

Role of surgery in back pain

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Role of surgery in back pain

- Surgical Indications (Hard & Soft)
- Interpreting radiology
- Non-Surgical options
- Cases for discussion

Surgical Indications (Hard)



- What do these things have in common?

Surgical Indications (Hard)

- Decompression of nerves
- Stabilisation of instability

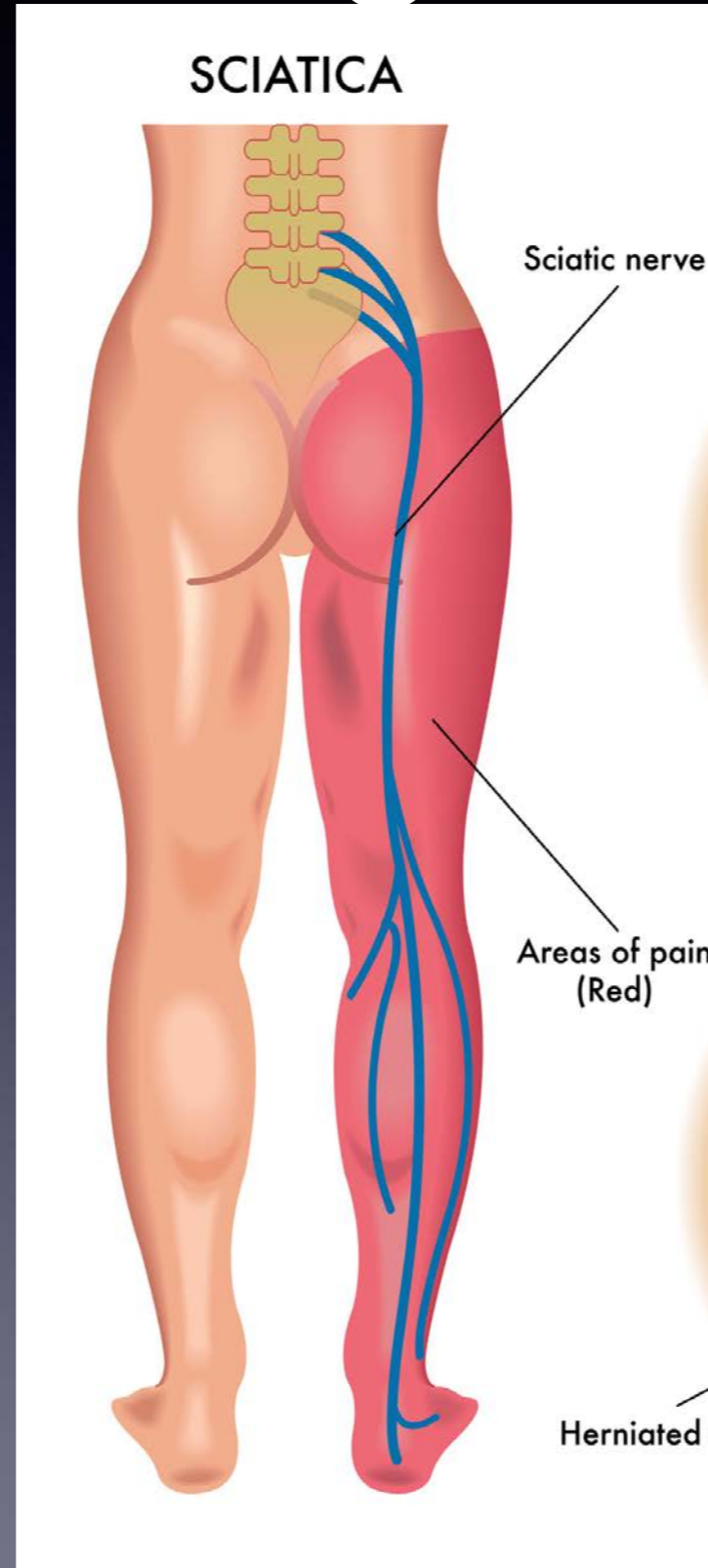
Surgical Indications (Soft)

- Non-radicular Pain - removal of potential pain generators

Interpreting radiology

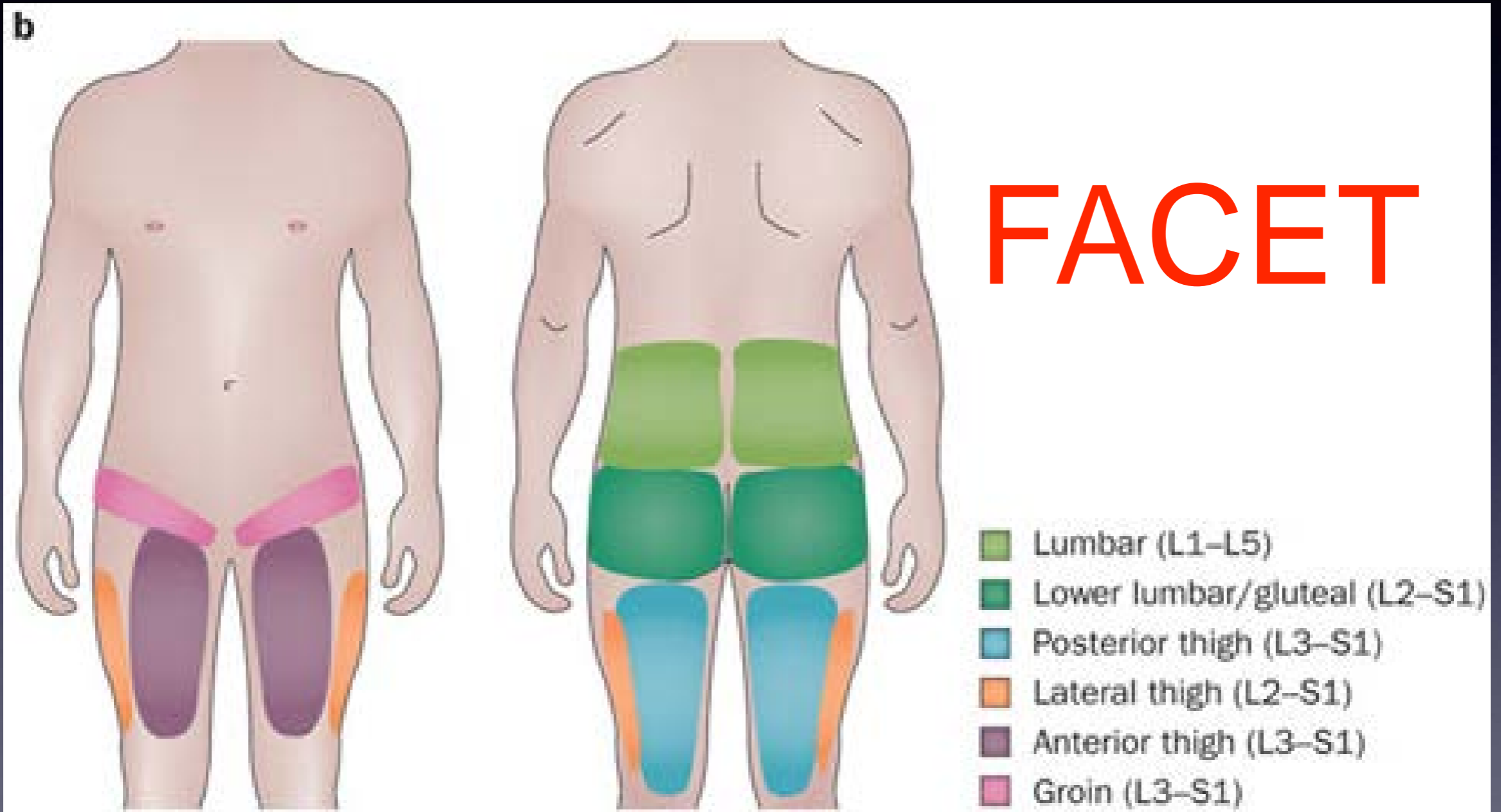
- We have no gold standard scan for pain
- Dynamic imaging (erect X-rays)
- Cross sectional imaging (CT & MRI)
- Nuclear medicine studies

Interpreting radiology



NERVE

Interpreting radiology



Interpreting radiology

- Radiologist (by their nature) do not have the patient in front of them - they cannot correlate potentially pathological findings with actual pathology
- Degenerative changes are common to universal

Interpreting radiology

- Wheat from the chaff:
 - “Effacement”
 - “Stenosis”
 - “Listhesis”

Non-Surgical options (from a surgeon)

1. Education, Education, Education
2. Activity modification
3. Pills (targeting pain generators)
4. Injections
5. Other

Education, Education, Education

- Catastrophising
- Fear avoidance behaviour
- Chronic pain

Activity modification

- Weight & Exercise & Mood

Pills (targeting pain generators)

- Mechanical Pain = Synergistic Paracetamol
NSAIDS
- Radicular Pain = Neuro-modifiers
- ?Steroids / Benzodiazepines / Opioids

Injections

- Diagnostic vs Therapeutic

Other

- Complex / Chronic Pain Management Programme
- Radio Frequency Ablation
- Spinal Cord Stimulation

Cases for discussion

- “What would you do with this pt?”

Case 0 - Normal?

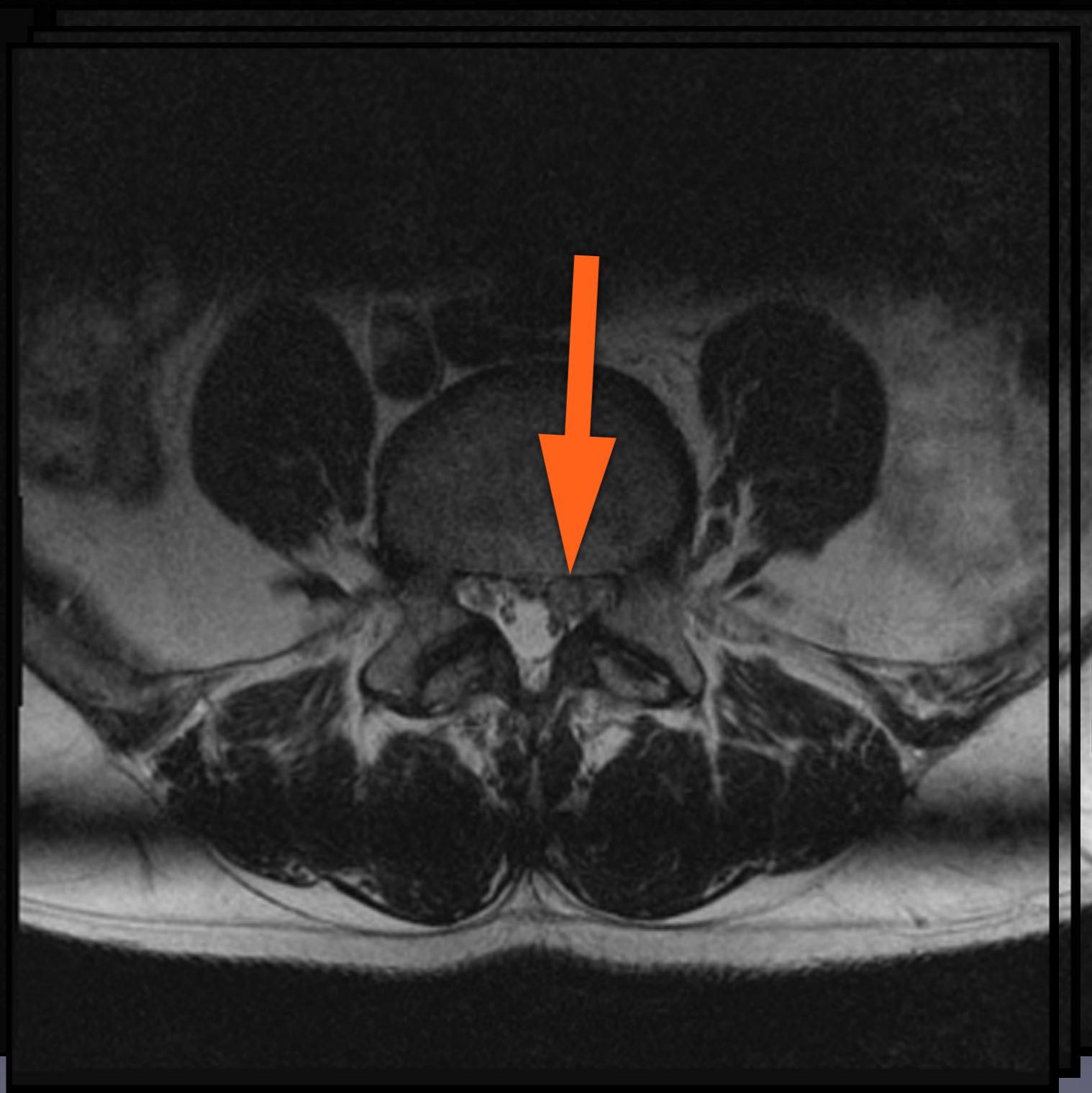


Case 1 - Tumour

- The CT report notes a malignancy - I
 1. Always refer to a Oncologist
 2. Always refer to a surgeon
 3. Sometimes refer
 4. Refer to a surgeon AND/OR Oncologist

Case 2

- 45M, Twist -> LBP, 48/24 later Left Leg pain

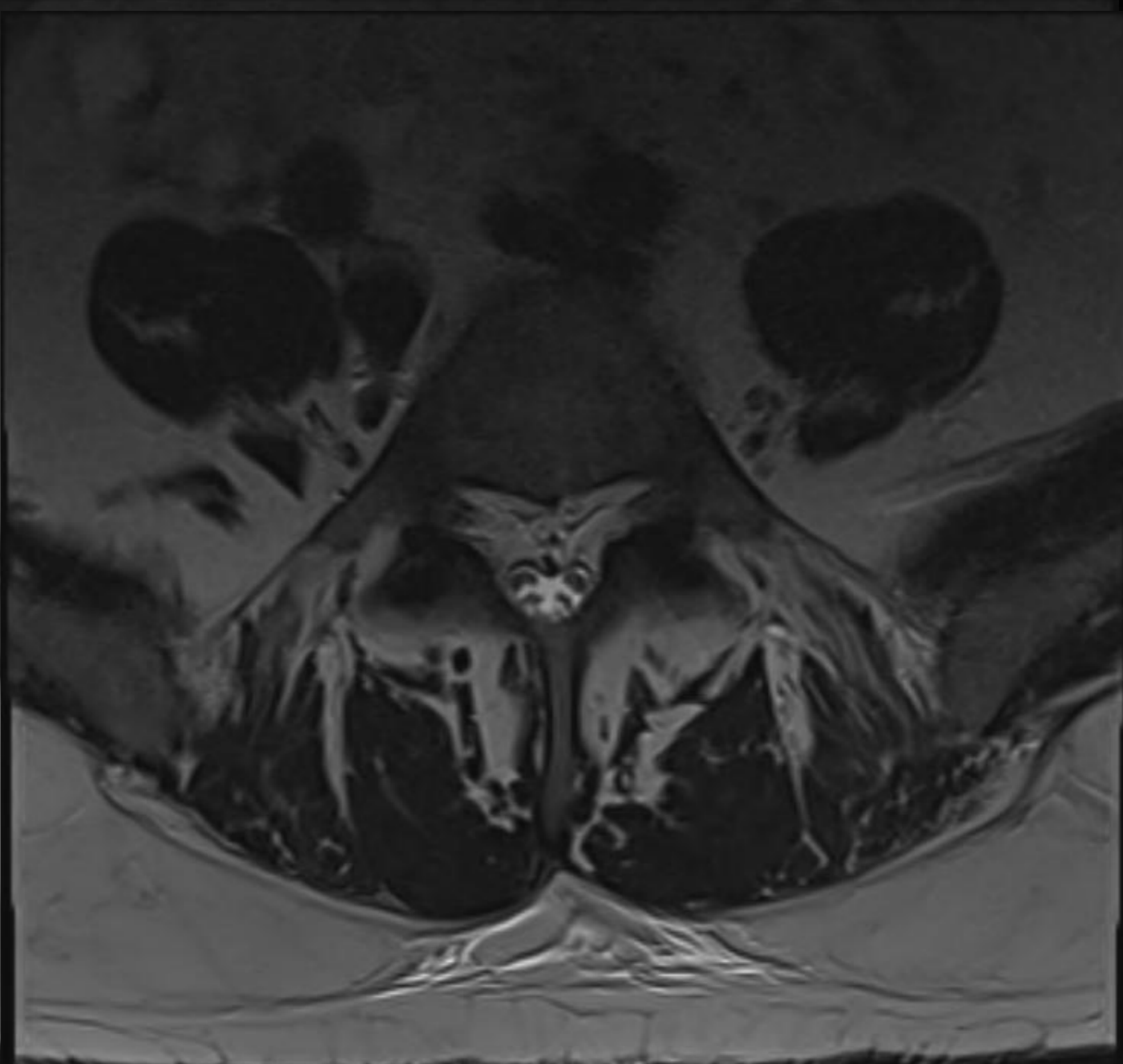


Disc Protrusion

- What are indications for urgent surgical referral:
 1. Presence of a disc protrusion on report
 2. Sciatica & Numbness
 3. Painless Weakness
 4. None of the above

Case 3

- 45M, Twist -> LBP, 48/24 later Left Leg pain
- 7 days later cough, now bilateral leg pain
- Bowel / Bladder normal



Cauda Equina Syndrome

- Index of suspicion - represents (uncommon/rare) worst case scenario
- No gold standard symptoms

Case 4

- 62M, 20+ yrs LBP, complains he can't garden anymore



A



P

NOT FOR MEDICAL USAGE





View size: 898 x 913
WL: 1072 WW: 2161

T2 AXIAL — T2 AXIAL
1
9



Zoom: 119% Angle: 0
Im: 15/24 1(S -> I)
Uncompressed
Thickness: 4.00 mm Location: -401.23 mm

NOT FOR MEDICAL USAGE

TE: 83 TR: 3360
FS: 3
17/07/2013 12:02:11 pm
Made In OsiriX

Spinal Stenosis

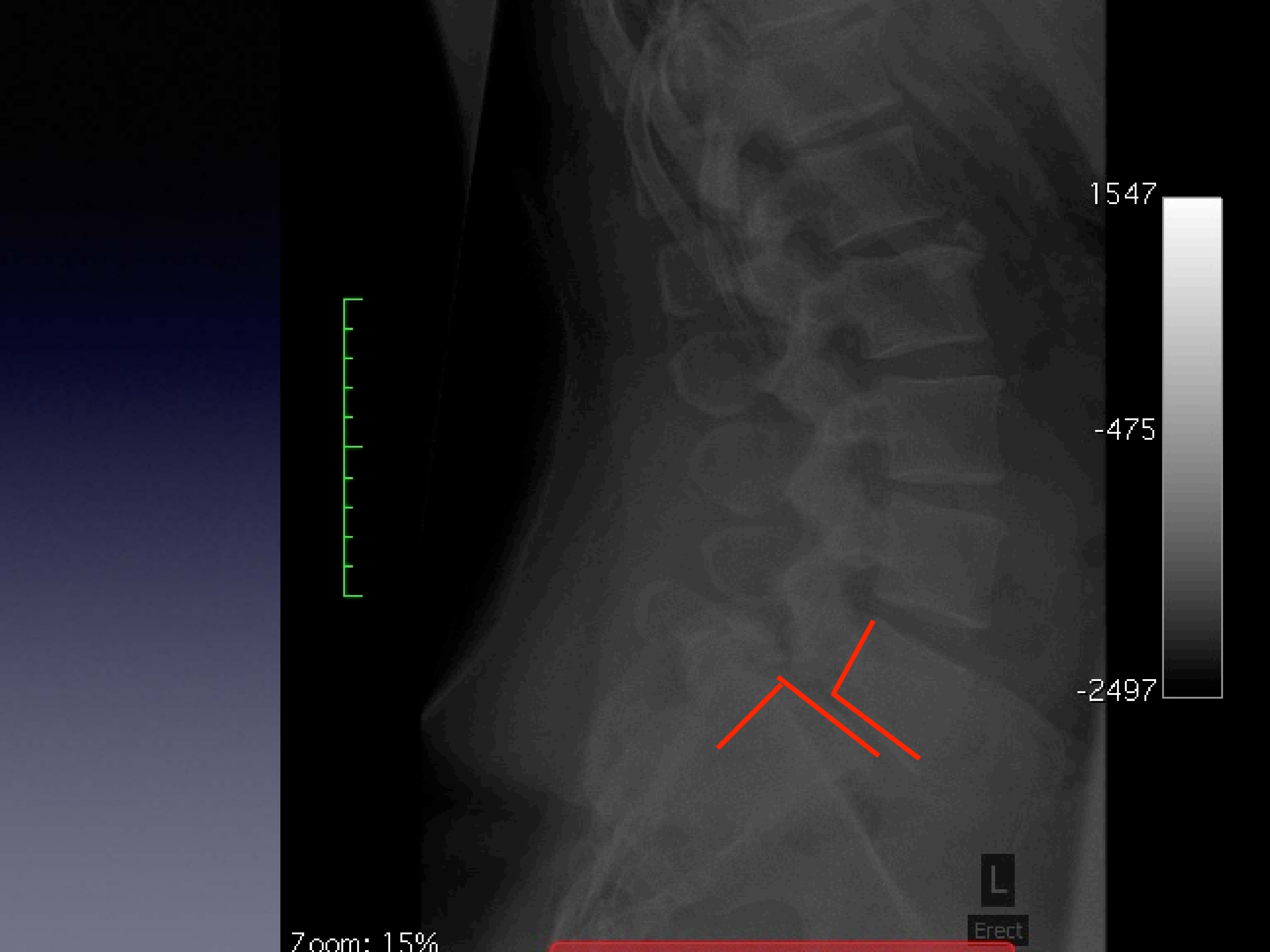
- 60% of 60yo have radiological spinal stenosis
- Natural history indolent
- Decompression effective (but not crucial)

Case 5 - Insufficiency Fracture

- I manage this so commonly that I have no X-rays to show in my files...

Case 6

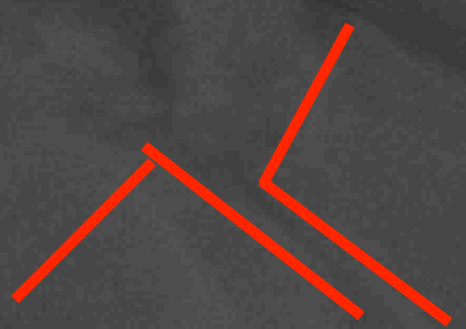
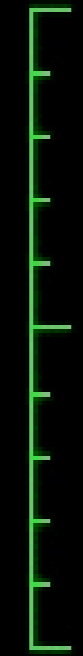
- 16M, Gymnast, Chronic LBP, wants to get back to sport



1547

-475

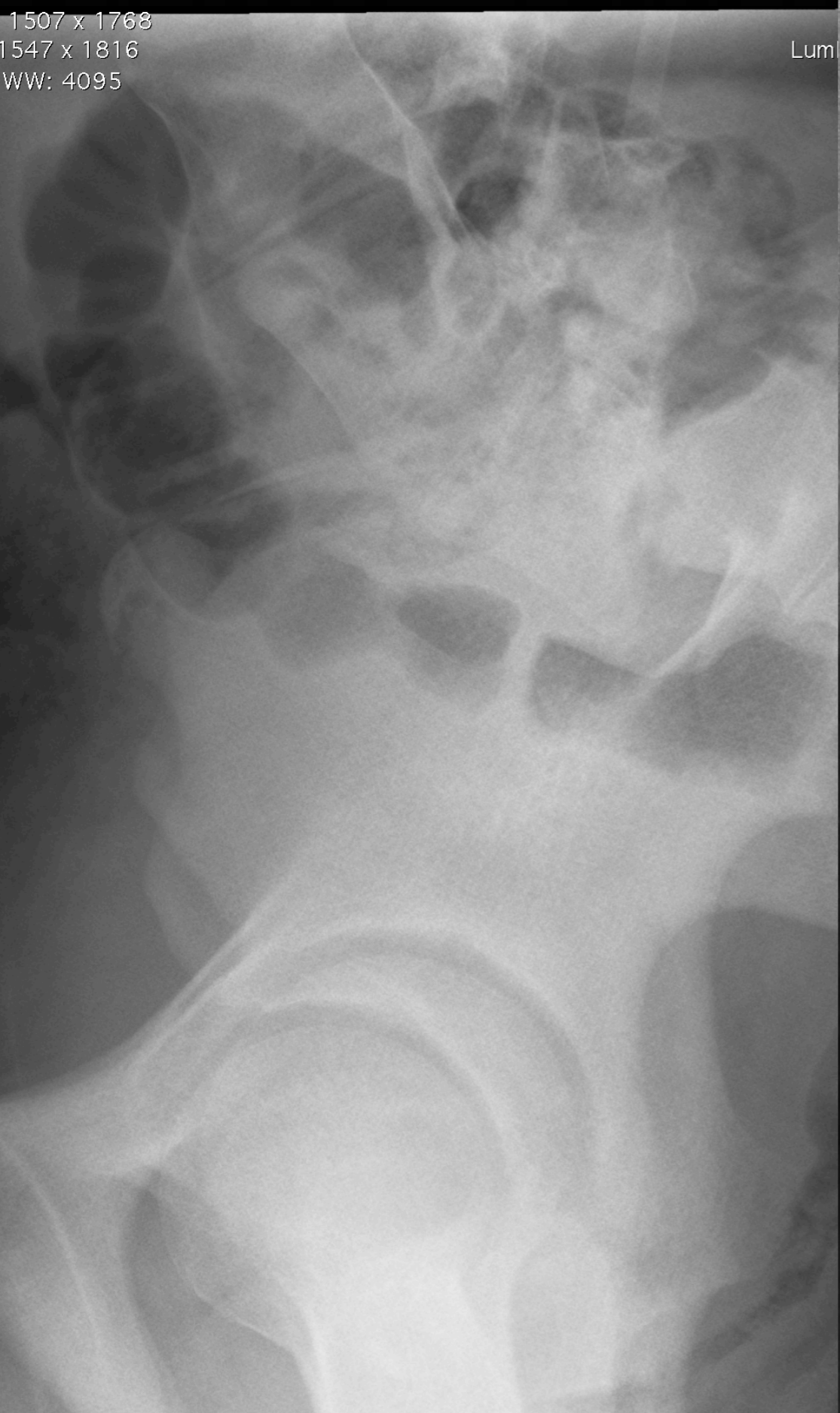
-2497



Zoom: 15%

L
Erect

1507 x 1768
1547 x 1816
WW: 4095



Lum

L
K
2



ERECT

[10-G1F84YX]

Im: 111
Ser: CR #3

Lytic Spondylolisthesis

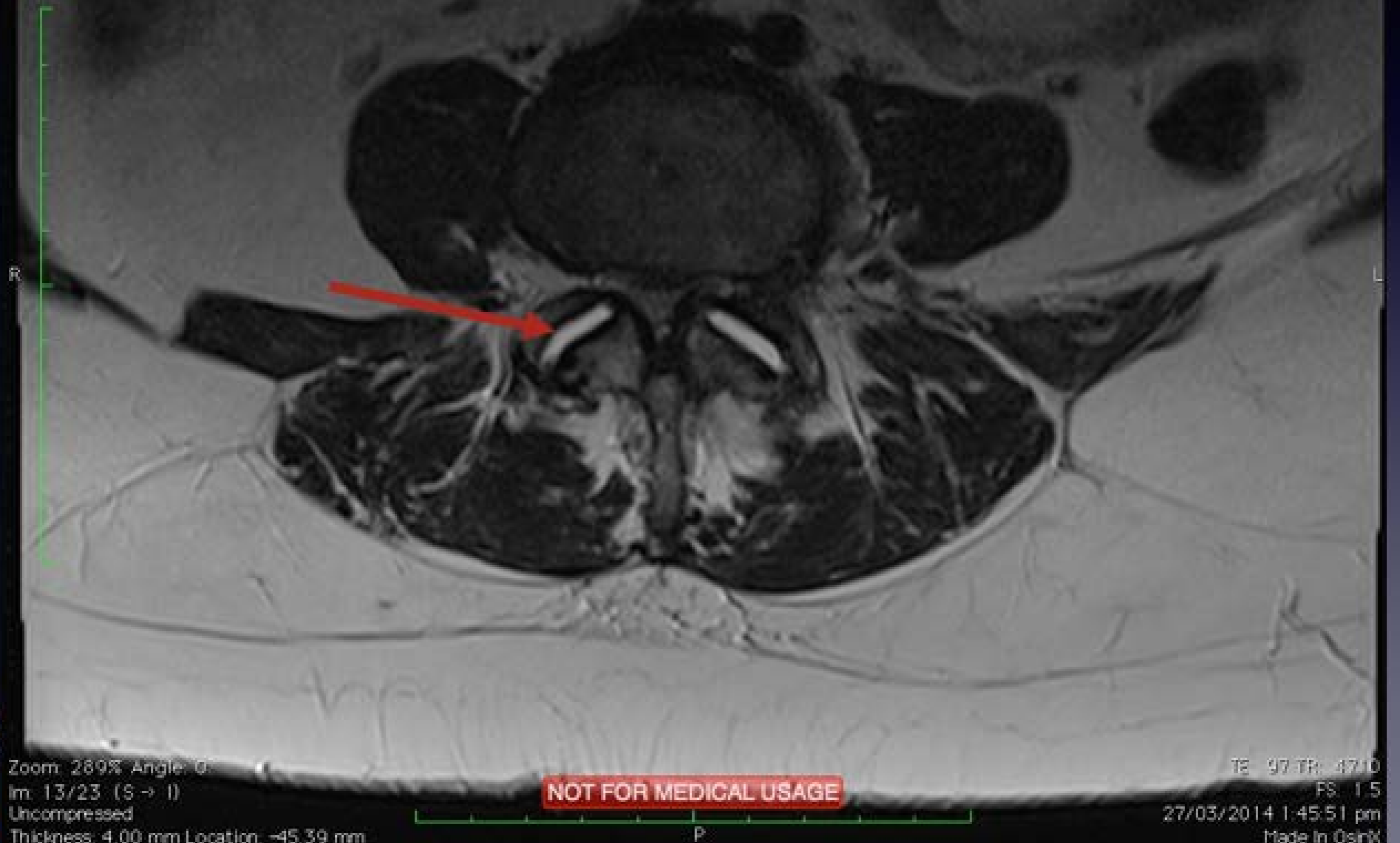
- Low grade (<50%) Common ~7% Population - non-progressive
- High Grade (>50%) Rare - Progressive
- Radiculopathy indication to operate

Case 7

- 74F, 20+ yrs LBP, complains she can't garden anymore



Facet widening



Degenerative Spondylolisthesis

- Common
- Instability is key - fusion gets results
- Method of fusion more controversial

Case 8

- 35M, Unemployed, Father of 2, Can't stand straight

Spinal Imbalance Case



Spinal Imbalance Case



Spinal Imbalance

- This is difficult
- And thankfully reasonably uncommon

Treat the patient not the scan (report)

Tumour	+/- (Stability)
Herniated Nucleus Pulposus	+/- (Neuro Deficit)
Acute Cauda Equina Syndrome	++++
Spinal Stenosis	- / + (Eventually)
Insufficiency #	- (Usually)
Lytic Spondylolisthesis (Low grade)	- - - / +
Lytic Spondylolisthesis (High grade)	+
Degenerative Spondylolisthesis	-/+
Complex Imbalance	+/-

Surgical Indications (Hard)

- Decompression of nerves
 - Disc protrusion with Radiculopathy
 - Cauda Equina Syndrome
 - Tumour / Trauma
- Stabilisation of instability
 - High grade spondylolisthesis
 - Tumour / Trauma

Surgical Indications (Soft)

- Non-radicular Pain - removal of potential pain generators
 - Evidence is contradictory
 - When all else has failed*

Interpreting radiology

- We have no gold standard scan for pain
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