


Common Spine Disorders - Diagnosis and Treatment

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Bones and Spine



Outline

- 
- A large, ornate metal key is positioned vertically on the left side of the slide. The key has a circular head with a small loop at the top and a long, slender shaft. The background of the slide is a dark blue gradient, and the key is set against a lighter, textured background that looks like sand or gravel.
- ◆ Urgent Vs. Elective. (緊急狀態對非緊急狀態)
 - ◆ Diagnosis of four common spine disorders
 - Spinal Stenosis 脊髓狹窄
 - Disk degeneration 脊椎圓盤退化
 - Herniated Disc 圓盤推出擠壓
 - Arthritis (spondylosis) 關節炎
 - ◆ Treatment of common spine disorders
 - Nonsurgical Vs. Surgical 沒有手術對手術

緊急狀態對非緊急狀態

緊急狀態

- 傳染
- 瘤
- 骨頭破裂
- 不能控制排尿

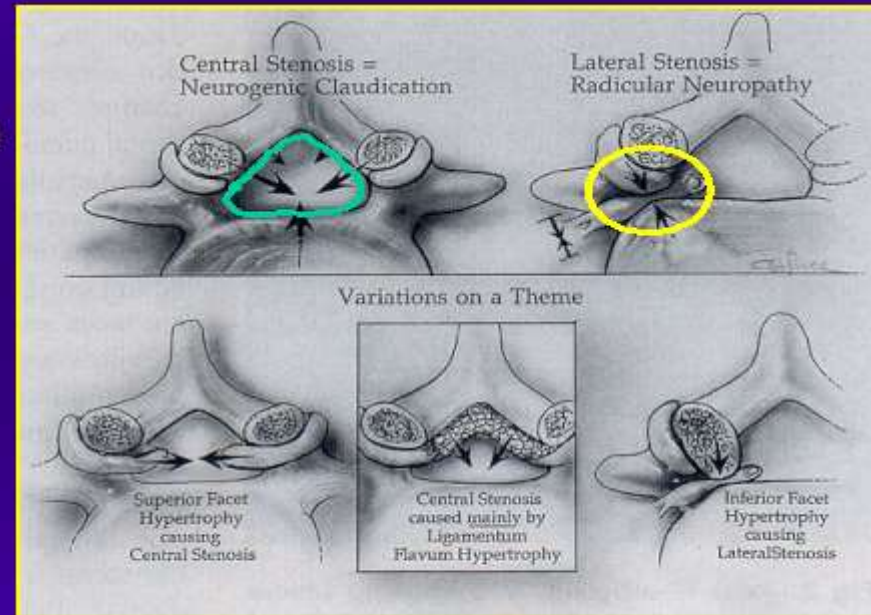
◆ 非緊急狀態

- 一切其他.

1. 脊髓狹窄

Anatomy

- Central Stenosis
 - Neurogenic claudication
- Lateral Stenosis
 - Radiculopathy



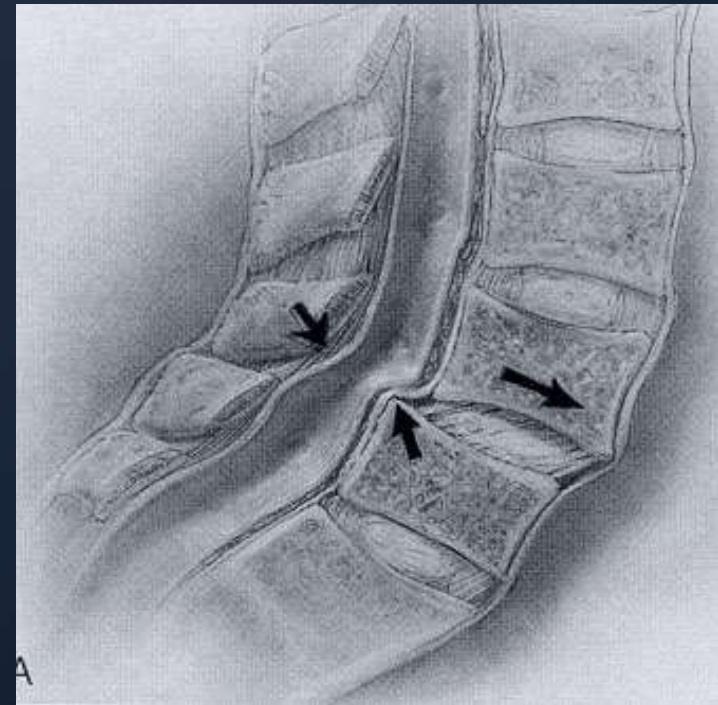
脊髓狹窄 + 滑動

◆ Derivation from Greek

- Spondylos: “vertebra”
- Olisthein: “to slip”

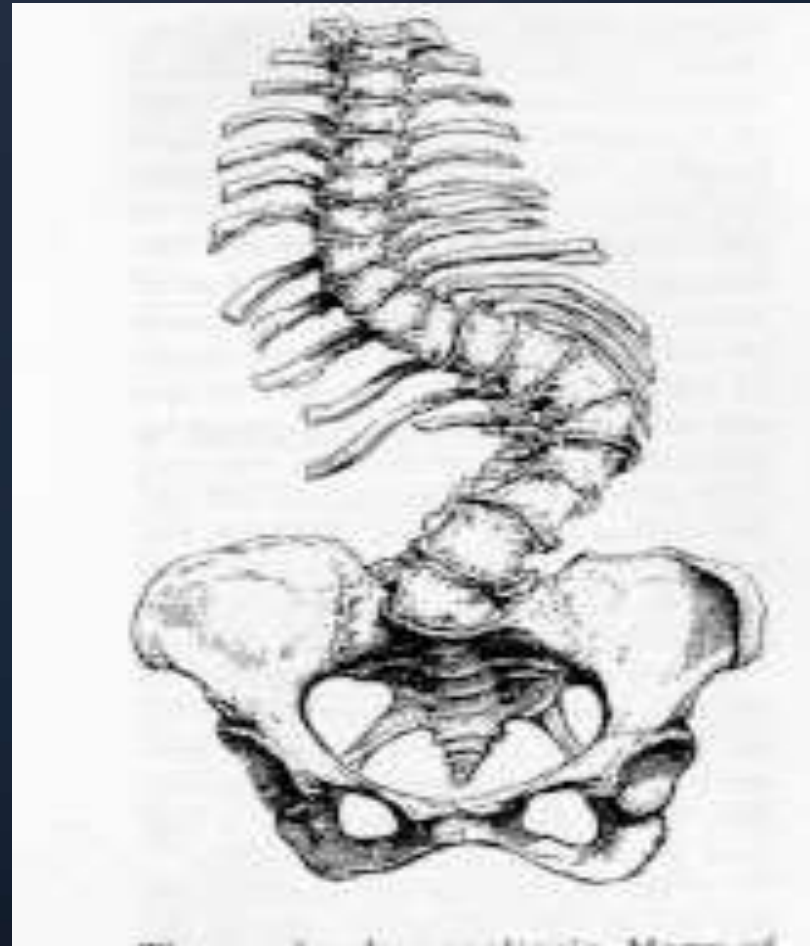
◆ Myerding Grading System

- Grade 1 25%
- Grade 2 50%
- Grade 3 75%
- Grade 4 100%



Stenosis with 脊柱側凸

- ◆ Lateral instability



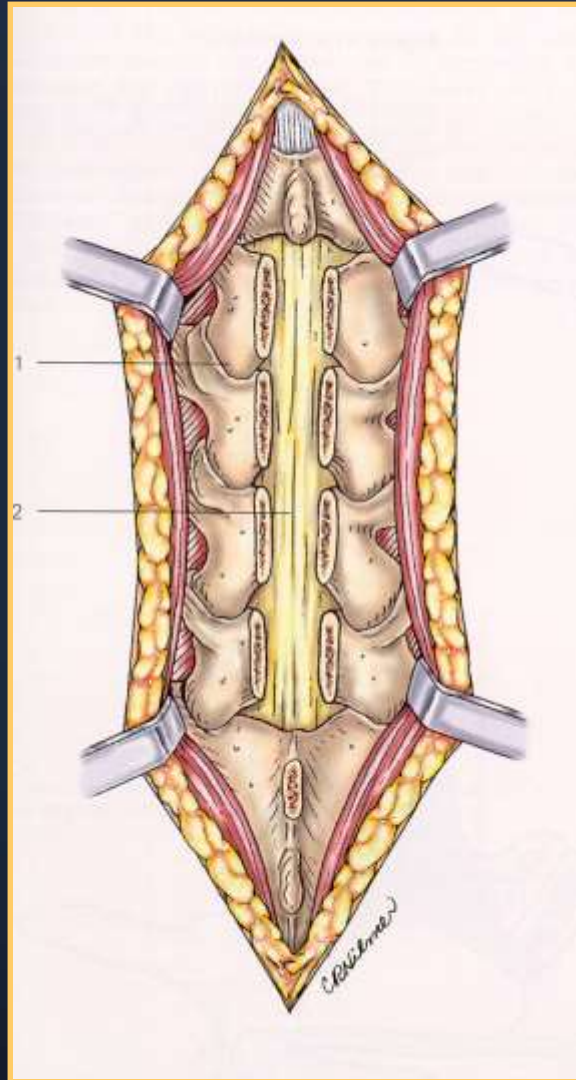
Clinical Presentation – Neurogenic Claudication



MRI - 脊髓狹窄

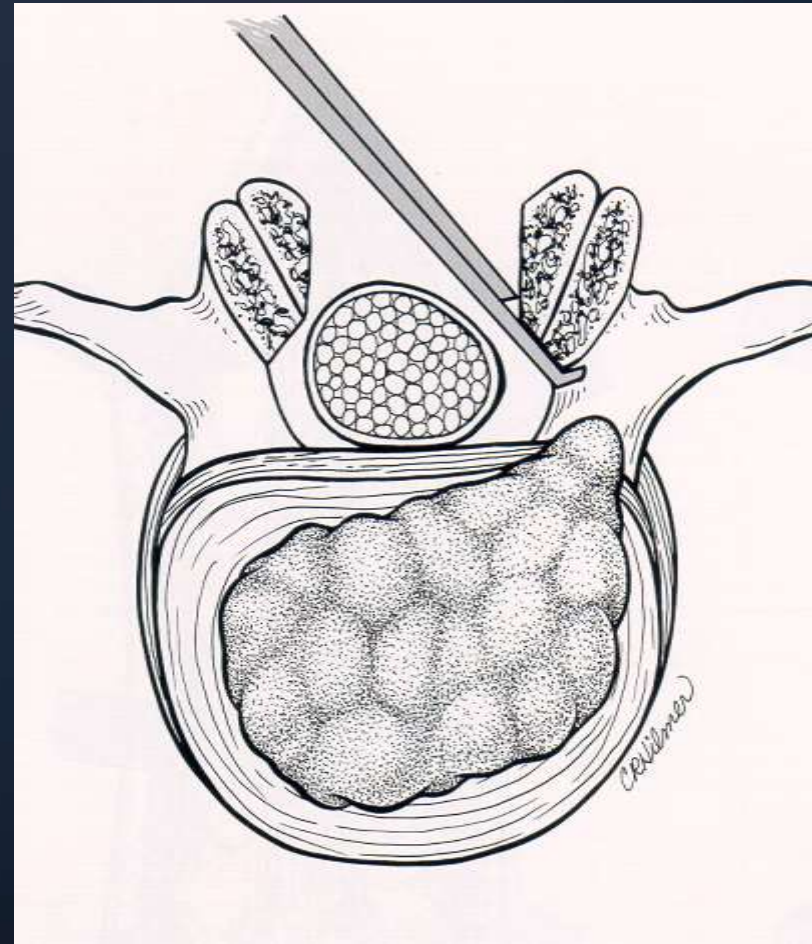


Decompressive Laminectomy



Surgical Decompression

- ◆ Unilateral/bilateral laminotomy with foraminotomy – Focal lateral stenosis
- ◆ Up to 50% of facet joint usually may be removed w/ low risk of post-op instability



Surgical Treatment-Fusion 融合

◆ Instability

- Spondylolisthesis
- Scoliosis
- Severe disc degeneration

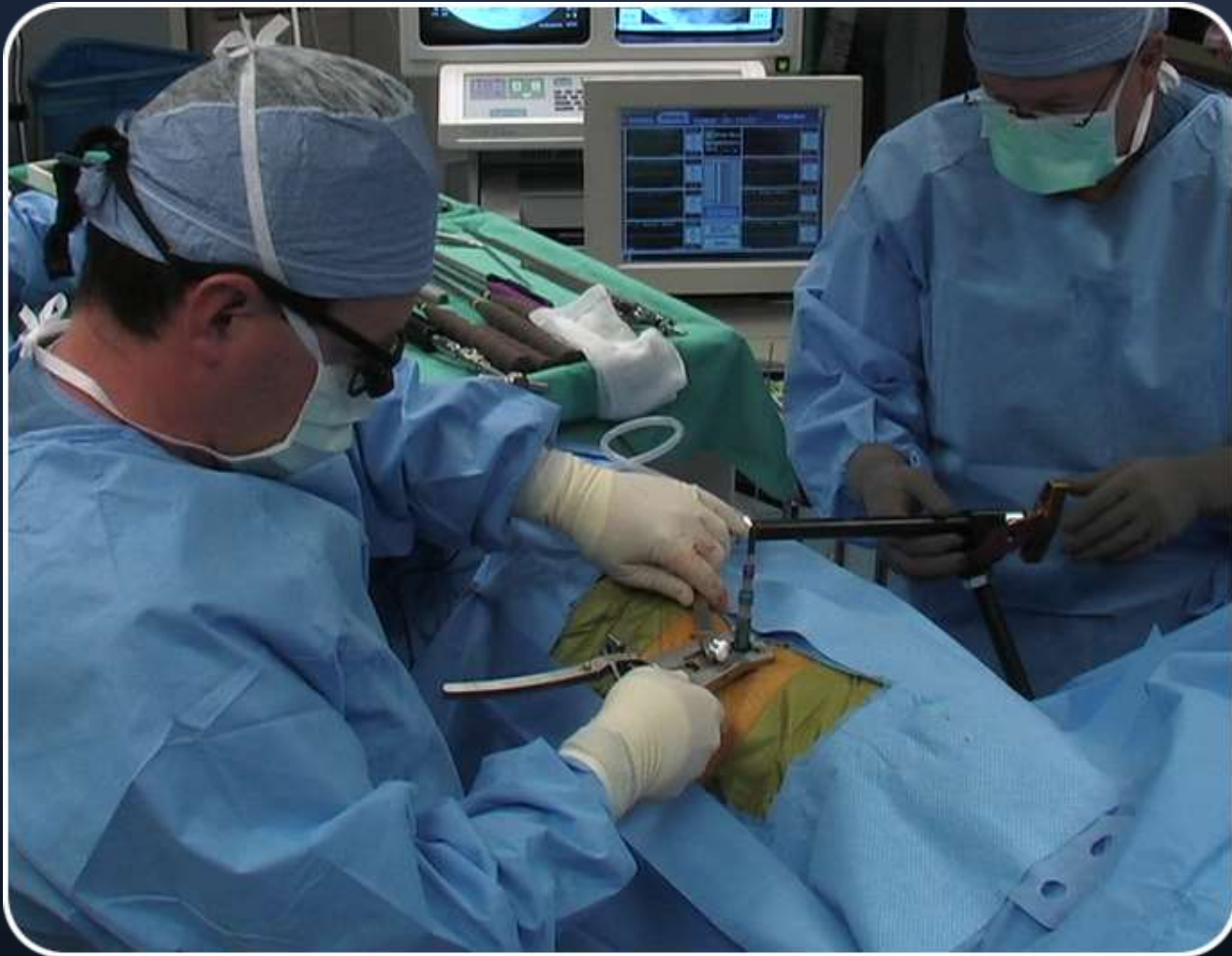


Surgical Treatment-Fusion(融合)

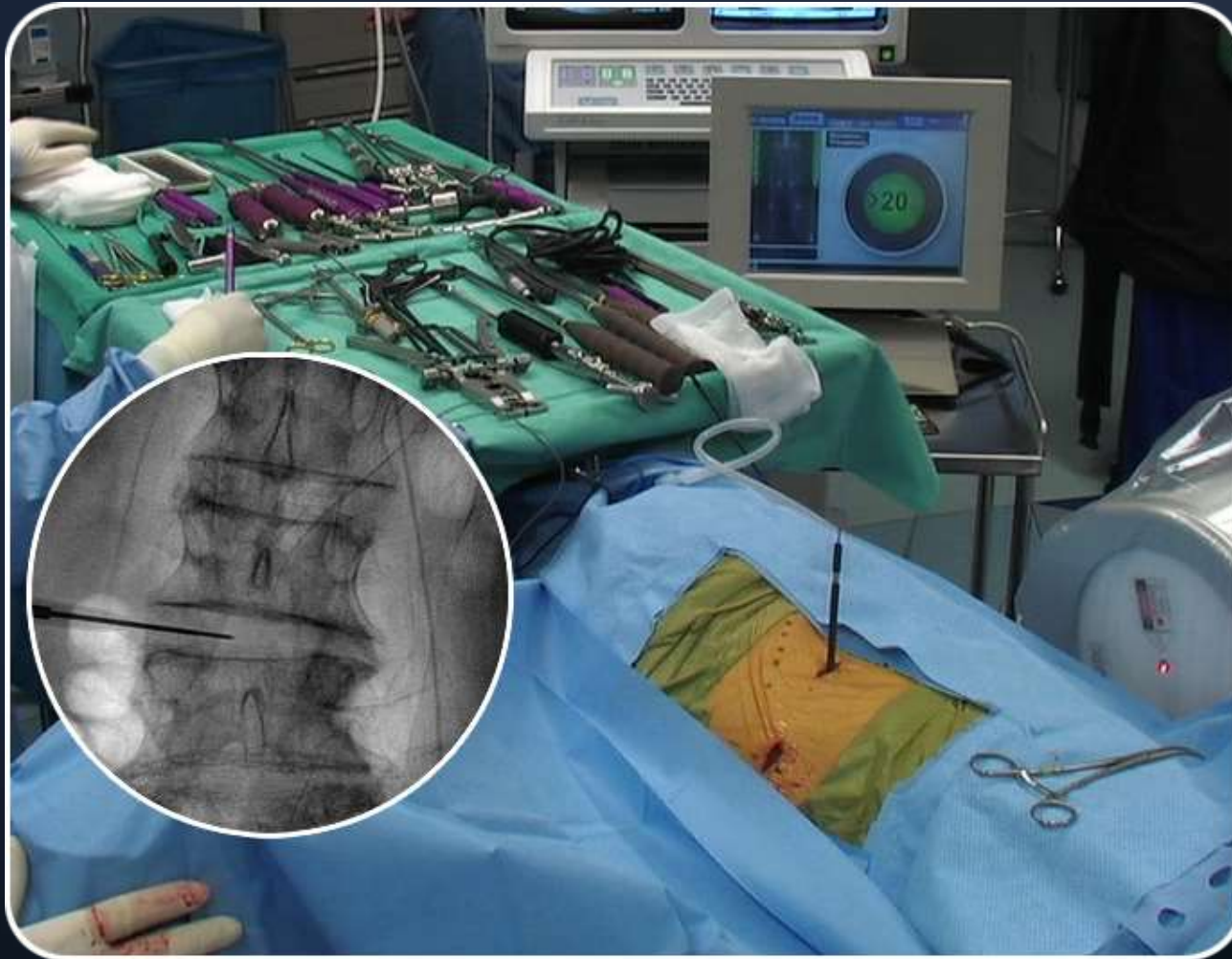




新技術- 小創傷



新技術- 小創傷



新技術- 小創傷



Decompression



新技術- 小創傷



新技術- 小創傷



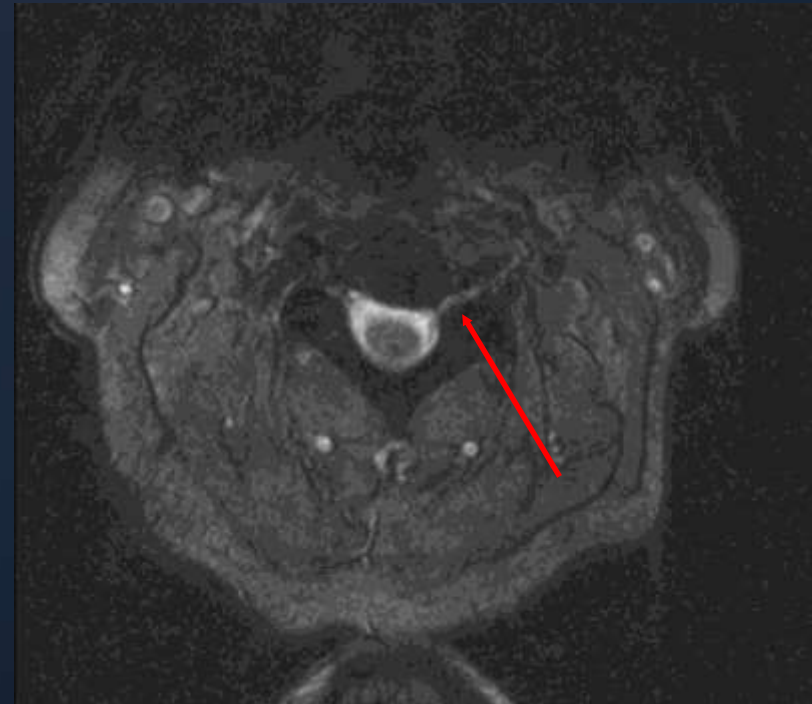
脖子手術



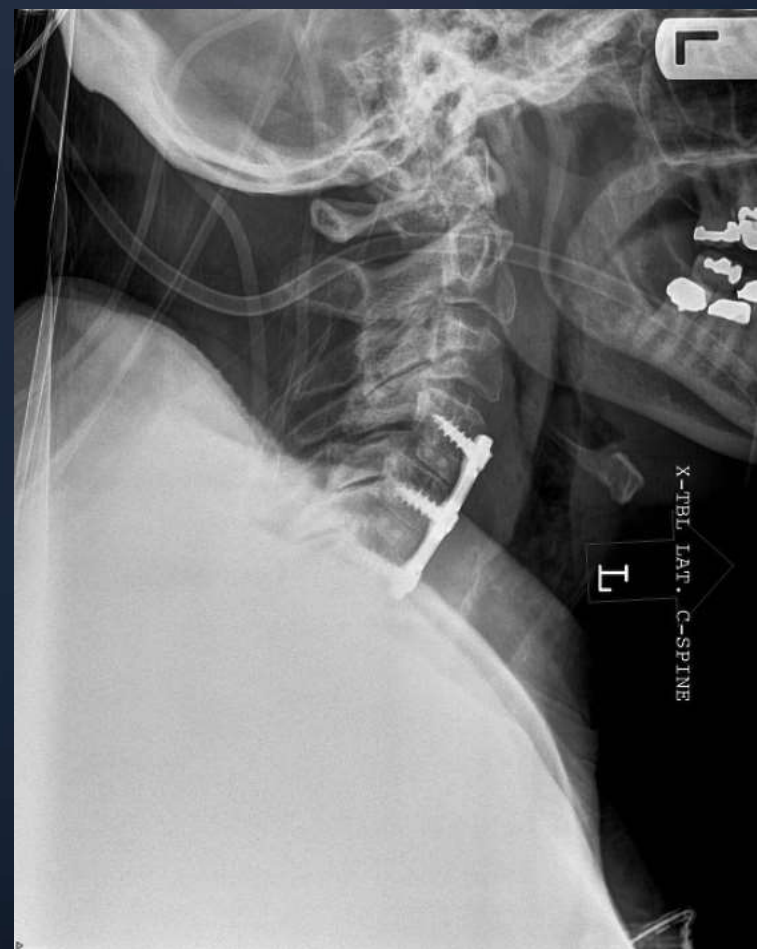
脖子手術



MRI - 狹窄



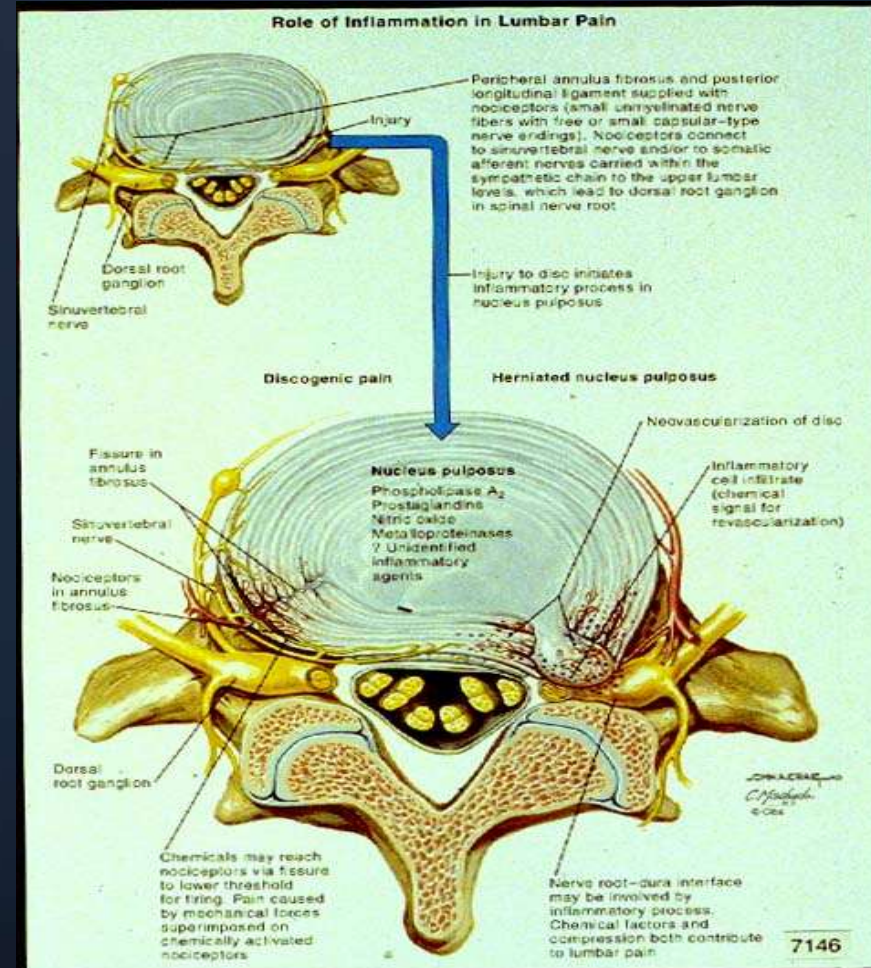
脖子手術為狹窄



Discogenic pain 脊椎圓盤退化



脊椎圓盤退化



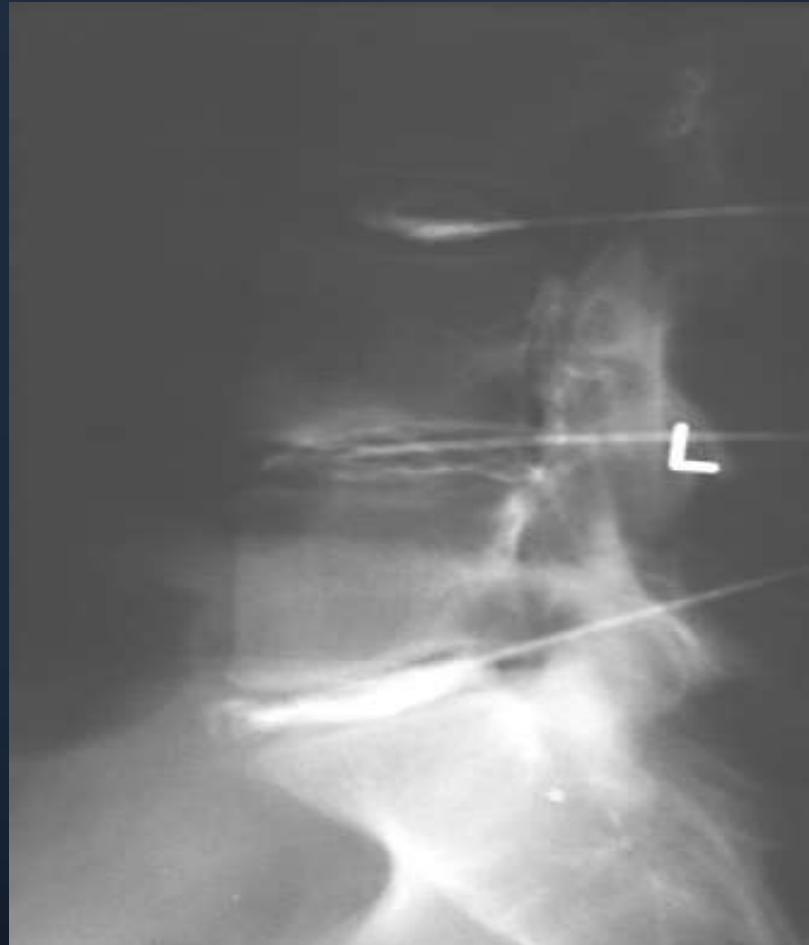
脊椎圓盤退化- MRI

◆ Black disc



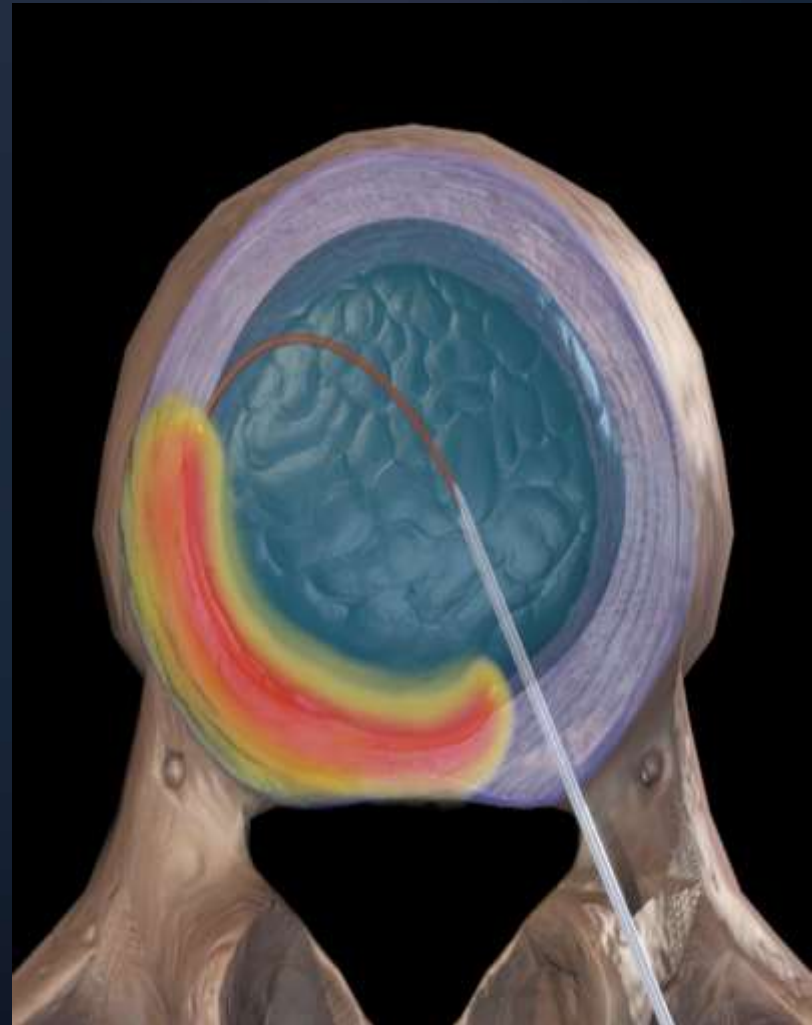
脊椎圓盤退化-DISCOGRAM

◆ Discogram

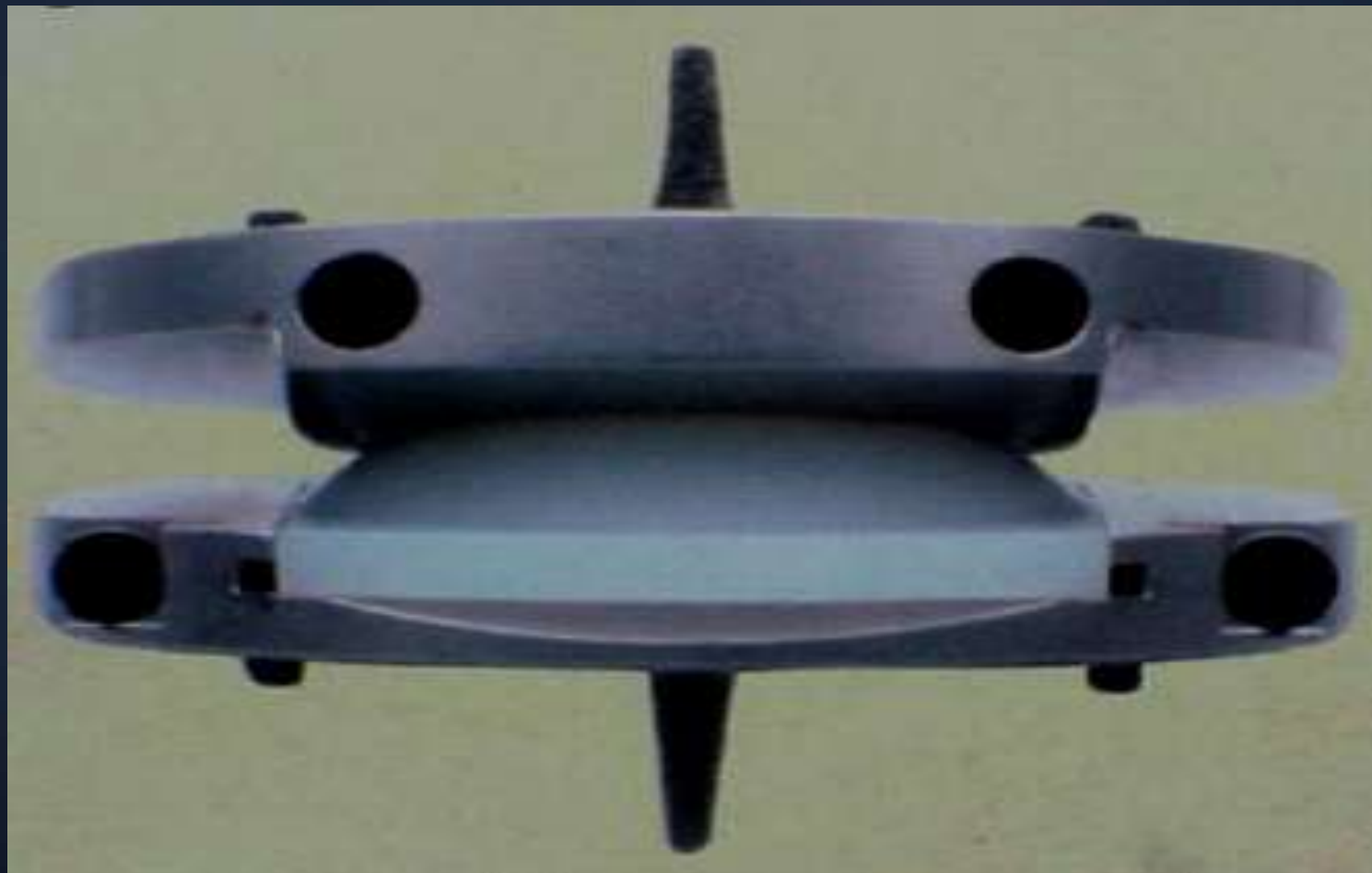


脊椎圓盤退化

- ◆ Disk degeneration
- ◆ Require 50% preservation of disc height
- ◆ 60-70% improvement
- ◆ May take up to eight months to be “effective”



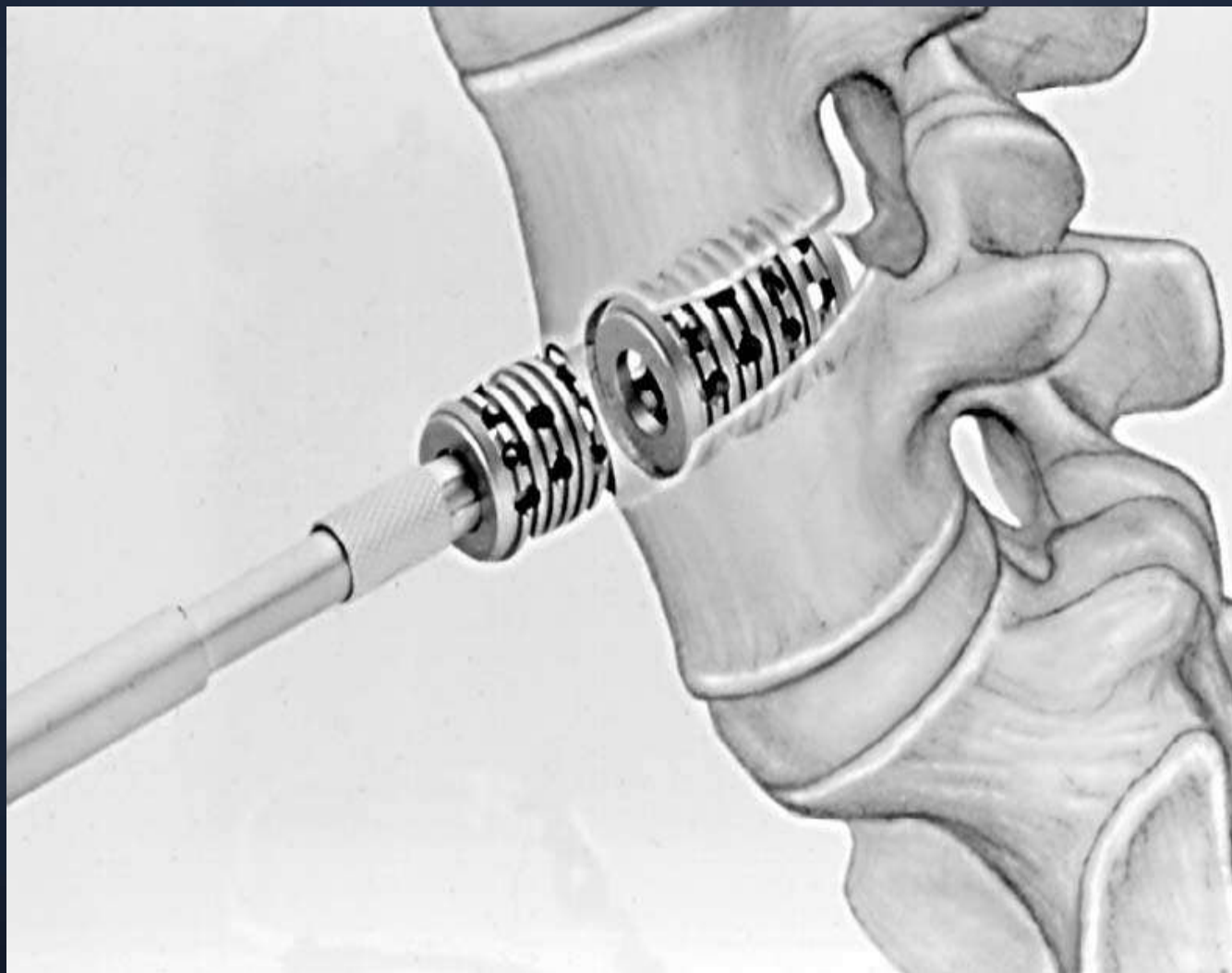
總圓盤替換



Total disc replacement 總圓盤替換



A large, ornate metal key with a circular bow and a notched bit, resting on a textured, golden-brown surface.



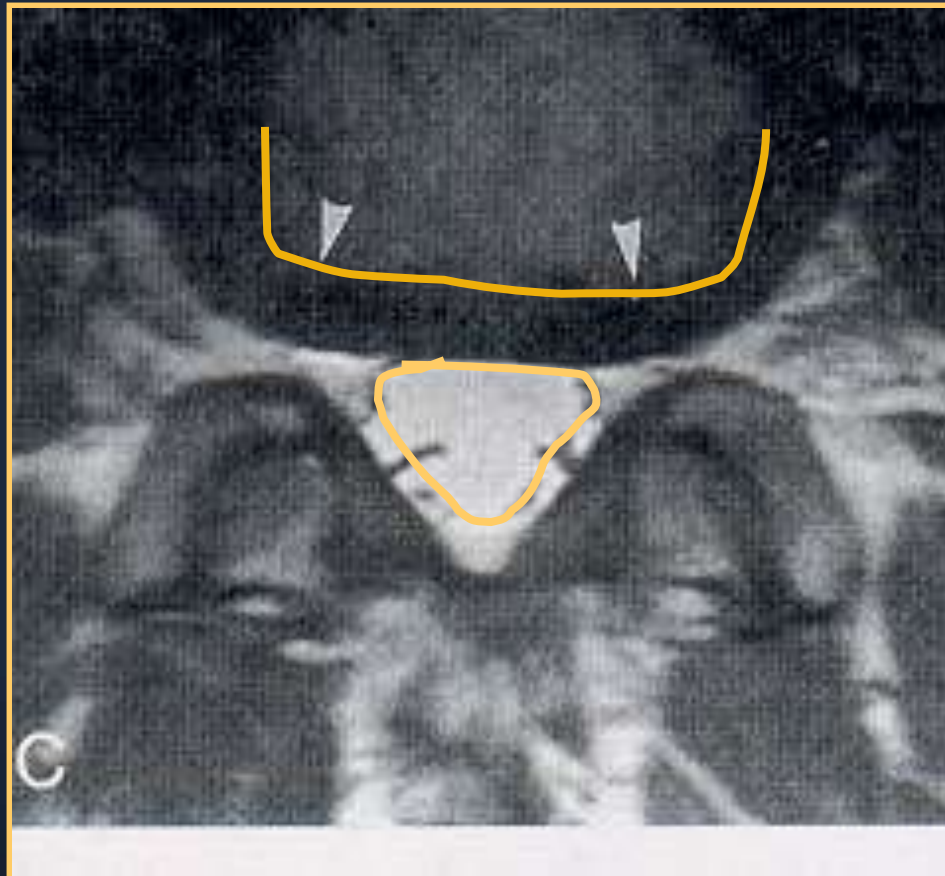
3. Herniated Disc 圓盤推出擠壓



Herniated disc 圓盤推出擠壓



Normal MRI



MRI-HNP 圓盤推出擠壓



新技術- 小創傷



Treat patient not x-ray !

◆ 67 Asymptomatic volunteers:

- MRI + Herniated disc
 - <60 yo = 20%
 - >60 yo = 36%
 - >80 yo = 90%

(Boden JBJS 1990)

◆ 98 Asymptomatic vol.

- 36% had normal disc at all levels

(Jensen NEJM 1994)

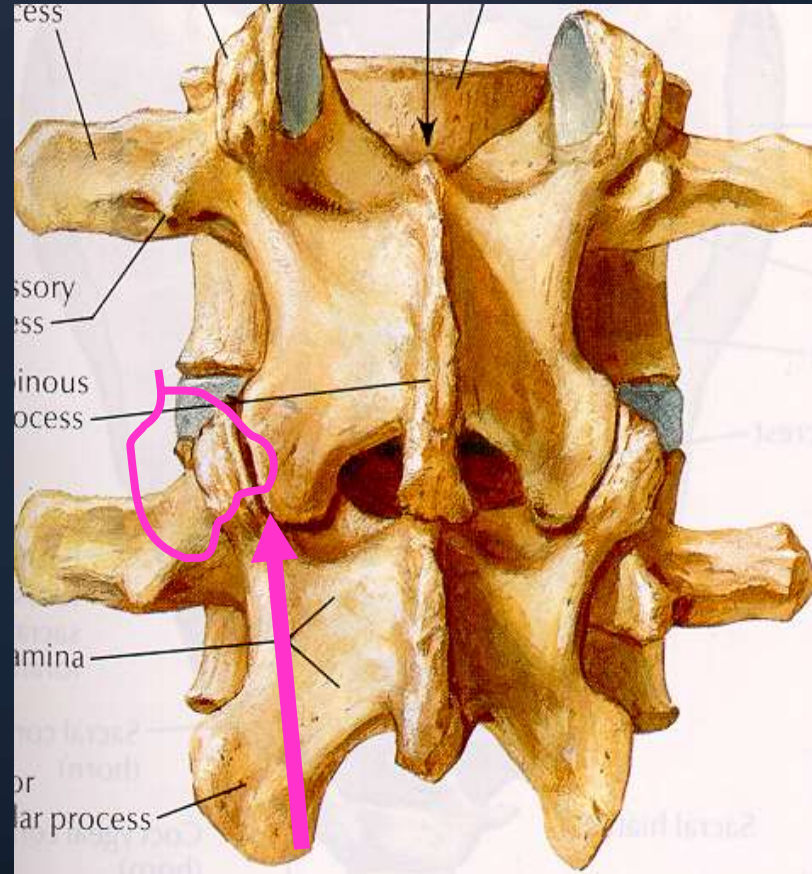


4. Arthritis of the Spine 關節炎



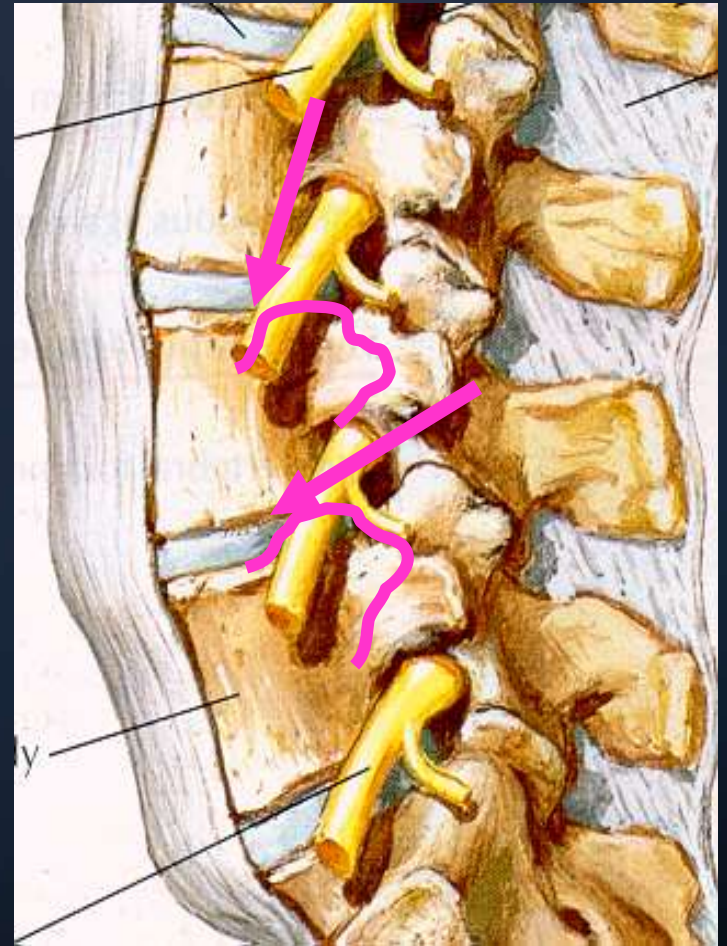
Inferior articular process 關節炎

- Located posterior and medially
- Forms lateral wall of spinal canal
- Osteophytes cause central canal narrowing



Superior articular process 關節炎

- Located laterally and anteriorly
- Osteophytes cause narrowing of :
 - lateral recess
 - neural foramen

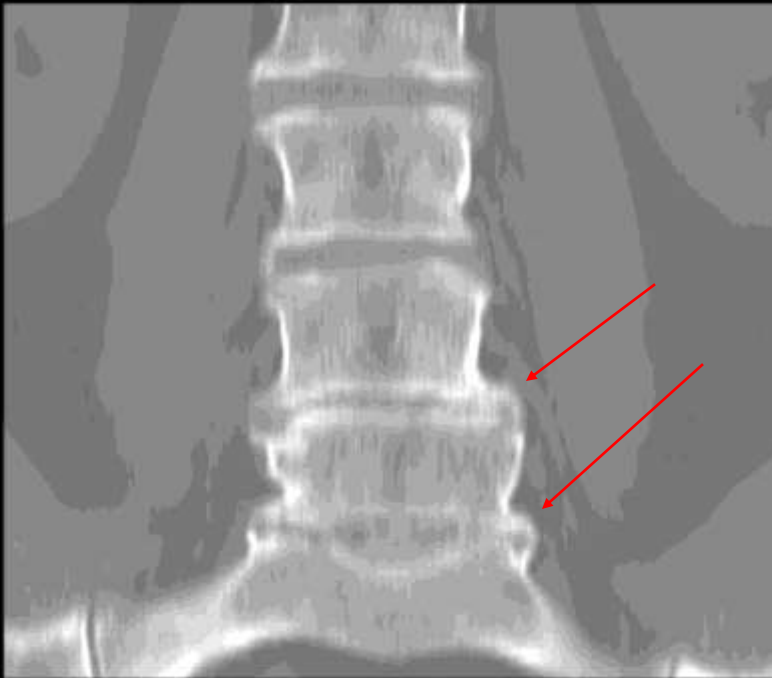


Clinical Presentation of Facets Arthropathy 關節炎

- Morning Stiffness.
- Lower back Pain without radiculopathy
- Pain improves with activities during the day, returns in the evening.
- More pain with extension than flexion
- Aggravated by weather or humidity change



關節炎 – CT SCAN



關節炎



Non-Surgical Treatment

沒有手術治療

(80-90% of patient)

- ◆ Bed rest (1-2 days)
- ◆ Traction(at least 25% of body weight)
- ◆ Acupuncture/trigger point injection
- ◆ TENS
- ◆ Corset/Braces
- ◆ Manipulation
- ◆ Medication
 - NSAID
 - Muscle relaxant



Physical Therapy 物理療法

- ◆ **Aerobic** (LA firefighter-higher fitness, lower risk of subsequent back pain)
- ◆ **Stretching** (YMCA-80% improvement/6wks)
- ◆ **Williams isometric flexion program** (stenosis, arthritis)
- ◆ **McKenzie extension program** (Discogenic)

Epidural Steroid Injections (ESI) 脊椎射入

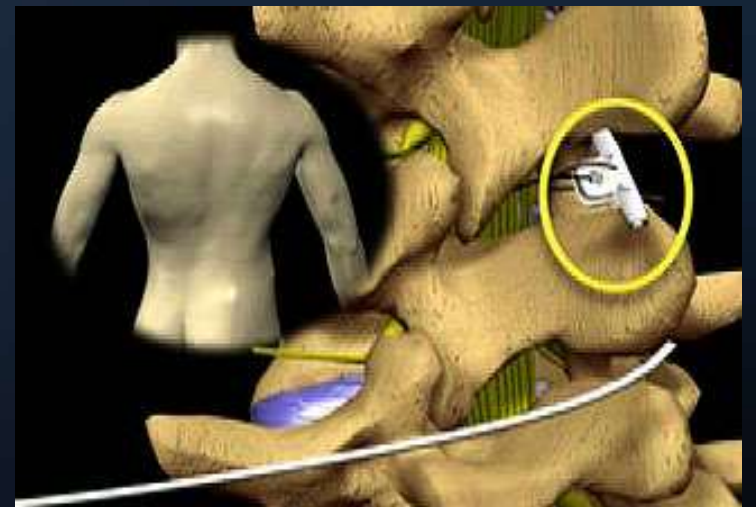
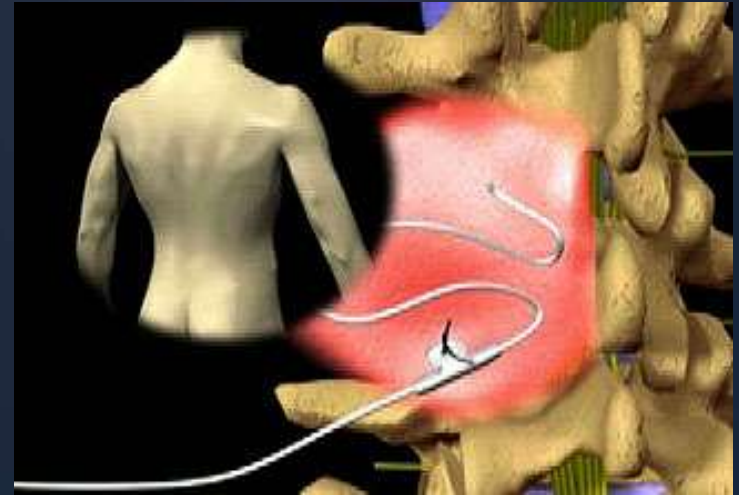
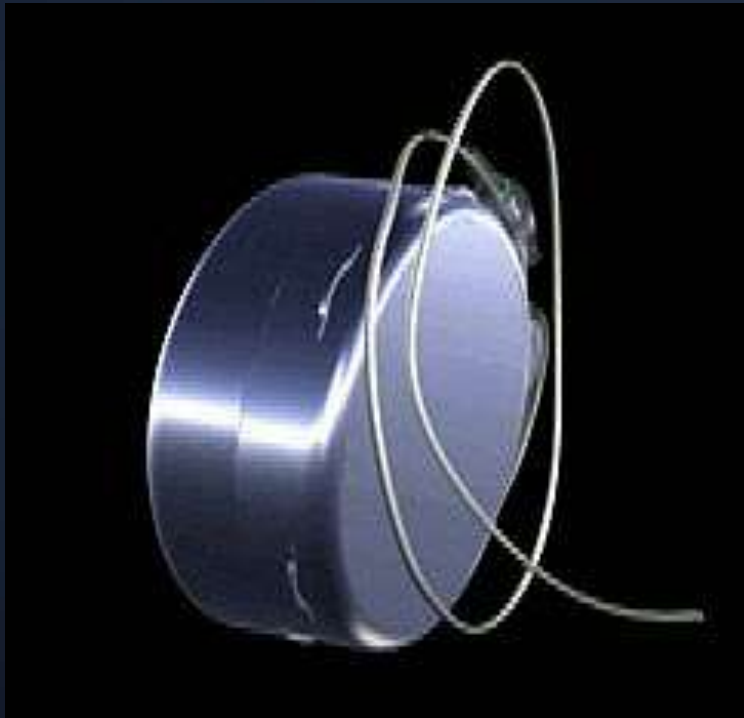
- ◆ May be helpful in acute flare-ups with significant radicular complaints and/or mild/moderate stenosis
- ◆ Useful in older pt population with many comorbidities (poor surgical candidates) after failing medical Rx and PT
- ◆ Complications - meningitis, nerve injury, epidural hematoma, arachnoiditis



Epidural Steroid Injections (ESI) 脊椎射入

- ◆ Prospective, randomized, double-blind study in pts with radicular Sx (~ 50% had Dx of lumbar stenosis)
- ◆ No significant difference in symptomatic improvement between steroid and placebo injections at 24-hr and 1-year f/u
 - Cuckler JM et al, JBJS Am 1985; 67:63-66

Stimulator & pain pump



Surgical Treatment



Is a Quality of Life Issue!

Thank You

