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Experience in Unilateral Biportal Endoscopic Spine Surgery for Adjacent Segment Disease

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History of UBE (Unilateral Biportal Endoscopic Spine)

1996 De Antoni et al.

First articles Soliman 2013, 2015,
herniation, stenosis

2016 Unilateral Biportal Endoscopy
(South Korea)

Unilateral Biportal Endoscopic Spine Surgery

Basic and Advanced Techniques

Dong Hwa Heo
Cheol Woong Park
Sang Kyu Son
Jin Hwa Eum

Unilateral Biportal Endoscopy of the Spine

An Atlas of Surgical
Techniques

Javier Quillo-Olvera
Diego Quillo-Olvera
Javier Quillo-Reséndiz
Michael Mayer
Editors

Arthroscopy  **AANA**
The Journal of Arthroscopy
and Related Surgery

TECHNICAL NOTE | VOLUME 12, ISSUE 3, P330-334, JUNE 01, 1998

Translaminar lumbar epidural endoscopy: Anatomy, technique, and indications

Daniel Julio De Antoni, M.D. • Maria Laura Claro, M.D. • Gary G. Poehling, M.D. • Steven S. Hughes, M.D.

DOI: [https://doi.org/10.1018/S0749-8063\(98\)90069-9](https://doi.org/10.1018/S0749-8063(98)90069-9)

 Springer

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UBE

Indications

- Neurogenic claudication
- Radiculopathy
- Stenosis on MRI / CT
 - disc herniation - central, lateral, foraminal, extraforaminal
 - recurrent herniation
 - stenosis
 - fusion
 - discitis
 - calcifications in the PLL (cervical and thoracic spine)

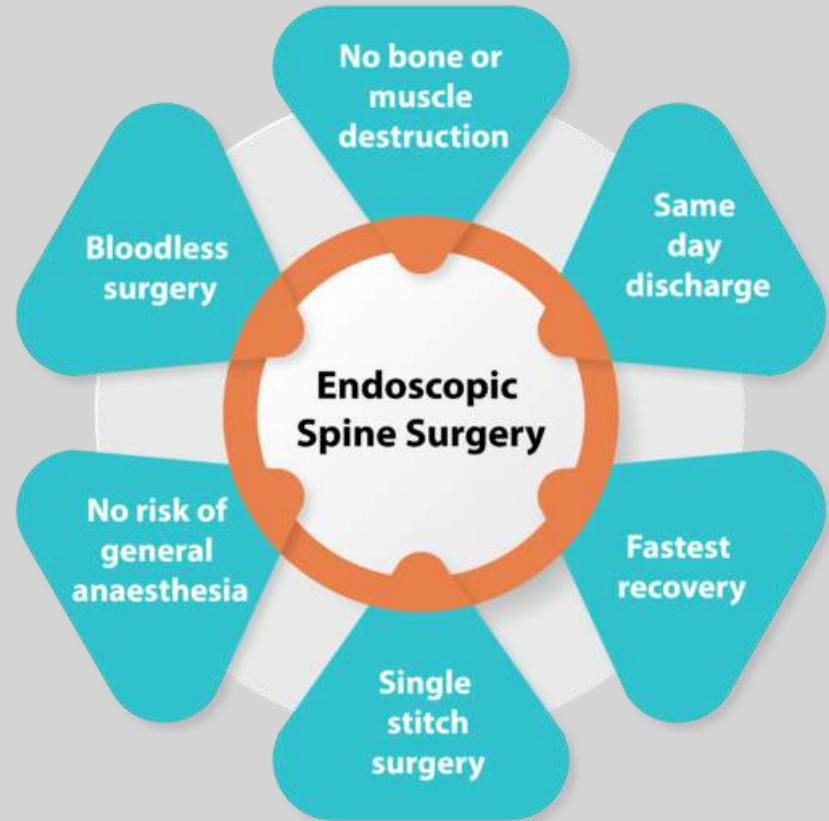
Contraindications

- Advanced deformity
- Advanced instability
- Infection



Advantages of endoscopic procedures

- Reduced risk of muscle damage
- Reduced risk of complications
- Reduced post-operative pain
- Reduced risk of infection
- Reduced blood loss
- Faster return to activity time
- Improved cosmetic results
- Local anesthesia options



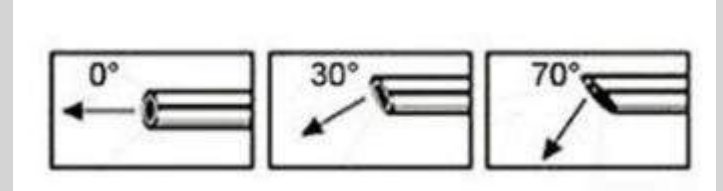
Devices

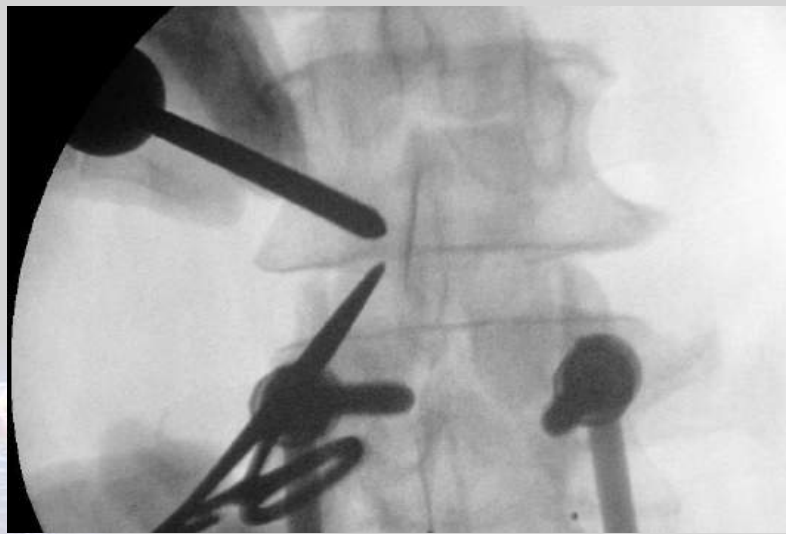
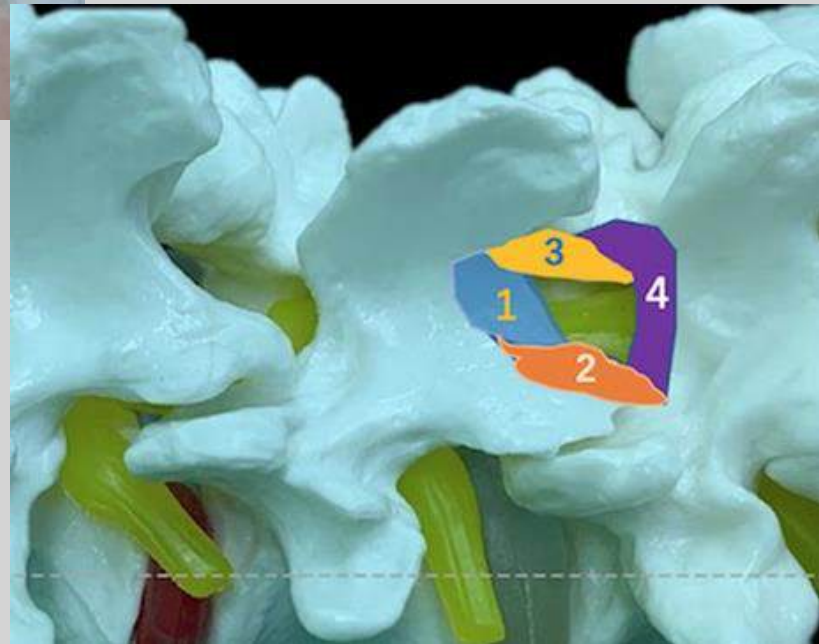
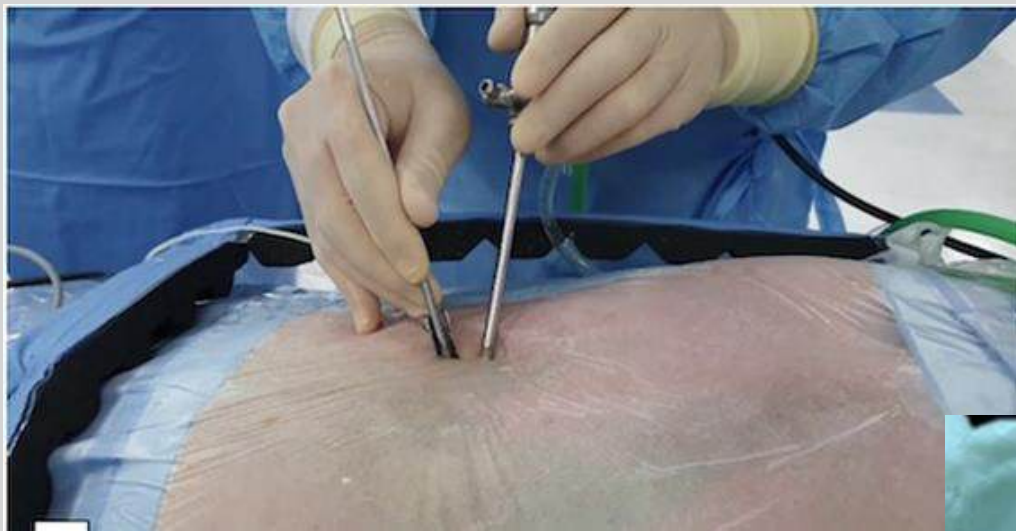


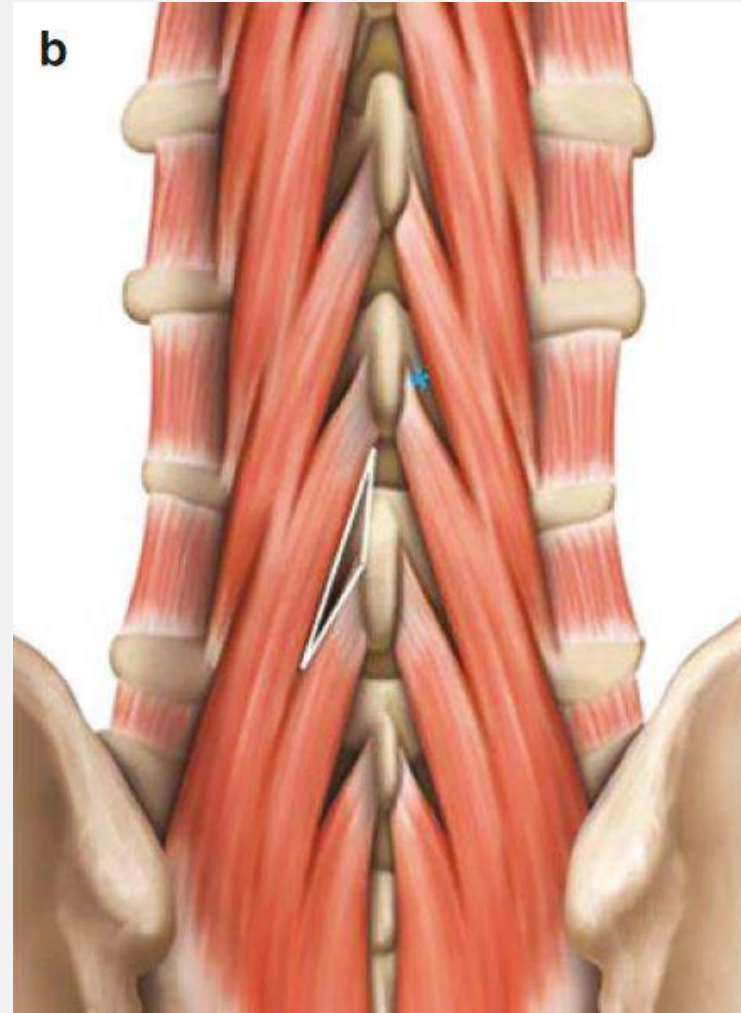
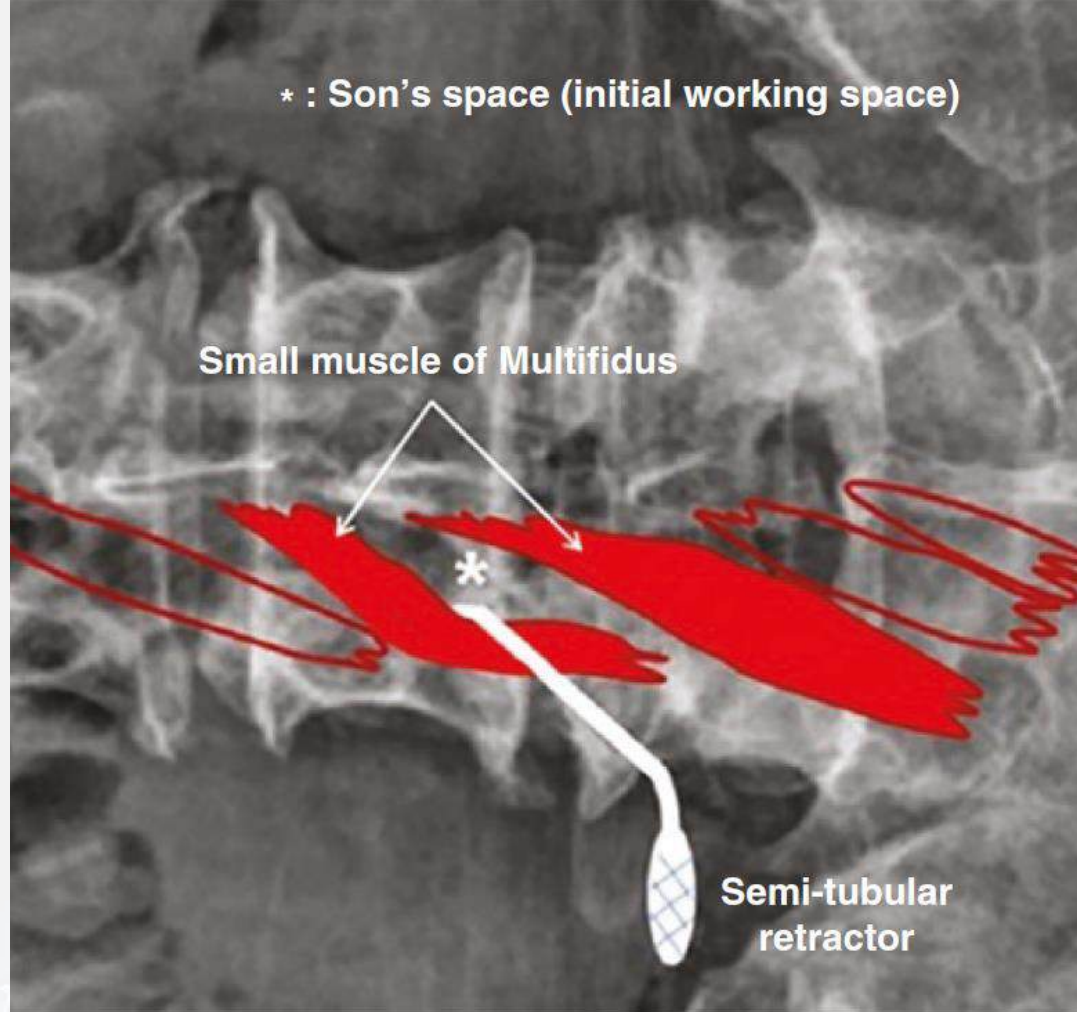
Diamond Bur

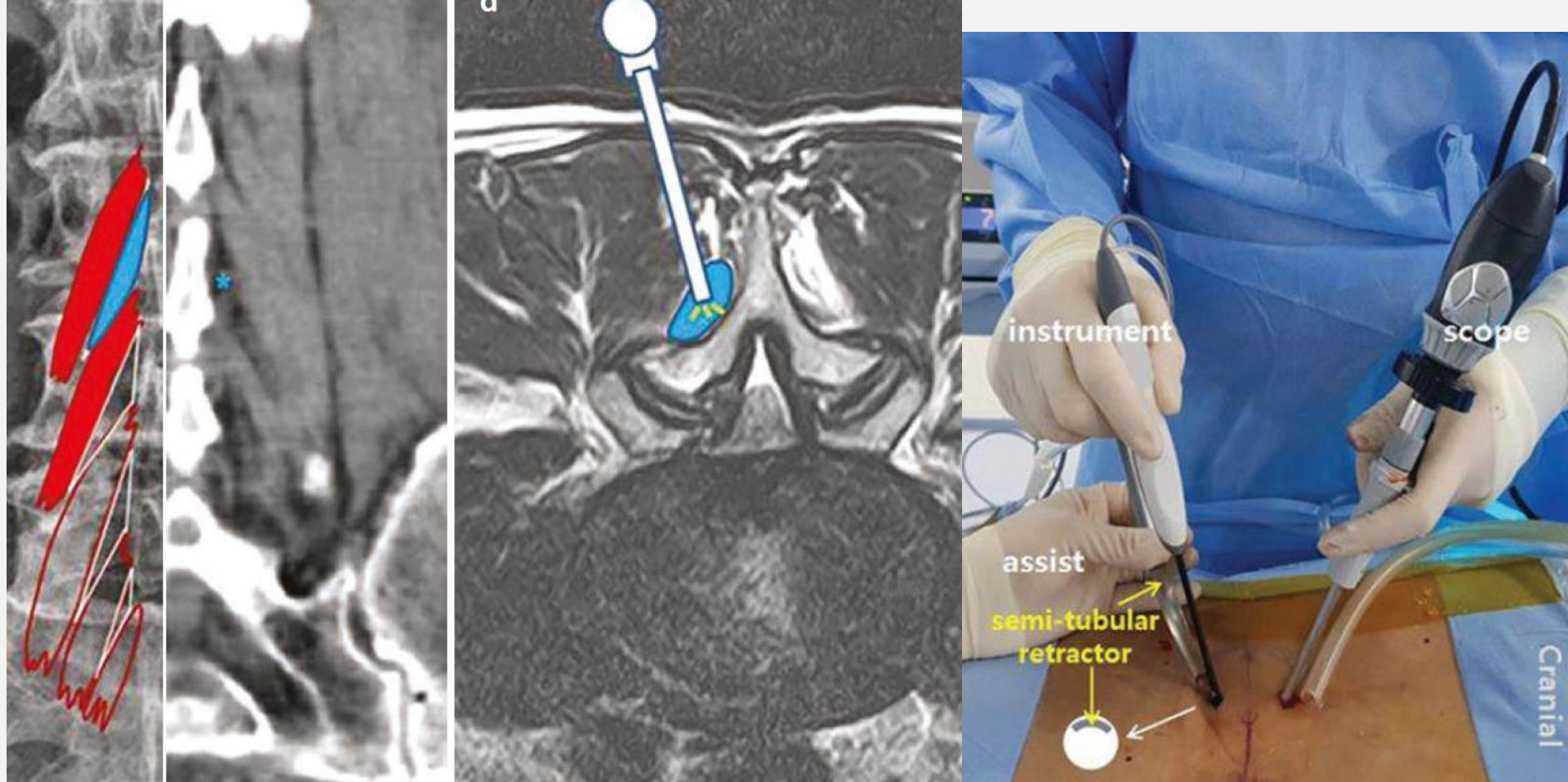


90 degree RF wand

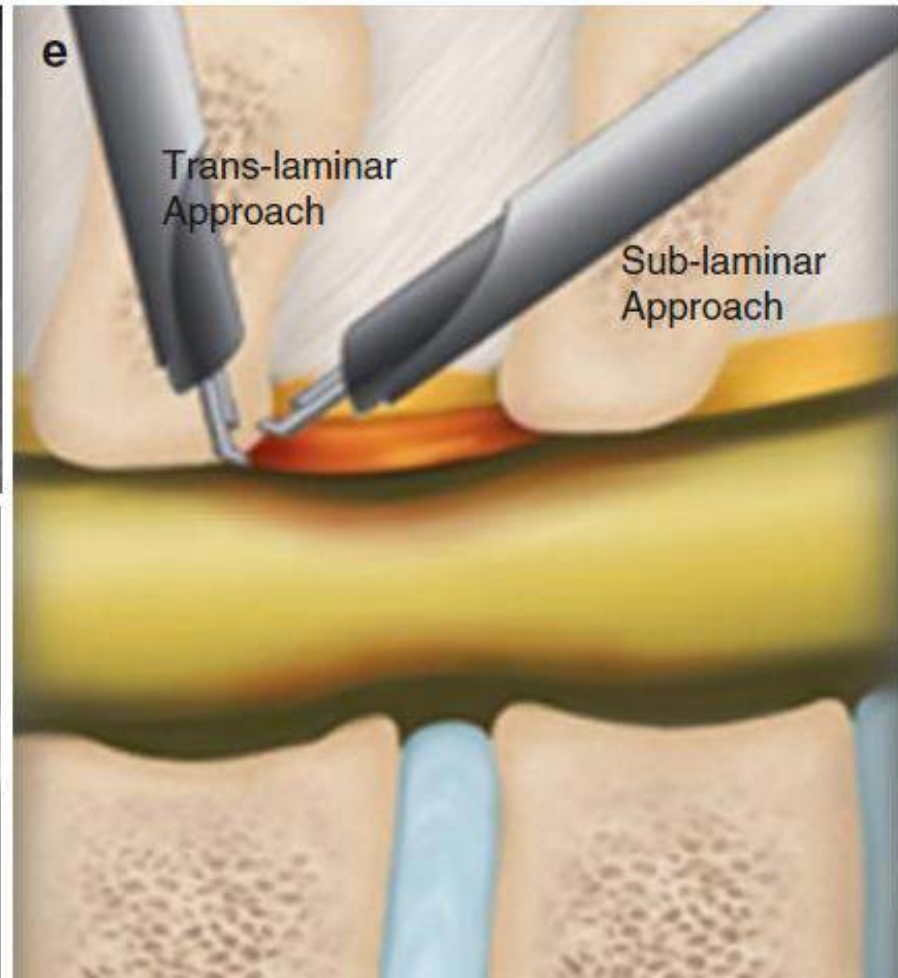
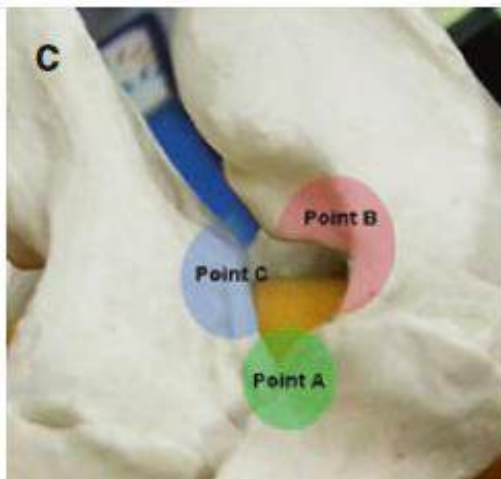
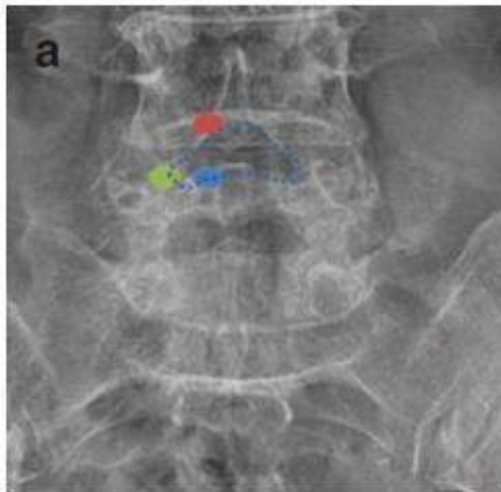






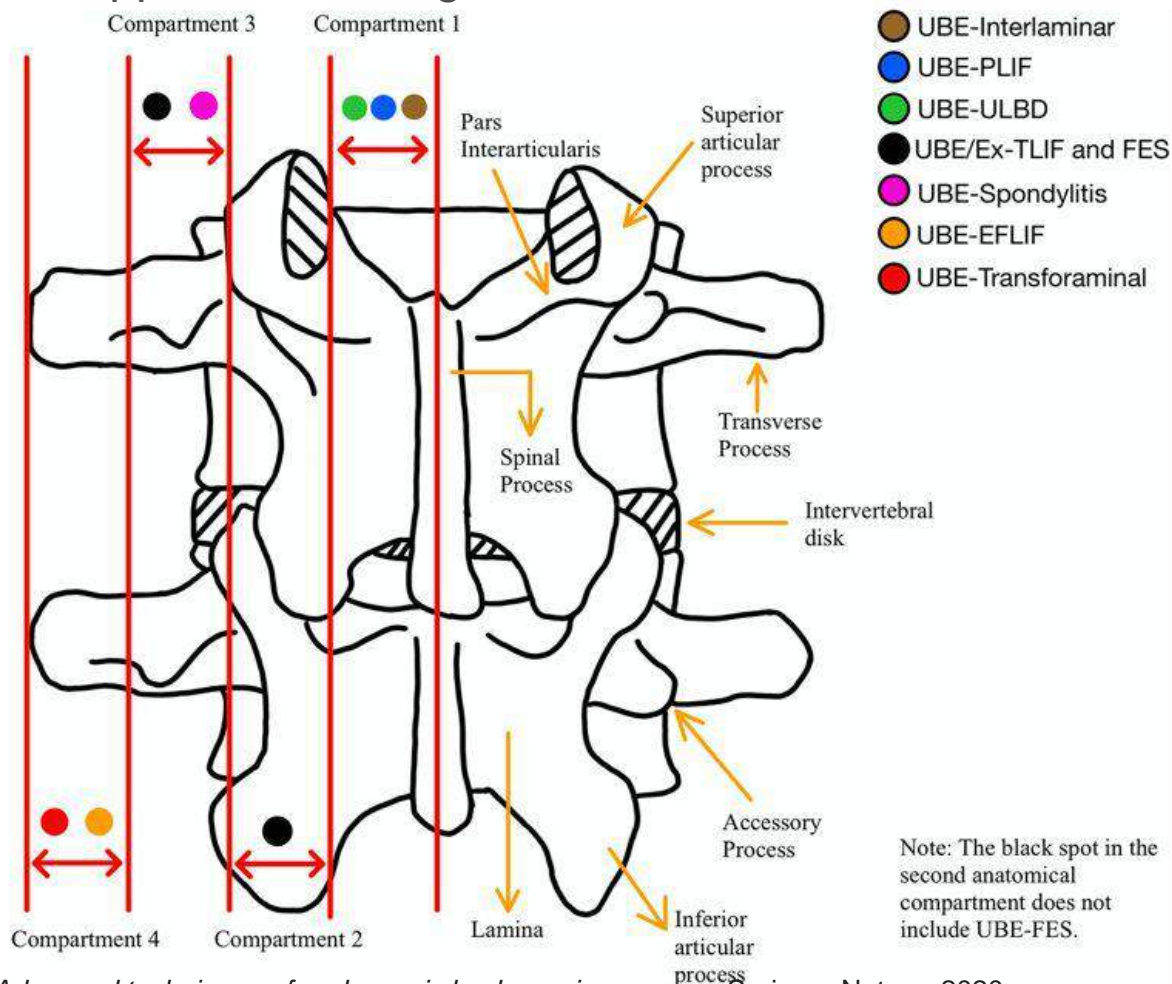


Heo, Dong Hwa, et al. *Unilateral biportal endoscopic spine surgery*.
Berlin: Springer Nature, 2022





Possibilities of surgical approaches using UBE

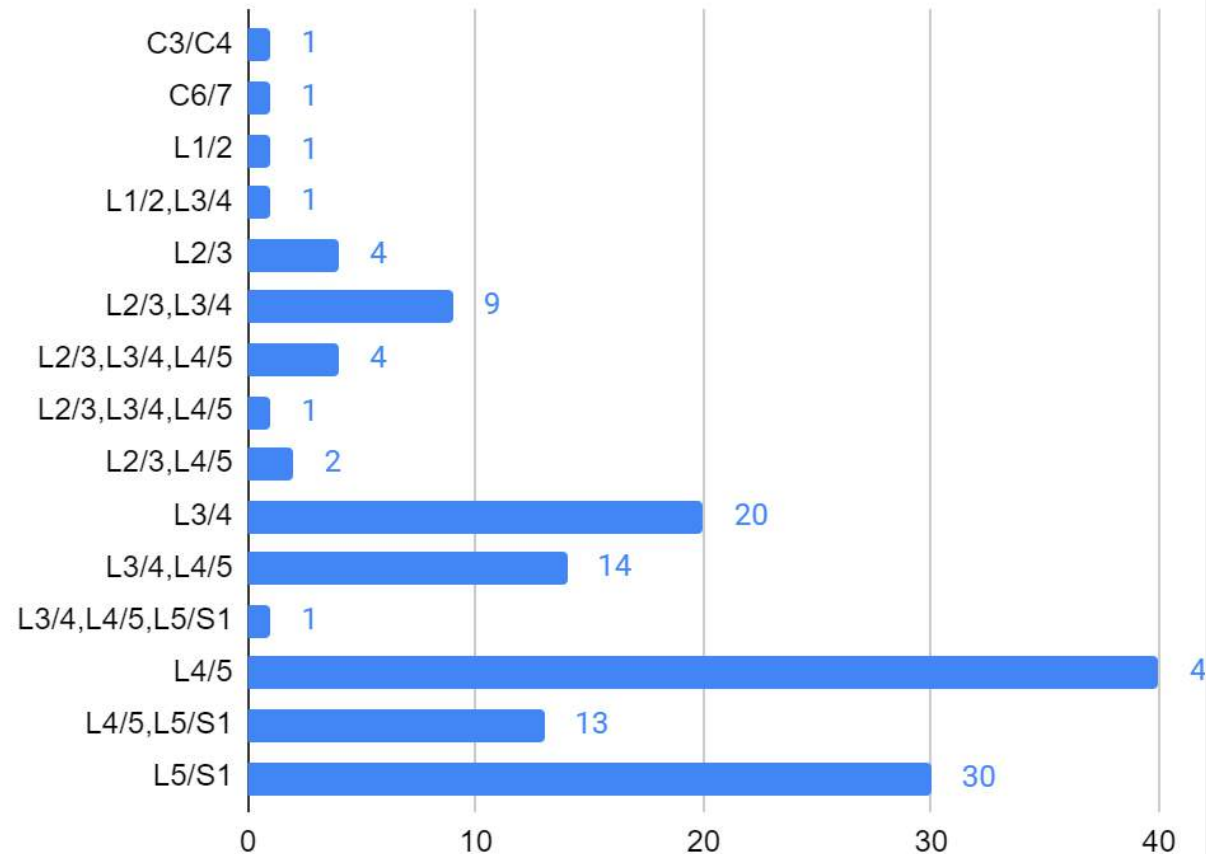


2 years of experience in UBE

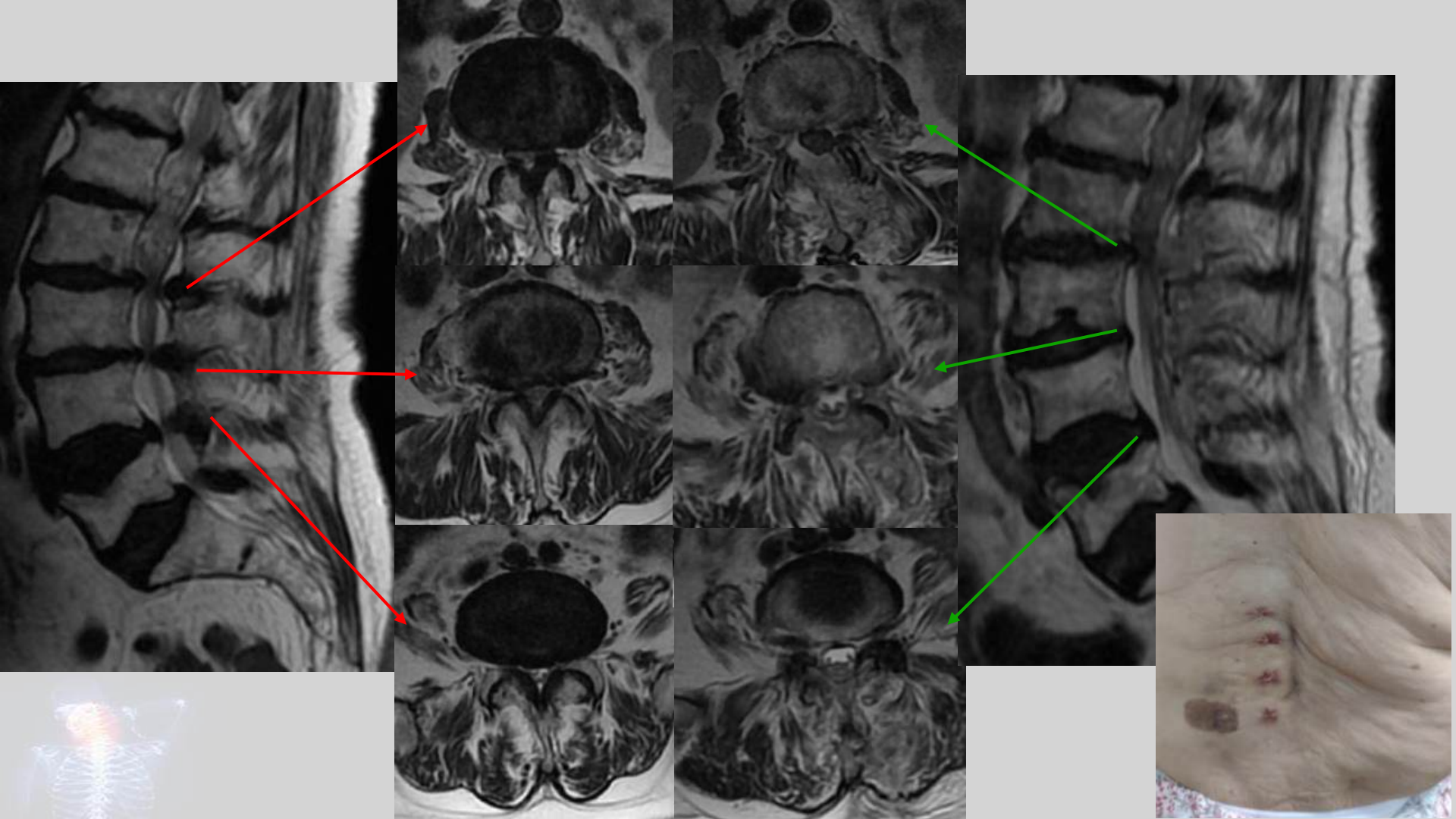
- 137 patients / 142 decompressions / 191 decompressed segments
 - age – mean 64 yo (25-89, median 67)
 - sex: F/M – 78 / 59
 - approach: interlaminar/ foraminal - 133 / 4
 - site: left/right - 115 / 22
 - number of operated segments: 1/2/3 - 99 / 37 / 6
- ASD - 3
- PLIF UBE – 2
- Arthrodesis after ALIF - 23



2 years of experience in UBE



segment	number
L1/2	2
L2/3	20
L3/4	50
L4/5	75
L5/S1	44



Complications

insufficient decompression	8	5,63%
dura tear	5	3,52%
limb paresis	2	1,41%
hematoma	2	1,41%
secondary instability	1	0,70%



Stenosis in Adjacent Segment Disease (ASD)

- Woman 70 yo
- Fusion L4/5 (20 years ago)
- Stenosis L3/4
- Endoprotheses due to hip dysplasia

