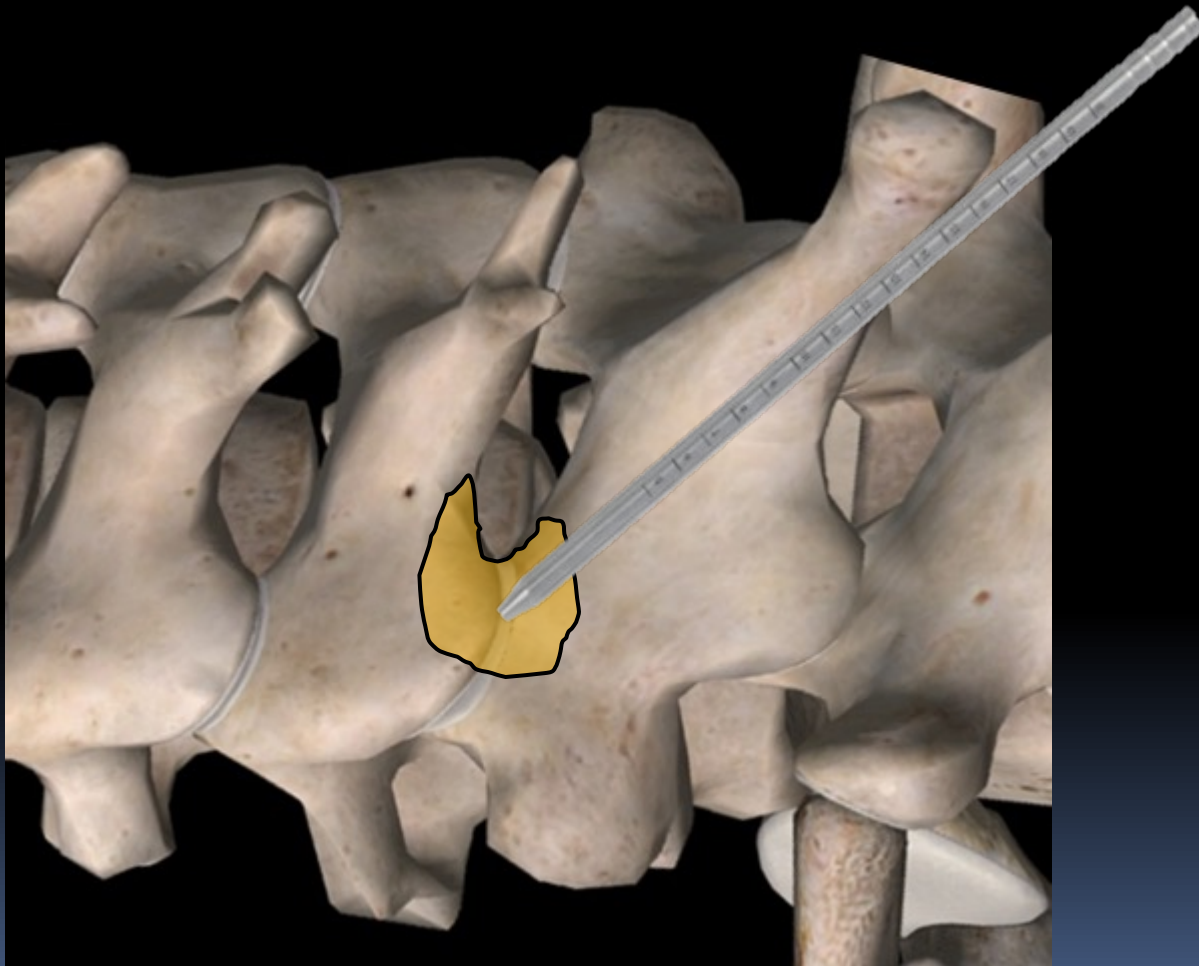
Landing point & Scrubbing



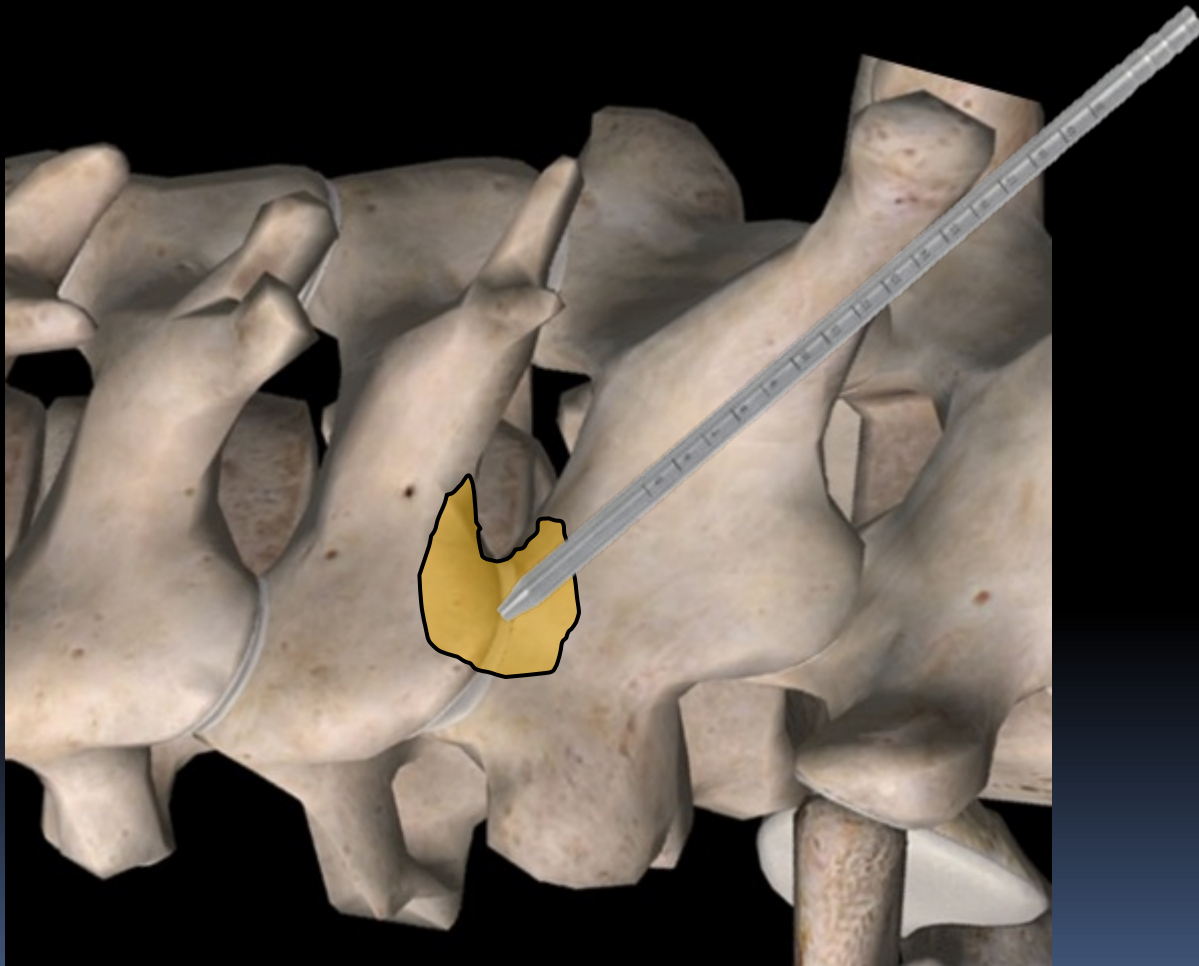
Landing point & Scrubbing



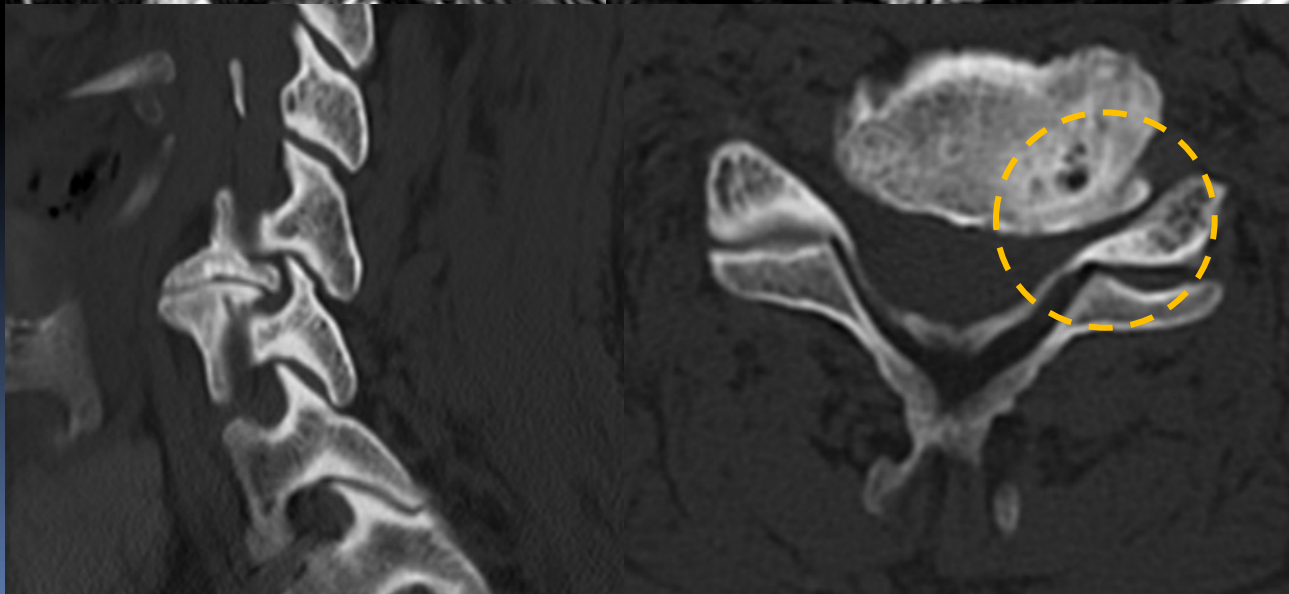
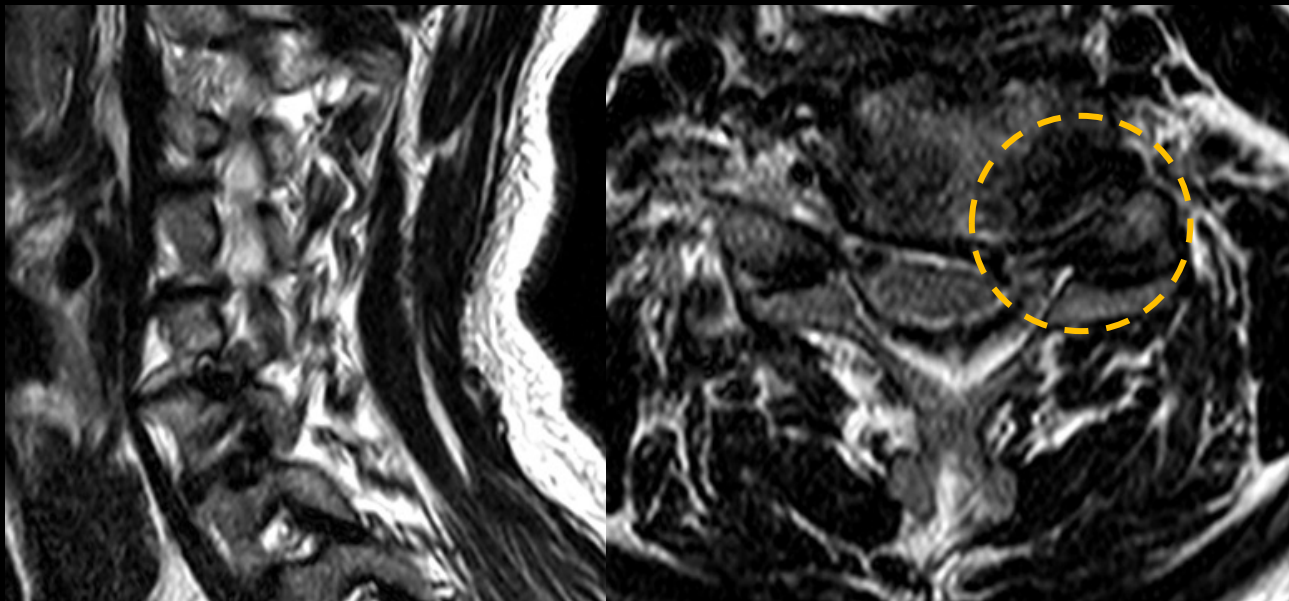
Landing point & Scrubbing



Landing point & Scrubbing



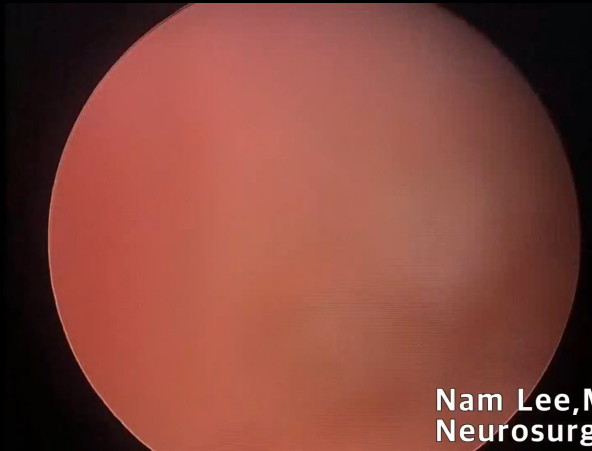
Case #1 F-SS C5/6, Lt



Serial OP vides (1)

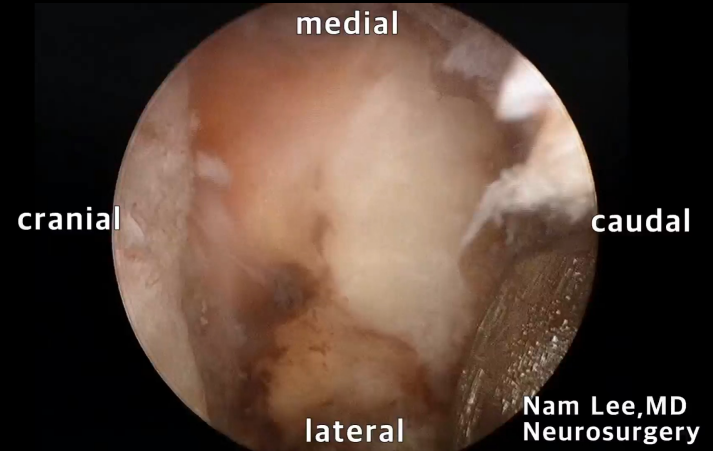


(1) Initial working space



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Neurosurgery

(2) 1st bone work



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Neurosurgery

(3) Epidural space open



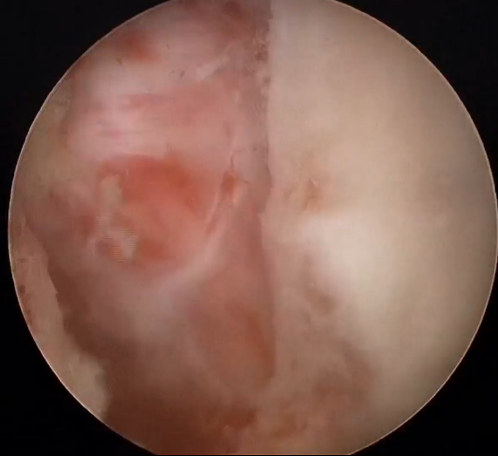
(4) 2nd bone work



Serial OP vides (2)



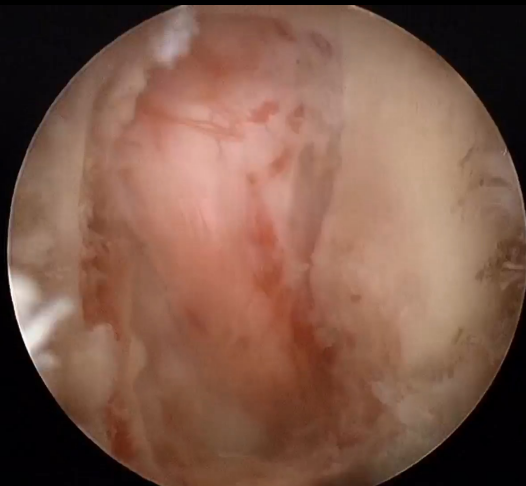
(5) 3rd bone work



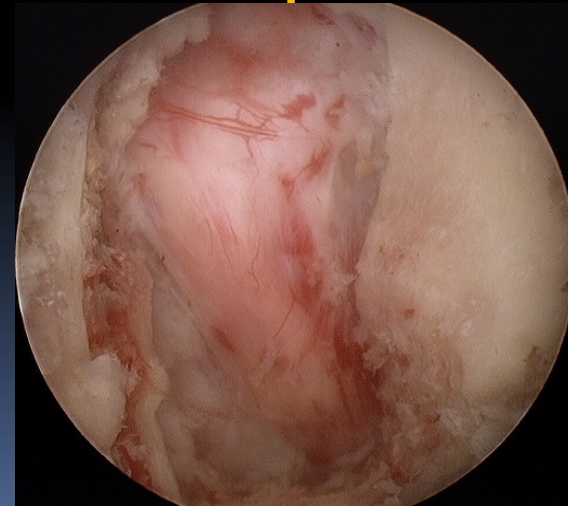
(6) foraminotomy



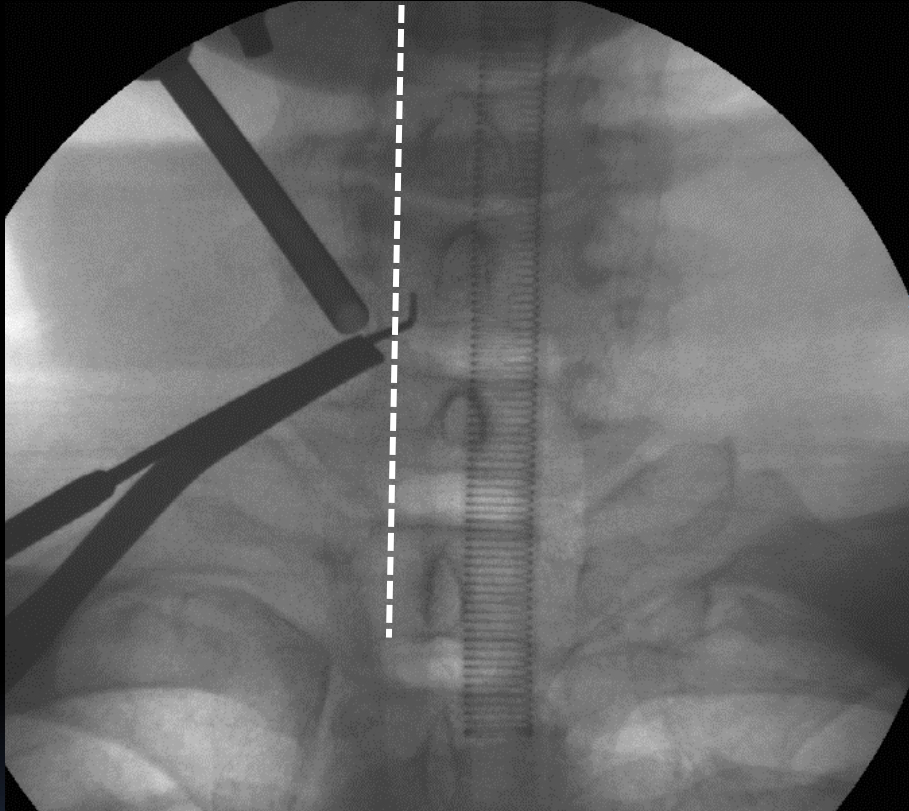
(7) Check free root



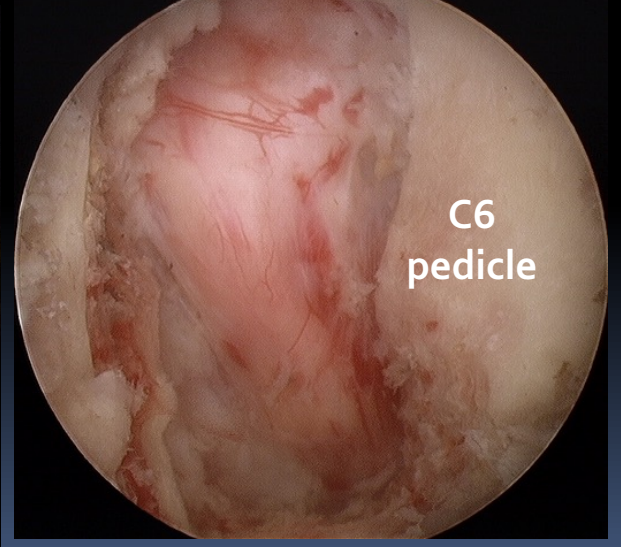
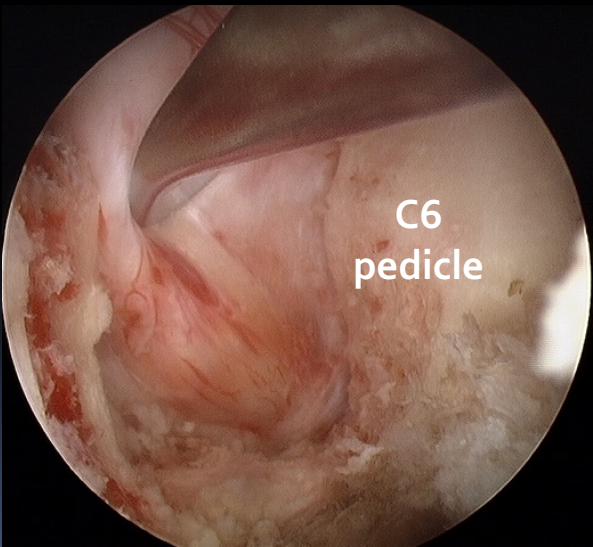
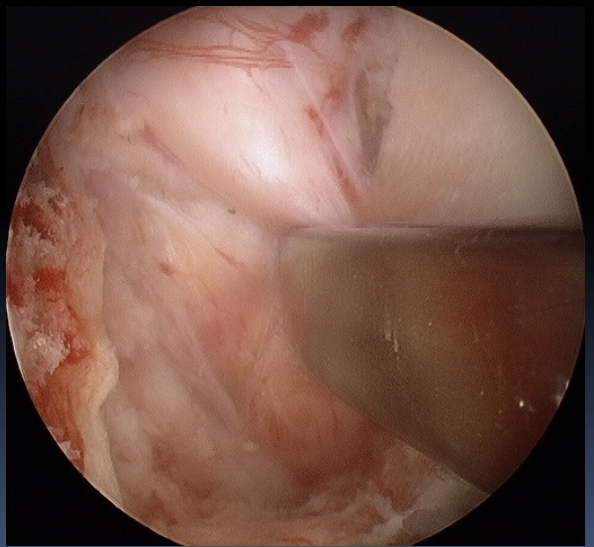
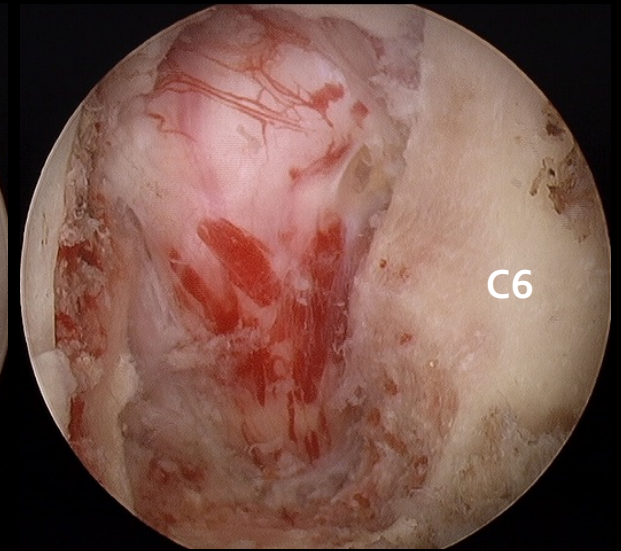
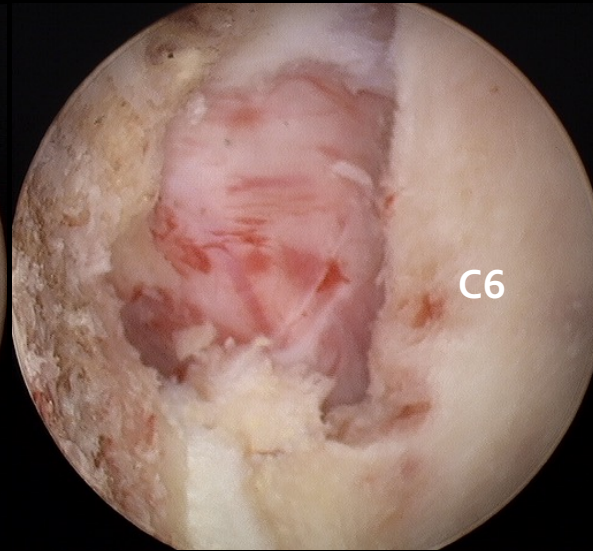
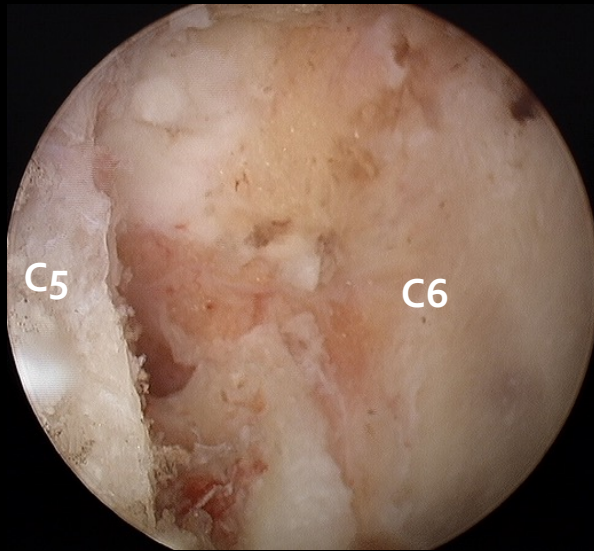
#Final photo



Check 'V-point' of OP level

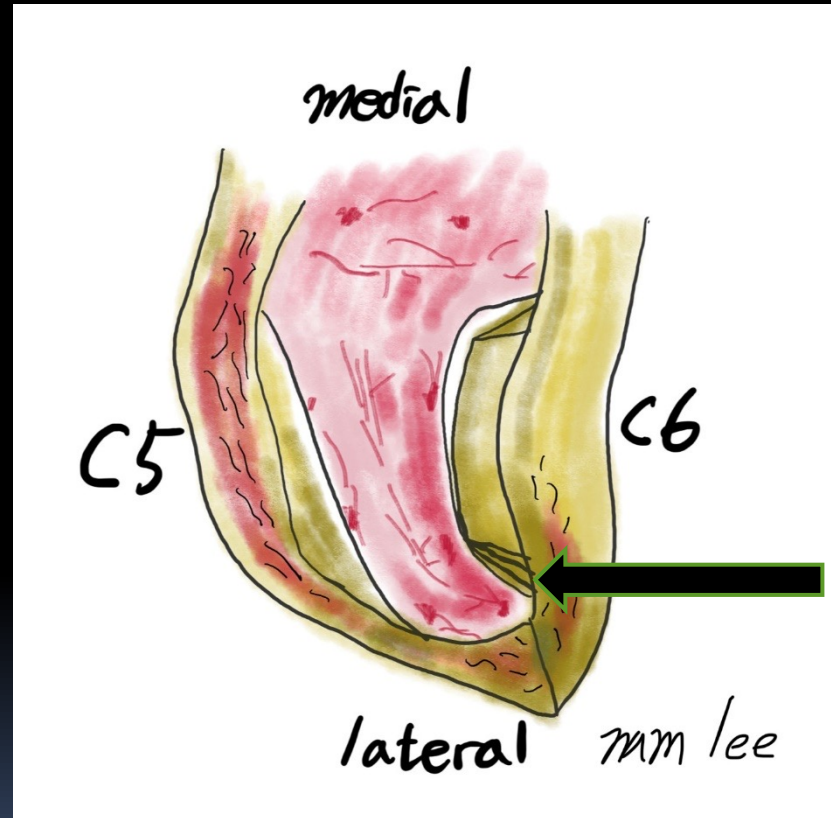


Intra-operative A-P view to confirm the 'V point' of index level.
The blunt hook indicates the 'V point' of C6-C7, left side.



##Endpoint of decompression

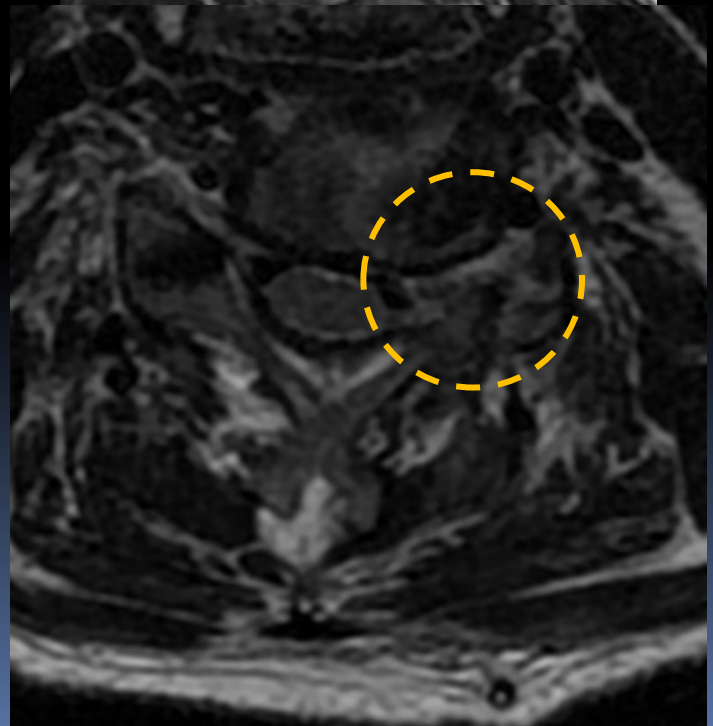
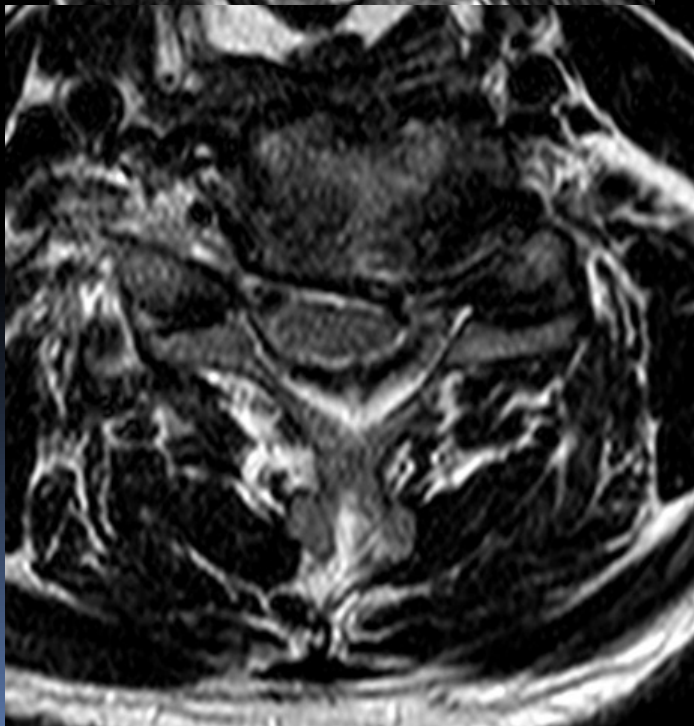
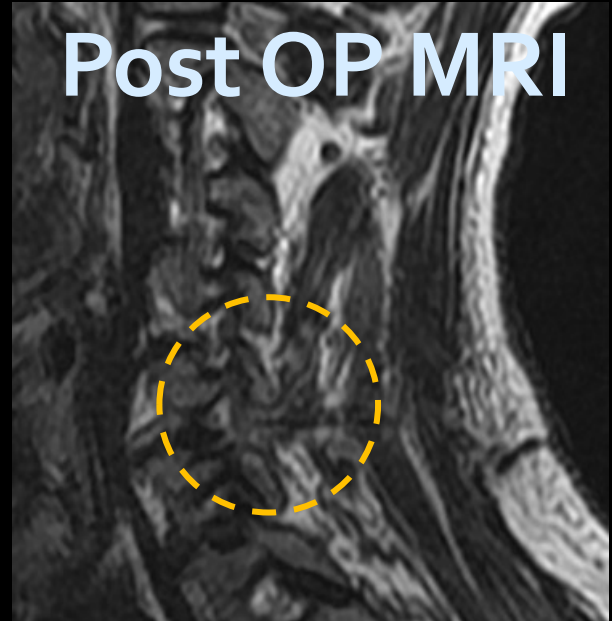
- Free mobilization of nerve root from proximal to distal zone
- Check the **lateral margin of pedicle**



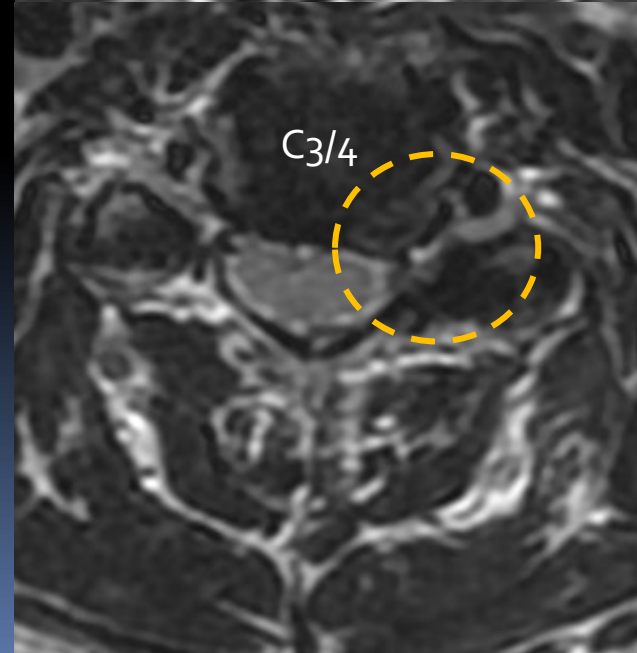
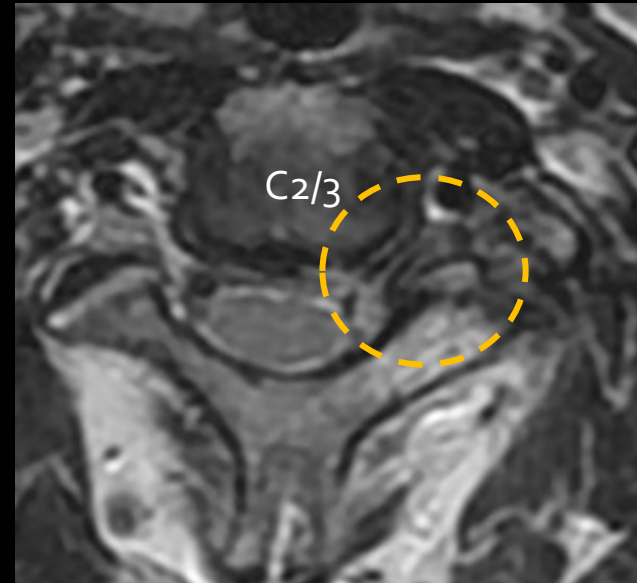
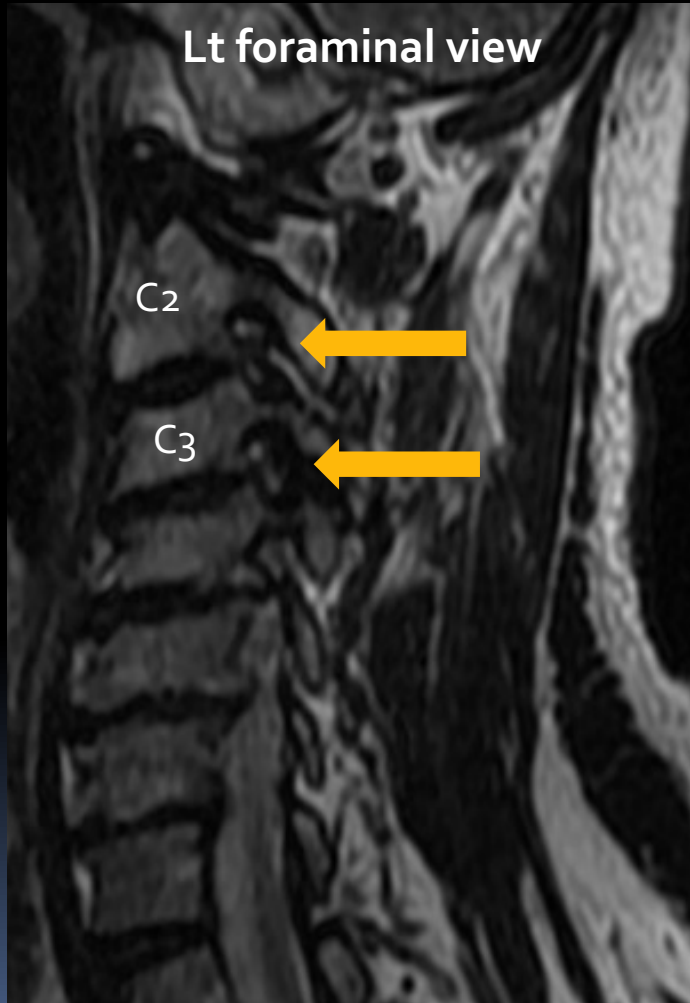
Pre OP MRI



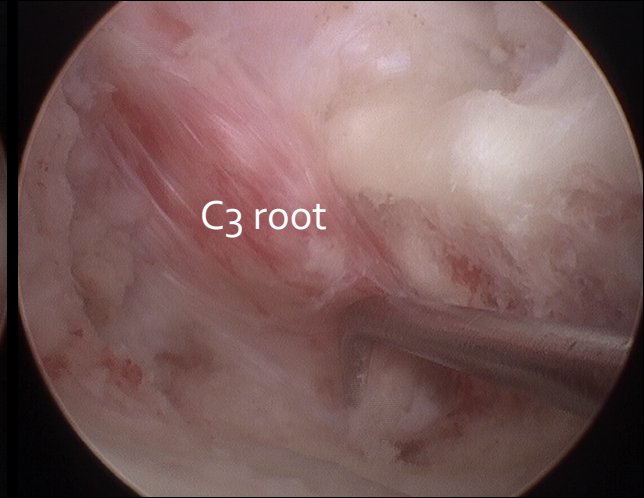
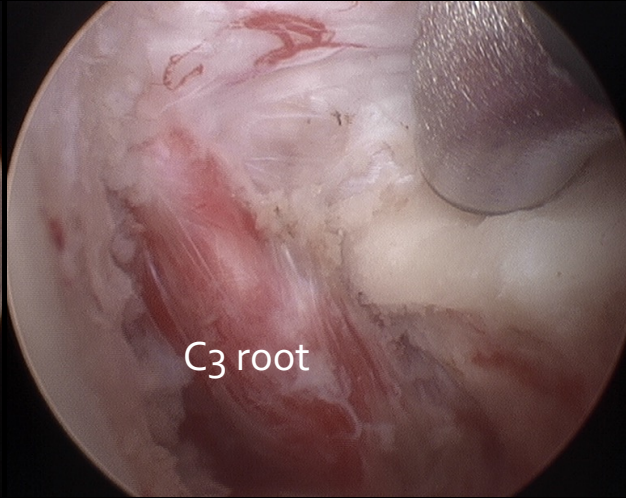
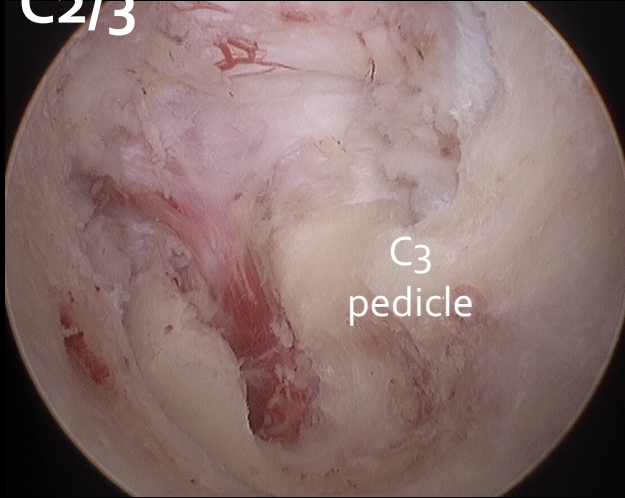
Post OP MRI



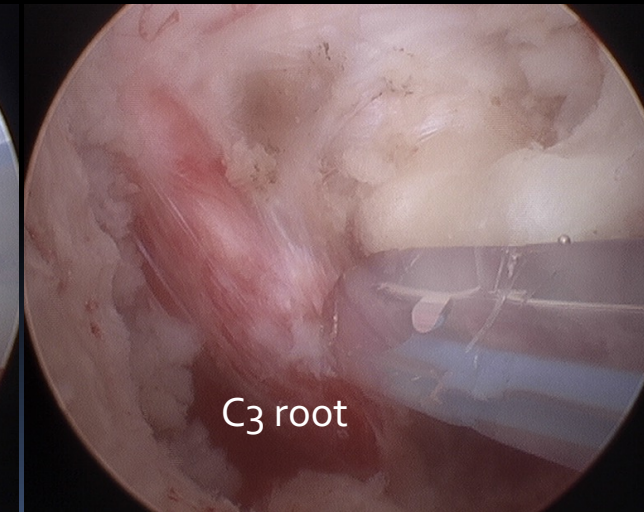
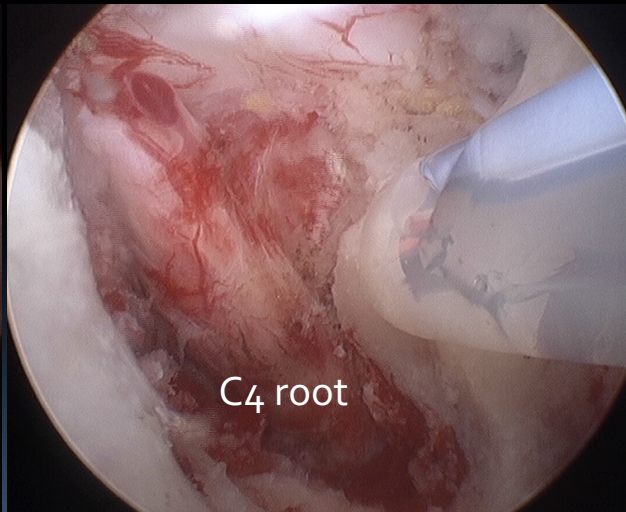
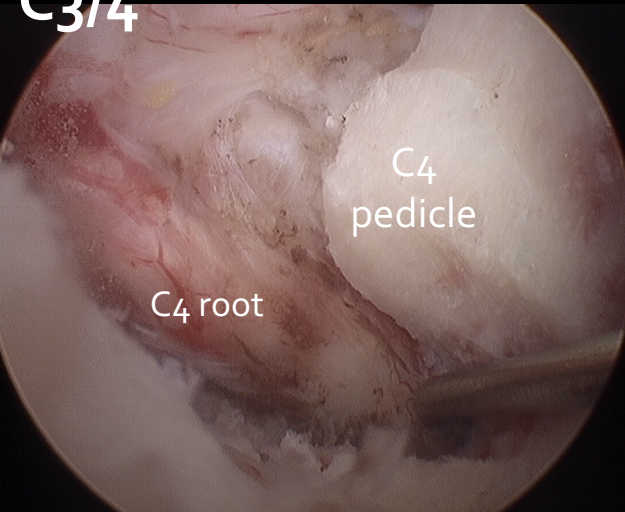
Case #2 F-SS C2/3/4, Lt



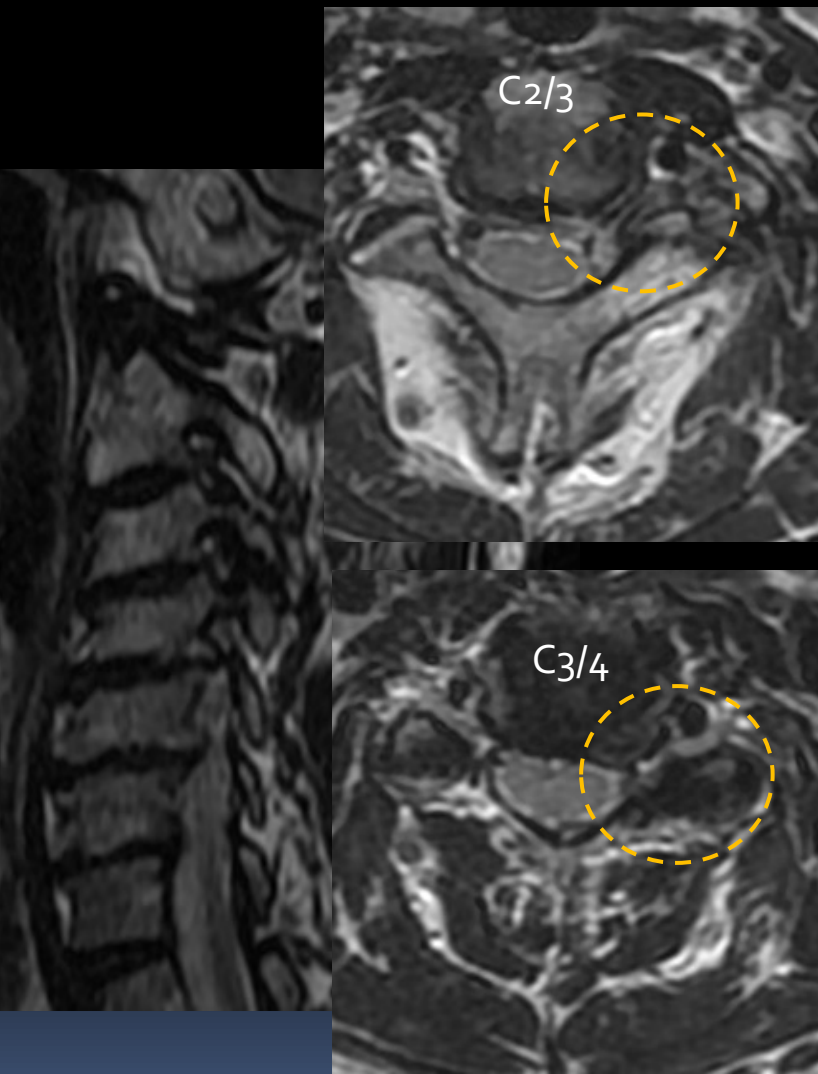
C2/3



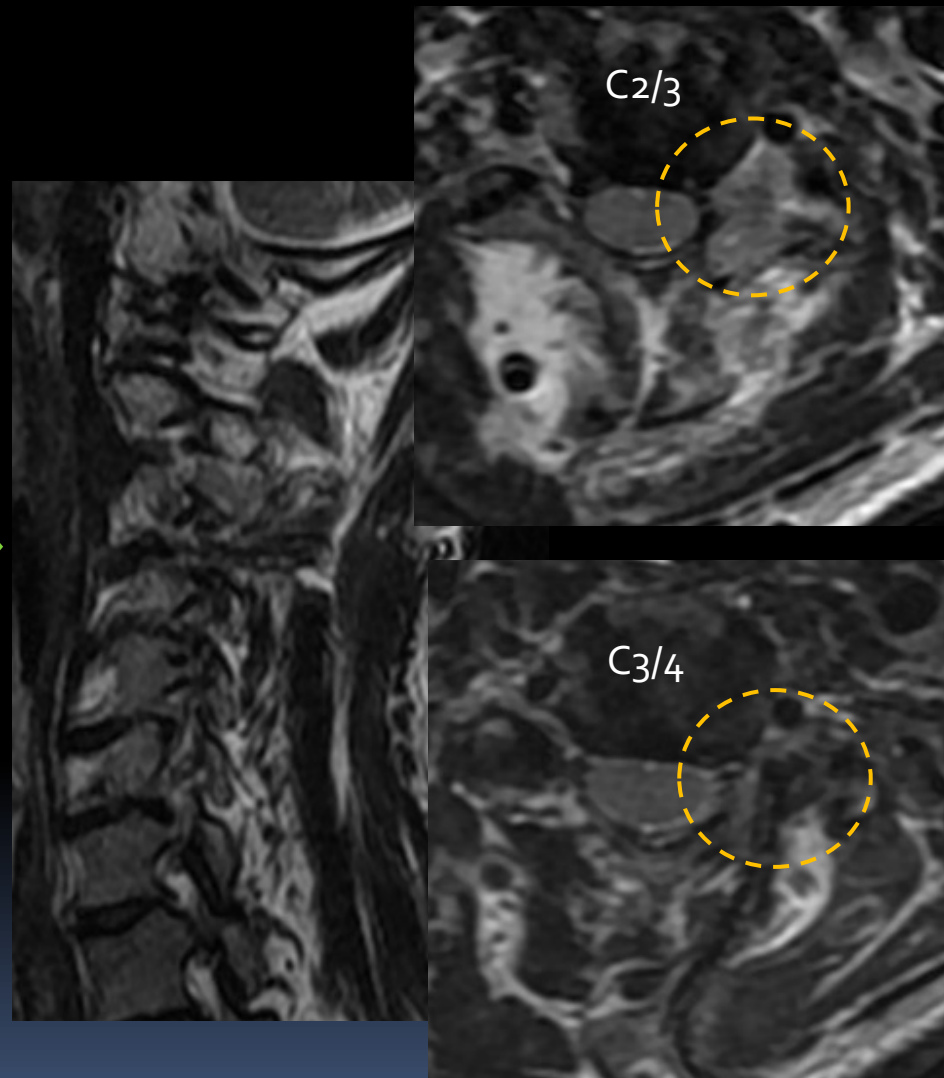
C3/4



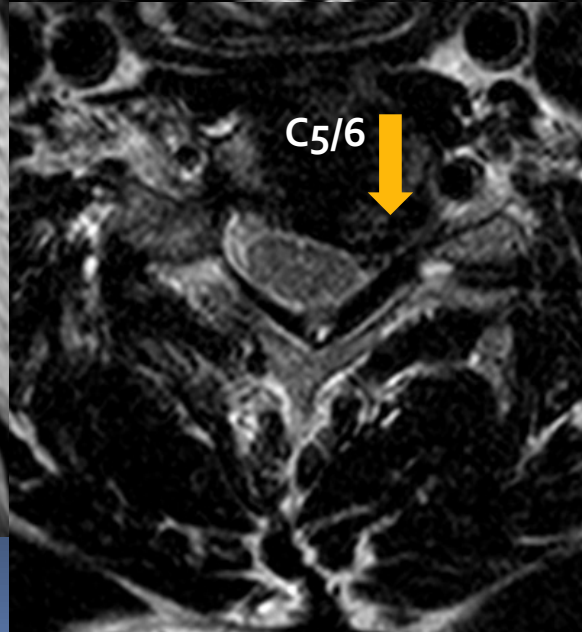
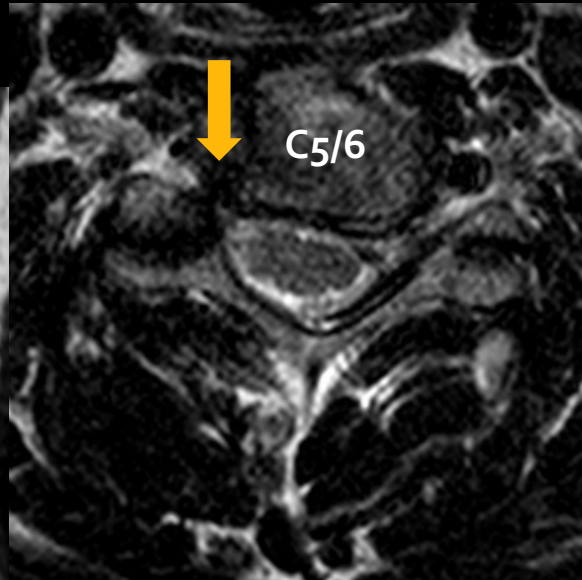
Pre OP MRI



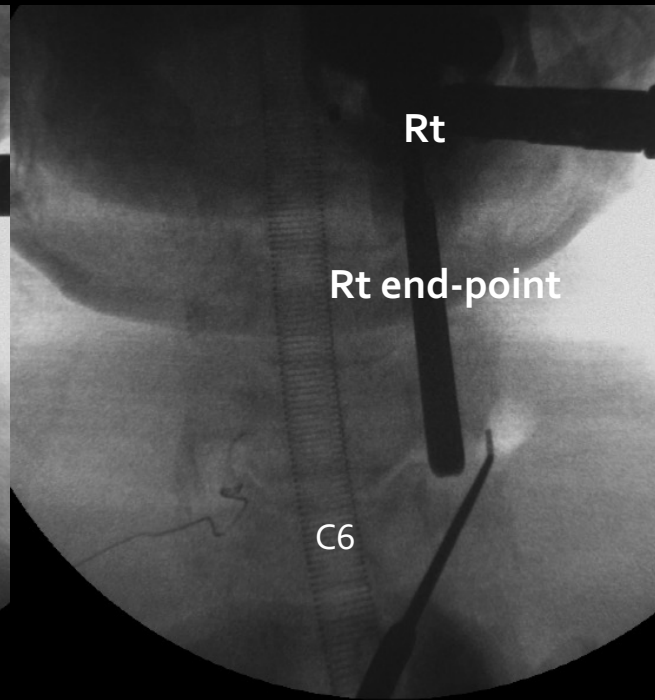
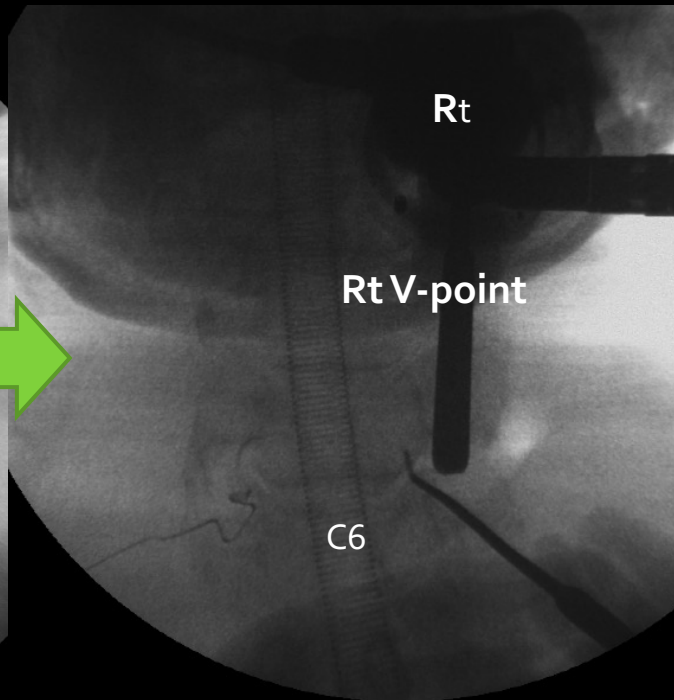
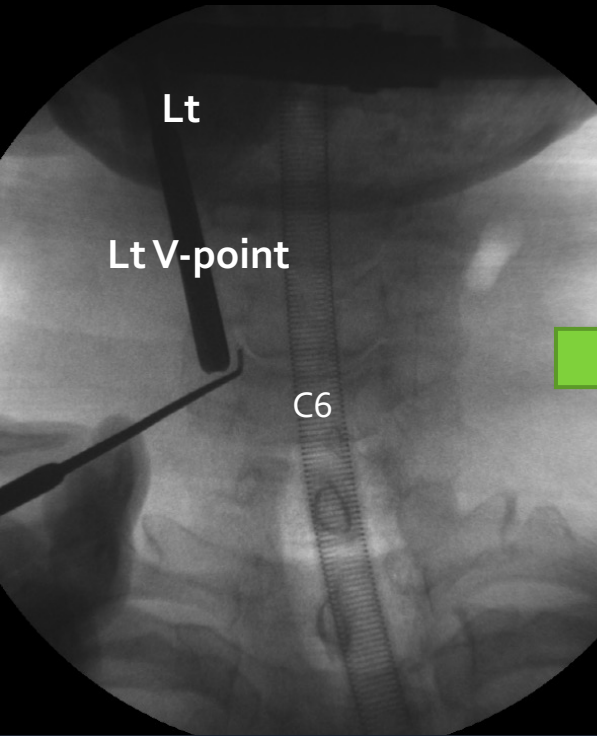
Post OP MRI



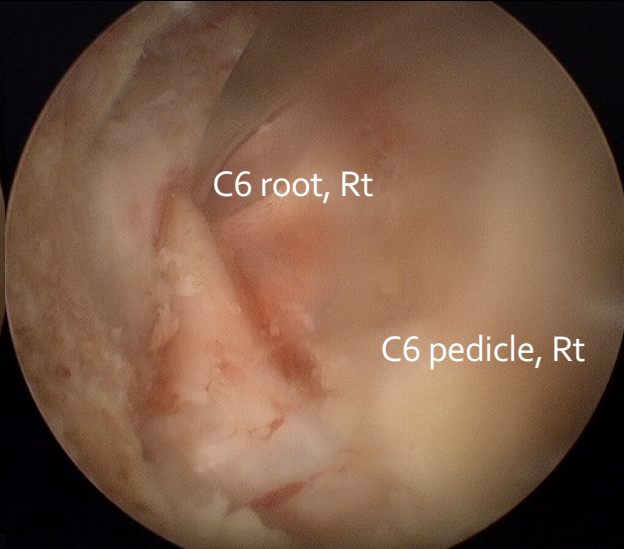
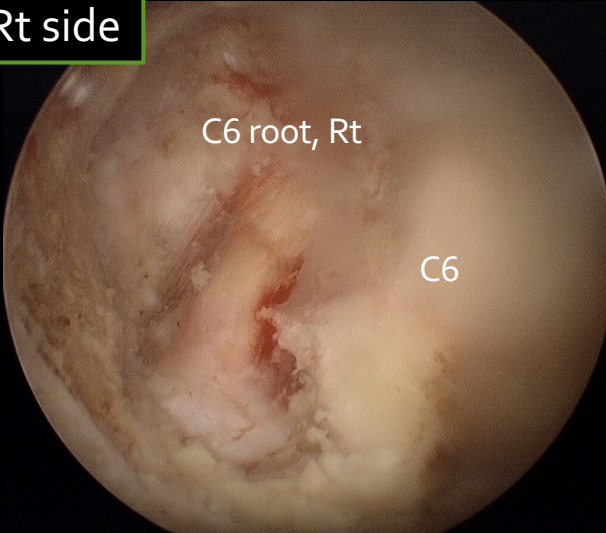
Case #3 F-SS C5/6, both



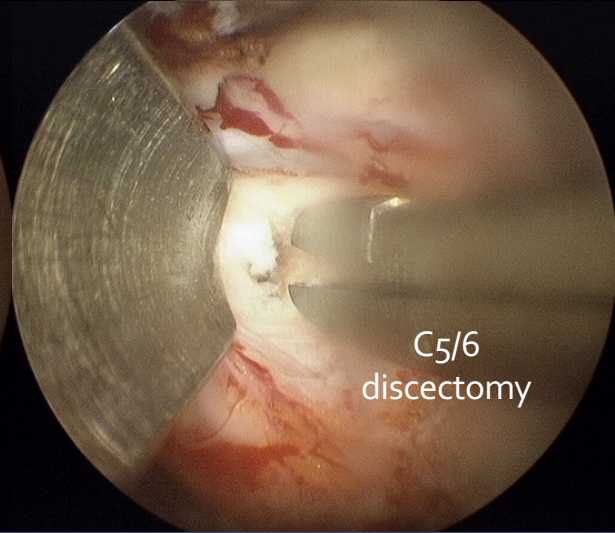
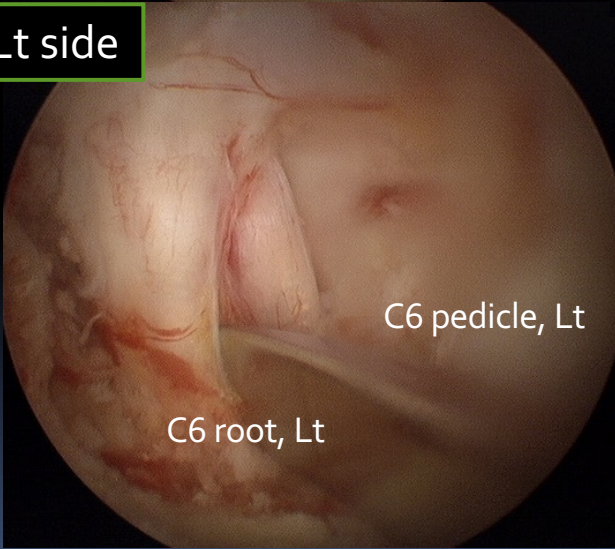
Lt side standing, both foramintomy

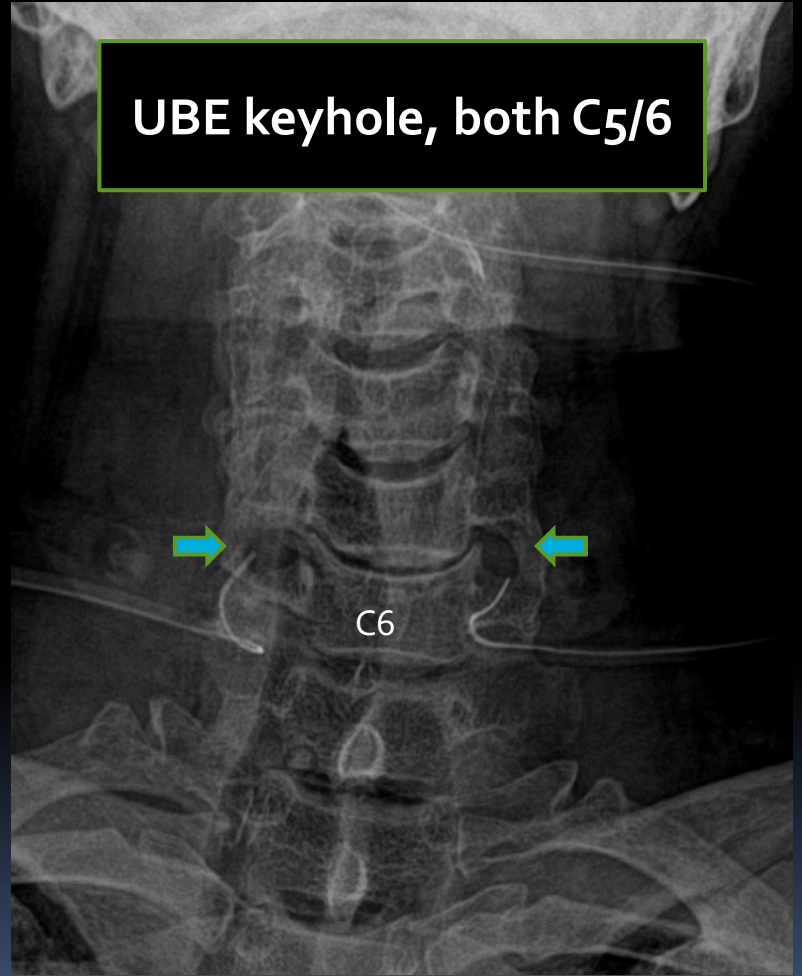


Rt side



Lt side

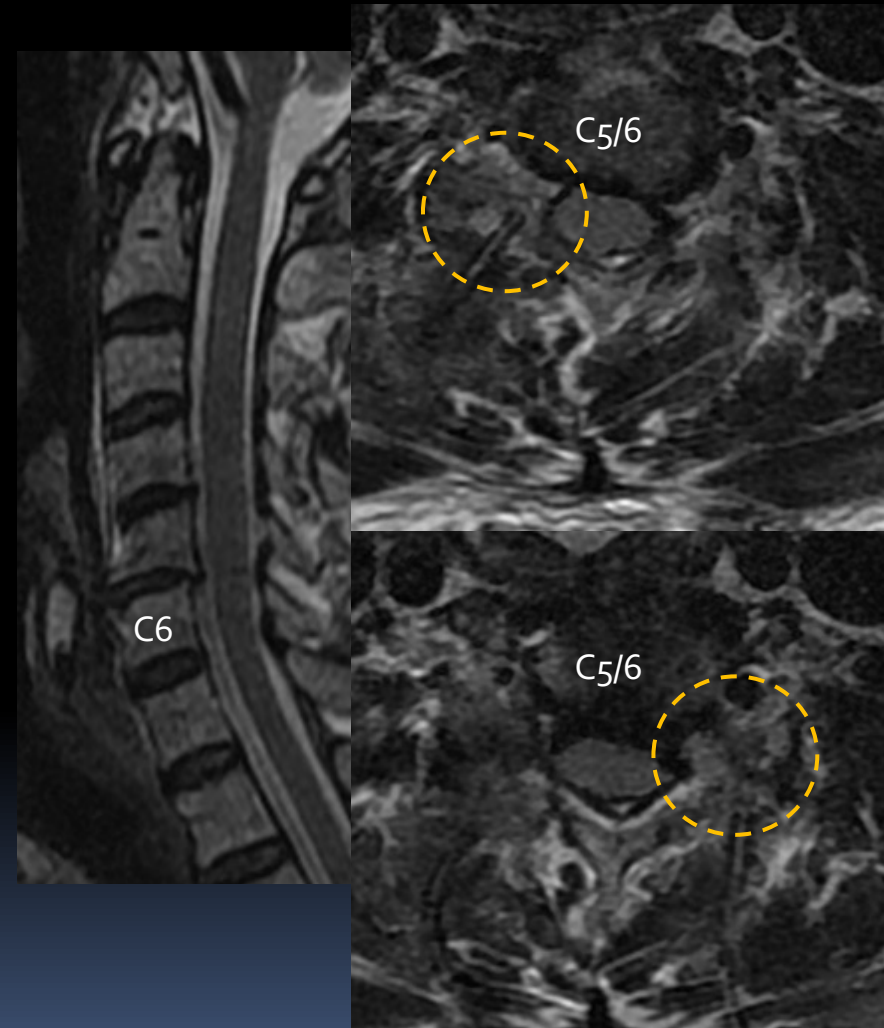




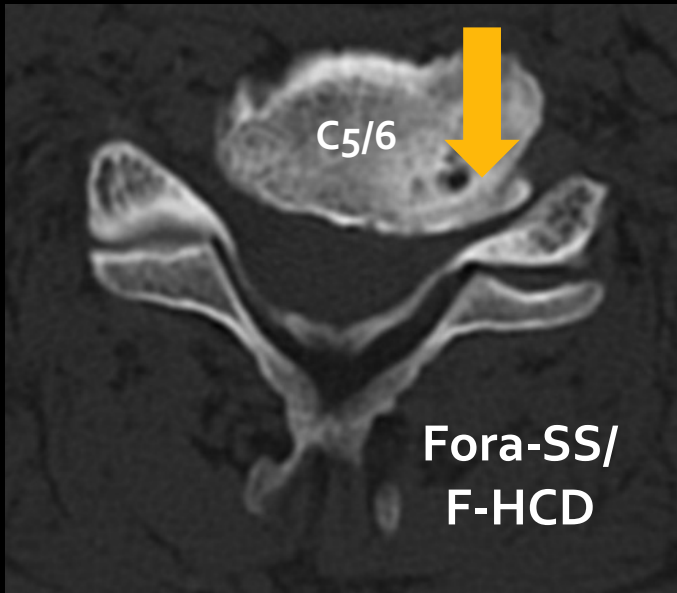
Pre OP MRI



Post OP MRI



Take home messages



- **Posterior Cervical Endoscopic Foraminotomy (PCEF) using UBE** is good option
 - ① **Cosmetic** superior (posterior op scar)
 - ② Avoid **ACDF** (fusion surgery)
 - ③ Can preserve the **facet joint**
 - ④ Patient **satisfaction** is higher

KOMISS UBE cadaver workshop 2022.12.4 Yonsei university



***Thank you for
your attention!!!***