

TRANPSOAS APPROACH FOR COMPLEX SPINAL SURGERY

WAYNE CHENG, MD

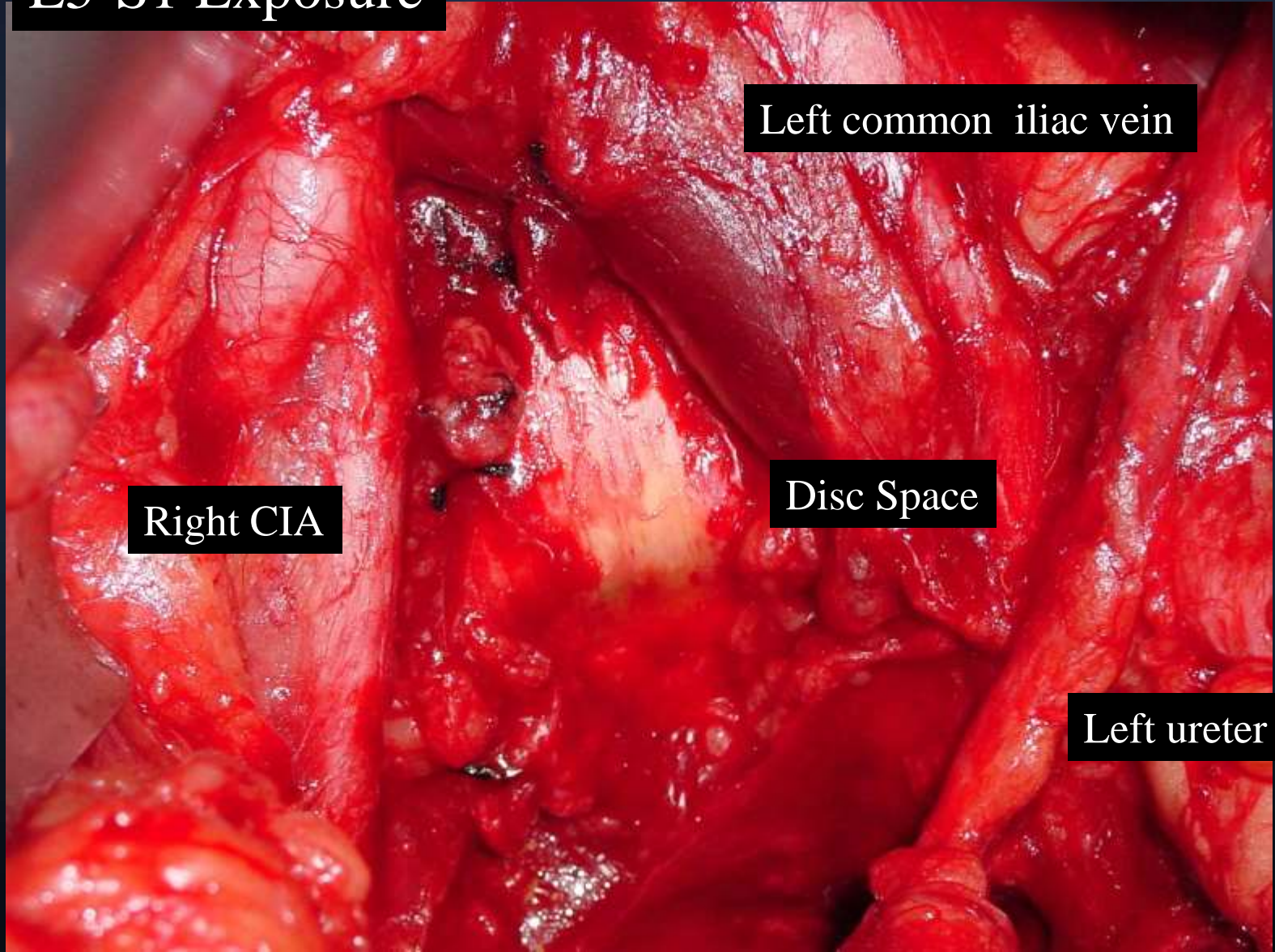
Bones and Spine

POSTERIOR APPROACH - FUSION DISEASE?



ANTERIOR APPROACH

L5-S1 Exposure



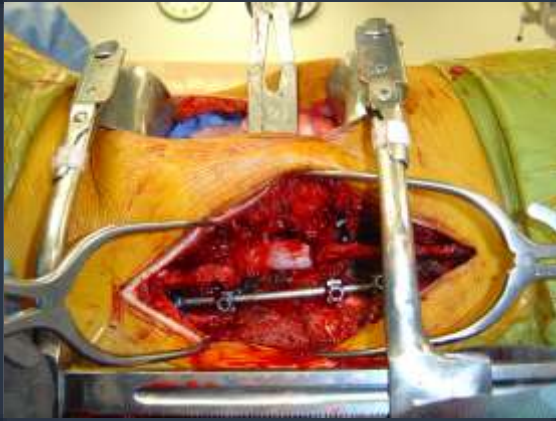
Left common iliac vein

Right CIA

Disc Space

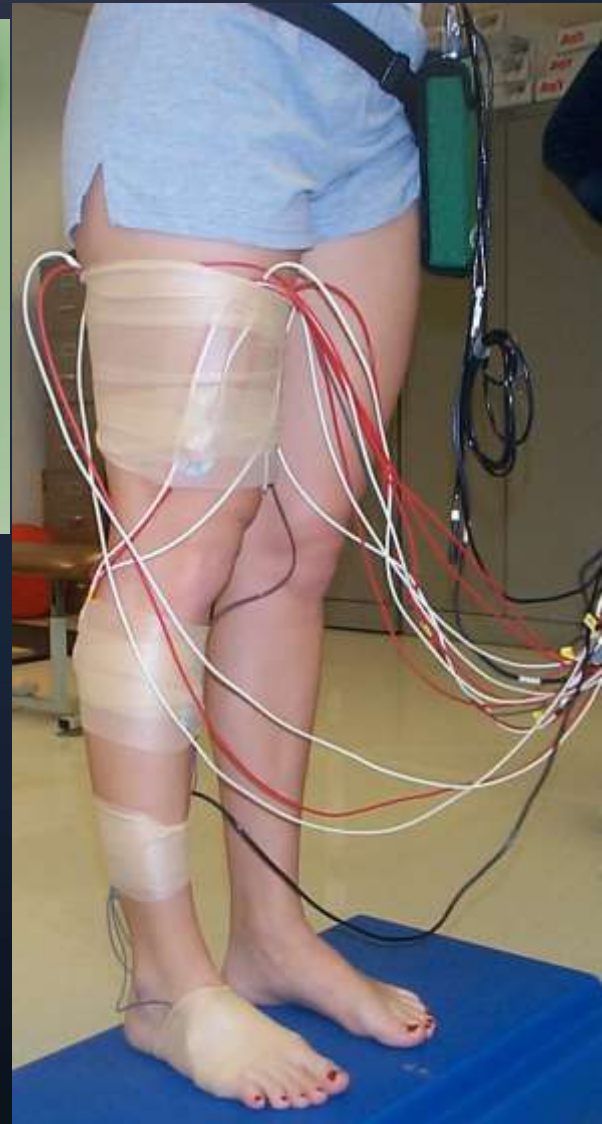
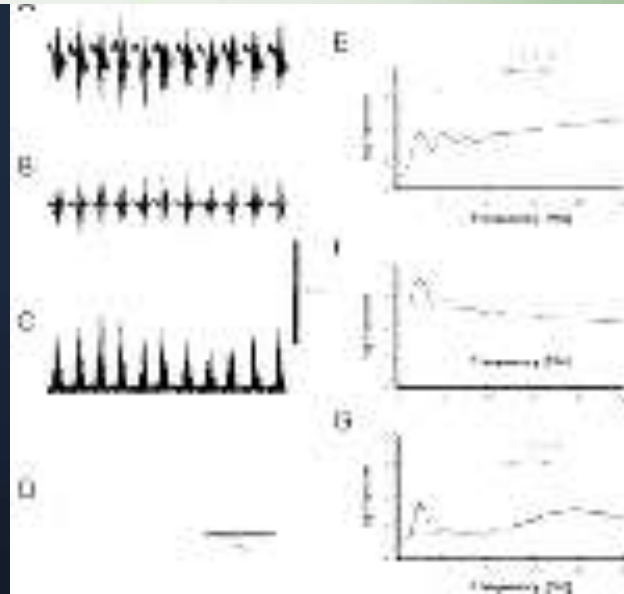
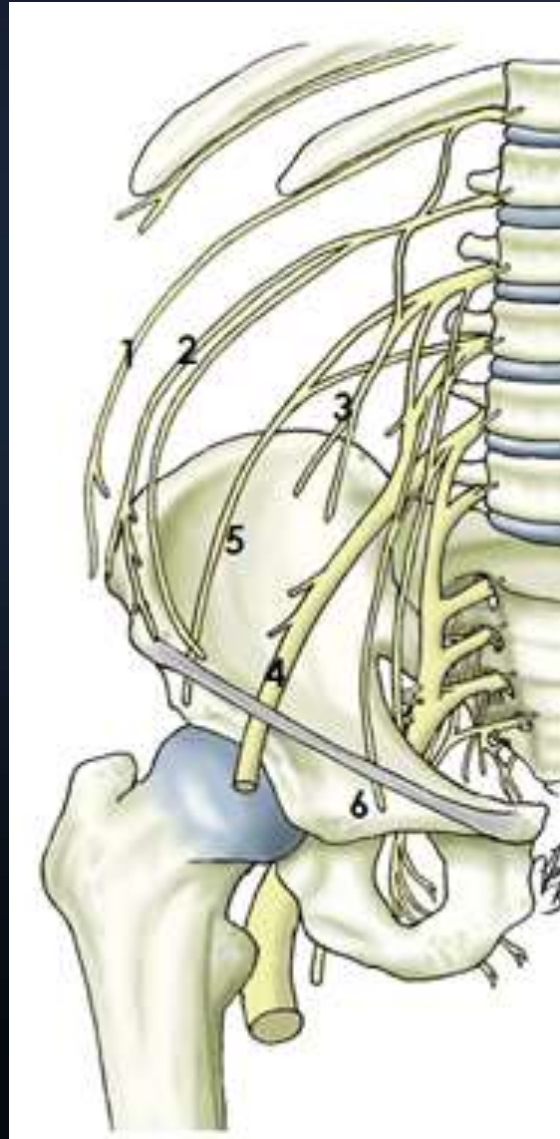
Left ureter

ANTERIOR & POSTERIOR APPROACH

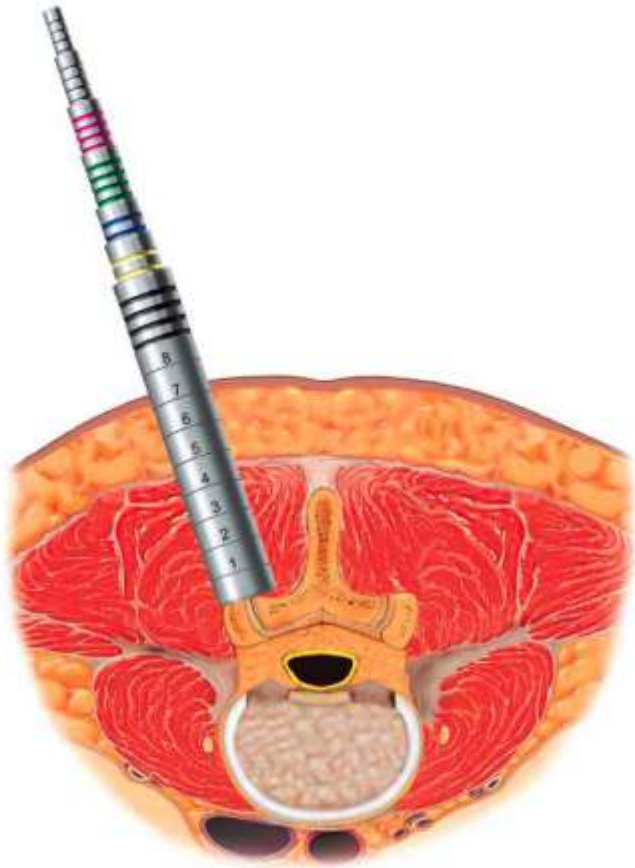




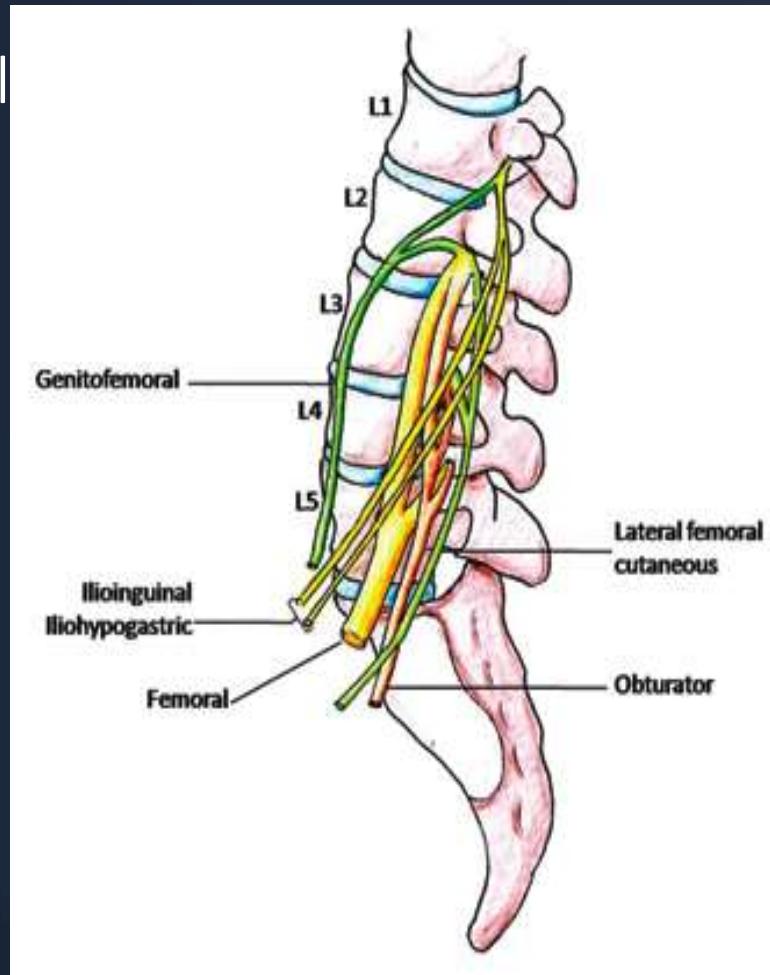
LUMBAR PLEXUS



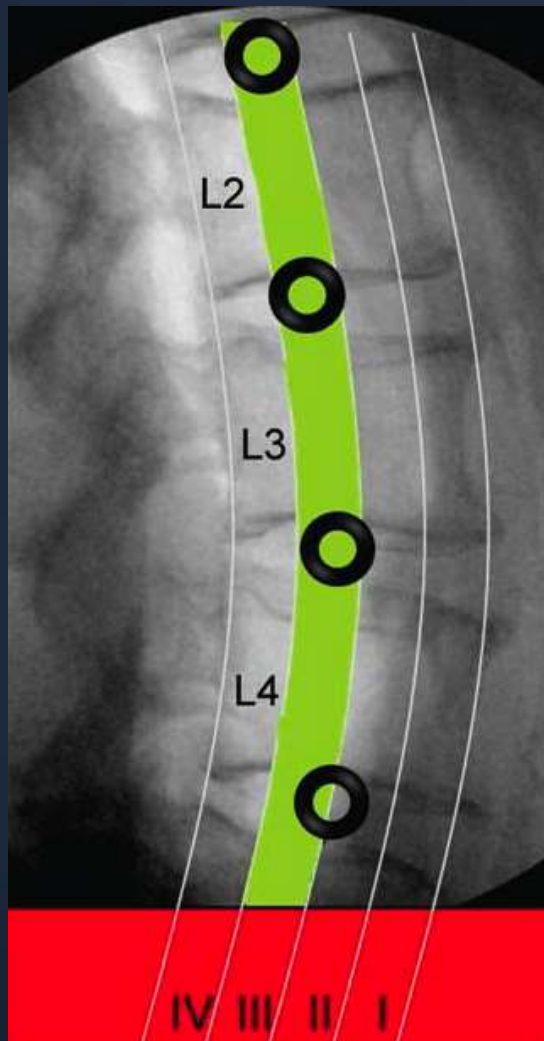
MIN. INVASIVE + EMG NAV.



NERVE MONI

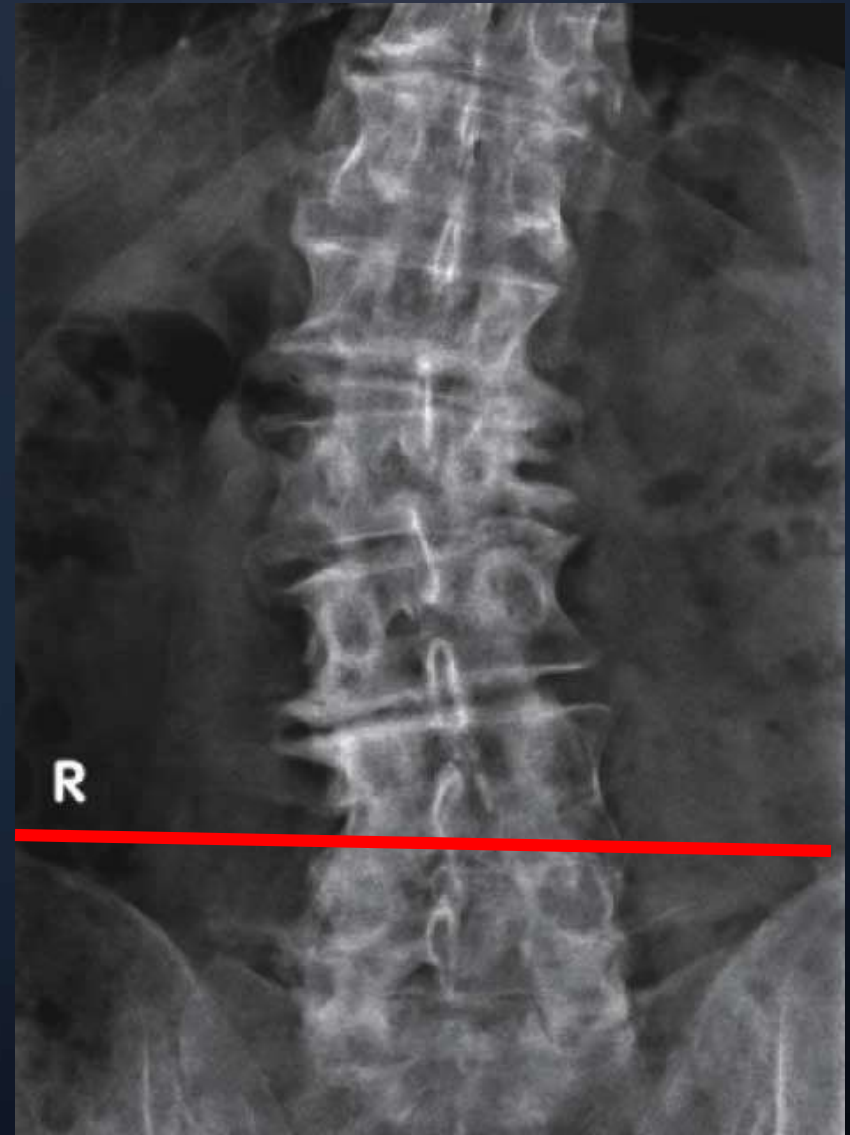


SAFE ZONE

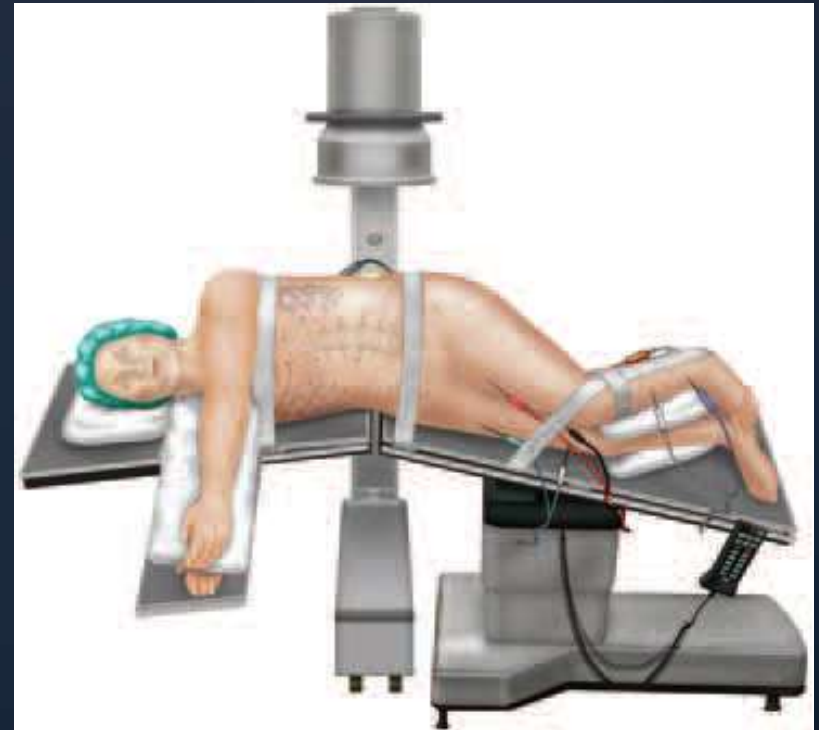
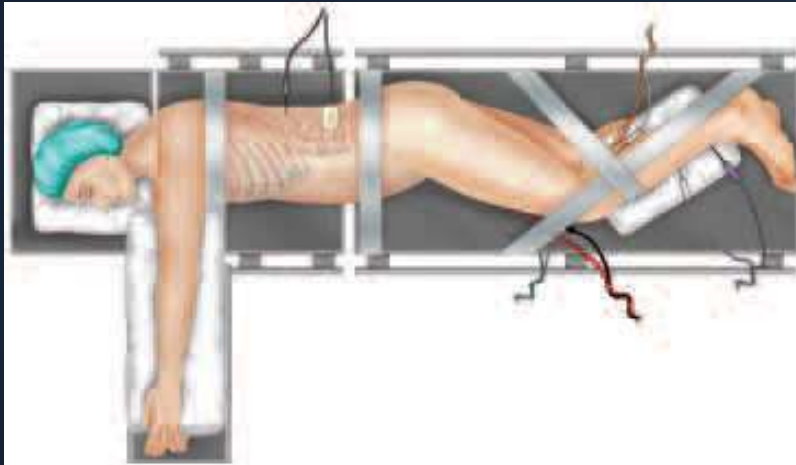


PATIENT ANATOMY

- When selecting patients, it is important to perform a reality check
 - Where is the iliac crest?
 - Important for L4-5 approaches
 - Where are the ribs?
 - Important for approaches above L2-3
 - Does the patient have any malalignment or deformity?



POSITIONING



POSITIONING



FLUORO POSITIONING

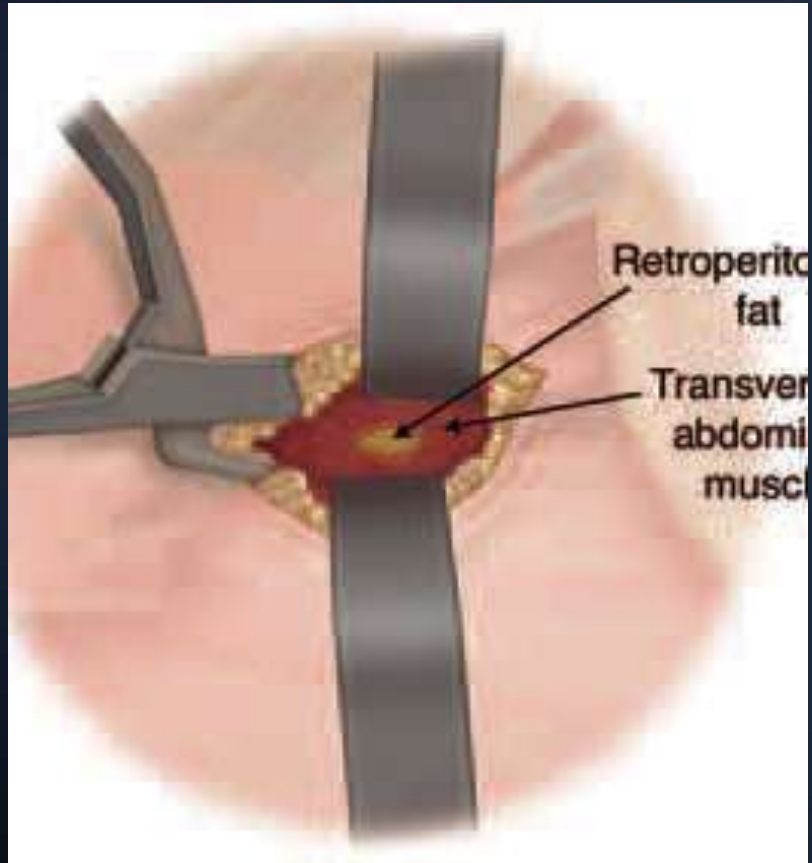
- Cannot overemphasize the importance of good fluoroscopic images

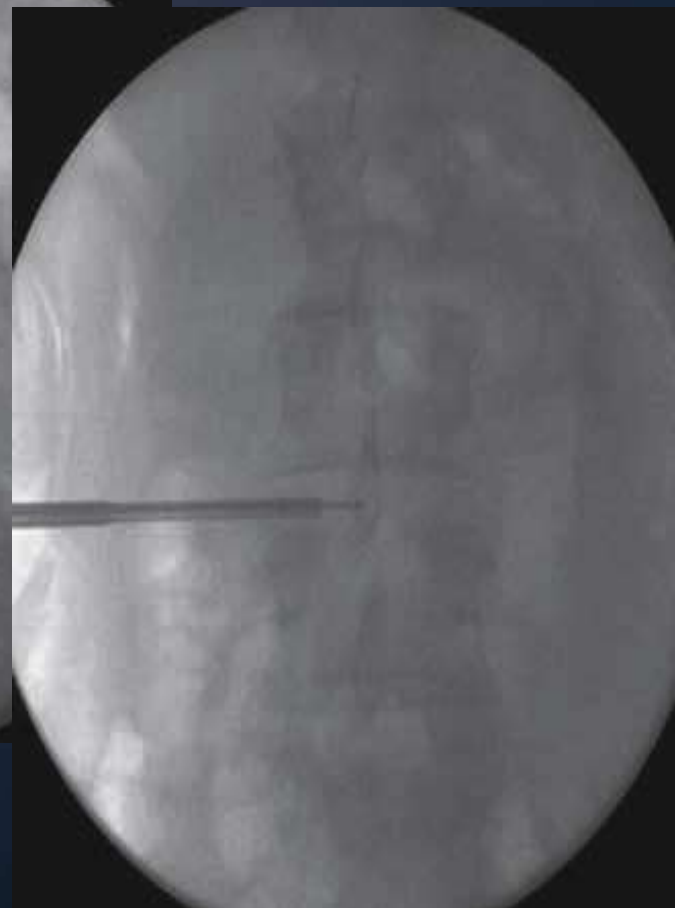
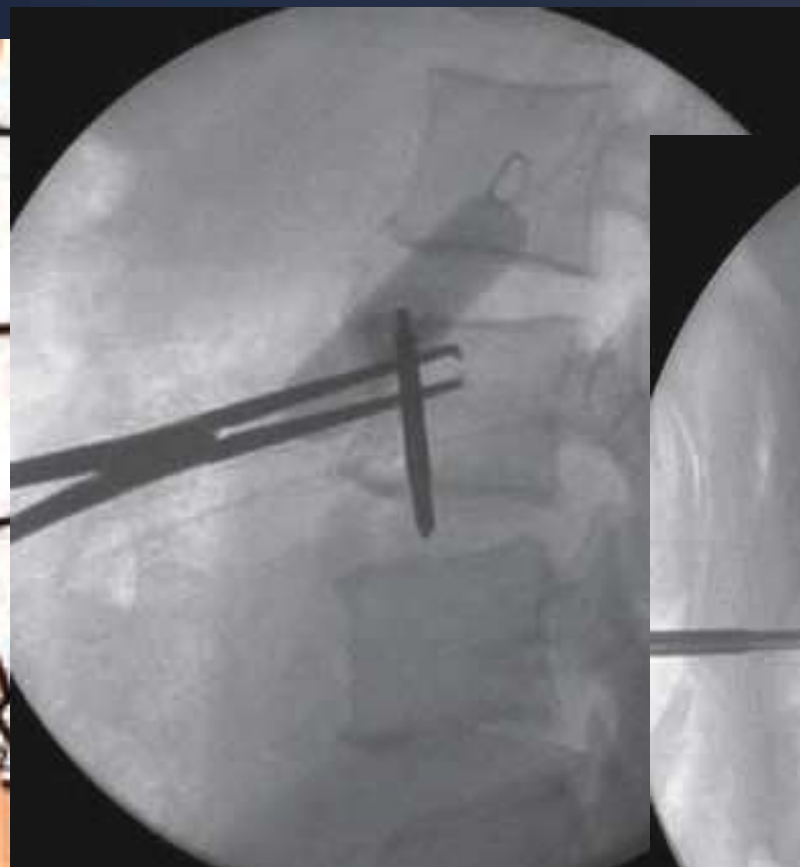


TRUE AP/LAT

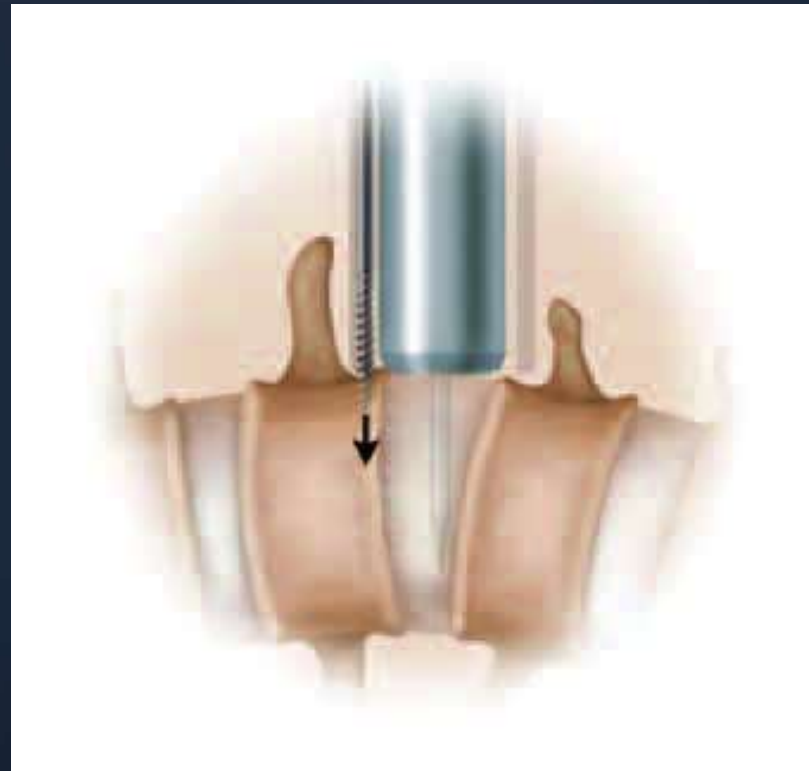
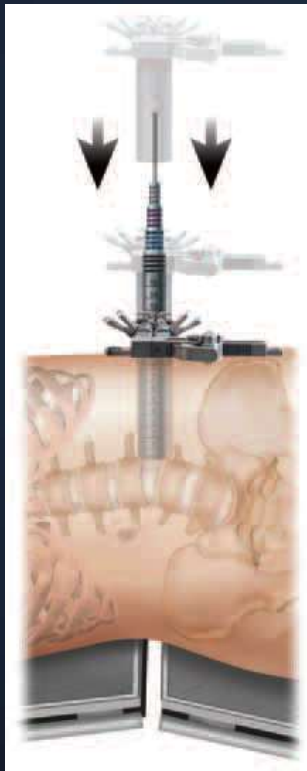


APPROACH



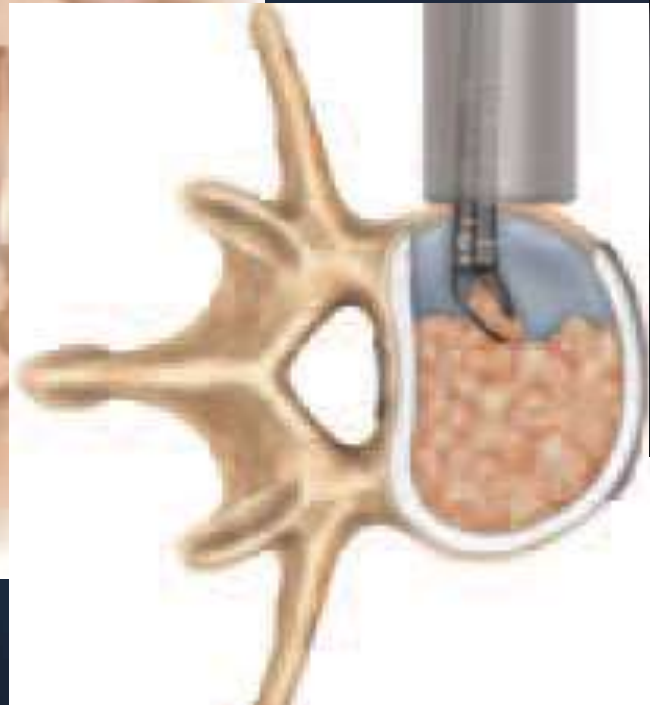
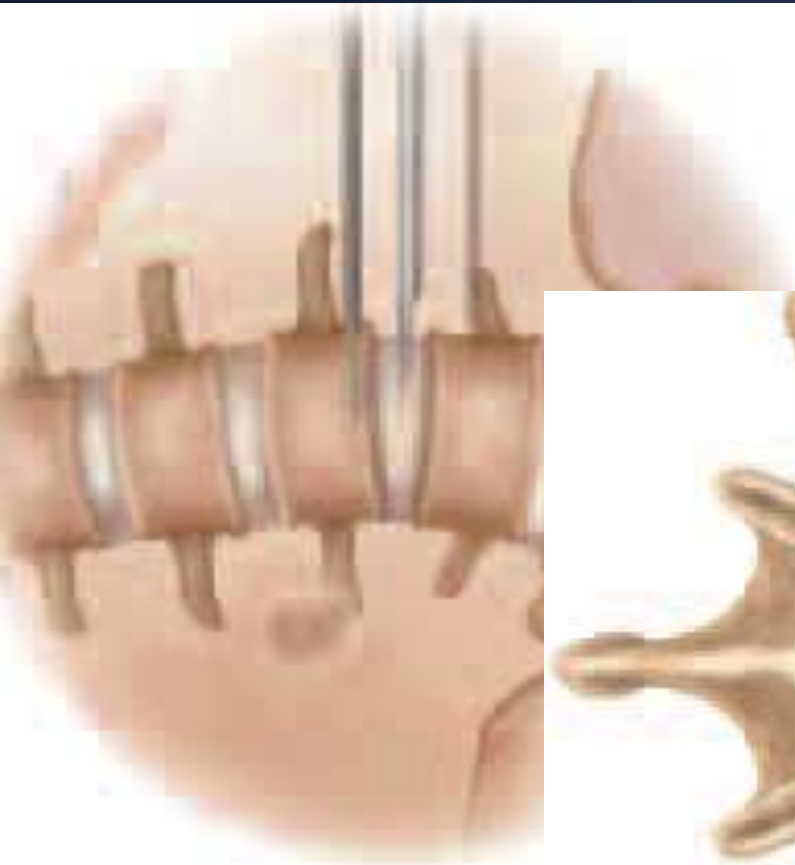


RETRACTOR

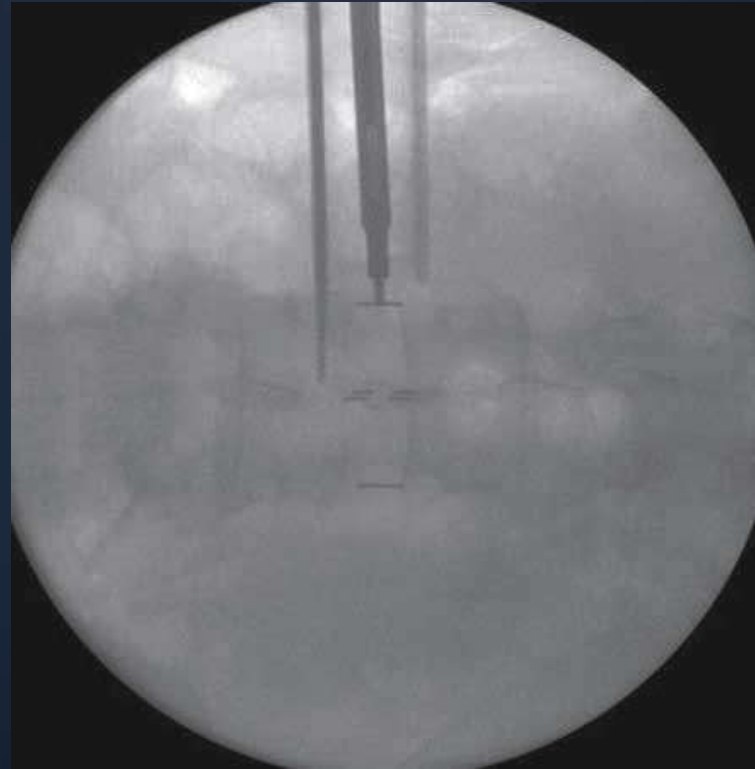
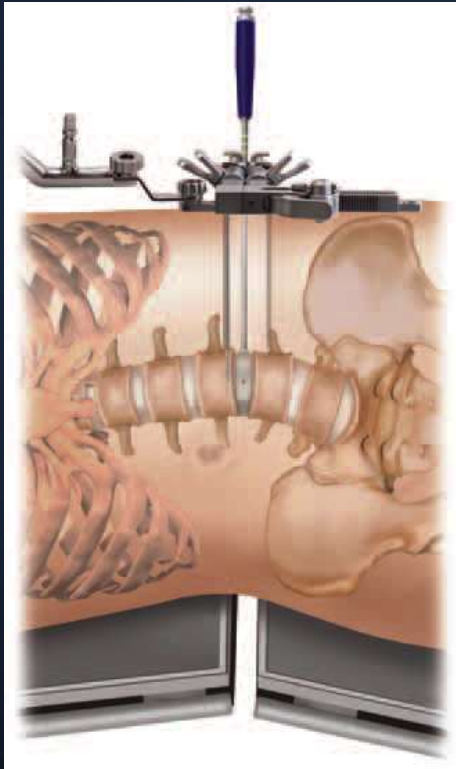


RETRACTOR





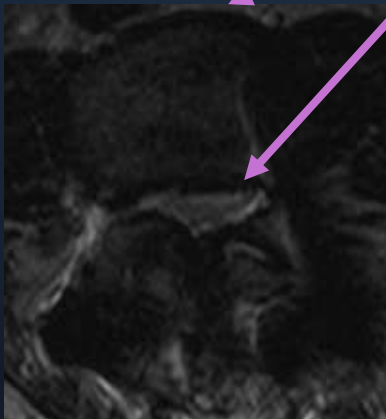
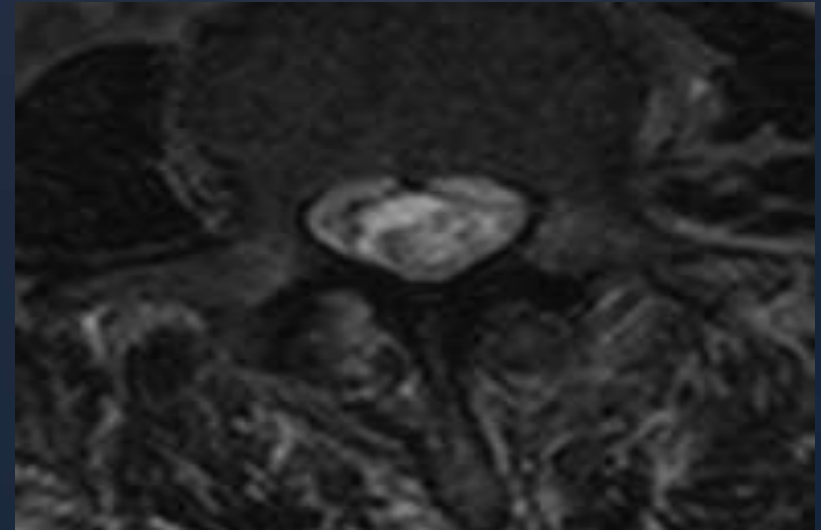
IMPLANT



CASE 1: 46 YO FEMALE, JEHOVAH WITNESS, NEUROGENIC CLAUDICATION, H/O INFX REQUIRED MULTIPLE I&D

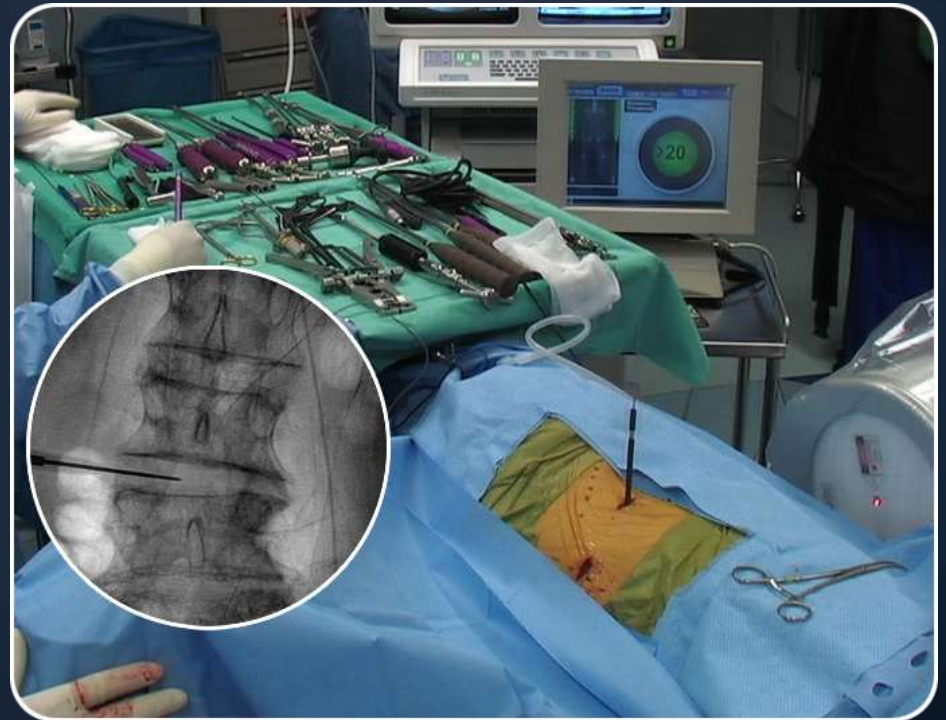
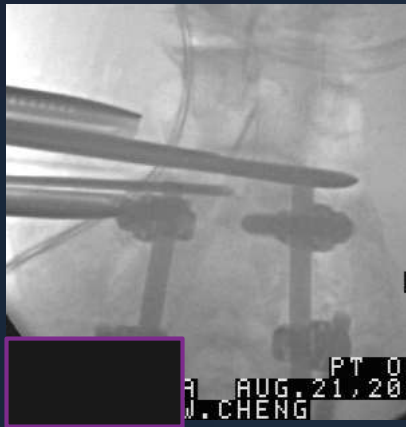


CASE 1: 46 YO FEMALE, JEHOVAH WITNESS,
NEUROGENIC CLAUDICATION, H/O INFX REQUIRED
MULTIPLE I&D - *PRE OP MRI*

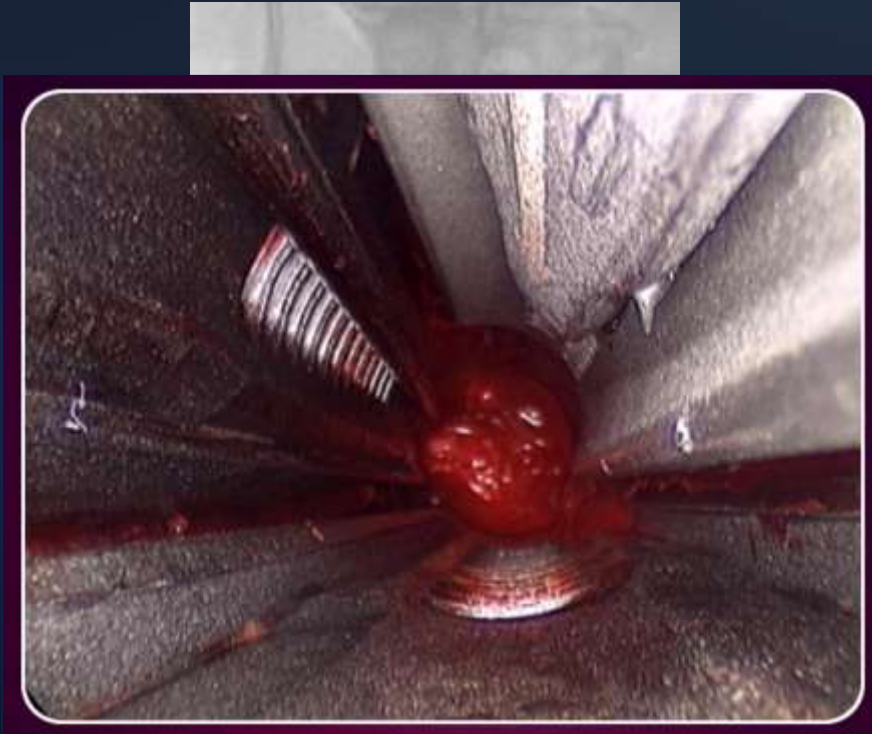


STENOSIS

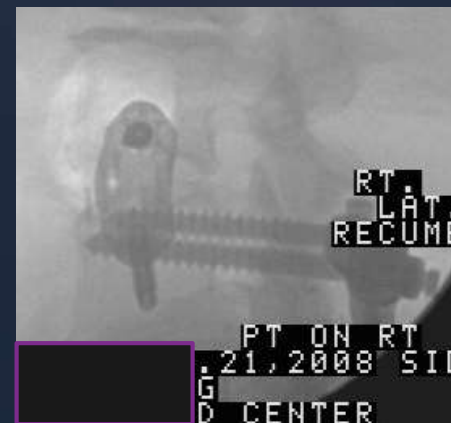
CASE 1: 46 YO FEMALE, JEHOVAH WITNESS,
NEUROGENIC CLAUDICATION, H/O INFX REQUIRED
MULTIPLE I&D - *INTRA-OP DISC PREPARATION*



CASE 1: 46 YO FEMALE, JEHOVAH WITNESS,
NEUROGENIC CLAUDICATION, H/O INFX REQUIRED
MULTIPLE I&D - **ANTERIOR INTERBODY FUSION**



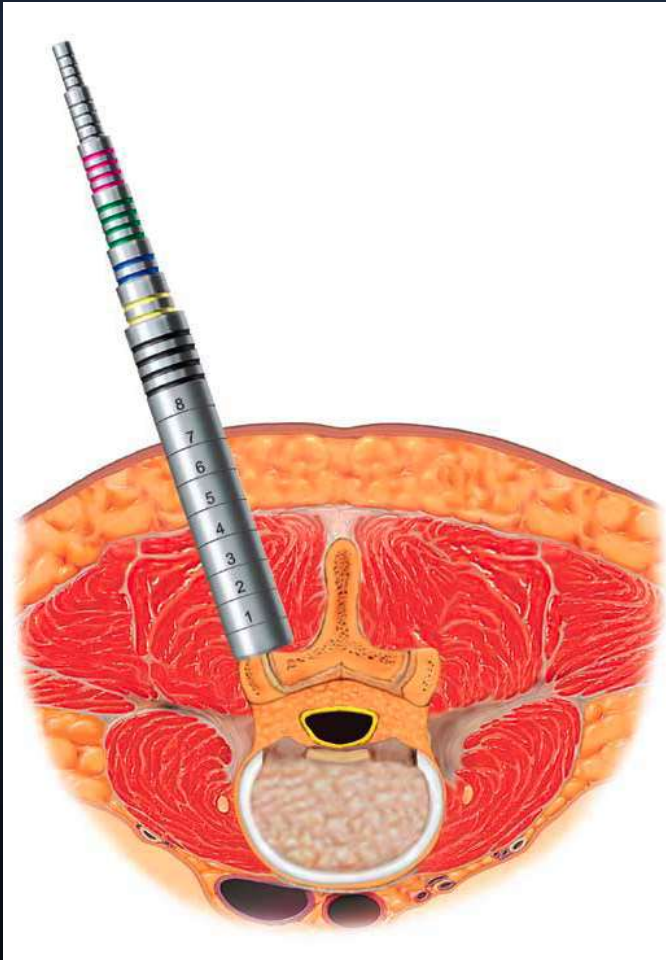
CASE 1: 46 YO FEMALE, JEHOVAH WITNESS,
 NEUROGENIC CLAUDICATION, H/O INFX REQUIRED
 MULTIPLE I&D - **ANTERIOR INSTRUMENTATION**



CASE 1: 46 YO FEMALE, JEHOVAH WITNESS,
NEUROGENIC CLAUDICATION, H/O INFX REQUIRED
MULTIPLE I&D - POST-OP X-RAY



CASE 1: 46 YO FEMALE, JEHOVAH WITNESS,
NEUROGENIC CLAUDICATION, H/O INFX REQUIRED
MULTIPLE I&D - **POSTERIOR DECOMPRESSION**



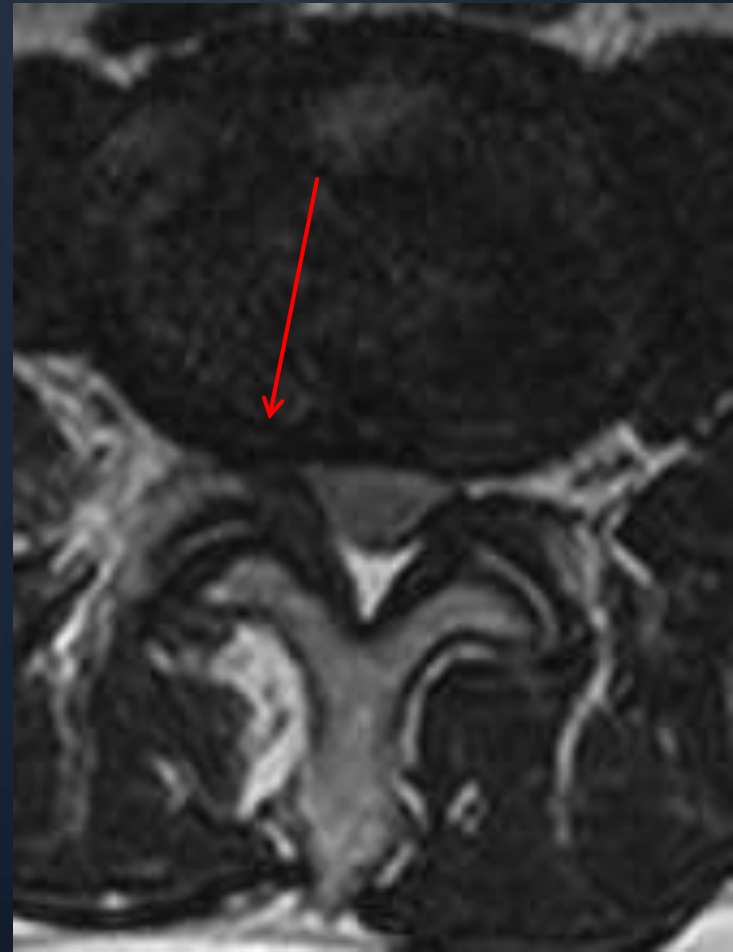
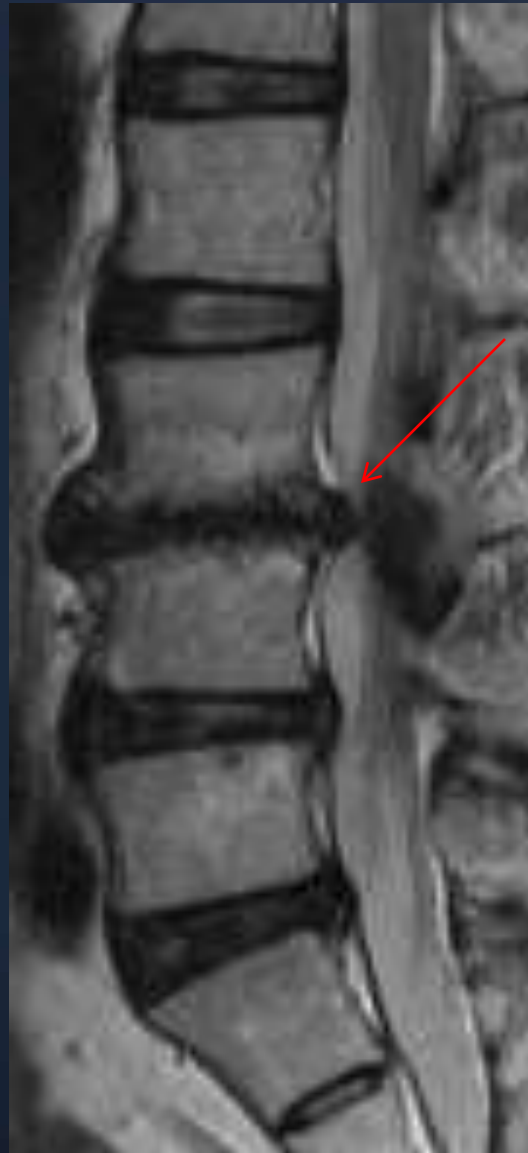
CASE 2 65 yo with lower back pain and right thigh pain



MRI PRE OP



Y
o
u
T
e



CASE 1 - INTRA OP



CASE 1- INTRA OP



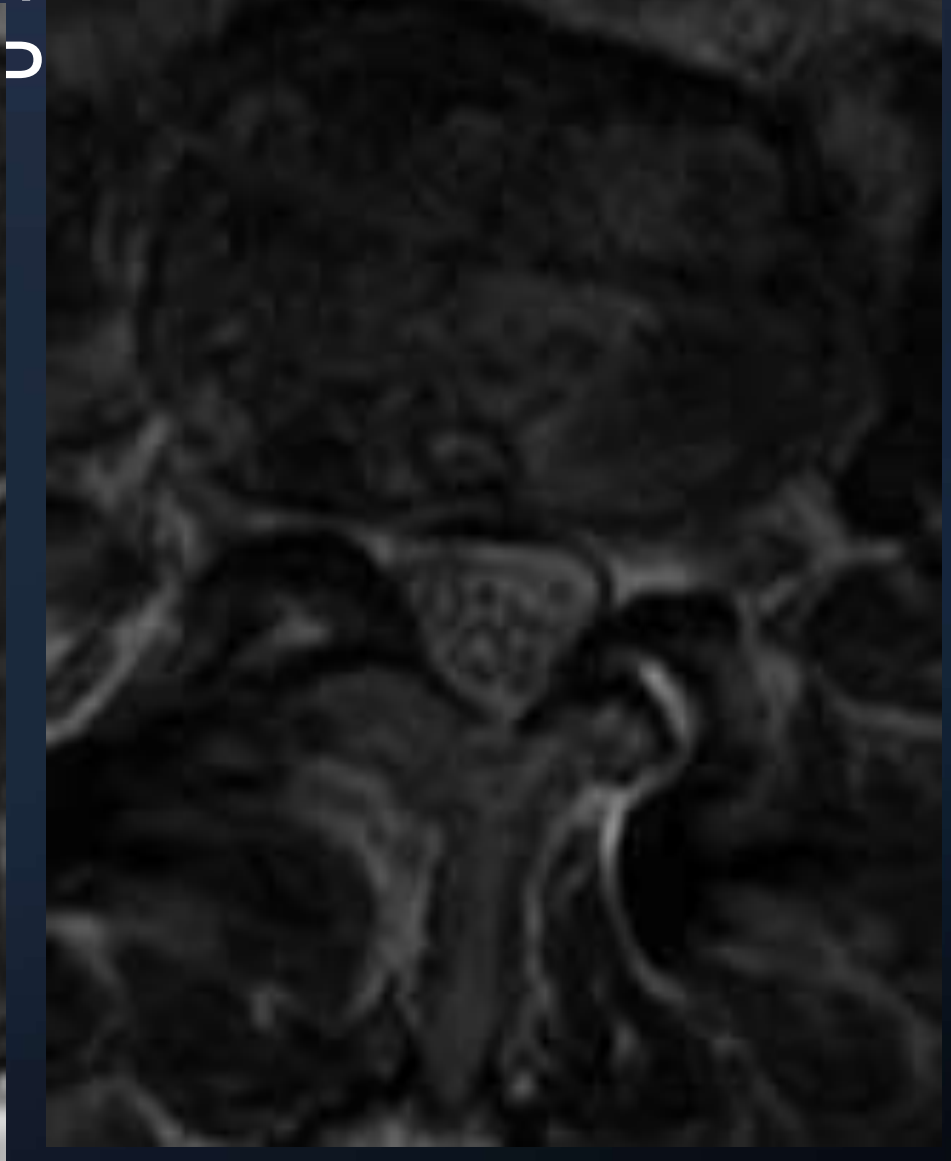
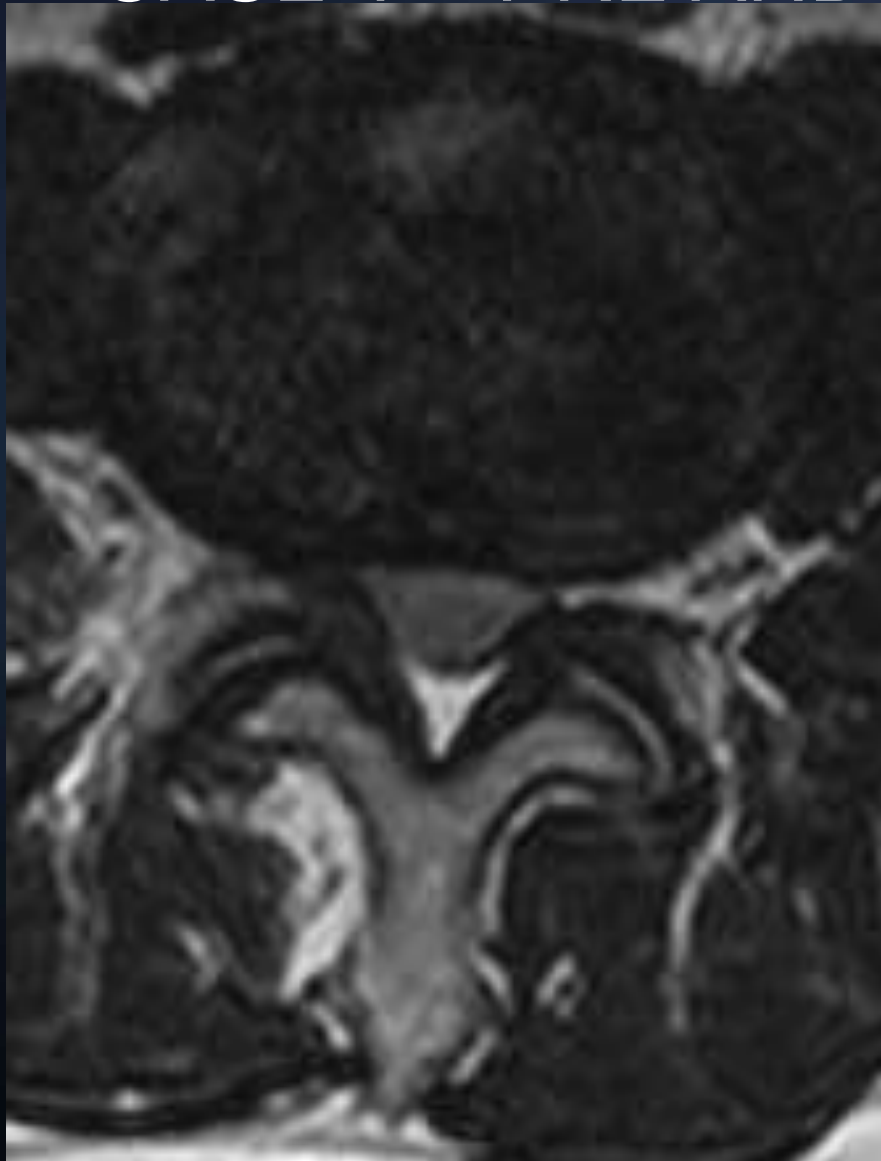
CASE 1 INTRA OP



CASE 1 – PRE AND POST OP XRAY



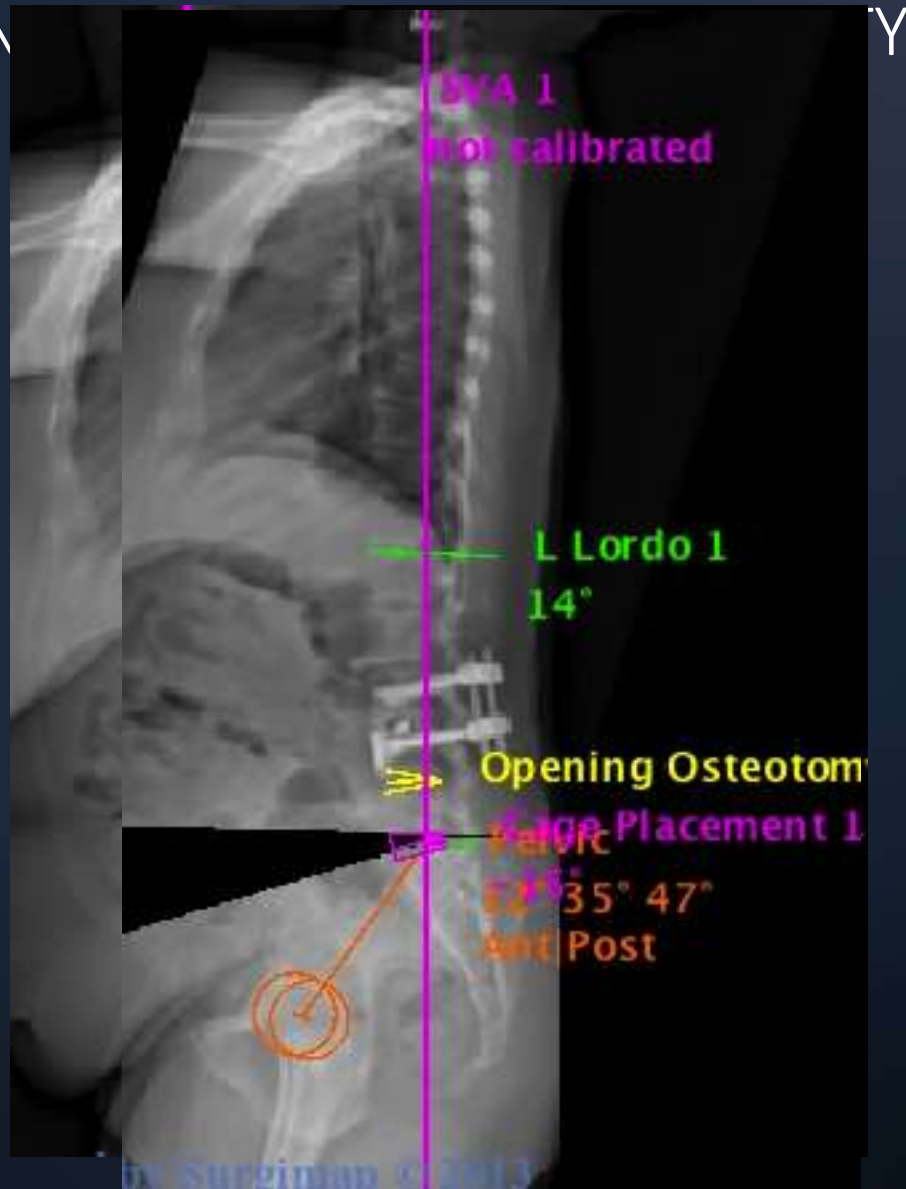
CASE 1 – PRE AND POST OP MRI



SAGITTAL DEFORMITY

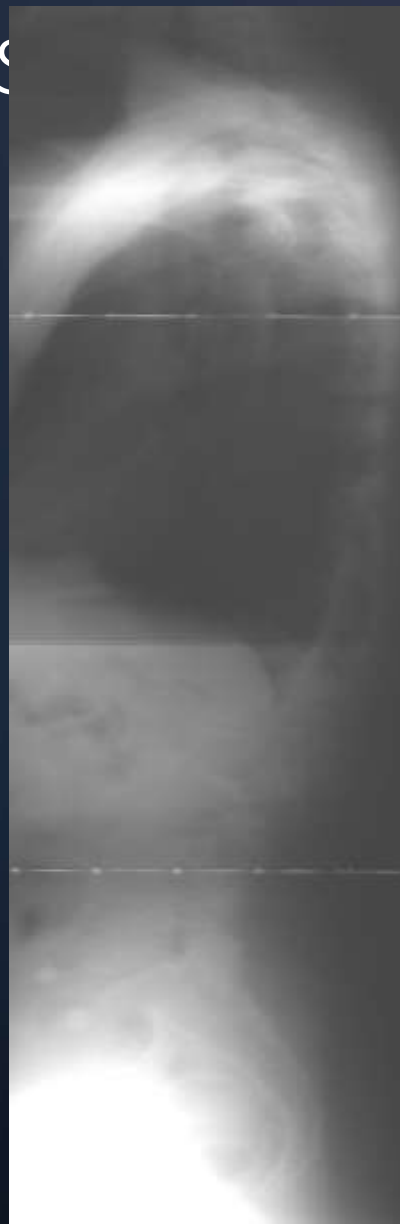


PRE OP PLAN



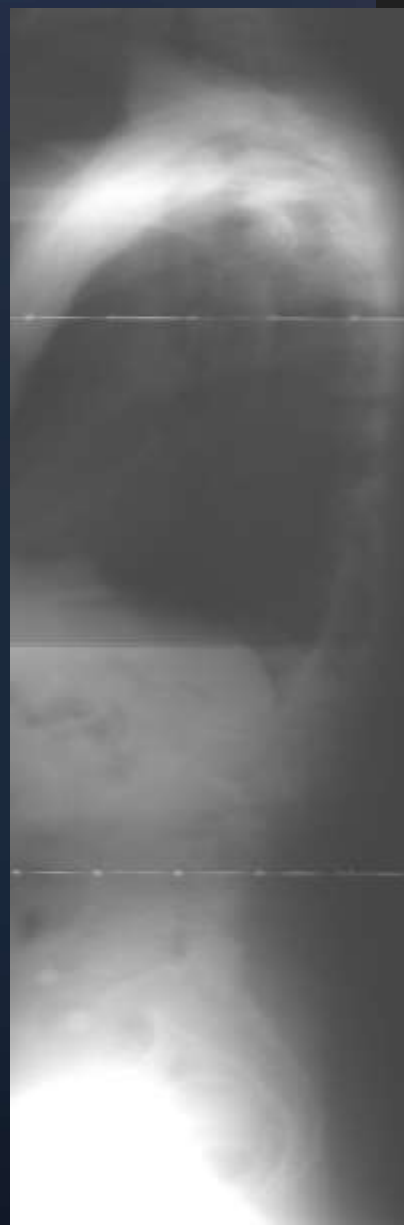
CASE 3 - 55

SIS

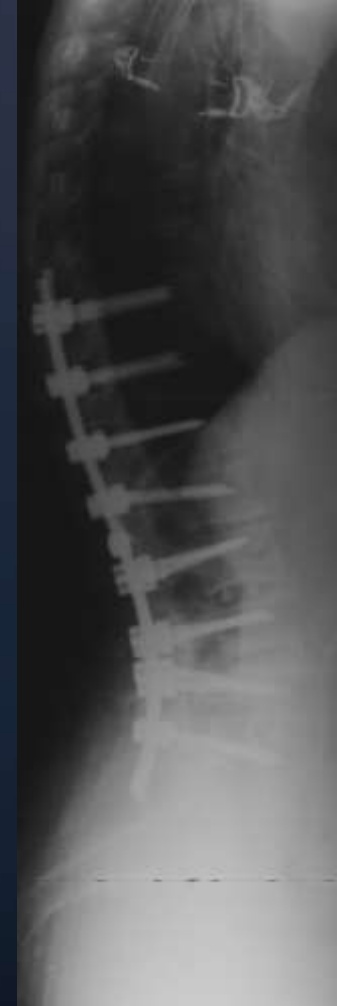
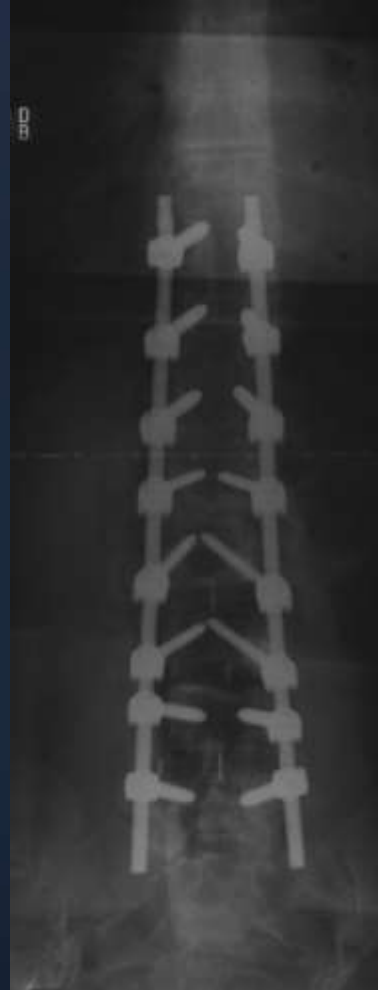


55 YO F W SCOLIOSIS





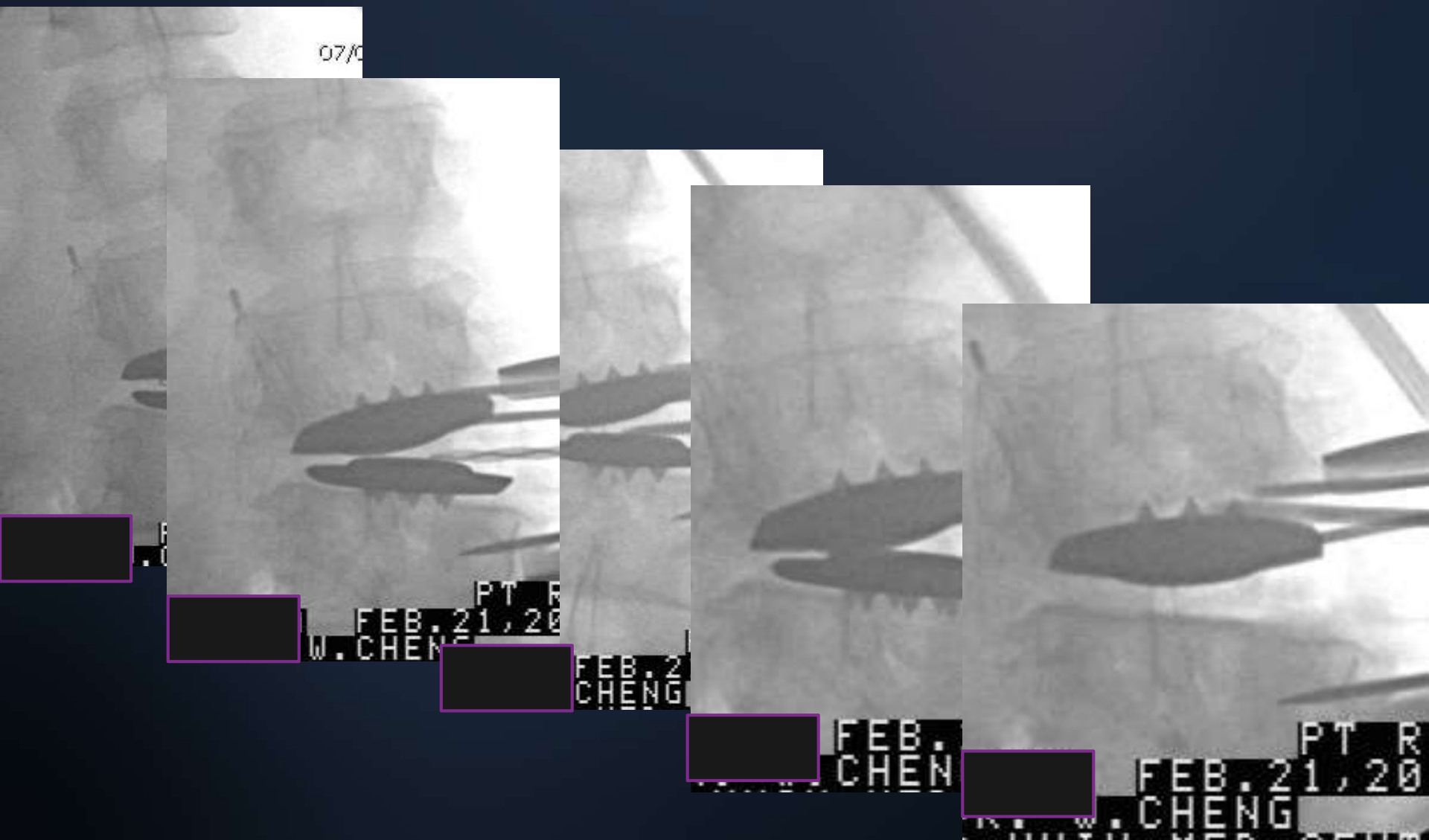
SCOLIOSIS CORRECTION



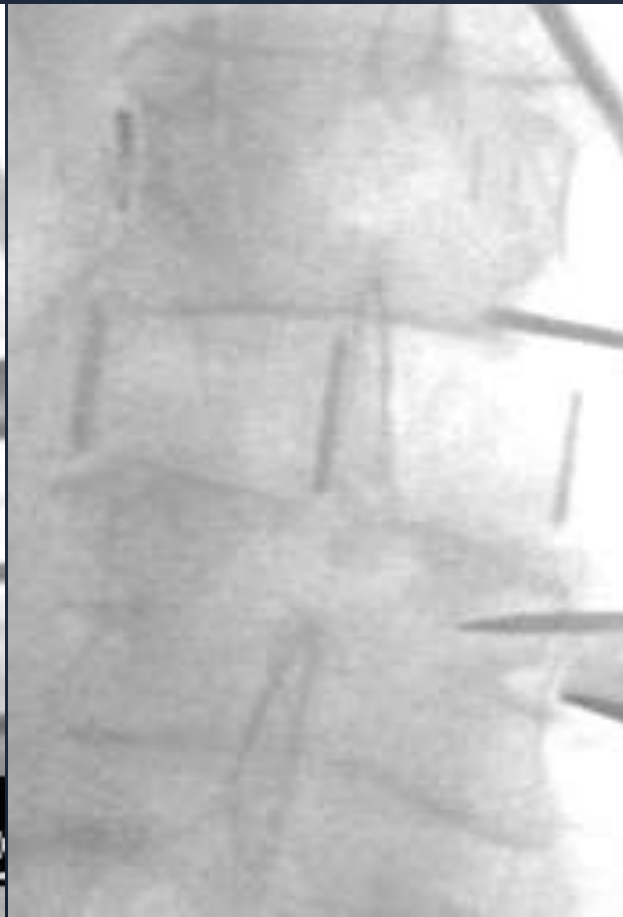
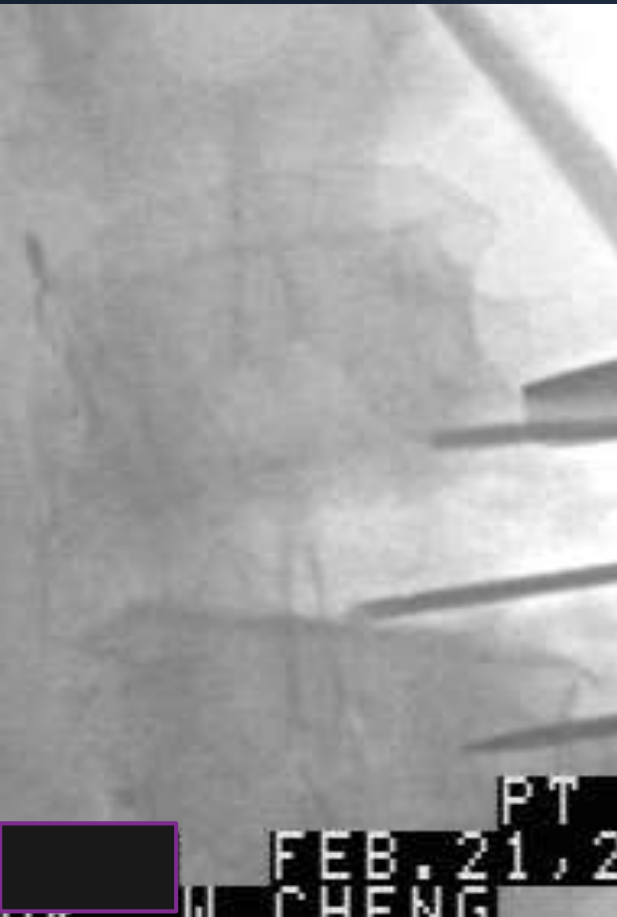
CASE 3: 46 YO FEMALE, FAILED TDR, POST-OP INFECTION, DVT; SEVERE BACK AND LEG PAIN



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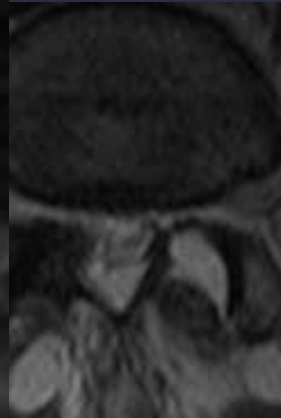
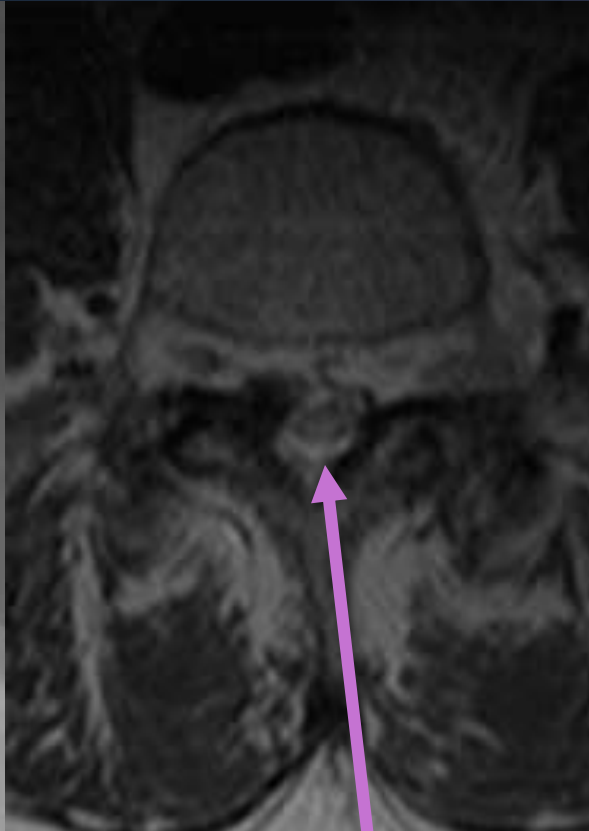
CASE 3: 46 YO FEMALE, FAILED TDR, POST-OP INFECTION, DVT; SEVERE BACK AND LEG PAIN



CASE 3: 46 YO FEMALE, FAILED TDR, POST-OP INFECTION, DVT; SEVERE BACK AND LEG PAIN



CASE 4: 54 YO RT INSTRUCTOR, BROKEN FACET REPLACEMENT; BACK AND LEFT HIP PAIN. PATIENT 265 LBS

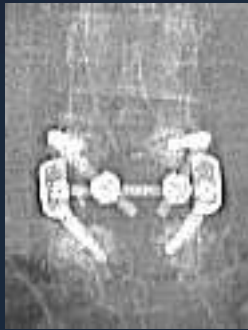


spondylolisthesis

stenosis

Facet arthropathy
W/ distraction

CASE 4: 54 YO RT INSTRUCTOR, BROKEN FACET
REPLACEMENT; BACK AND LEFT HIP PAIN.
PATIENT 265 LBS

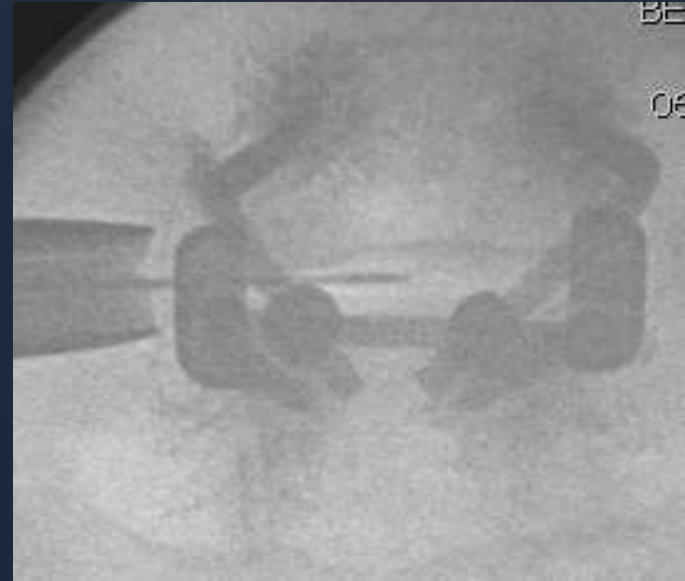


CASE 4: 54 YO RT INSTRUCTOR, BROKEN FACET REPLACEMENT; BACK AND LEFT HIP PAIN. PATIENT 265 LBS



Broken cemented
Stem of TFR

CASE 4: 54 YO RT INSTRUCTOR, BROKEN FACET
REPLACEMENT; BACK AND LEFT HIP PAIN.
PATIENT 265 LBS



CASE 4: 54 YO RT INSTRUCTOR, BROKEN FACET
REPLACEMENT; BACK AND LEFT HIP PAIN.



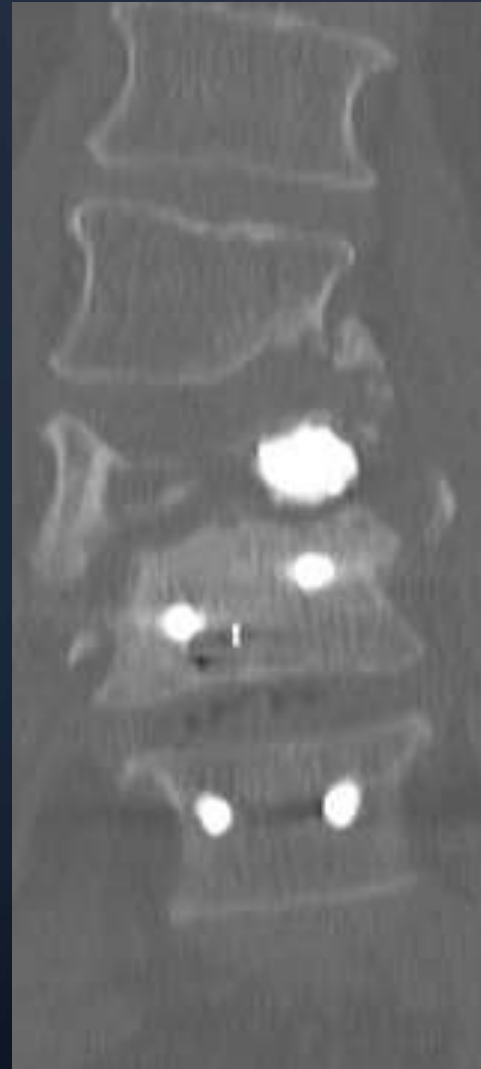
CASE 4: 54 YO RT INSTRUCTOR, BROKEN FACET
REPLACEMENT; BACK AND LEFT HIP PAIN.
PATIENT 265 LBS



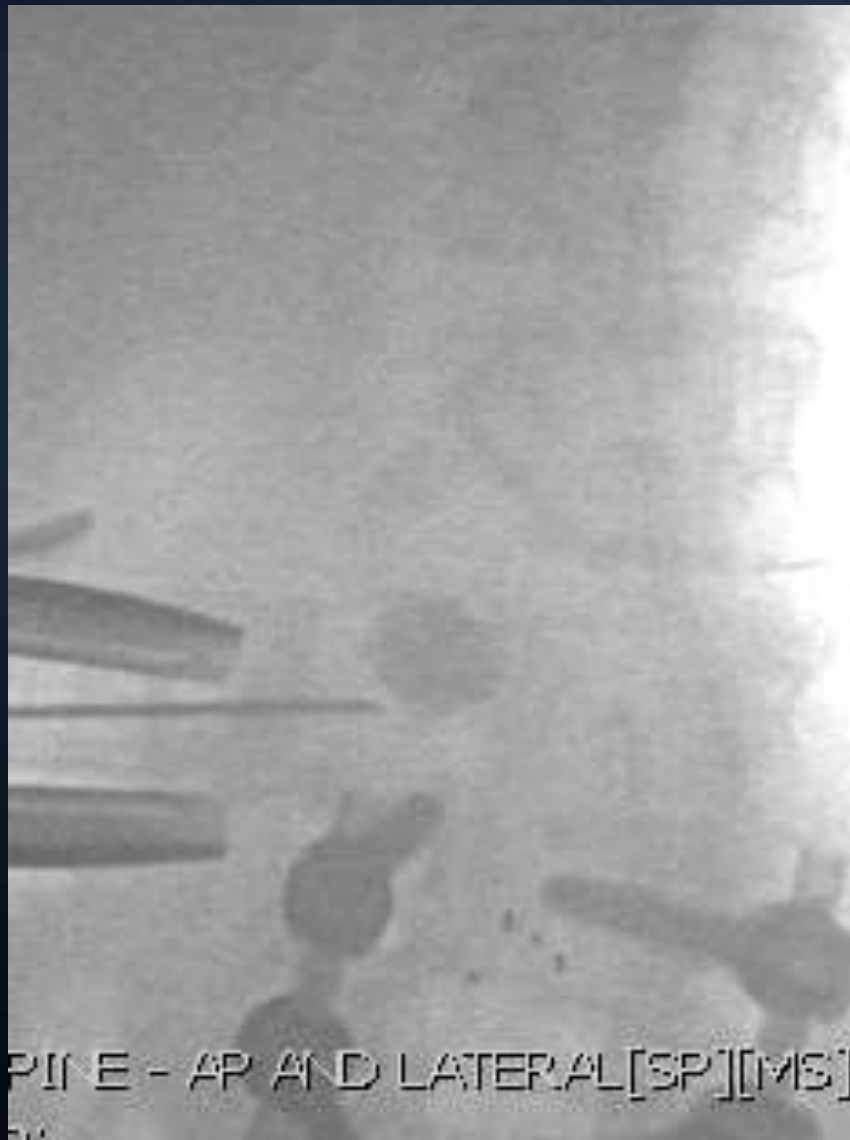
CASE 5 – 59 YO F W BURST FX, FAILED KYPHO, 250#



CASE 5 – 59 YO F W BURST FAILED KYPHO, 250#



59 YO 250# F W BURST FX TRANSPSOAS CORPECTOMY





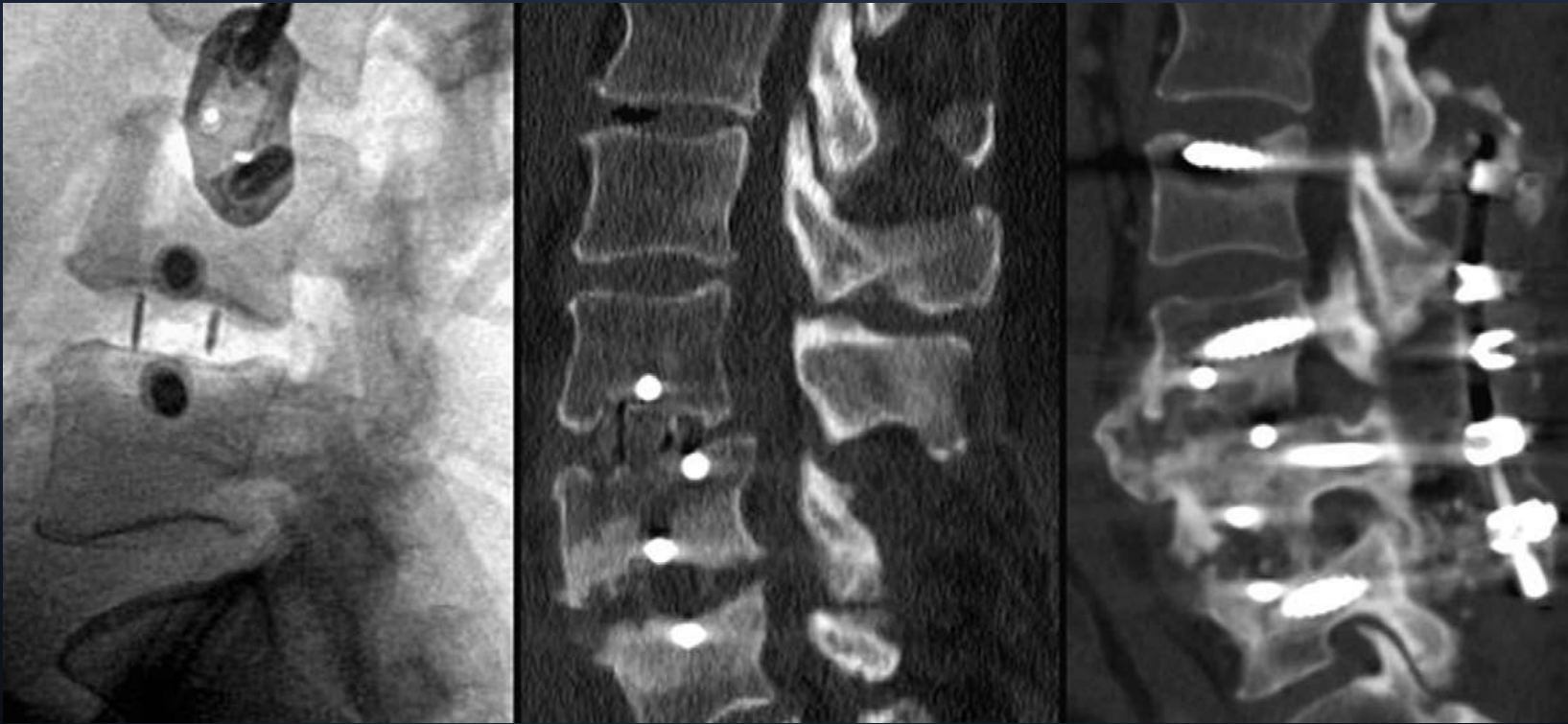
COMPLICATION – NERVE INJURY

- Ahmadian et al 2013 (J NS spine)
- 18 study 2310 pts
- Motor weakness 1 to 34%
- Sensory complication 0 to 75%
- 13% plexus related injury

COMPLICATION



COMPLICATION: FRACTURES



THANK YOU

