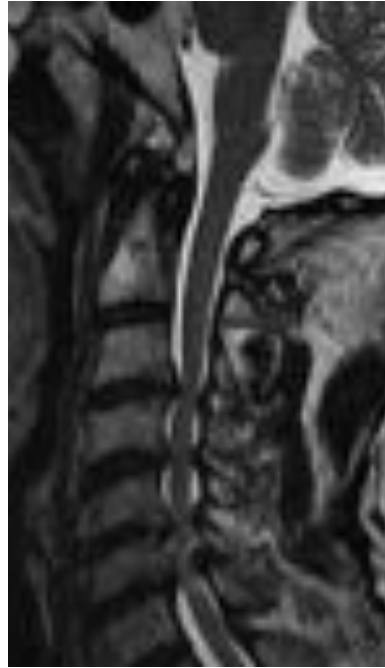


Cervical myelopathy



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- **Radiculopathy**

- Nerve root involvement (Radicle)
- Pain arising – Radiculopathy/Radiating pain

- **Myeloapthy**

Spinal Cord involvement – cord dysfunction

UMN signs/ Spasticity





Normal lumbar spine anatomy



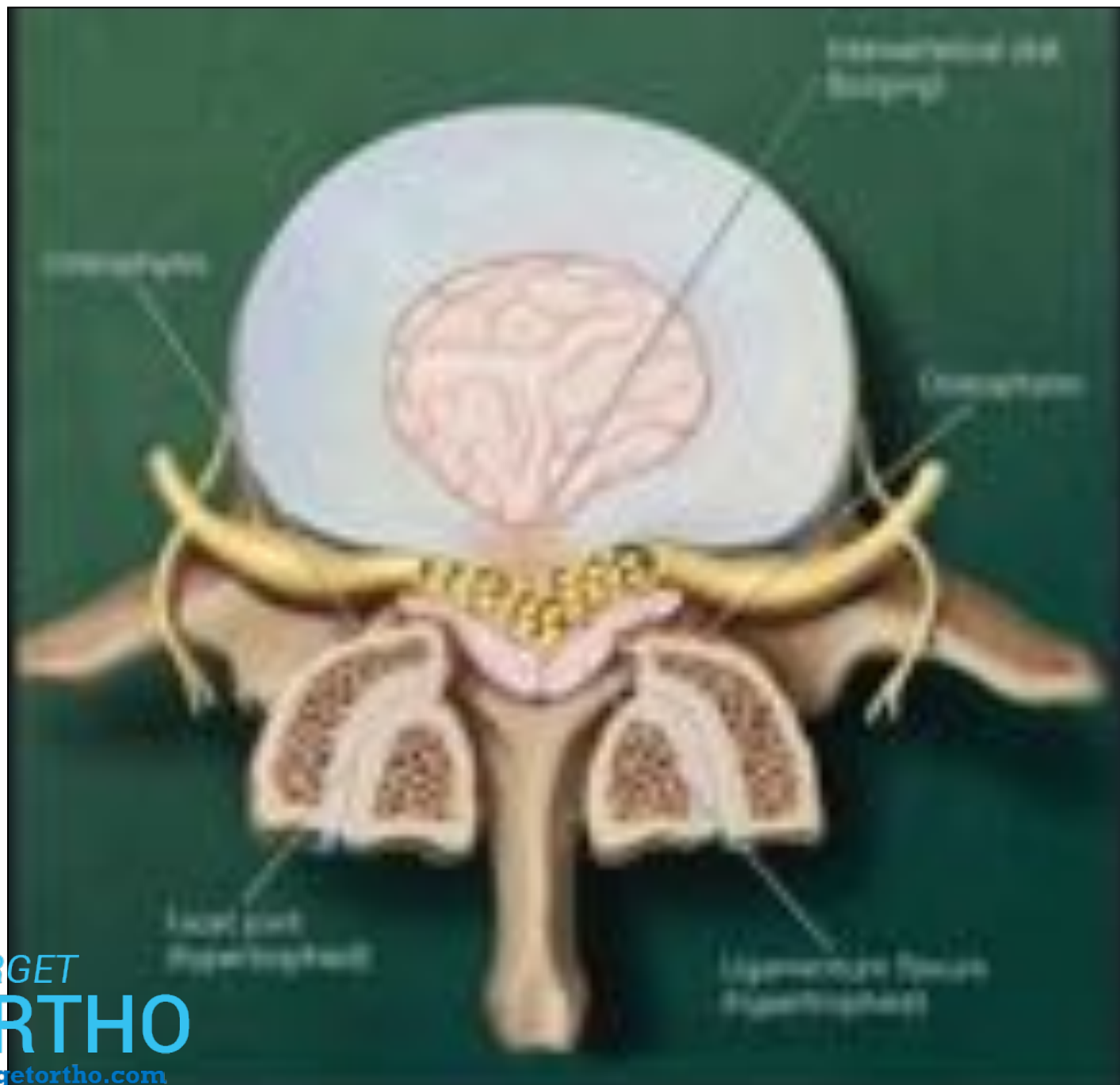
Lumbar stenosis



Pinching disc

Spinal canal

Narrowed disc space



Kirkaldy-Willis Model of LBP



Cervical myelopathy



History and symptoms

Upper limb

- Clumpsiness of hand
- Loss of grasp strength
- Buttoning shirt
- Hand writing
- Combing
- Mixing food

Lower limb

- Unsteady gait
- More in darkness
- Frequent falls

History and symptoms

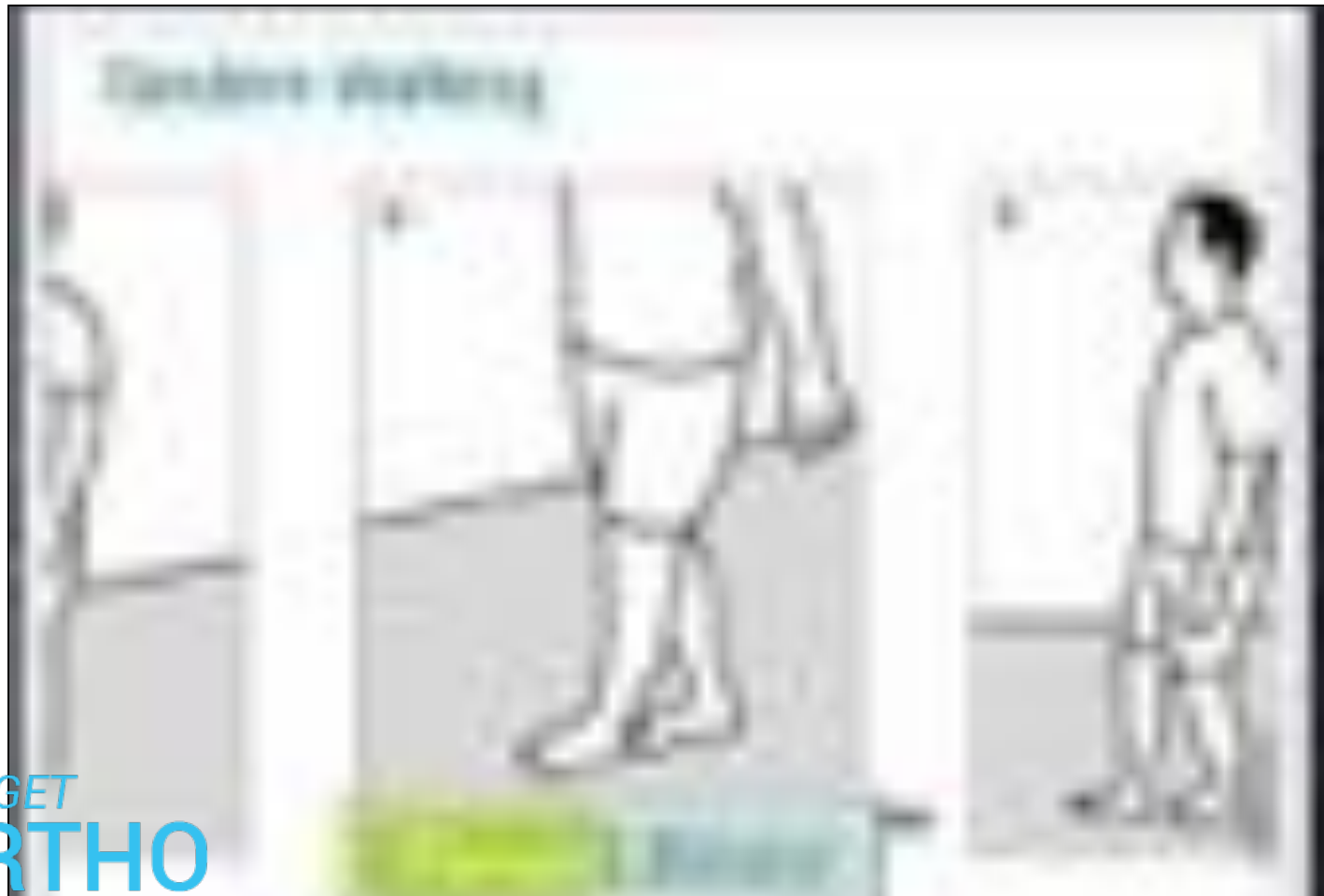
Vague symptoms

- Neck pain
- Low back ache
- Numbness and parasthesia in upper and lower limb

Clinical examination

Gait- unsteady gait





Station, Stance & Romberg's Test



- **Station & Stance**
 - Pt stand with feet together
 - First, eyes open
- **Romberg Test**
 - Then, close eyes
 - If okay with eyes open, but sways w/ eyes closed = + Romberg
 - Mainly tests position sense
 - Vision can compensate for loss of position sense

Intrinsic muscle wasting

Finger escape sign



Fist sign



Hoffmans sign



Physical Exam

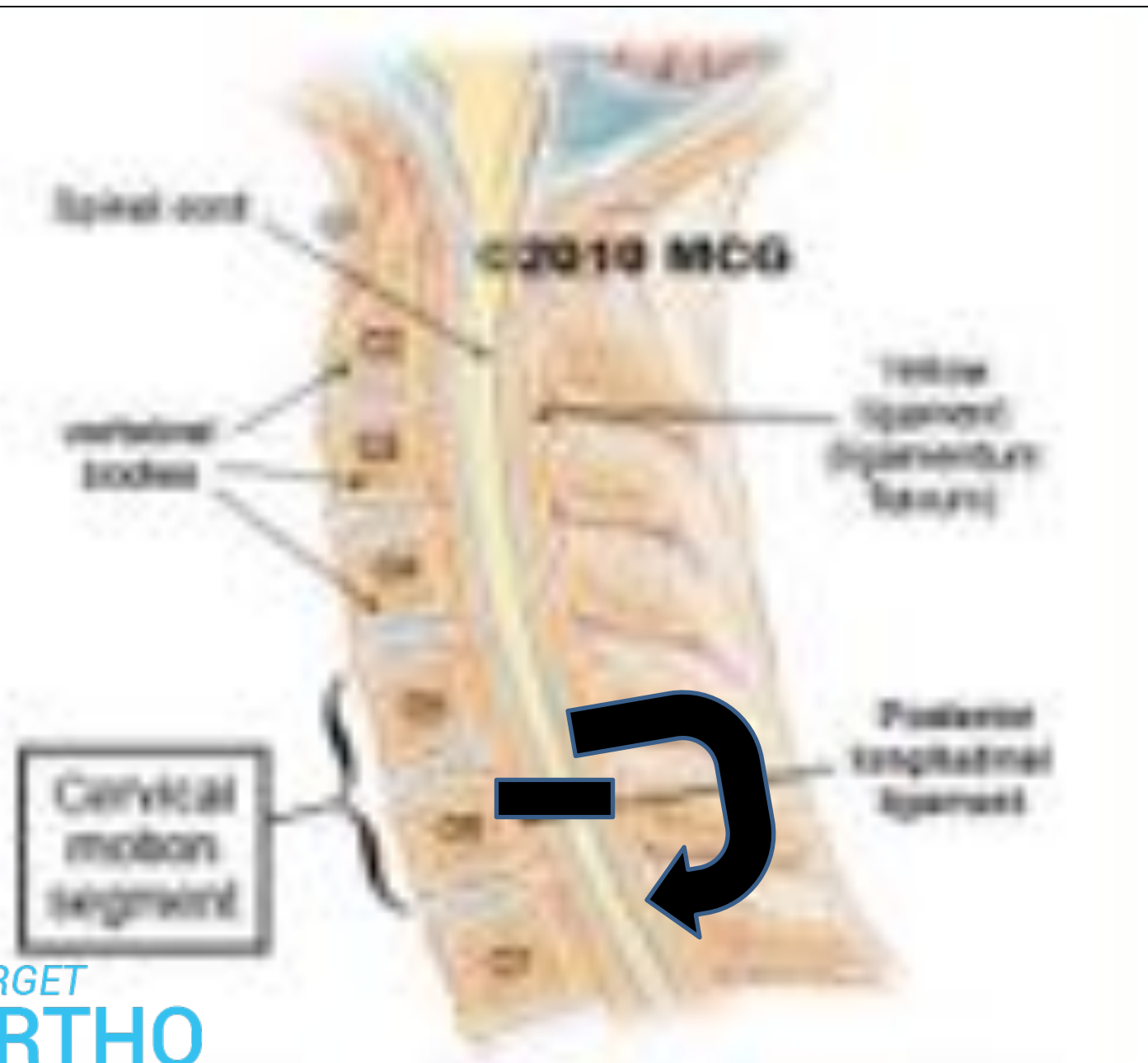
Lhermitte sign/ Barber chair phenomenon

- Flexion of neck producing electric shock like sensations that extend down the spine and shoot into the limbs
- Usefulness is limited
- Indicates spinal canal stenosis, disc impingement, multiple sclerosis, or tumor



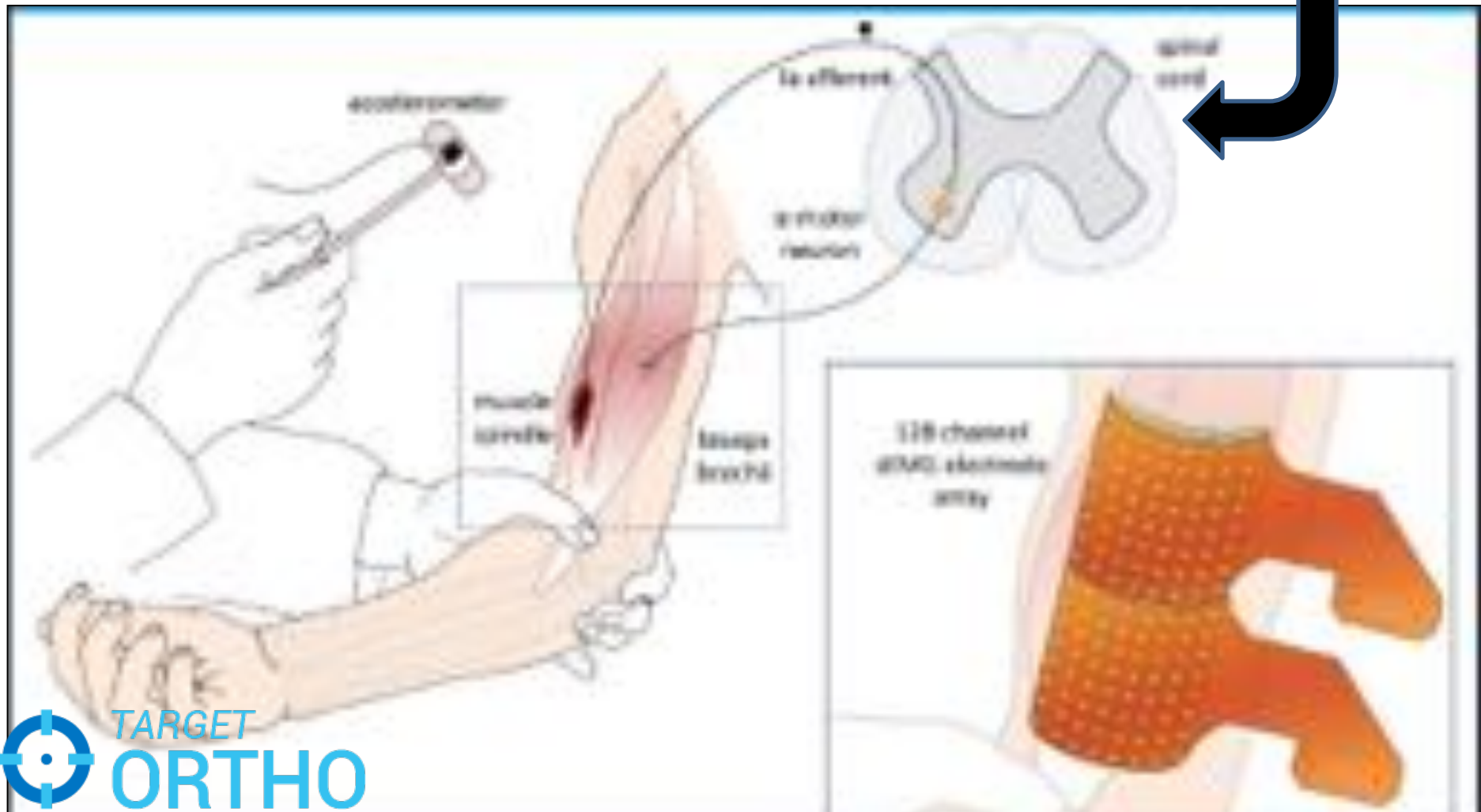
Inverted supinator reflex





Neurological examination

- Motor power- Hand grip
- DTR- Exaggerated
- Increased muscle tone – spasticity



Nuricks grading

Grade	Description
0	No evidence of cord involvement
1	Signs of cord involvement normal gait
2	Mild gait involvement able to be employed
3	Gait abnormality prevents employment
4	Able to ambulate only with assistance
5	Chair bound or bedridden → Exclude

X-ray

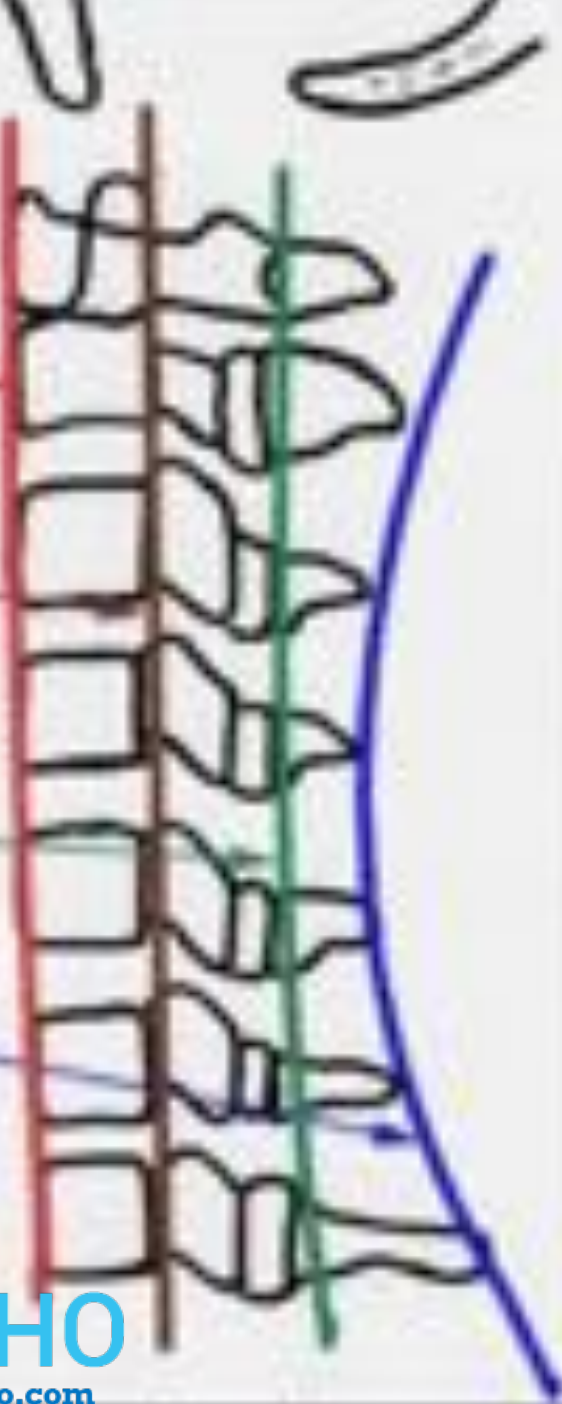


Anterior
Vertebral
Line

Posterior
Vertebral
Line

Spino-
Laminar
Line

Posterior
Spinous
Line



Alignment

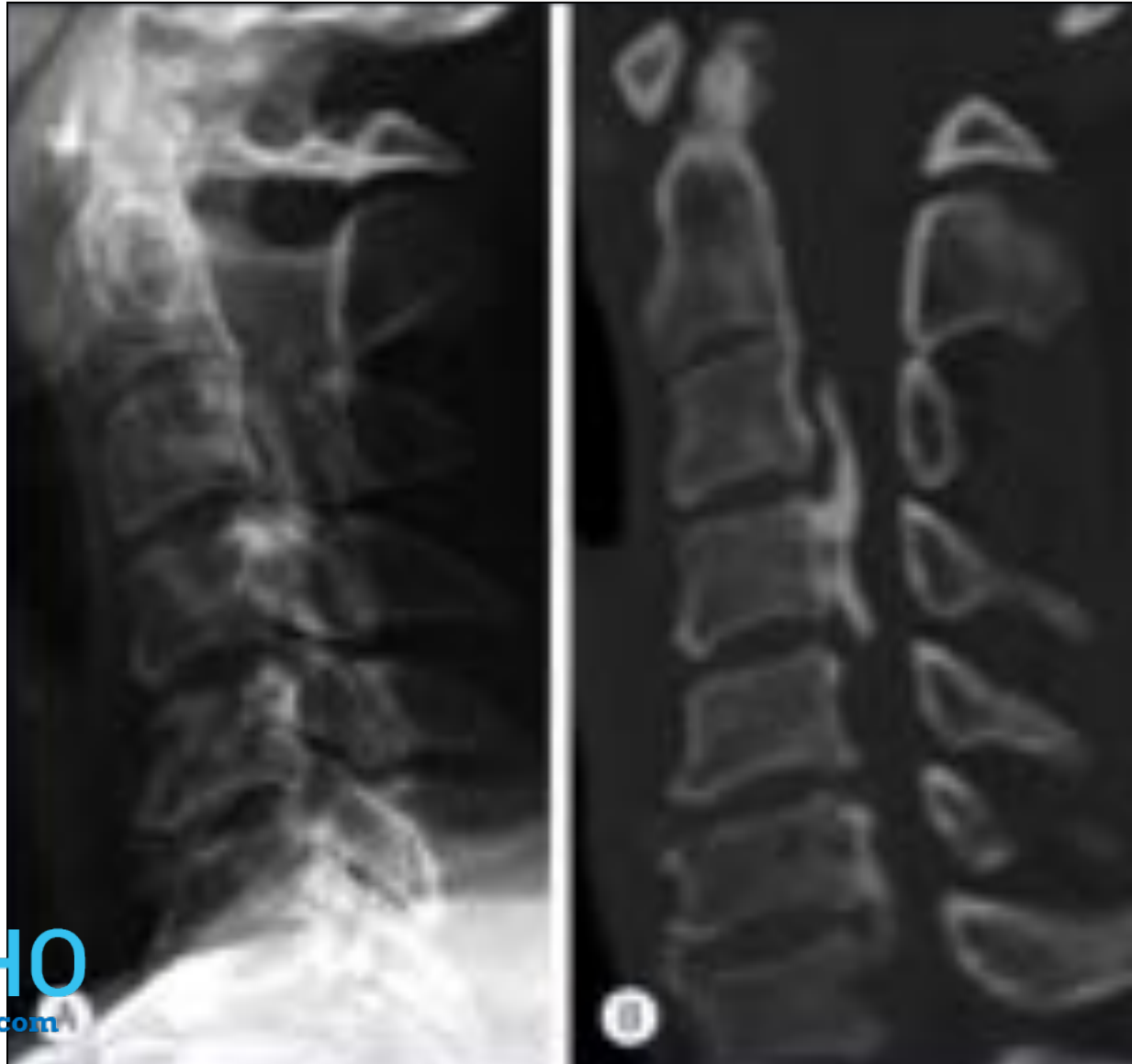


Instability



OPLL

Ossified posterior longitudinal ligament



MRI – indications

- Clinical examination / Symptoms – Suspicious of myelopathy -----

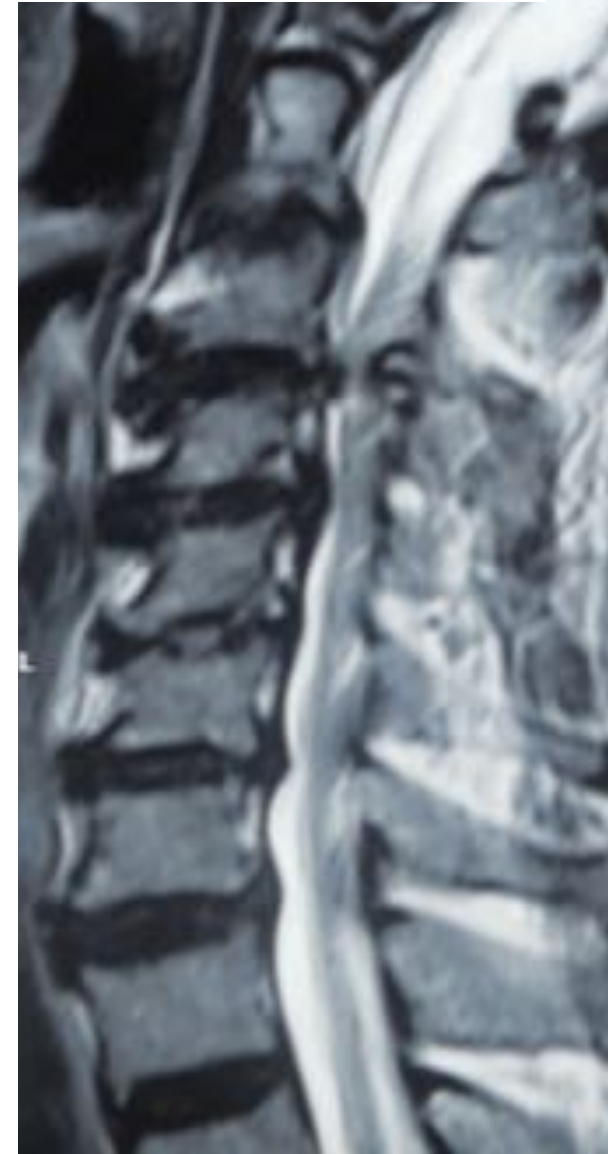
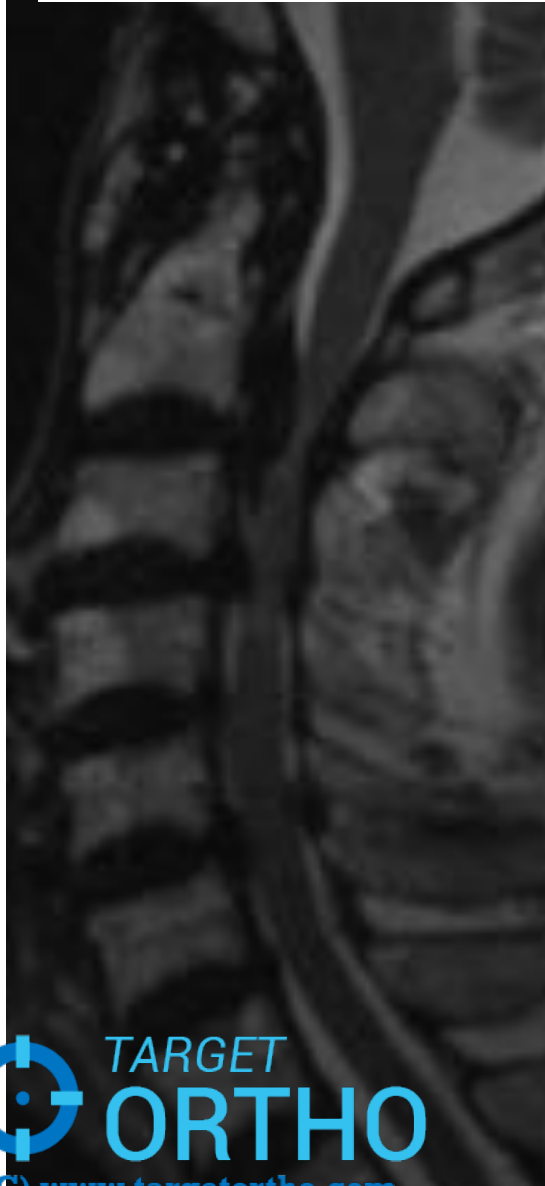
MRI – first investigation

Thing to see in the MRI.....

Severity of compression



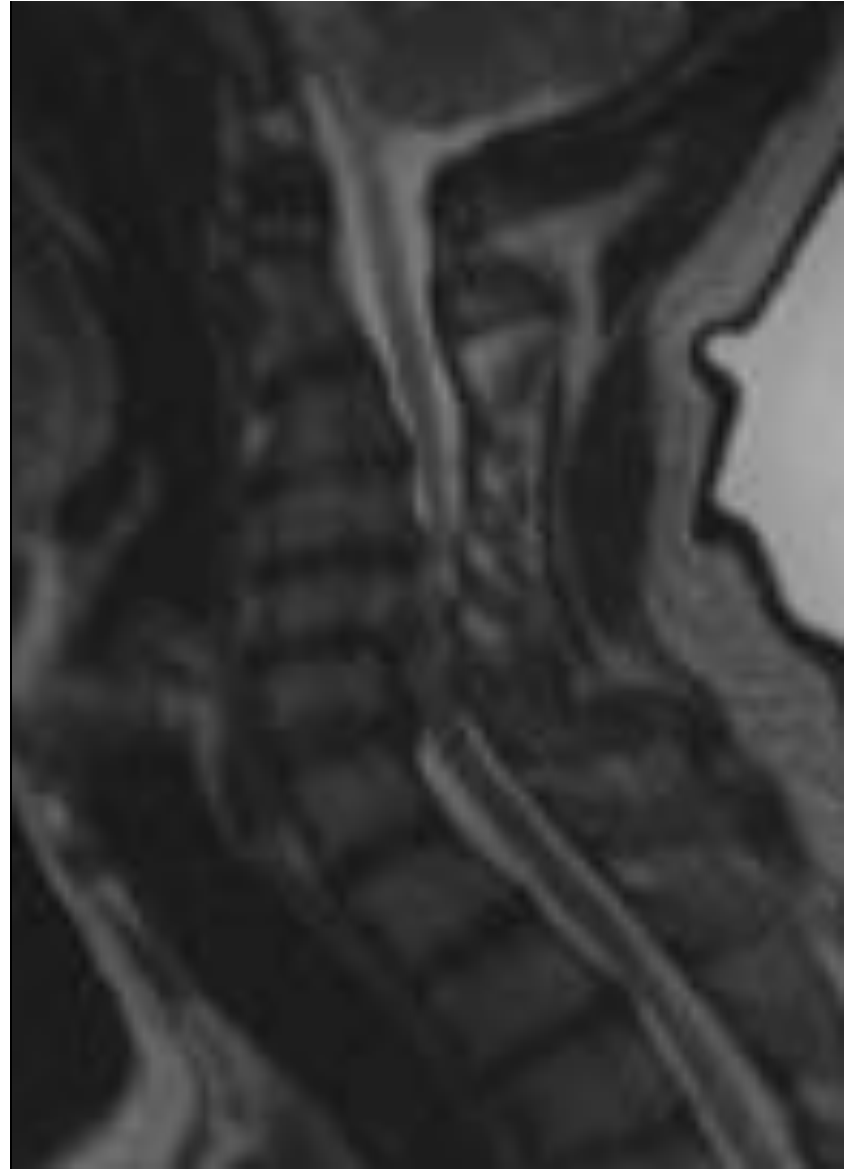
From where is the compression



Structure causing the compression



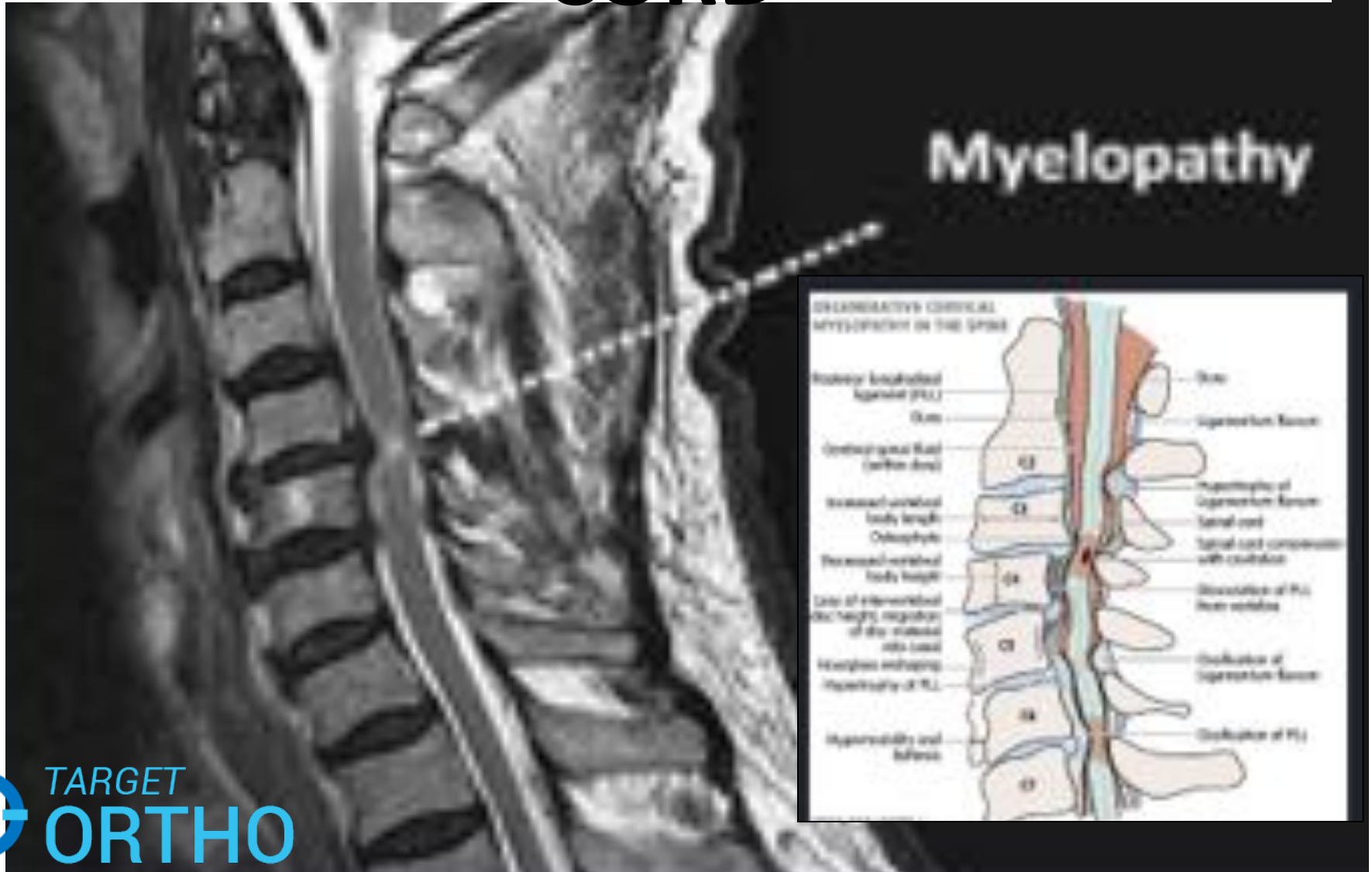
Alignment



Levels of compression

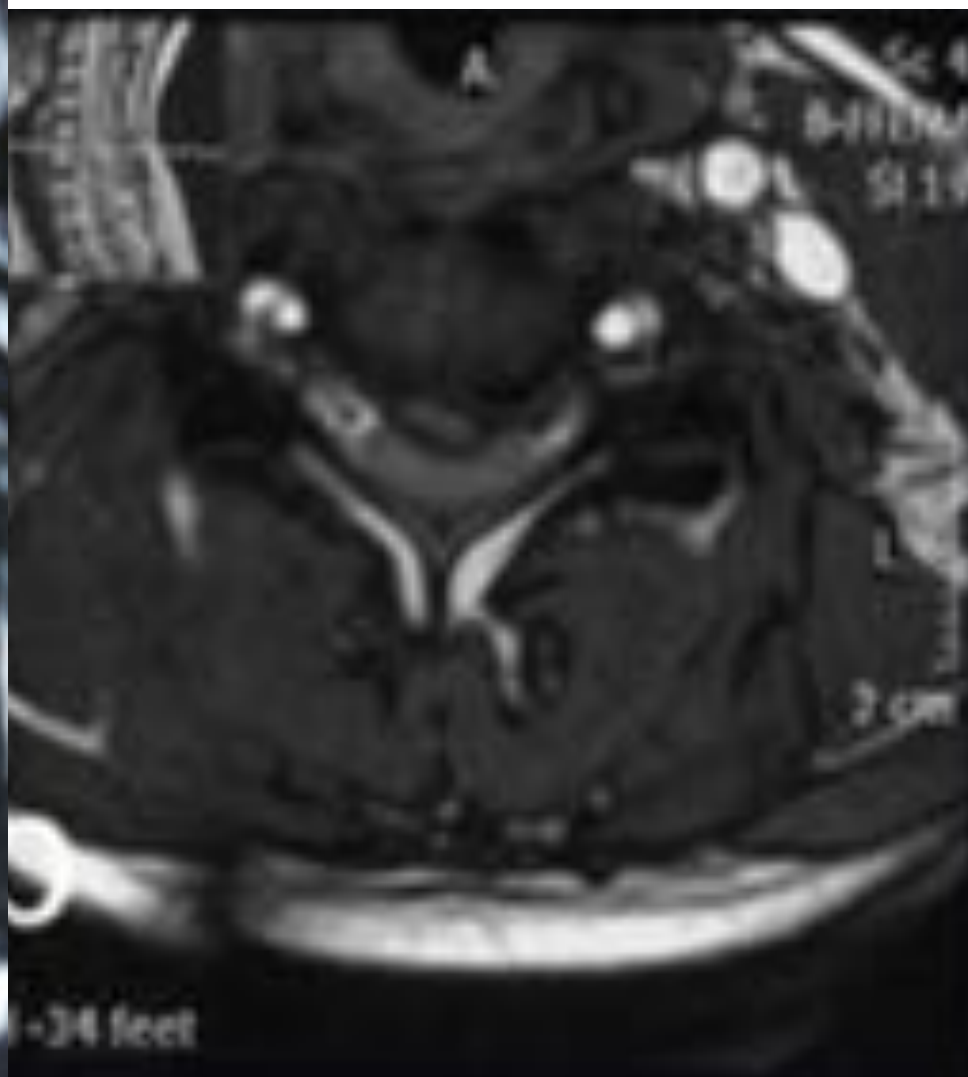
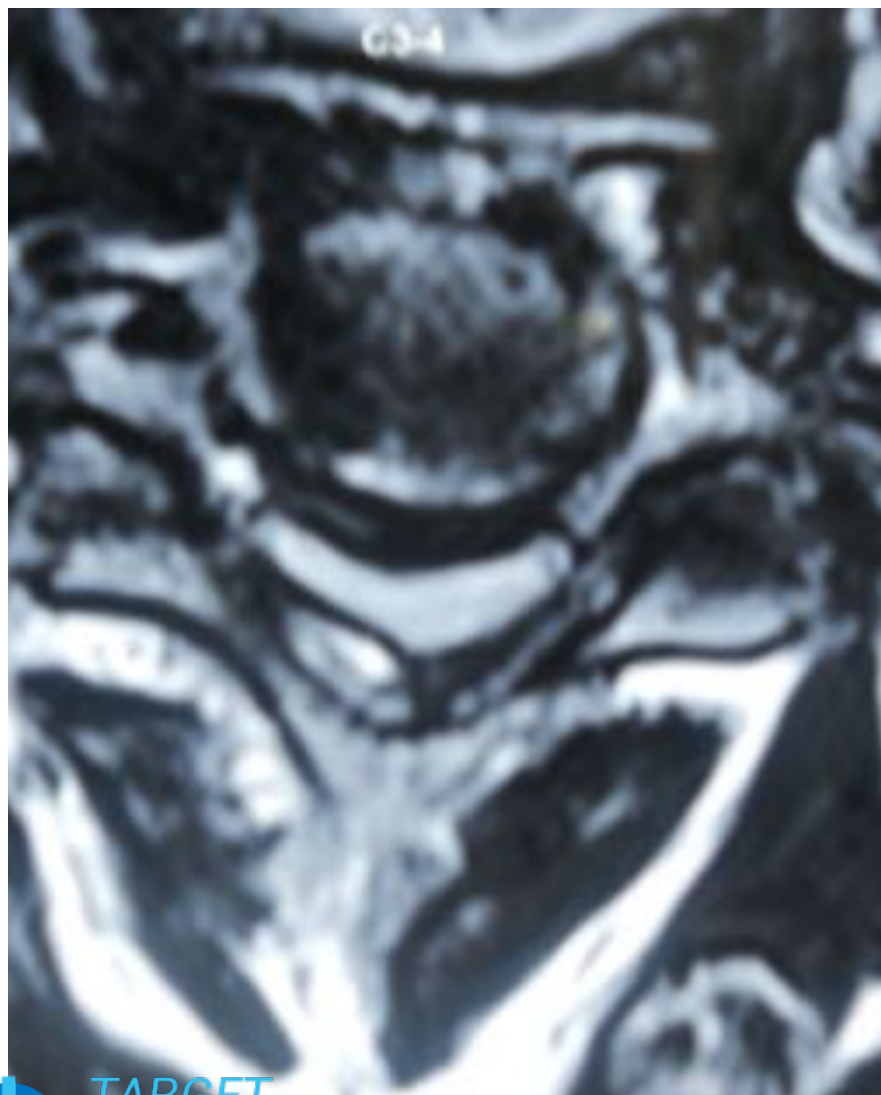


Signal intensity changes in CORD



Tandem stenosis

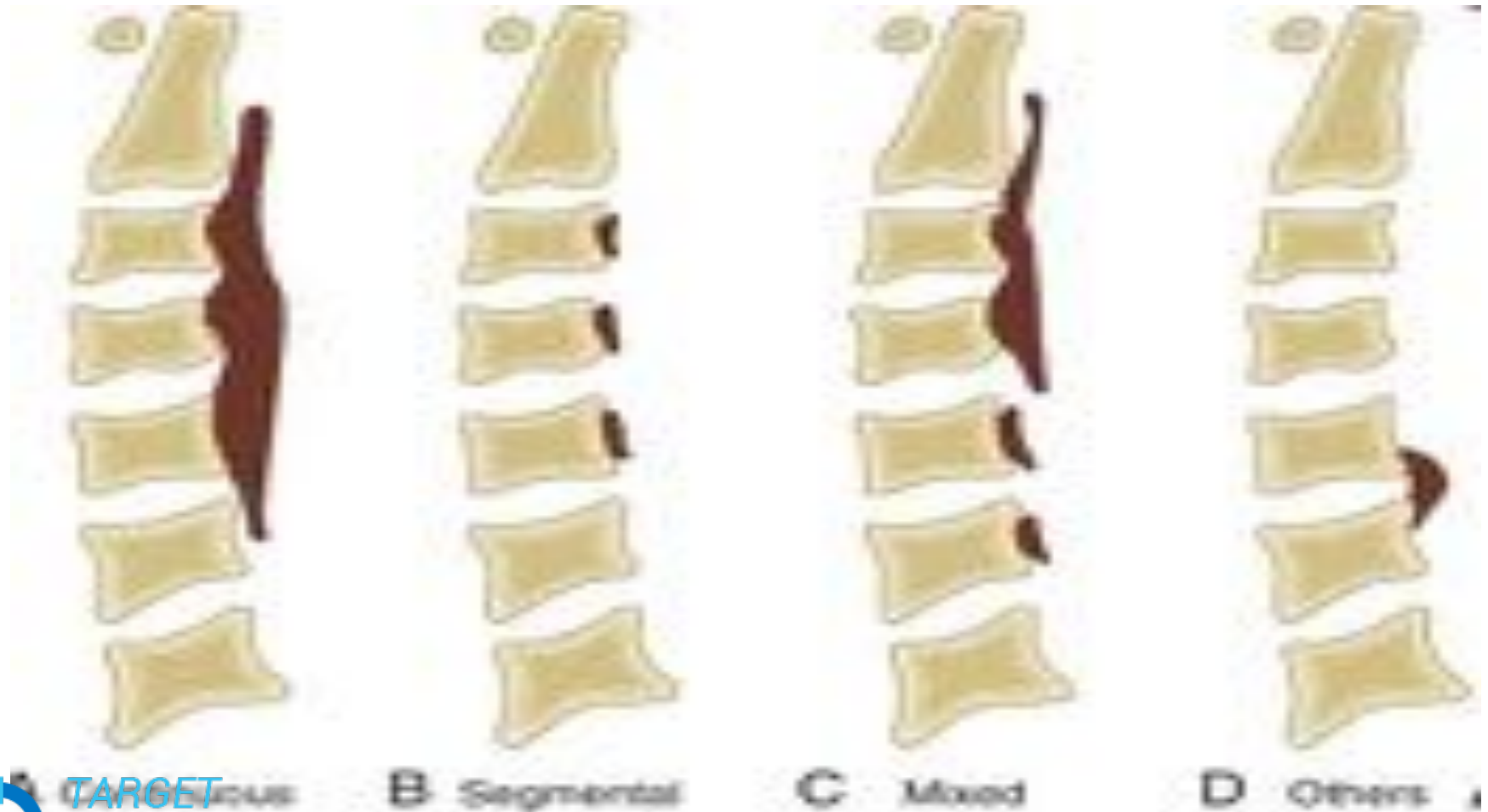


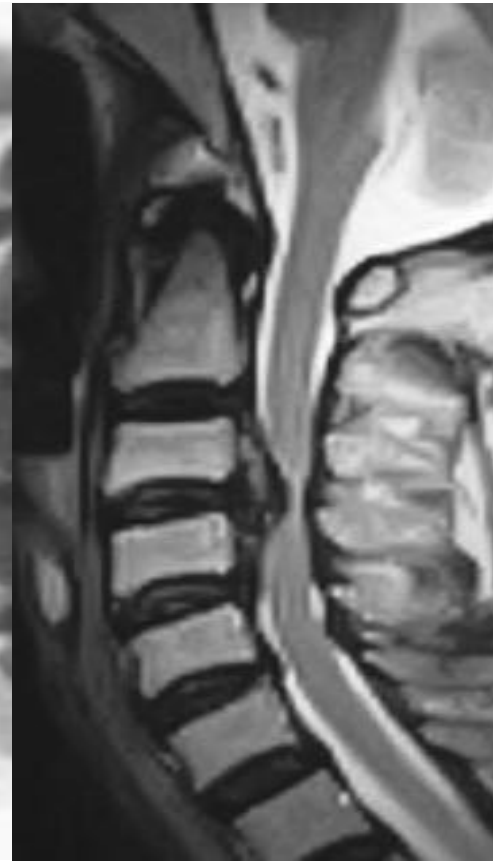


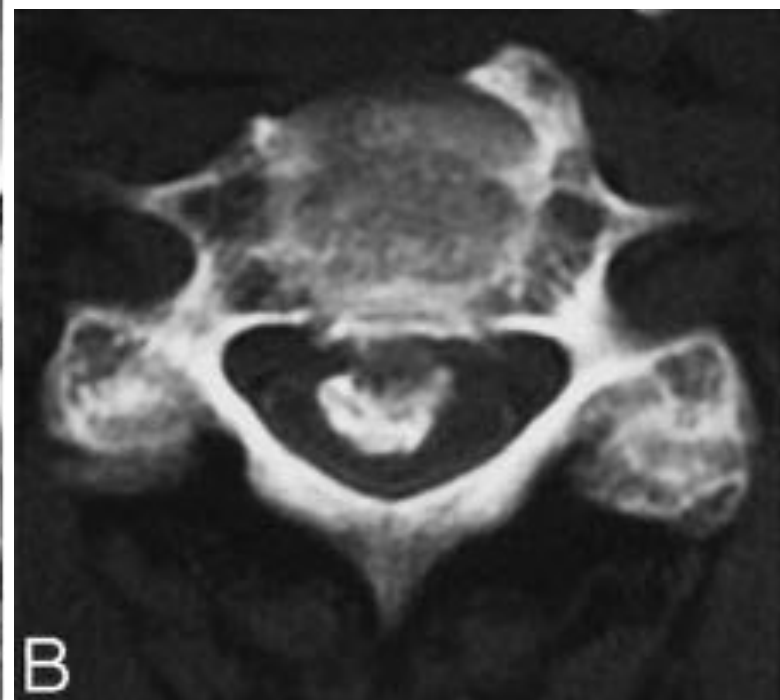
Ossified posterior longitudinal ligament (OPLL)

- Ossification of the PLL
- Ectopic bone formation
- No correlation between OPLL and disc degeneration

Radiological classification of OPLL







Surgery

- Anterior
- Posterior

Surgery

Anterior surgery

- Predominant anterior compression
- Single level compression

Anterior cervical discectomy

Anterior cervical corpectomy

Posterior surgery

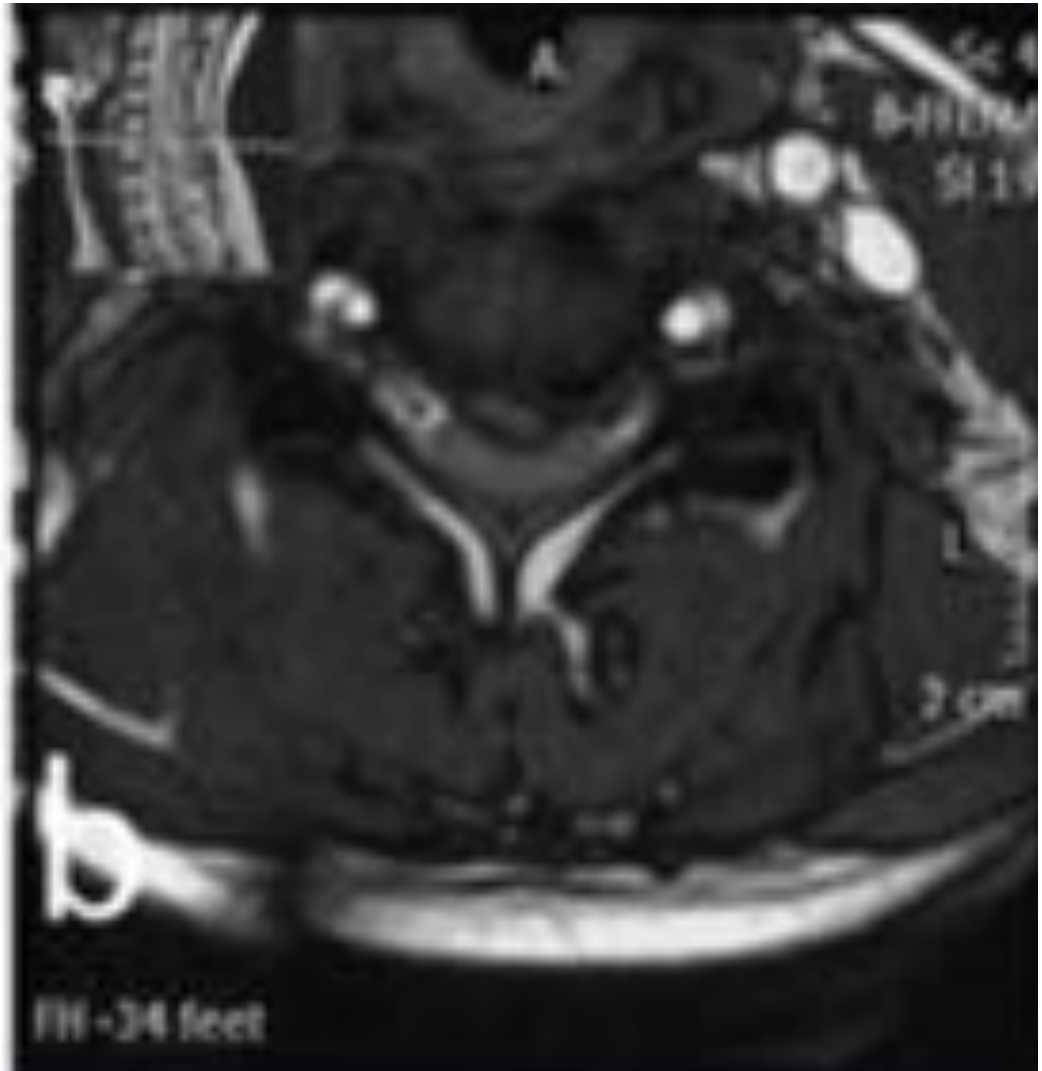
- Predominant posterior compression
- Multilevel compression

Posterior cervical laminectomy

Laminoplasty

Laminectomy with instrumentation

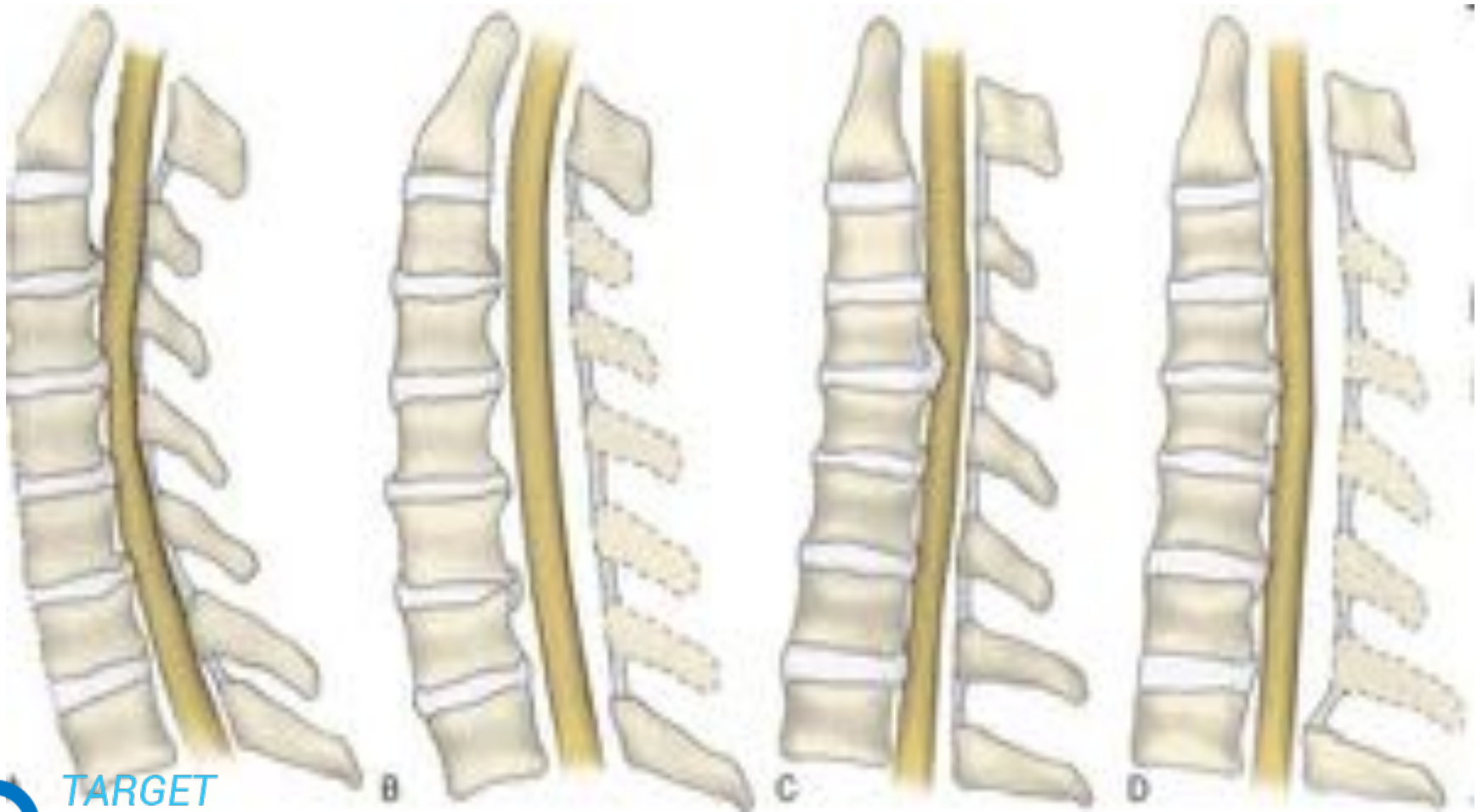
Anterior discectomy



Anterior corpectomy

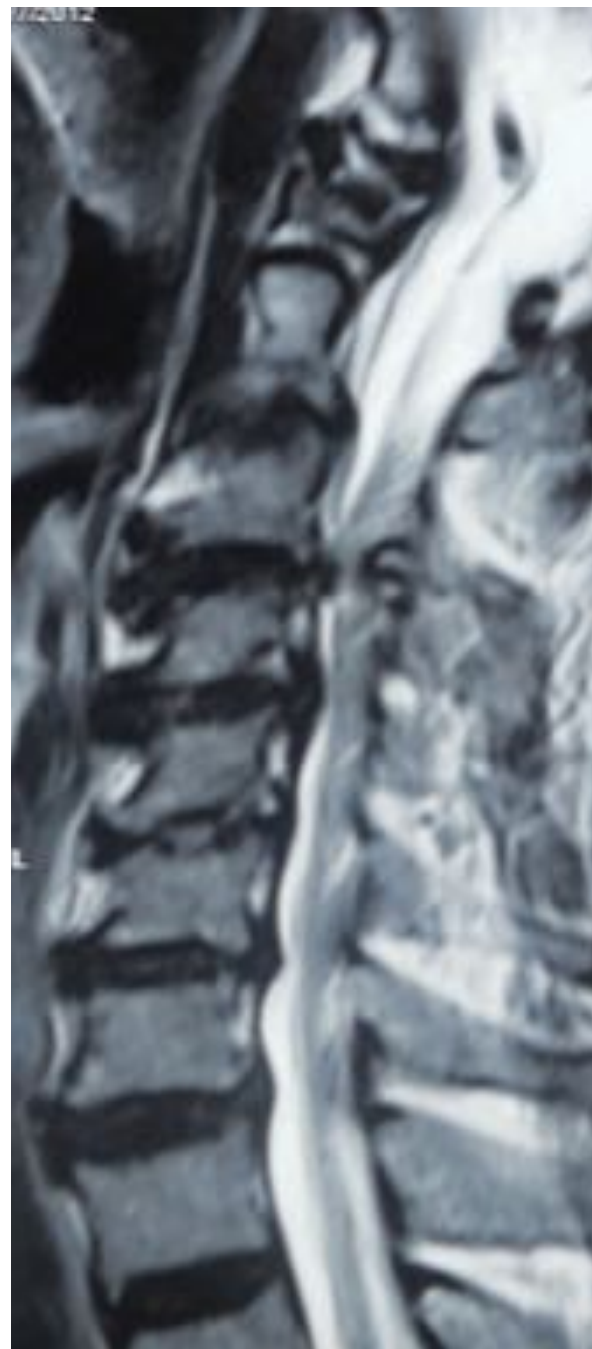


Cord fall back in lordotic and kyphotic spine



Inadequate cord fall back

- Anterior canal encroachment **> 7 mm** and
- Cervical lordosis **< 10 deg**
- Posterior decompression - only modest results



Selective laminectomy (C3-C6)



Preservation of C2



Segmental partial laminectomy (SPL)

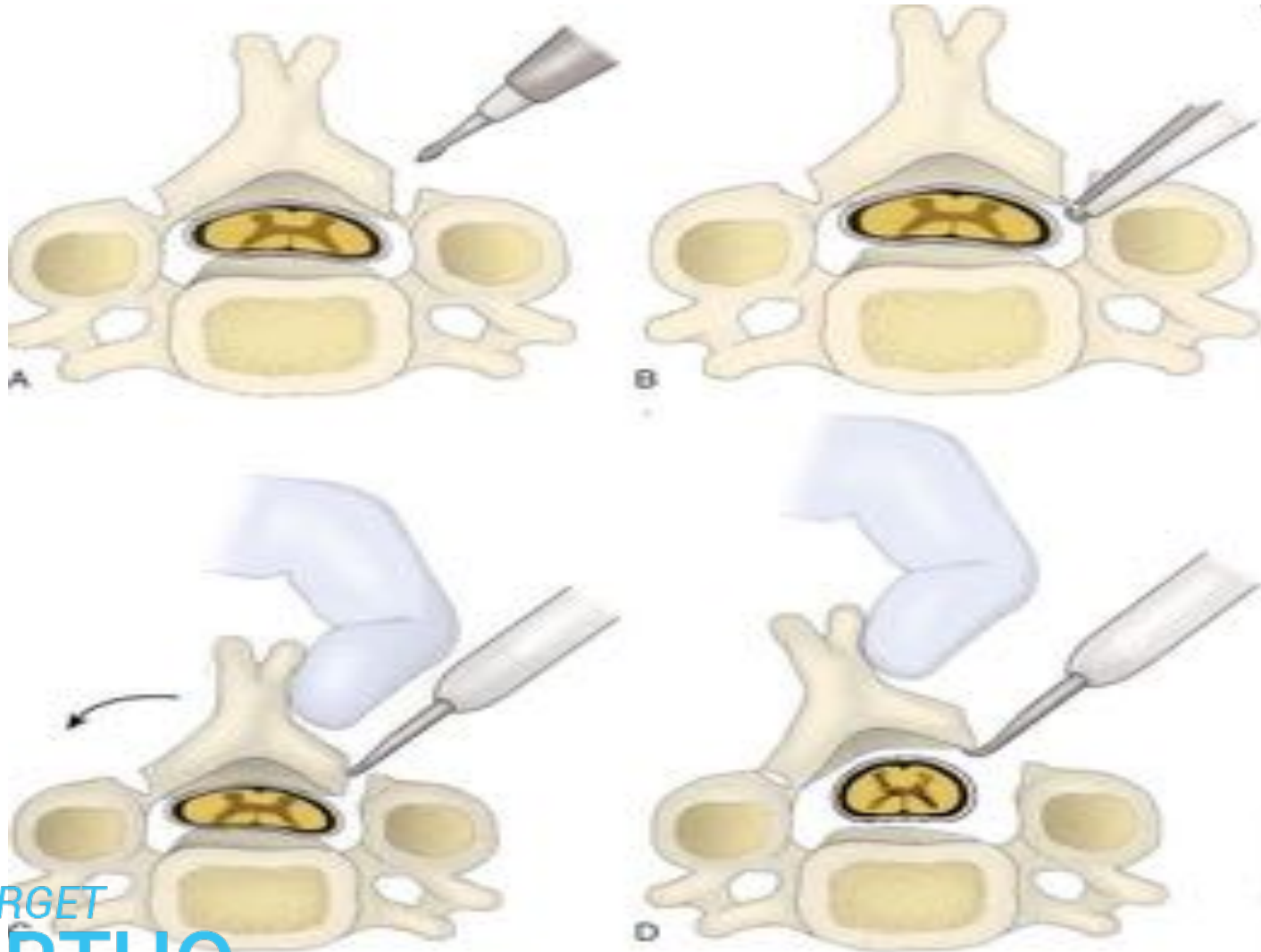


Disadvantages of laminectomy

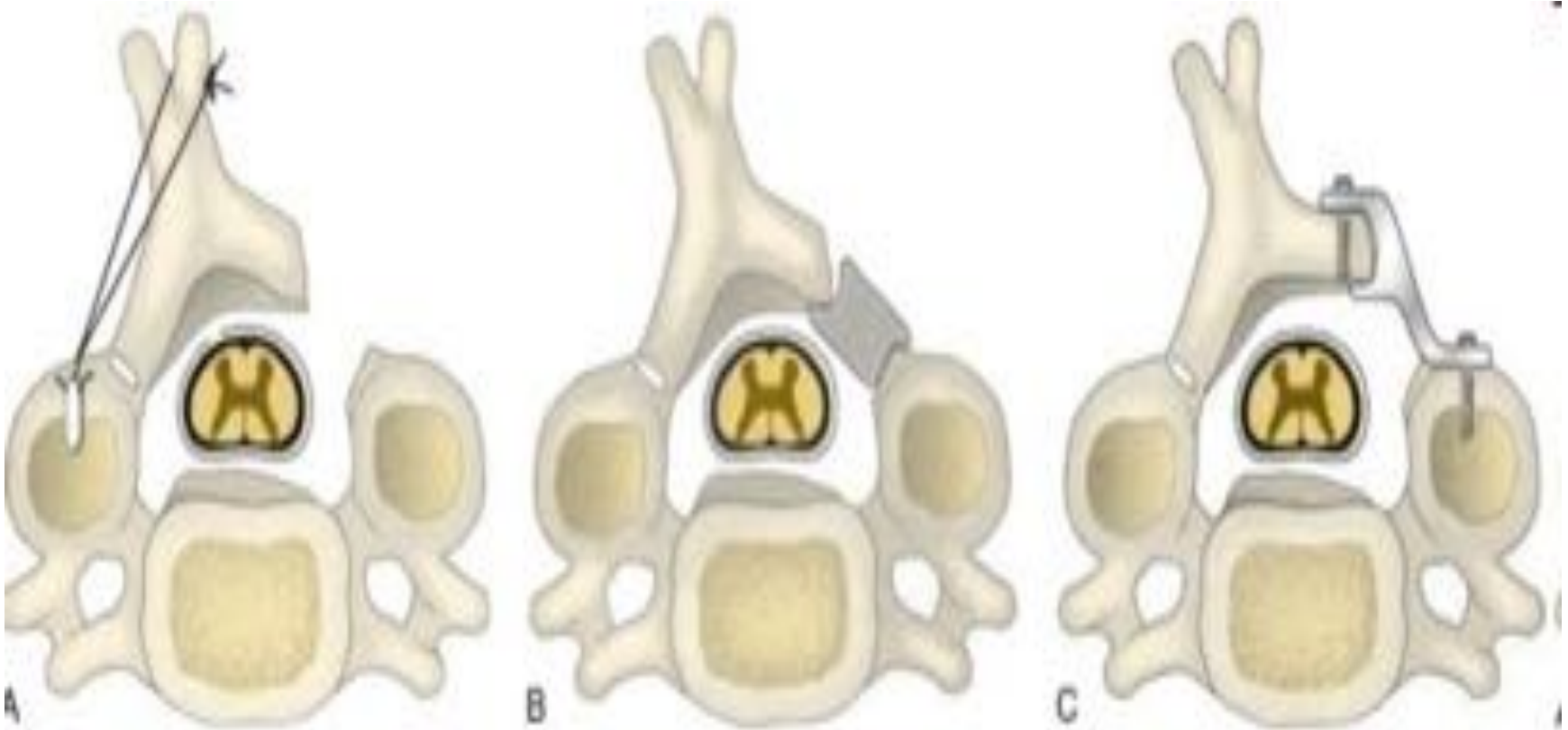
- Loss of paraspinal muscle attachment
- Progressive kyphosis
- Instability

Preserving C2 and C7 – brings down these complications.

Open door laminoplasty



Methods to stabilise the posterior arch



Open door laminoplasty



Plateau shaped OPLL after laminoplasty



CSM with kyphotic alignment



CSM with kyphotic alignment



