

3RD ANNUAL AMPLIFY SURGICAL

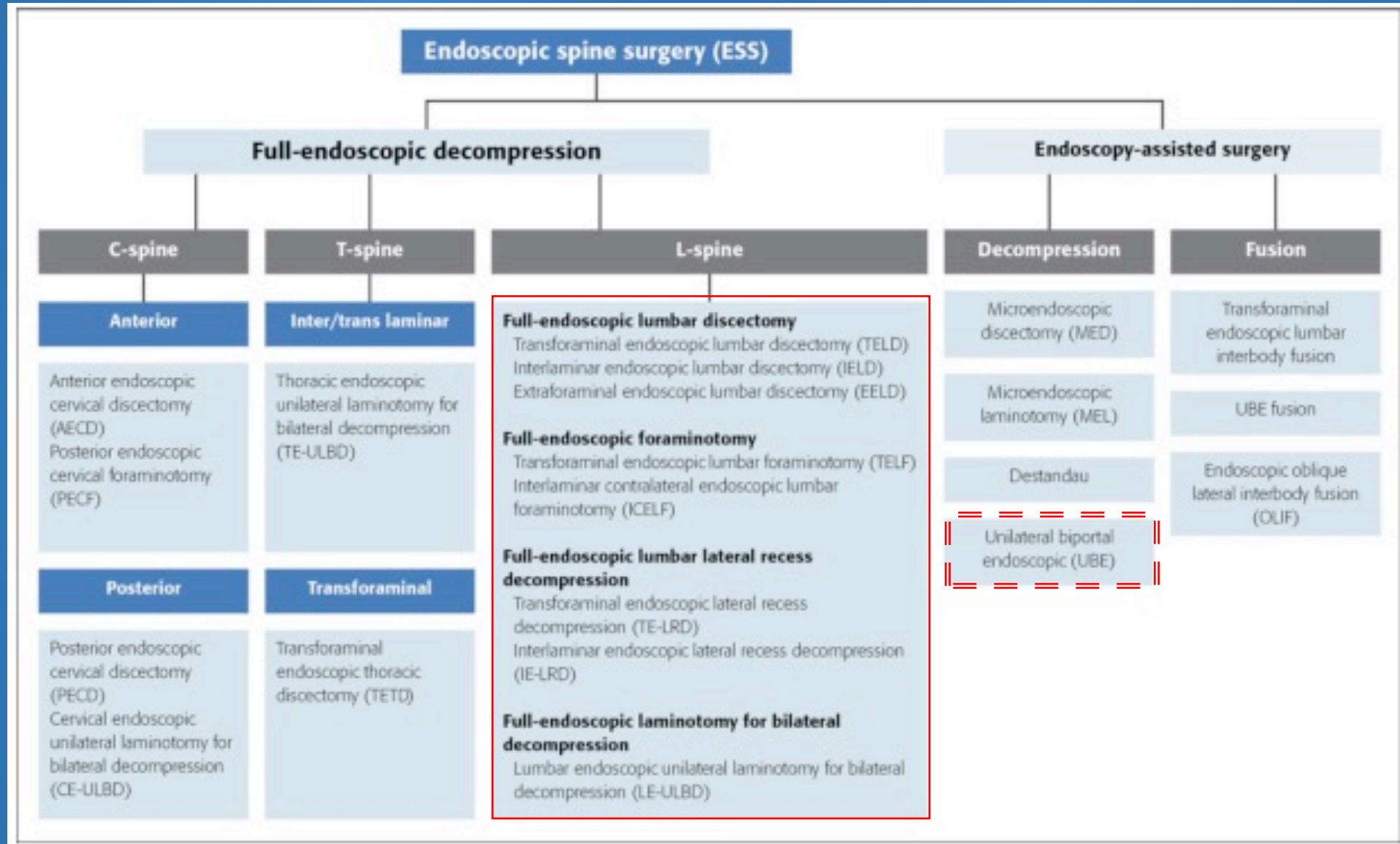
ENDOSCOPIC SPINE SYMPOSIUM

FEATURING dualPortal[®] AND dualX[®] TECHNOLOGIES

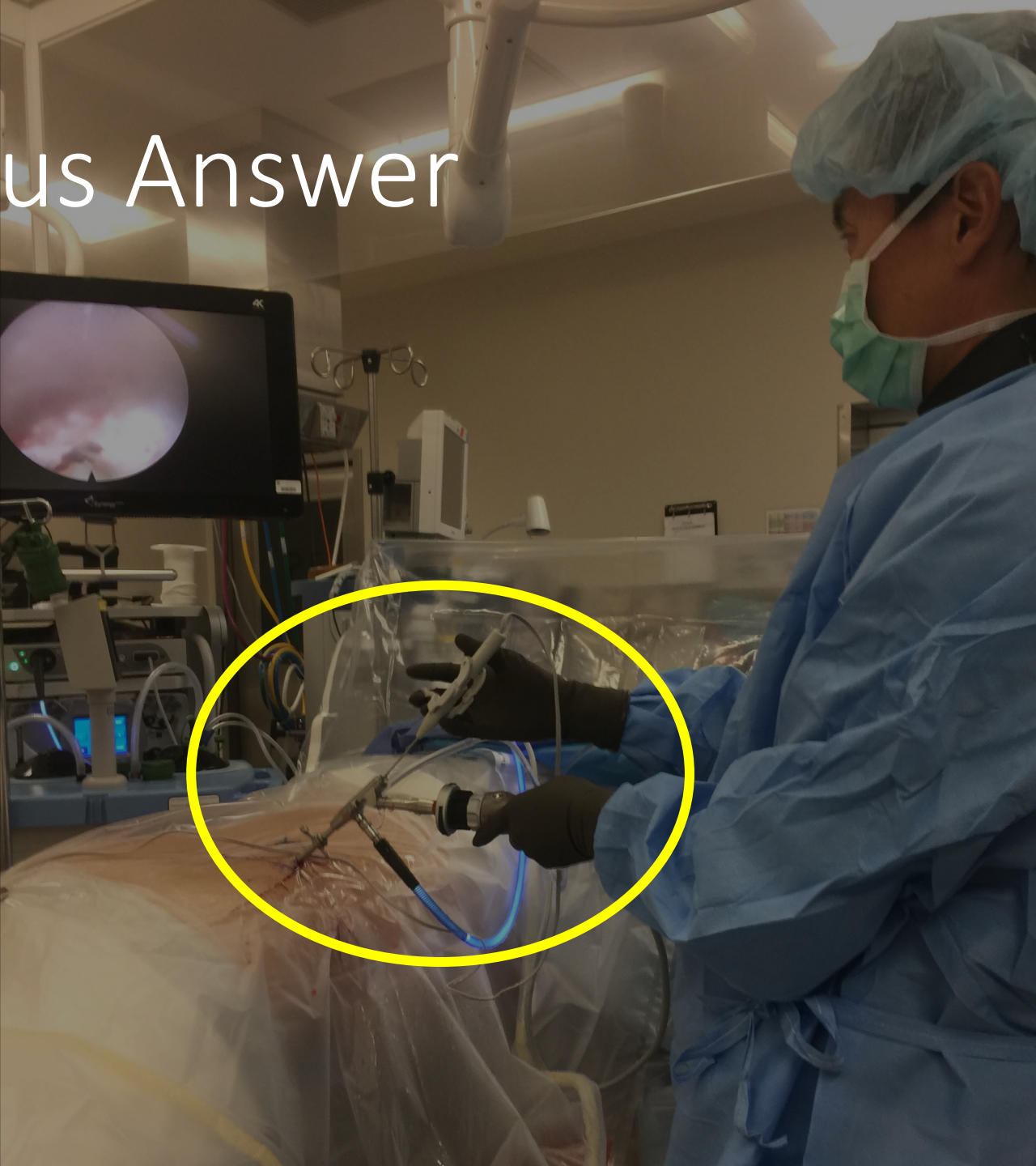
SAT, MARCH 9, 2024 | ORANGE, CA | UCI MEDICAL CENTER

What is dualPortal Endoscopic Spine Surgery and does it differ from Uniportal Endoscopic Spine Surgery?

**Brian Kwon, MD
Boston, MA, USA**

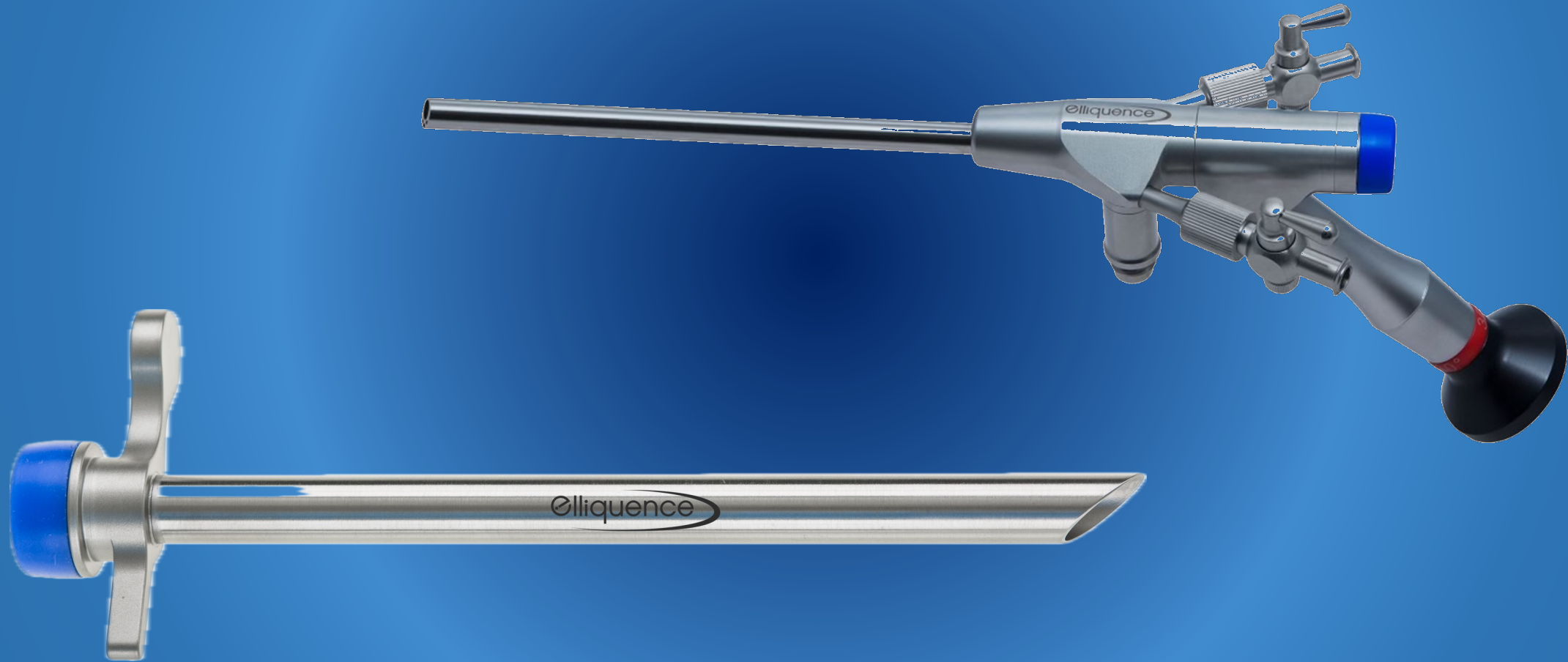


The Obvious Answer



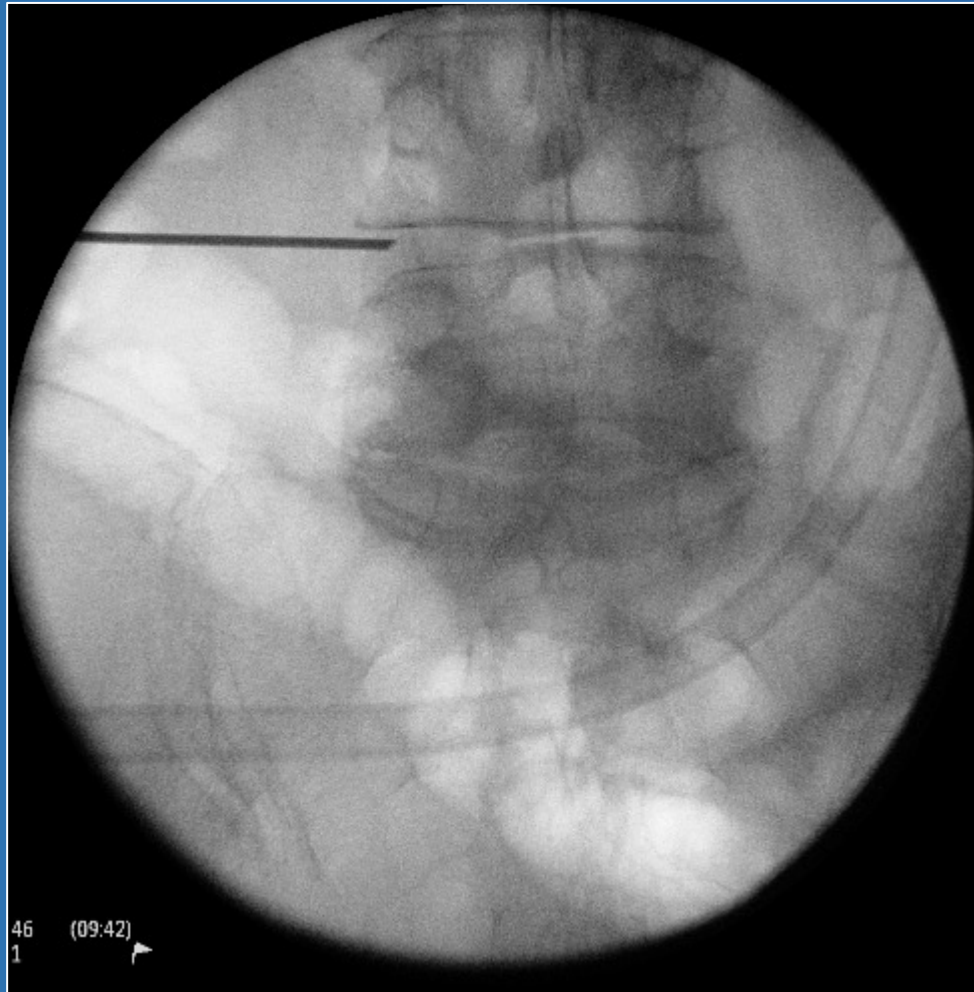
Uniportal Endoscopic Spine Surgery

One unit: working tube + endoscope/camera



Radiofrequency/cautery probe, drill, biting tools, grasping tools, endoscopic rongeurs

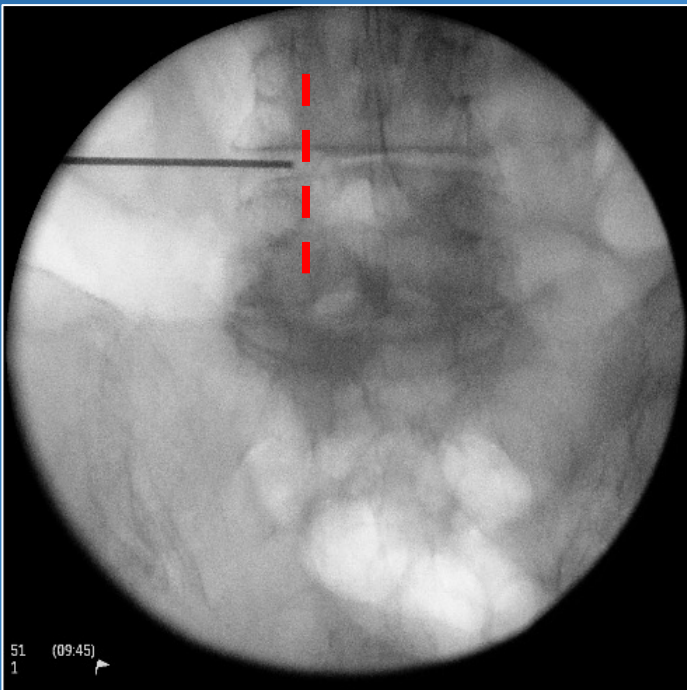




For first cases, **better to be too dorsal than ventral** where the lumbar plexus and viscera are located

It is not uncommon that you might get to this point and your needle stops progressing

- this is typically the **lateral border of the lamina**
- this is likely because you are too dorsal
- NB: the correction here is to move your hand dorsal to point your needle more ventral
- **if you unsure, check a lateral fluoroscopic image**



51 (09:45)
1



50 (09:44)
1

Good docking point

- medial border of the pedicle
- at the level of the disc

NB: if you whether the disc is caudal or cranial to the disc space. This will change your trajectory

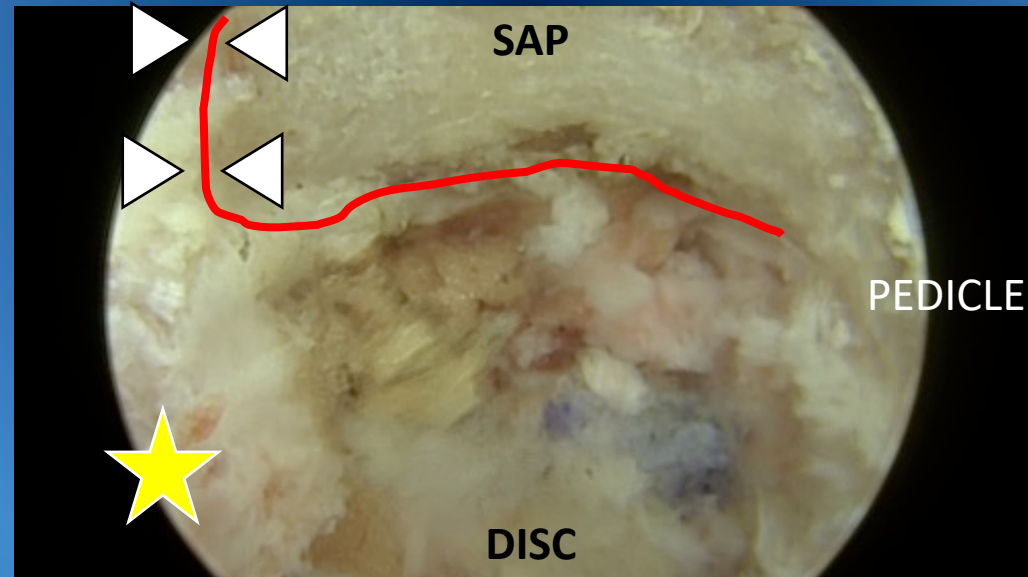
Check a lateral image (if you have not already)

Identification of SAP and Pedicle

These are the **first** anatomical structures you will encounter when entering the foramen.

This is the entrance to the LEFT L4-5 foramen:

SAP = dorsal (ceiling)
DISC = ventral (floor)
PEDICLE = caudal
NERVE ROOT = cranial



NB: The cranial-caudal relationship flips left-to-right for RIGHT sided approaches

Red line = outline of SAP
White triangles = joint line

Identification of SAP and Pedicle

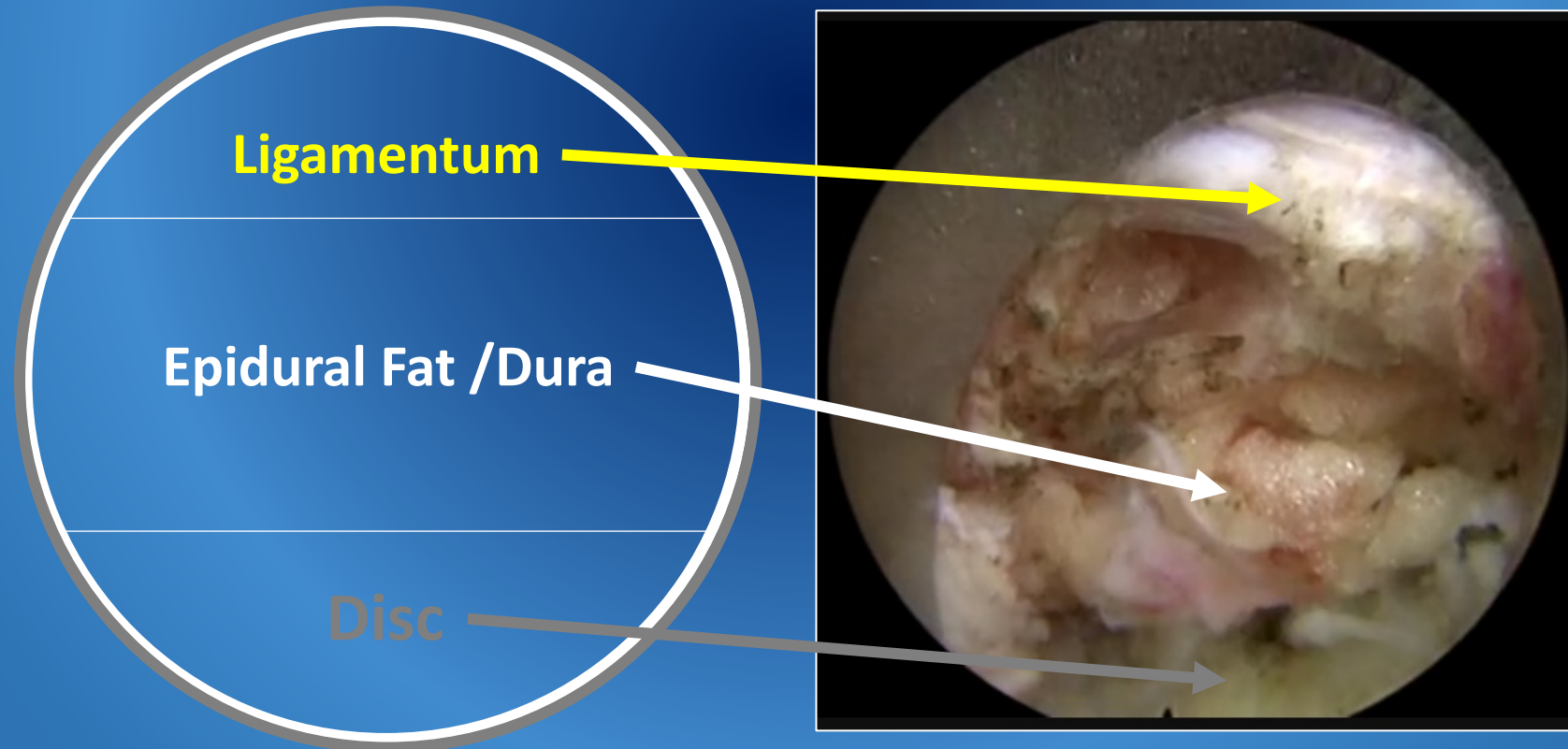
Gaining comfort with the locations of the pedicle, SAP, and disc is critical to safely navigate in the foramen and spinal canal.

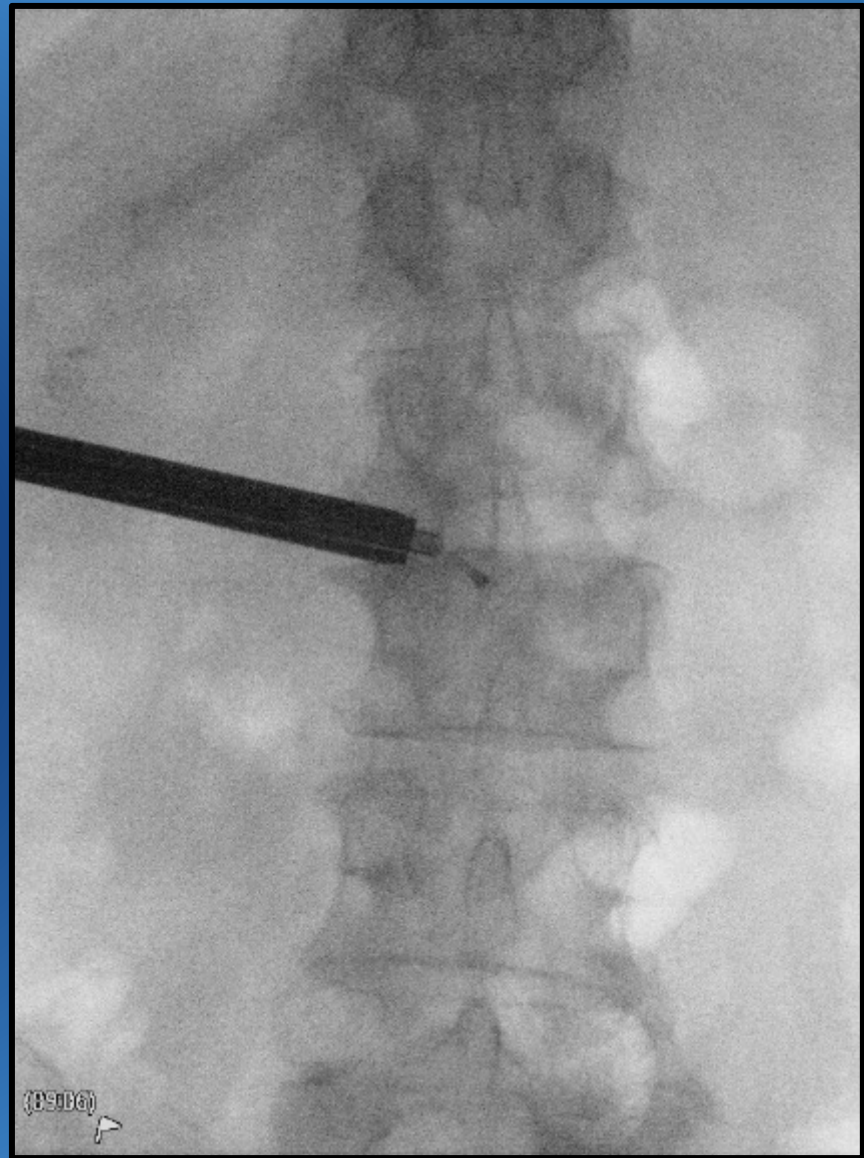
- The relative locations and relationships between them is vital
- Understanding their orientation relative to each other is a top priority for the beginner endoscopic surgeon
- Right versus left approaches will change where these structures are in space

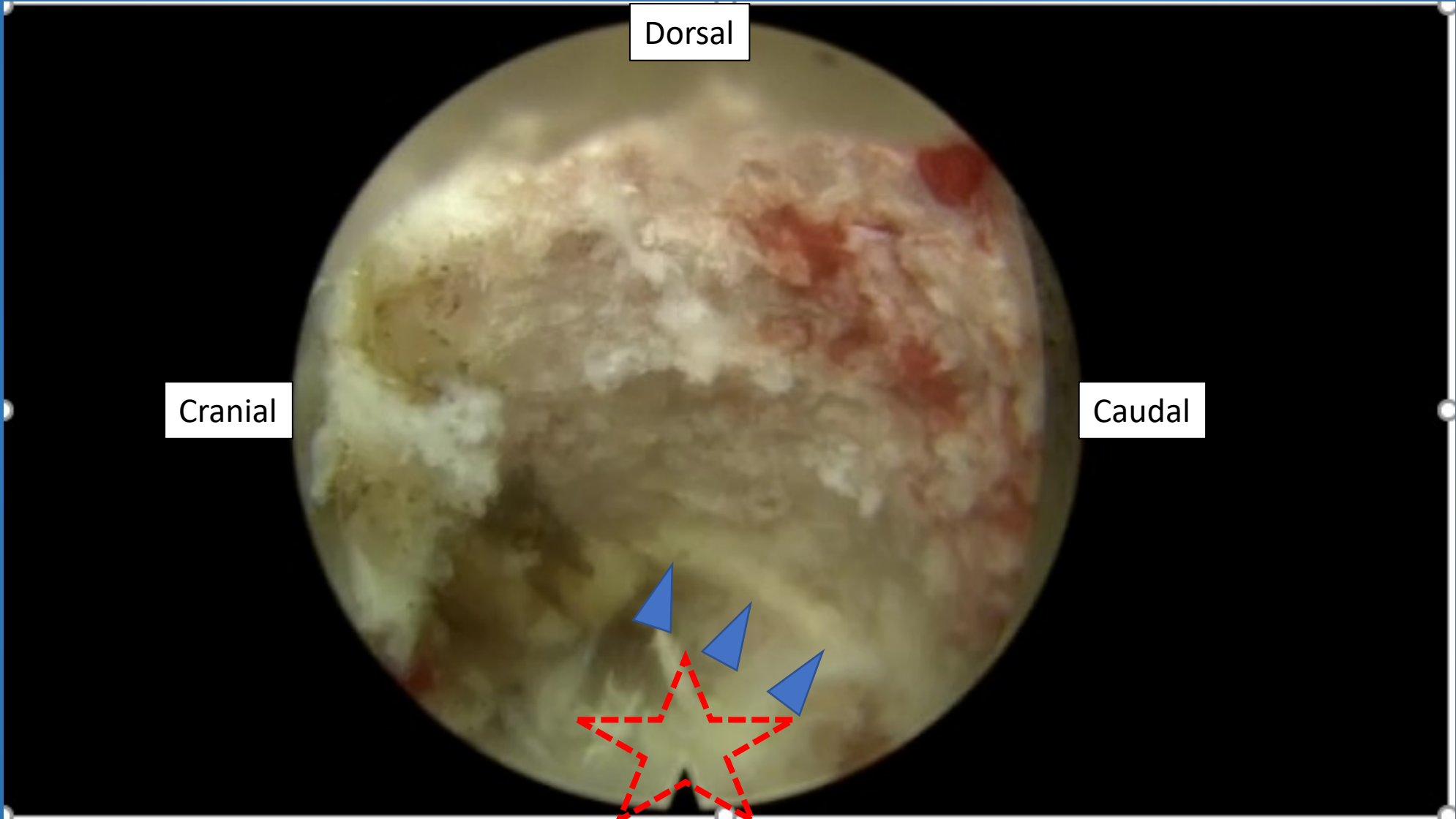


Ventral Epidural Fat Plane & Spinal Canal

As you course medially to approach paracentral pathology, the next vital structure to identify is the epidural fat plane. Dorsal to the dura is ligamentum flavum, dura is middle and disc/annulus is ventral.



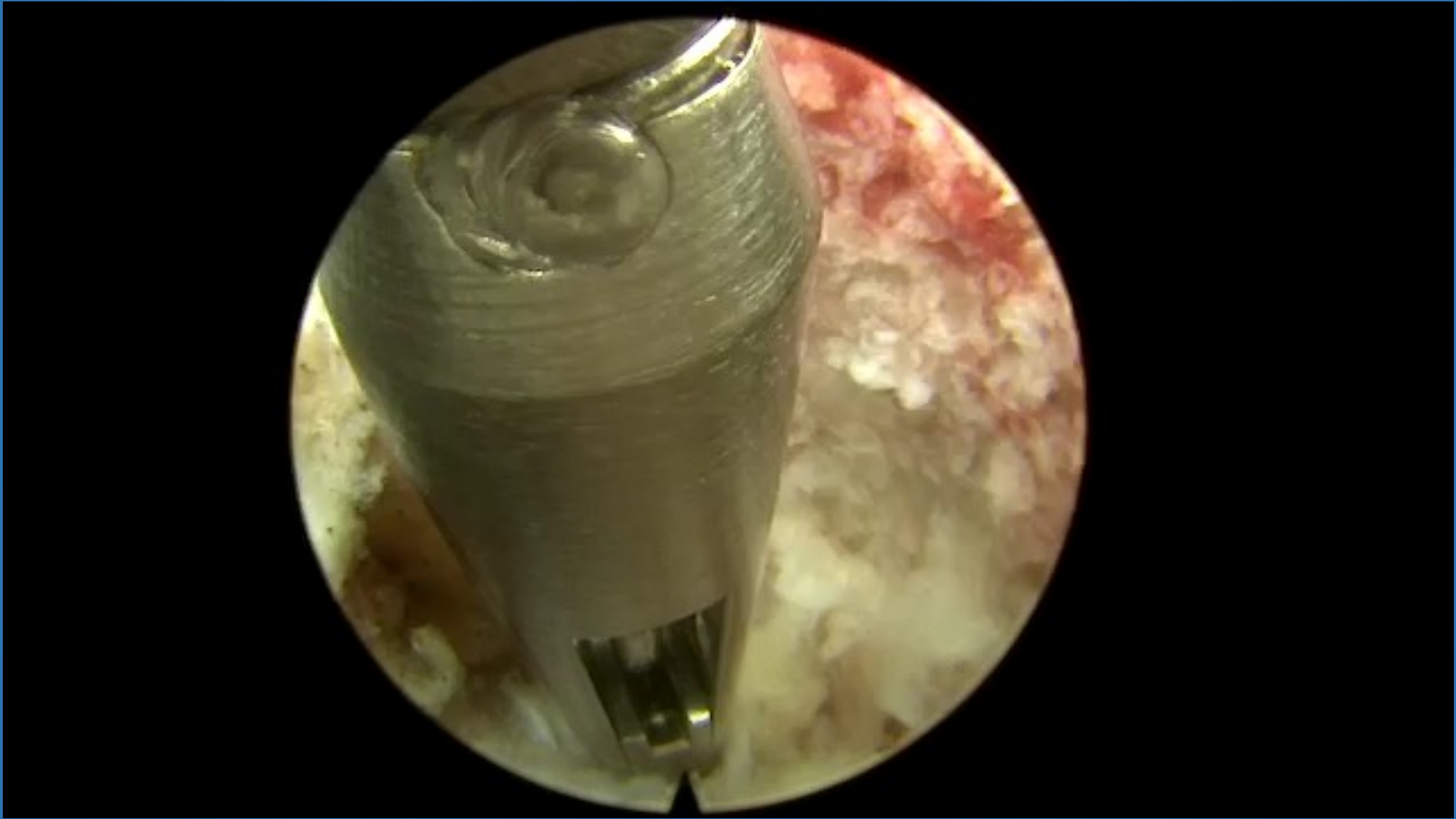




Dorsal

Cranial

Caudal

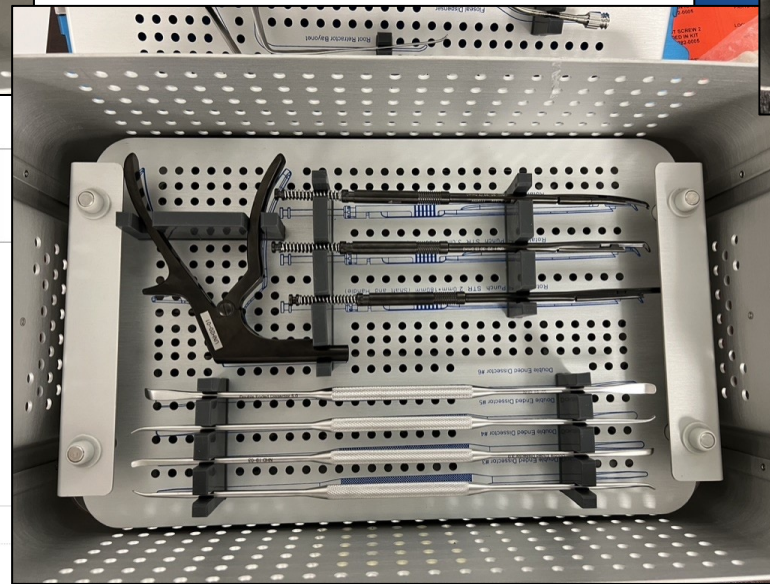


dualPortal™ Endoscopic Spine Surgery

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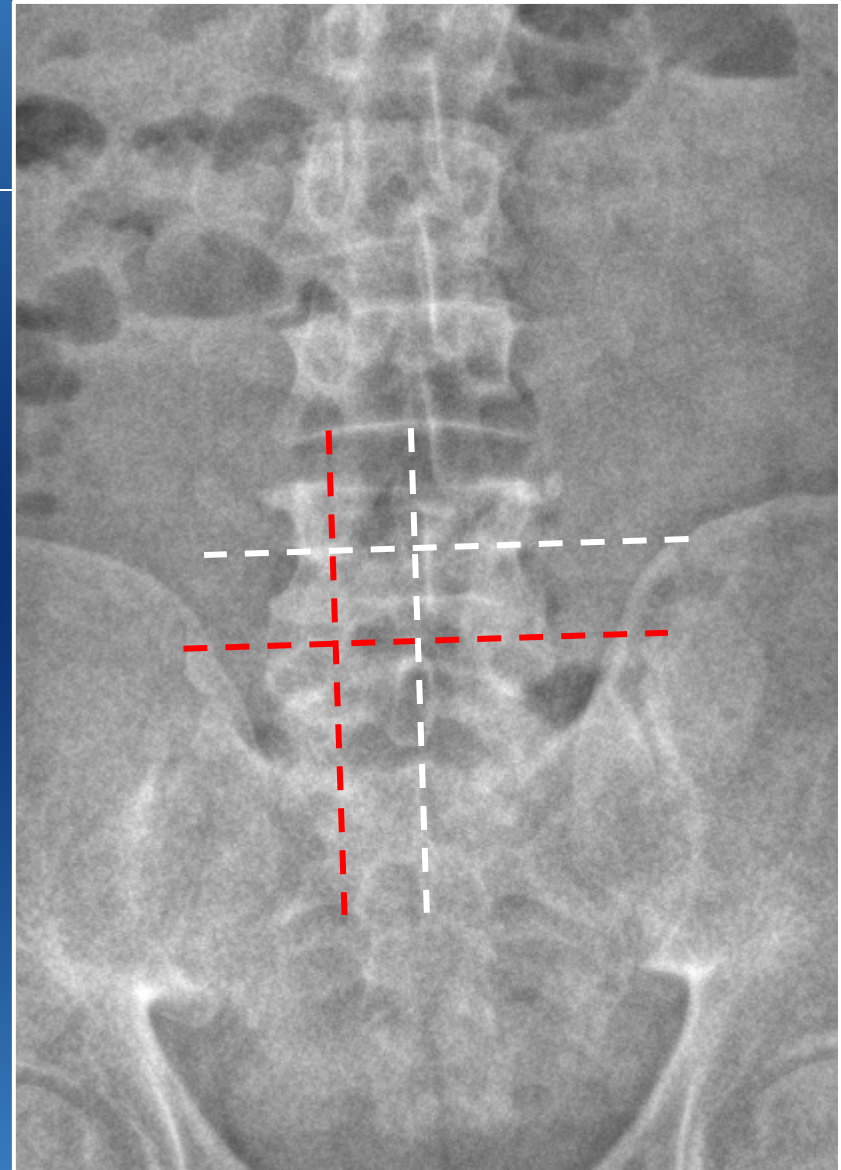
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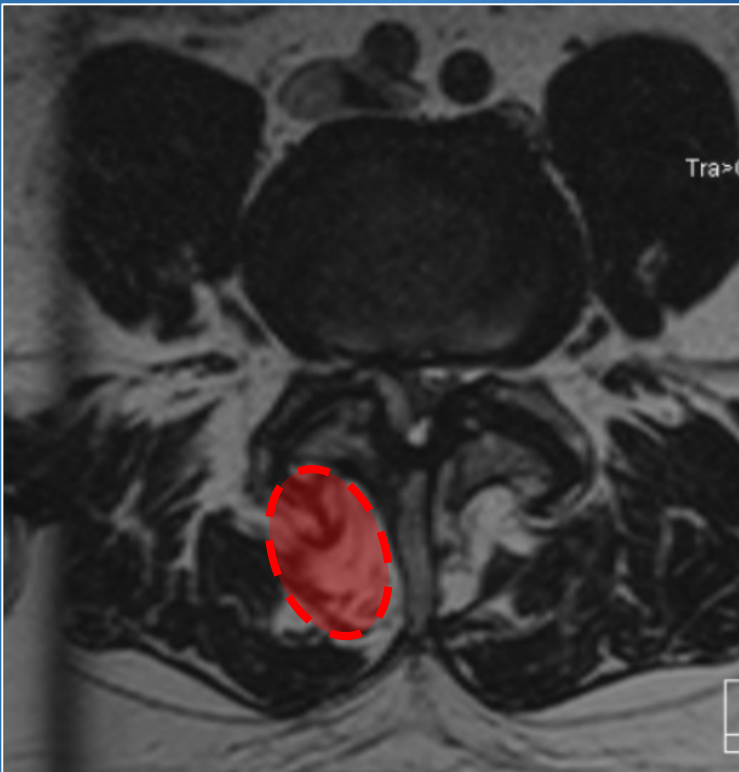
Targeting

1. Cranial of LOWER pedicle
2. Medial wall of pedicle
3. Midline
4. Caudal of UPPER pedicle

*AP image

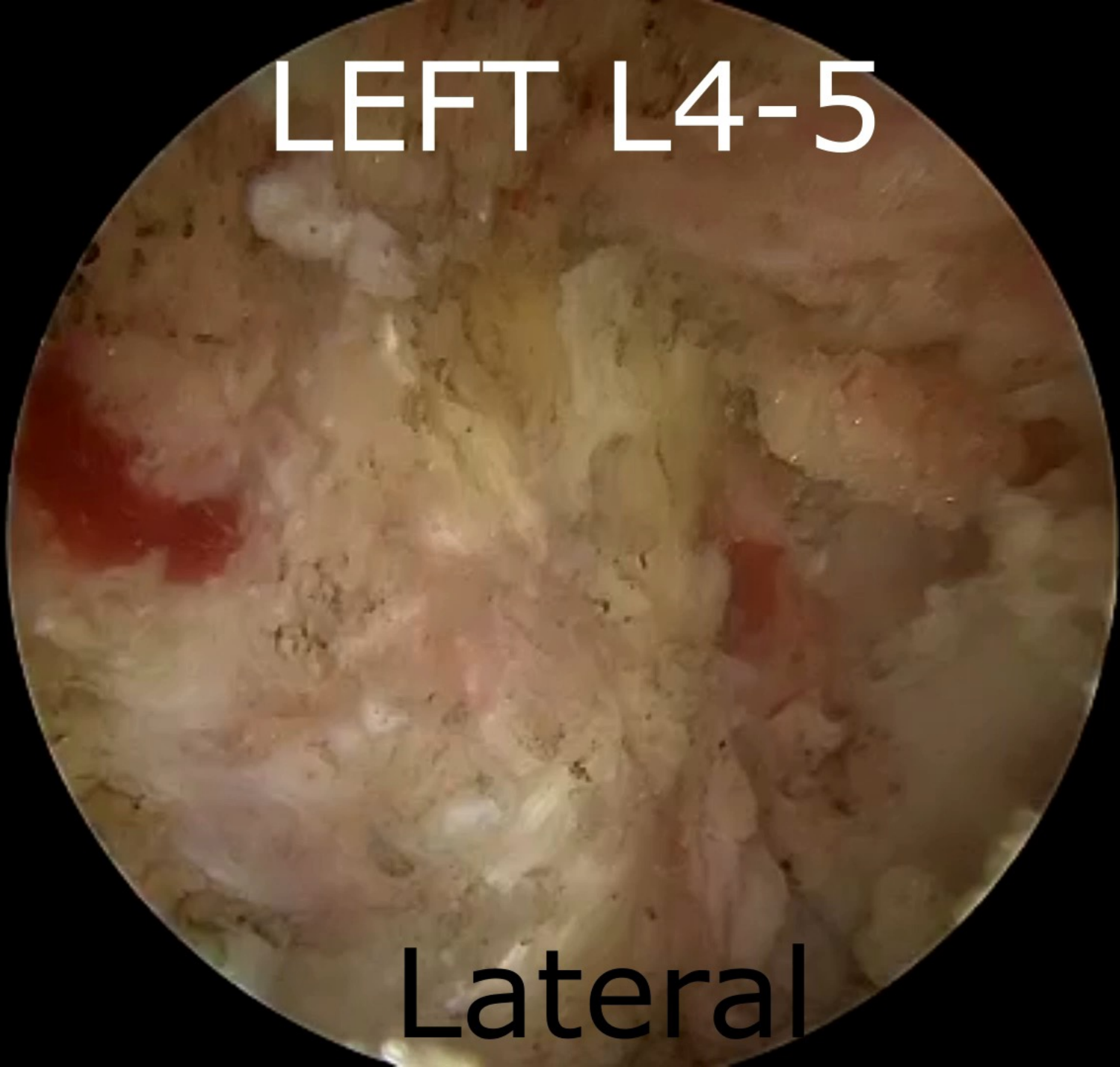


Working Compartment



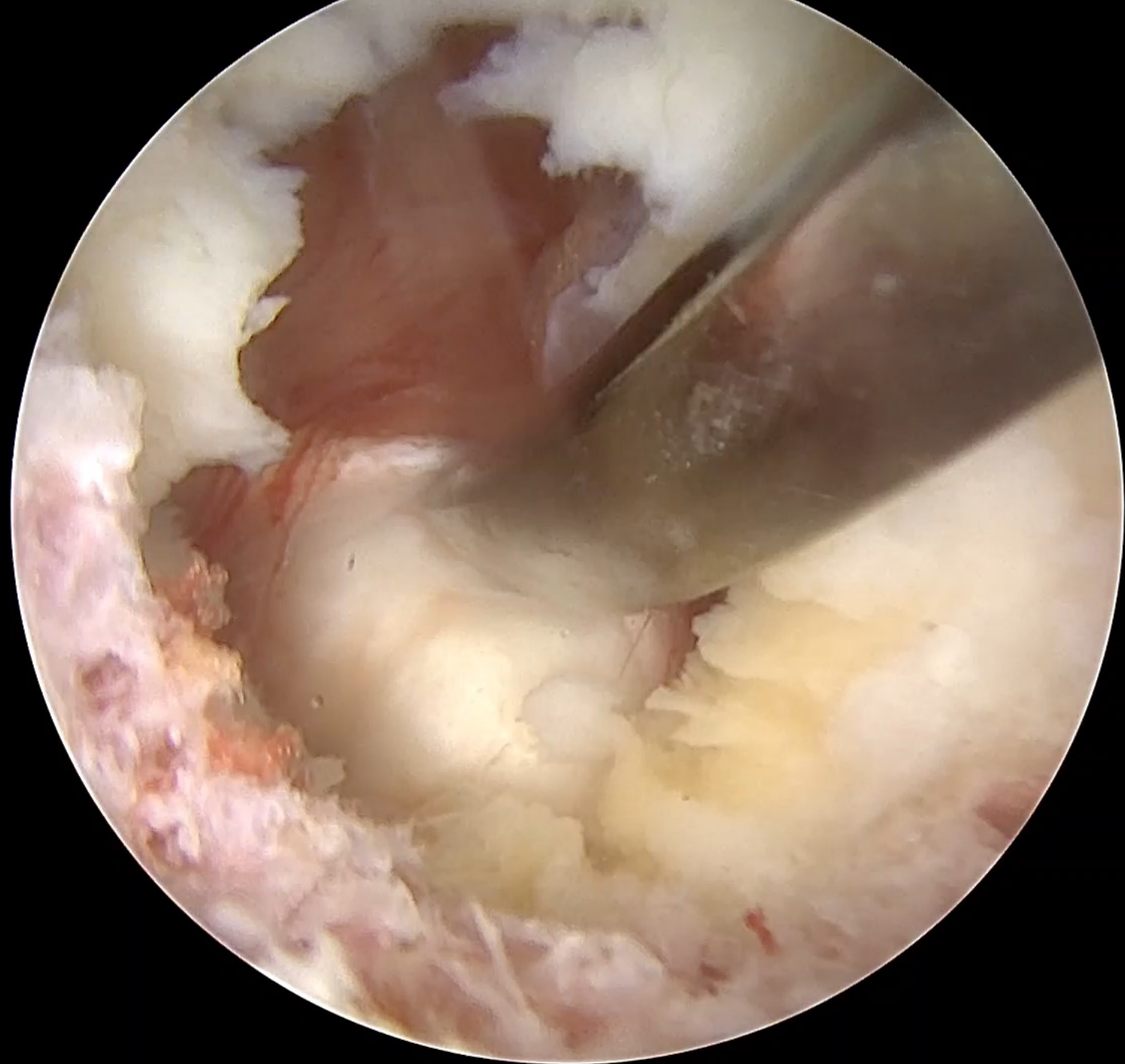
LEFT L4-5

Cranial



Lateral





	dualPortal	uniPortal
Equipment	“Off the shelf”, most hospitals have everything you need	Purchase or lease (***)
	Arthroscopy tower/camera, spine tray	Unique to uniportal system (maintenance)
		Disposables
Learning curve	“Arthroscopy of the spine”	Entirely new procedure
Education	Learn from Sports Med colleagues	Take a course, pay money, take time off practice
	More intuitive	Less intuitive
		Precise targeting
Getting started	Industry, US and Intl mentors	Industry, AO Spine, Arthrex
Certification	None	+/-

When do I use uni- vs. dualPortal?

Extra-foraminal & foraminal

Uniportal

- L1-2
- L2-3
- L3-4
- L4-5
- L5-S1

Central & paracentral

Uniportal

- L1-2
- L2-3

dualportal

- L3-4
- L4-5
- L5-S1



Conclusion

- Surgical technique to **BEST** treat the pathology
- Get trained & proficient in BOTH techniques
- L4-5 L5-S1 is where we all make a living...



Thank You