



ARTIFICIAL DISC & COMPLICATION

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Bones and Spine

HISTORY



HISTORY



- 1955 Hamby/Cleveland
 - Cement injection
- 1962 Nachemson
 - Silicone injection
- 1964 Fernstrom
 - Ball bearing
- 1970's to 80's
 - Urbaniak
 - Lee
 - Kotsuik
 - Steffee

History-Present



Charite' (depuy)



Prodisc (synthes)



Maverick (Medtronic)



Flexicore (stryker)

Current Indication

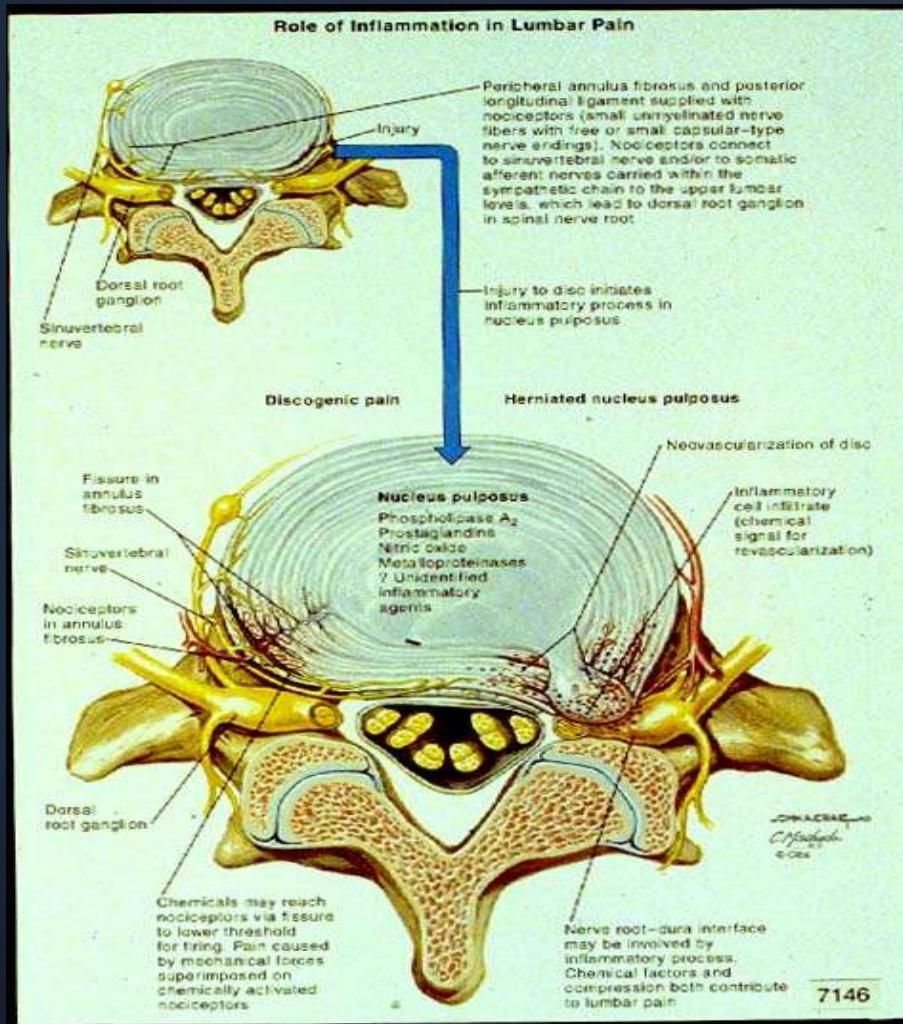
- Chronic lower back pain due to degenerative disc disease.
- One level (L4 – S1)
- Failed 6 months of conservative tx.



Discogenic pain



Discogenic Pain



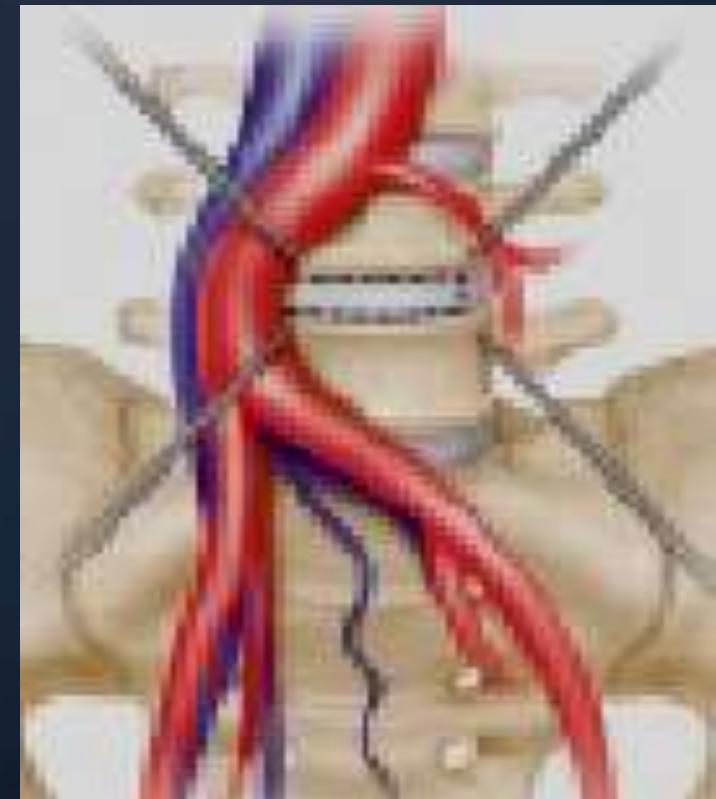
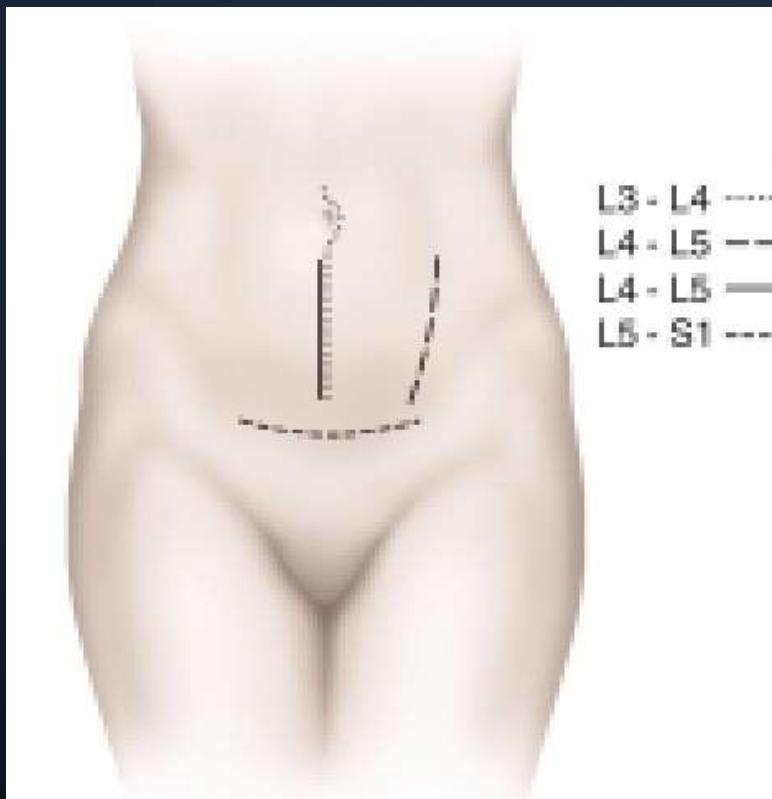
Radiograph



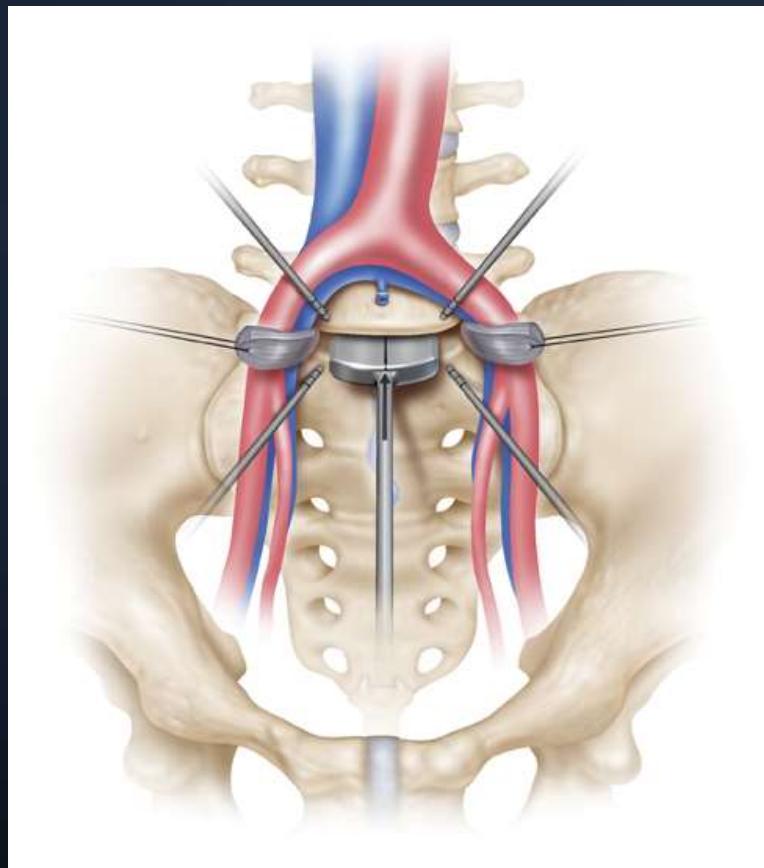
Discography



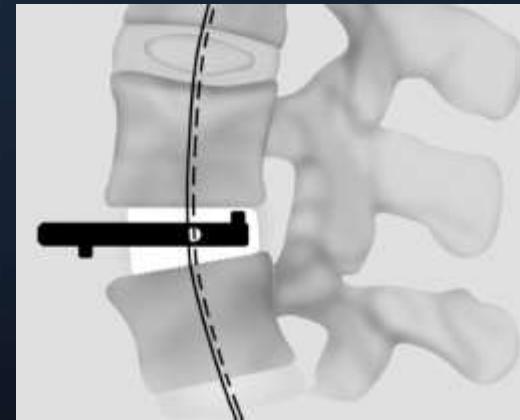
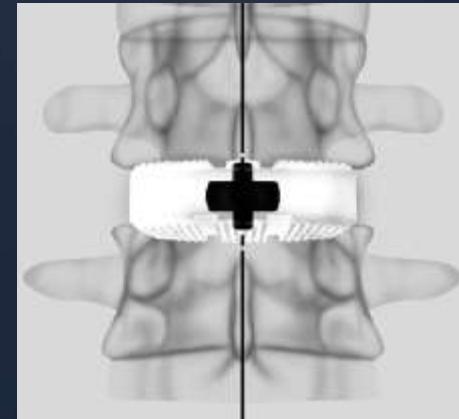
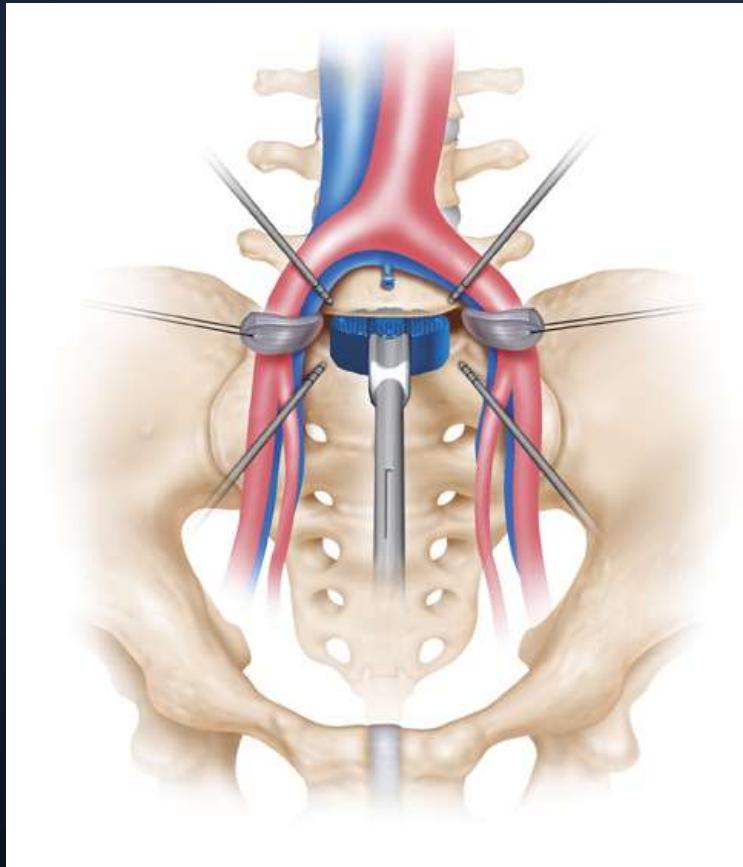
Approach



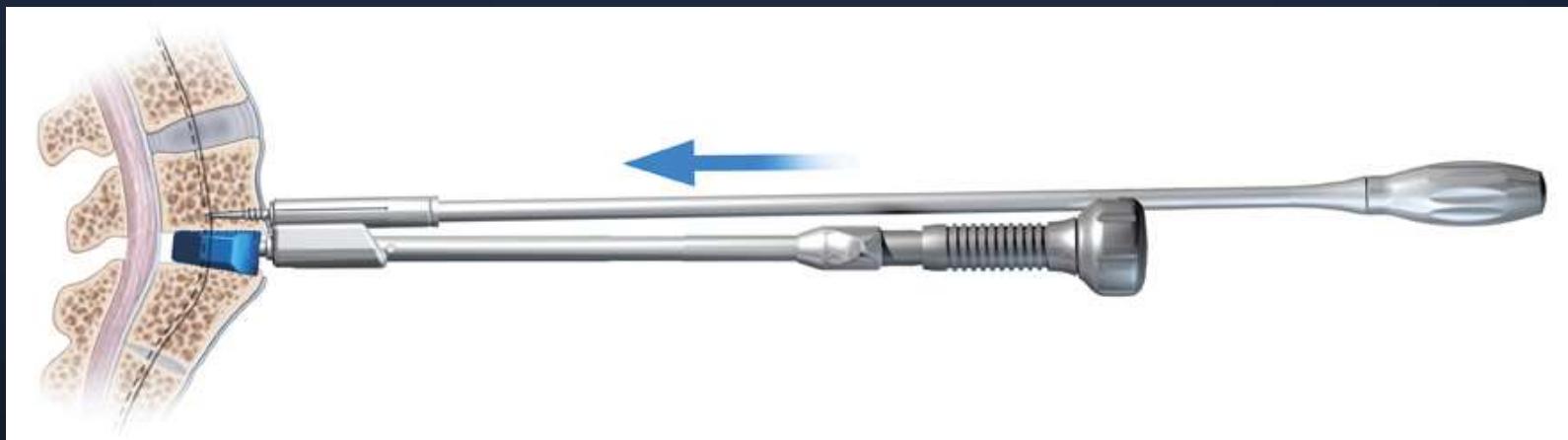
Step 1 - Sizing



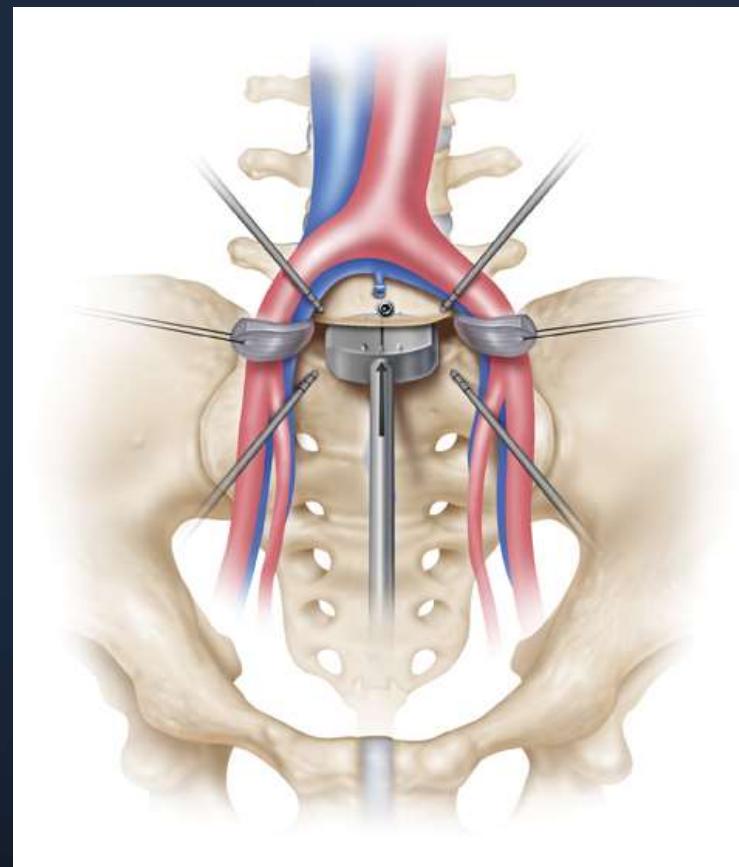
Step 2 - Trialing



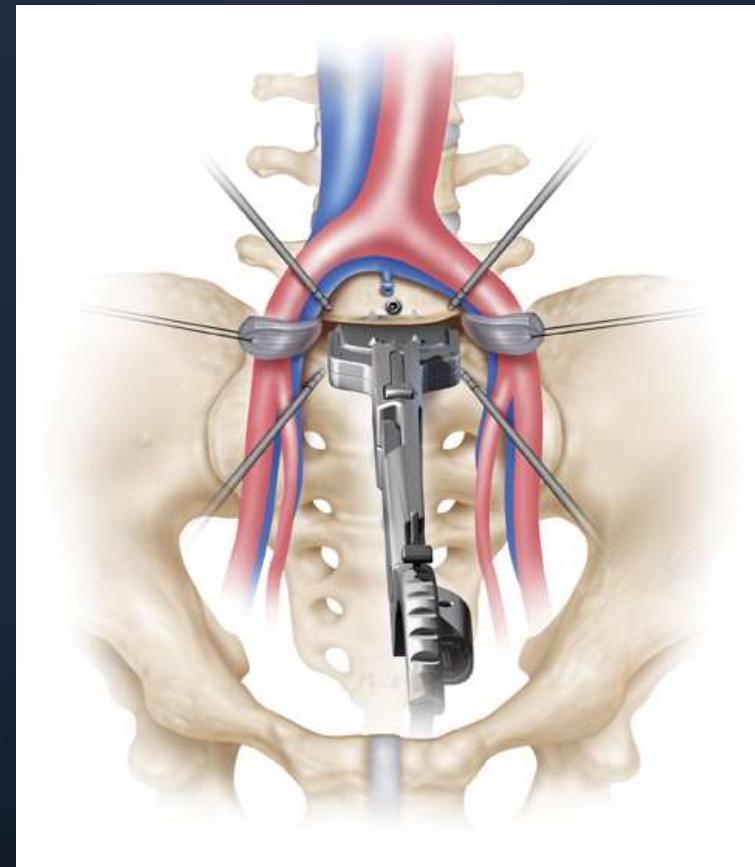
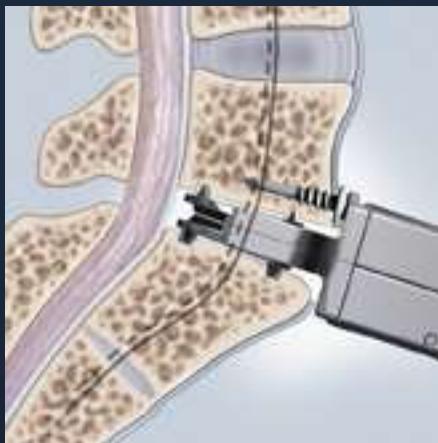
Step 3 – Midline Identification



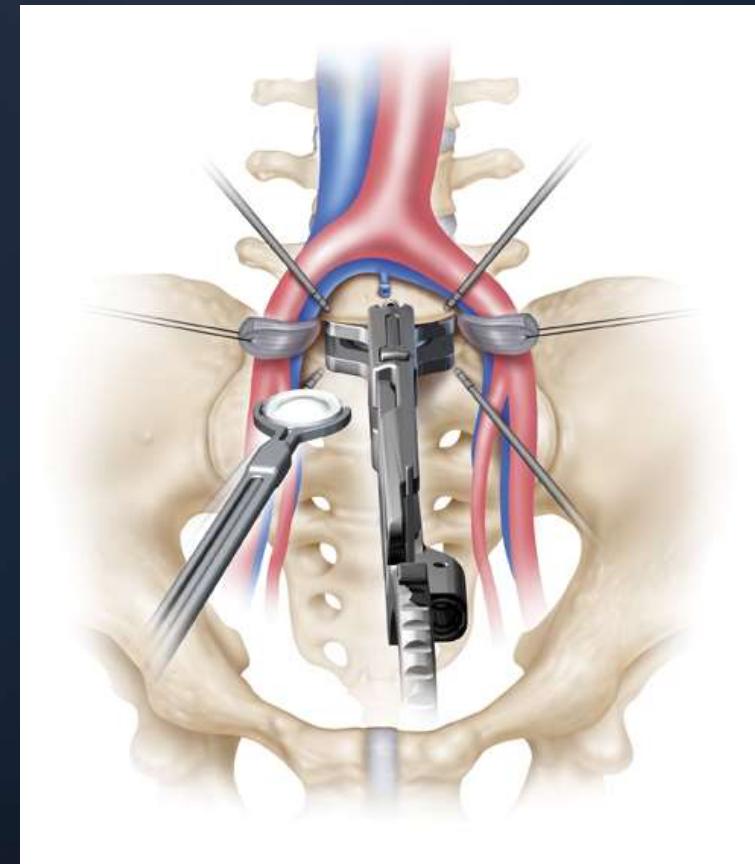
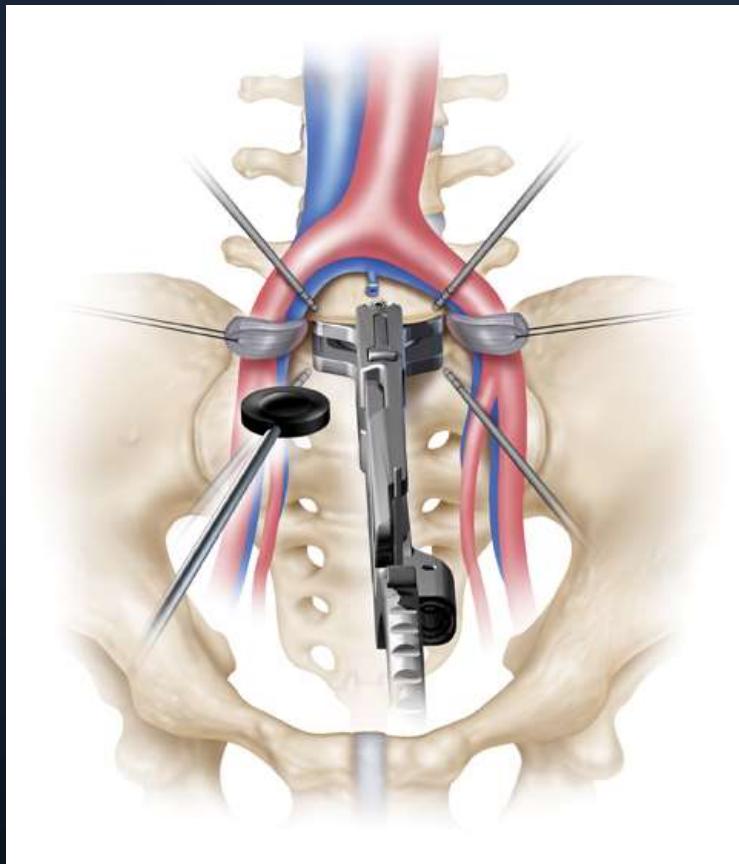
Step 4 – Pilot driver



Step 5- Insert Endplates



Step 6 – Core Trial & Insertion



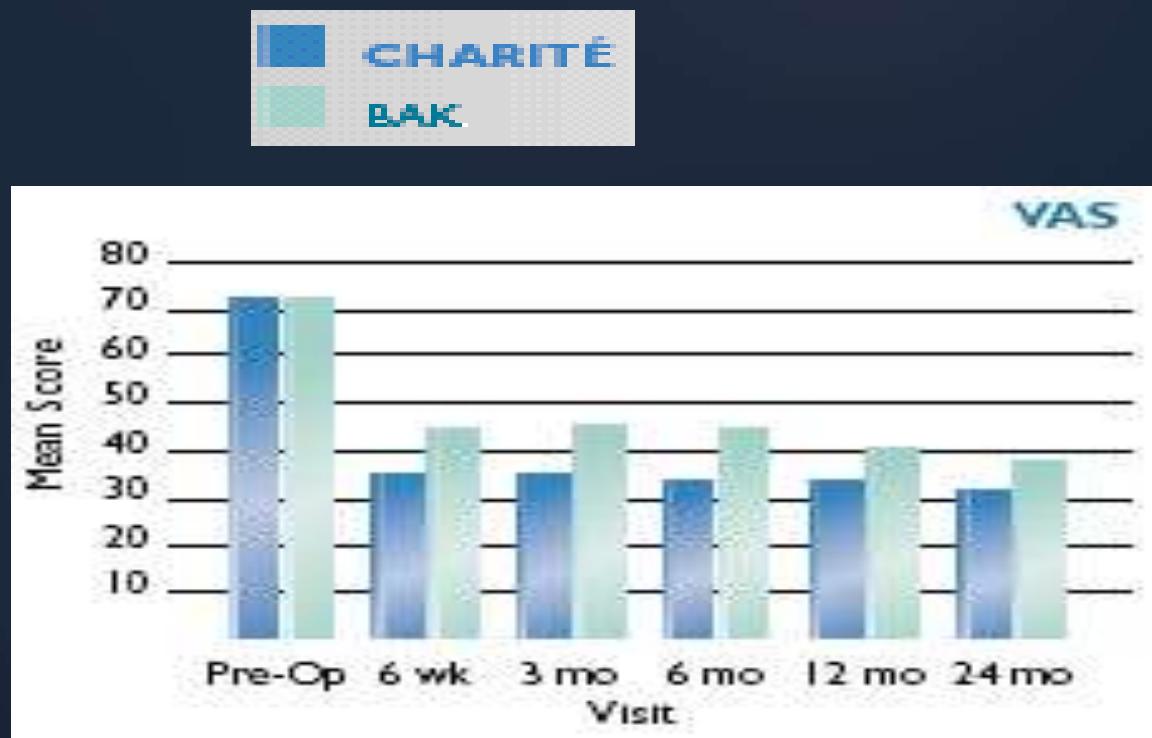
Results – IDE (Randomized/Prospective)

<i>Characteristics</i>	<i>Artificial disc</i>	<i>Fusion</i>
# of subjects	205	99
Age -years old	39.6	39.6
L5/S1	70%	67%
Surg. Time (min)	205 min	209 min

Results – IDE (Randomized/Prospective)

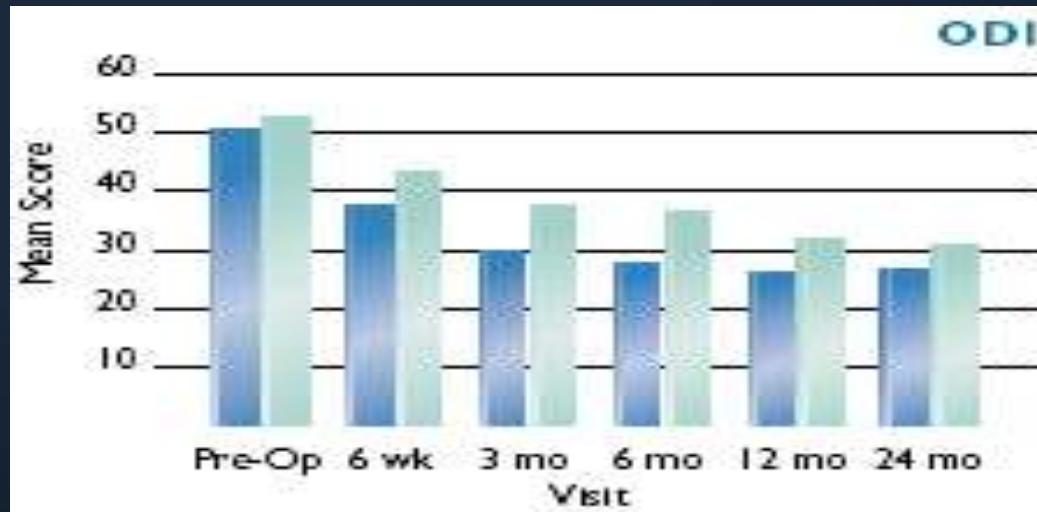
<i>Characteristics</i>	<i>Artificial disc</i>	<i>Fusion</i>
Complication (device-related)	7.8%	4%
Complication (neurological)	12.1%	17.2%
15% improv. (Oswestry score)	64%	58%

Pain Relief (VAS)

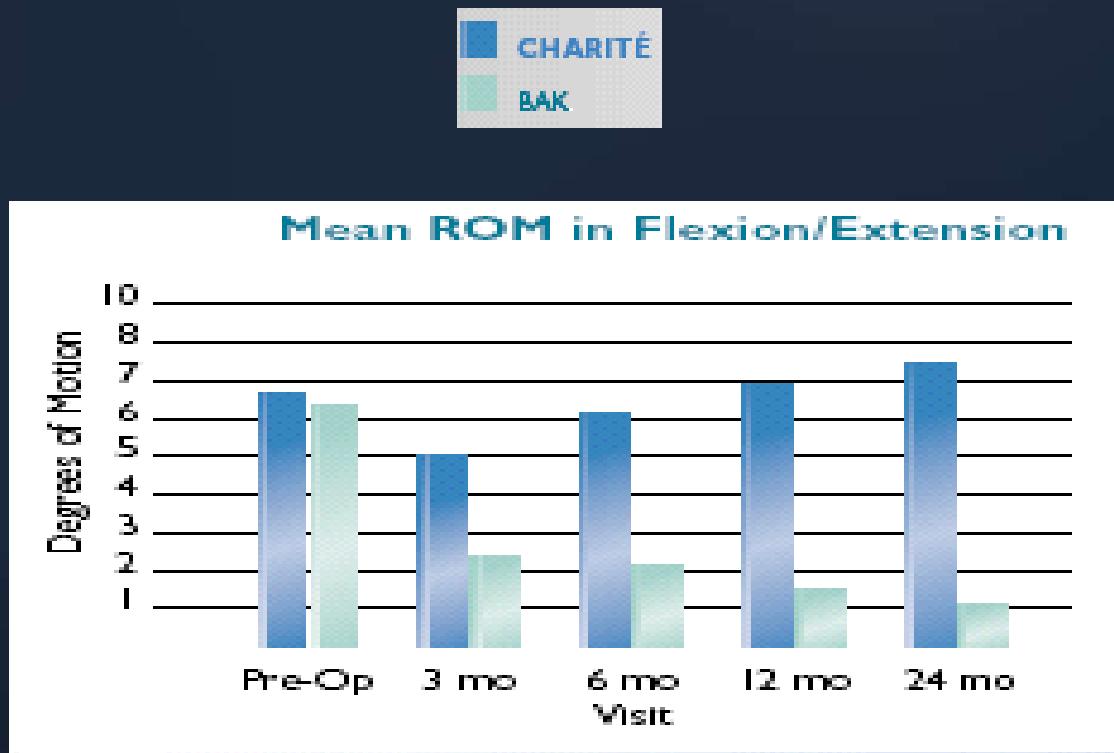


Pain & Function (ODI)

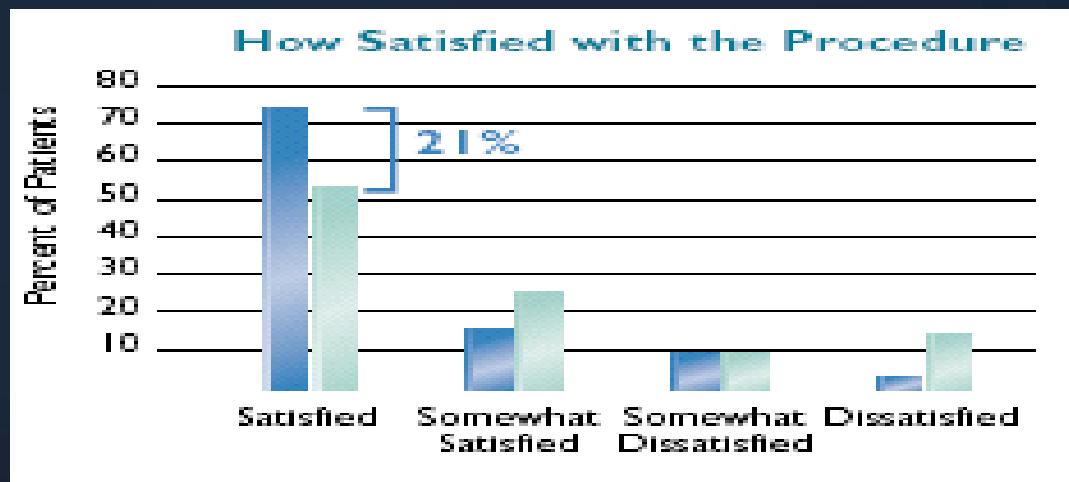
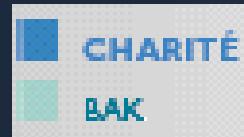
CHARITÉ
BAK



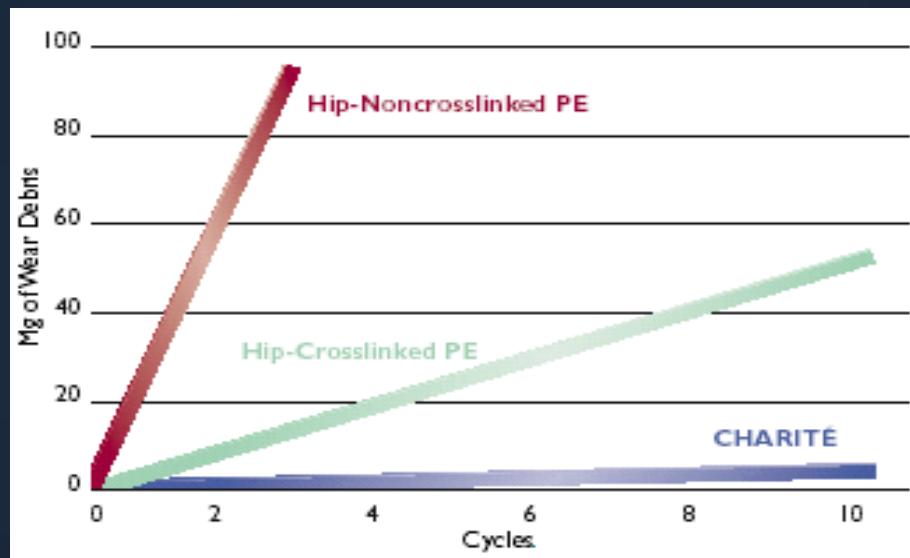
Range of Motion



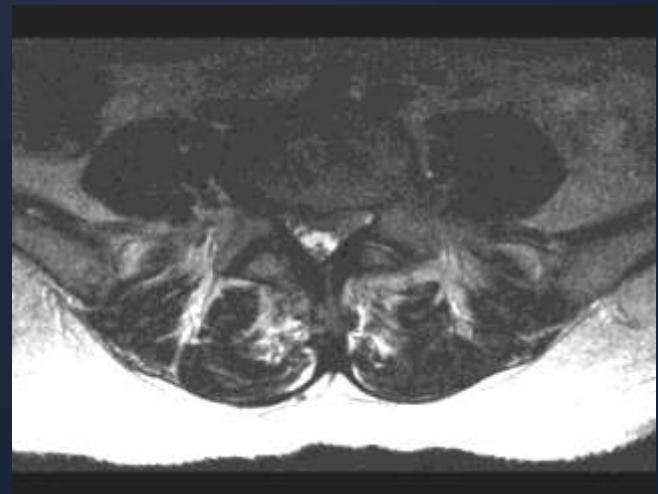
Patient Satisfaction (2 years)



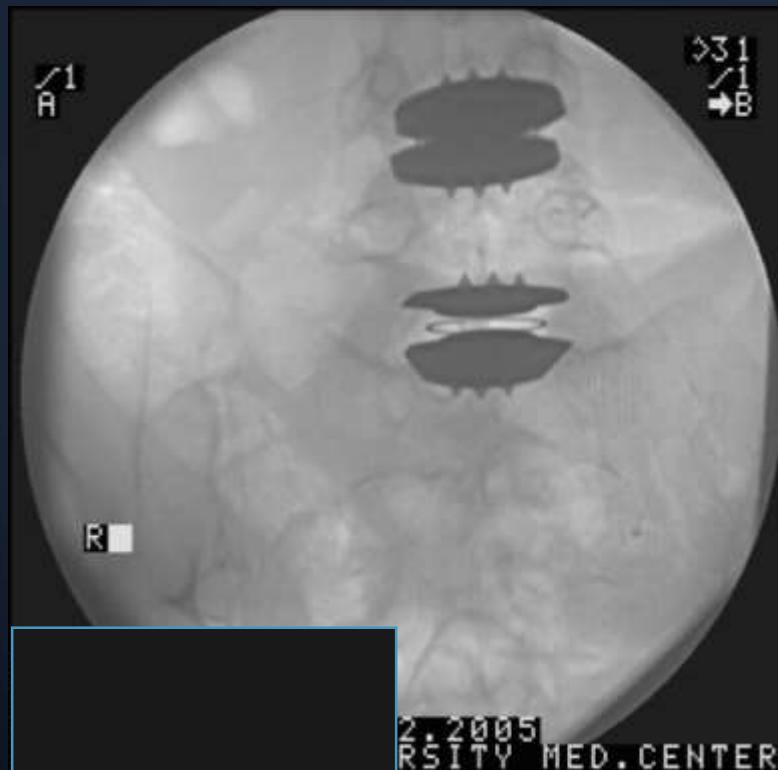
Wear-10 million cycles



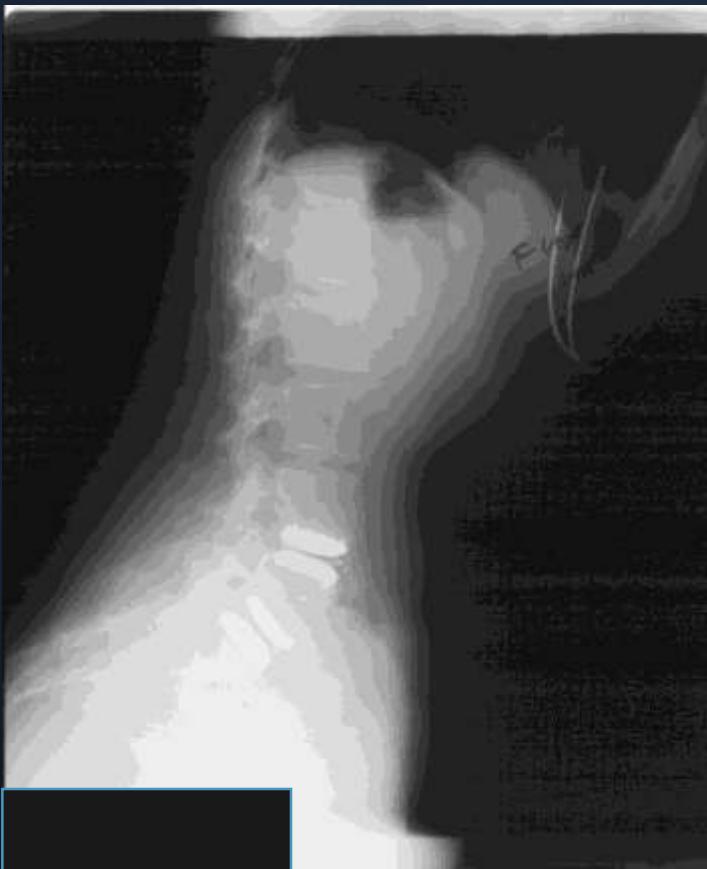
Case 1



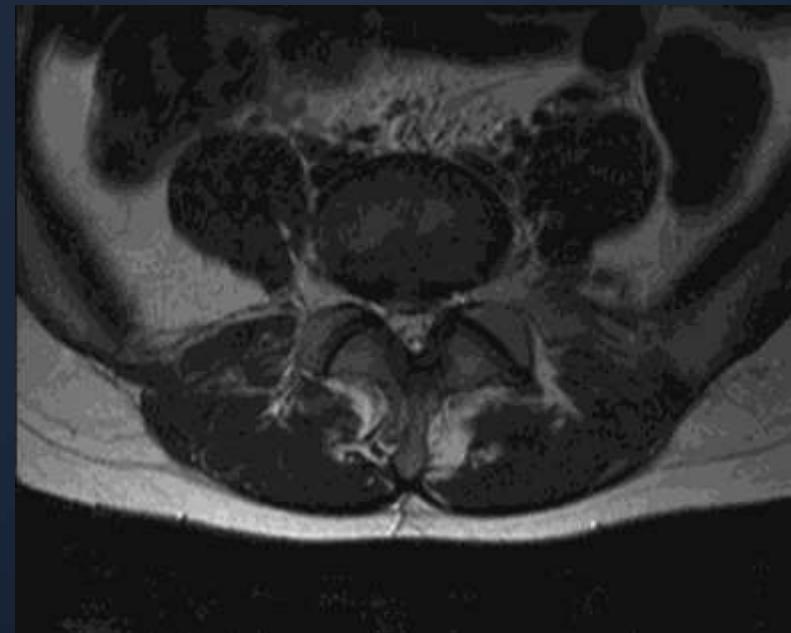
Intra-op xray



Flexion – Extension xray



Case 2 – multi-level



Case 2 – multi-level



Case 2 hybrid (post op)



Case 3 hybrid



Complication-Case 1



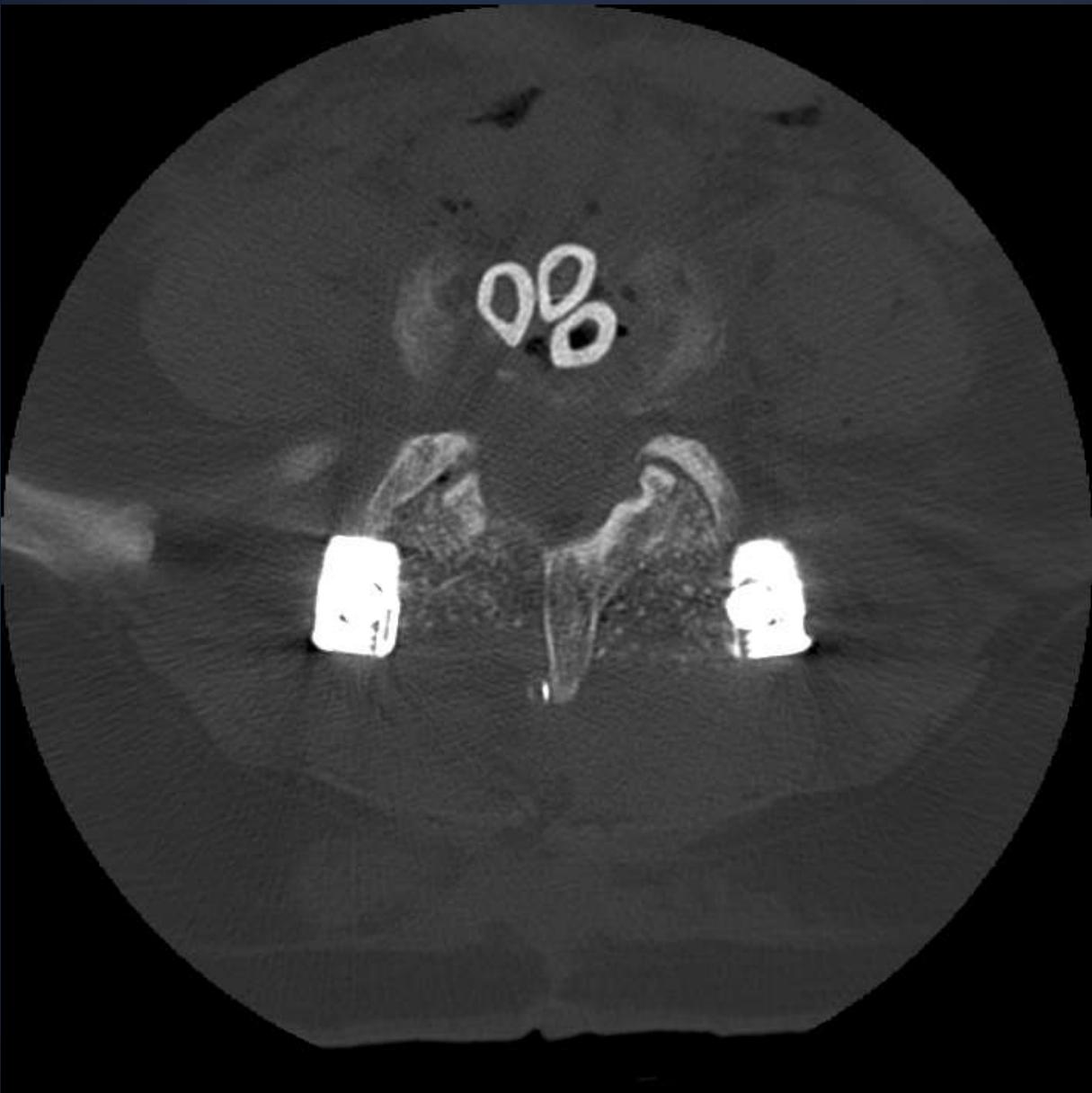
Case 1-post op xray



Case 1 (6 wks post op)



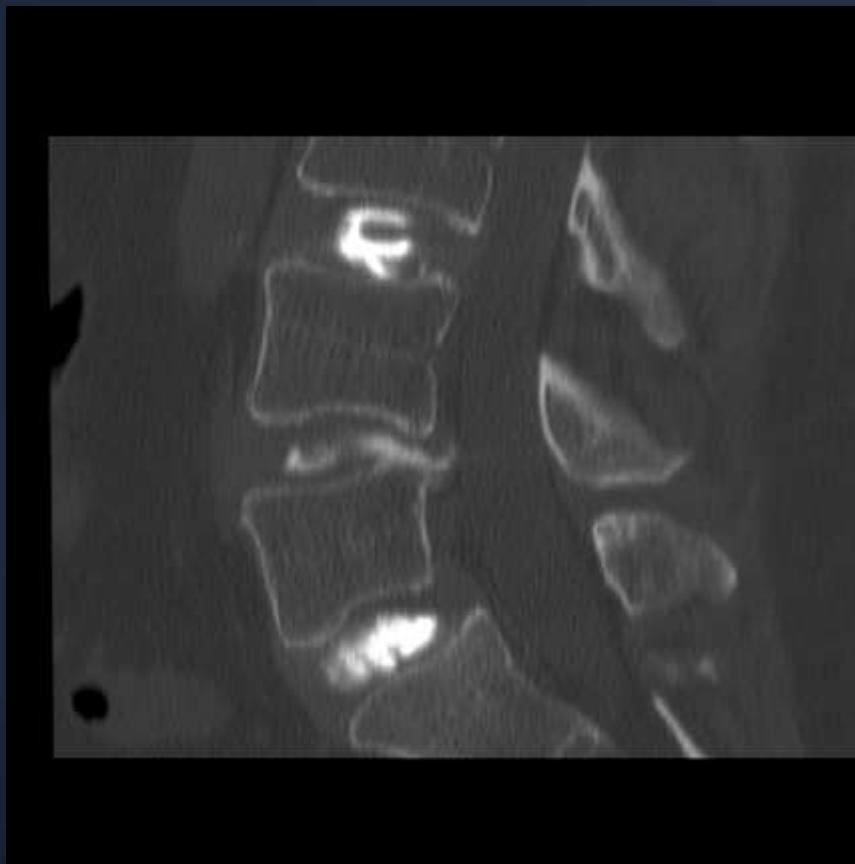




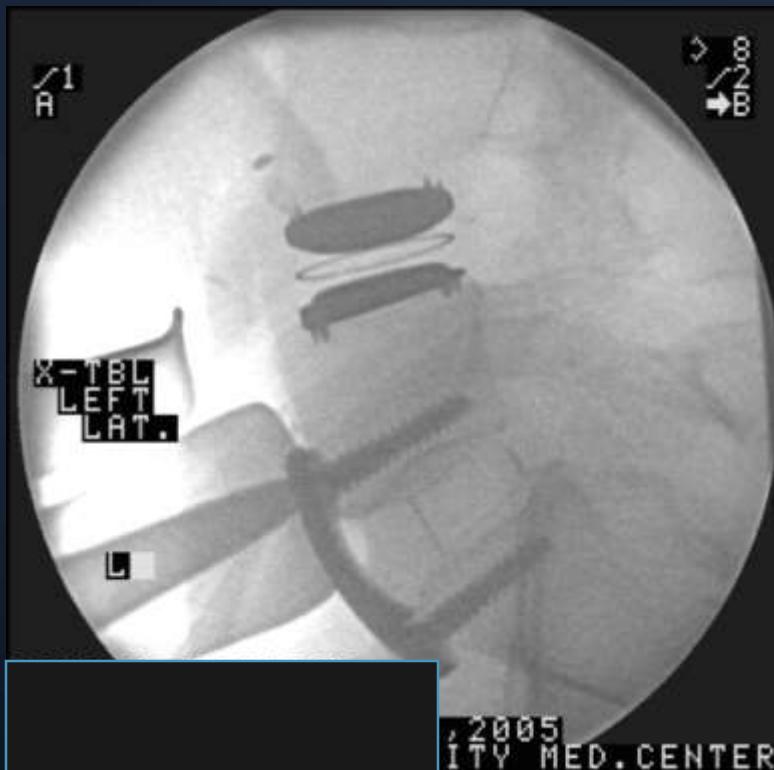
Case 1 (post op xray)



Case 2 (Post disco CT)



Case 2 (intra-op)



Case 2 (post op standing)



Case 2 (anterior fusion)



Case 2 (final)



Case 3 (post op myelogram)



Case 3 (post op CT)



Case 4 complication



Case 4 - complication



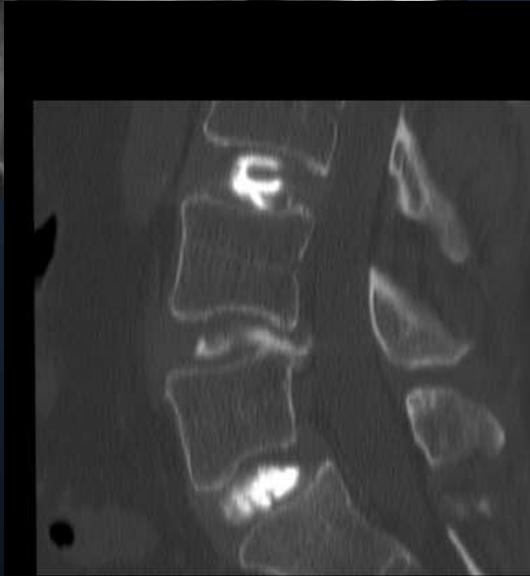
Case 4 – complication



Complication



Conclusion





THANK YOU