Back Pain in General Practice

Mr Ravindran
Airedale General Hospital

BACKACHE

20 million attended GP

3 million OPD

2 million X-rays

200,000 admitted to hospital

50,000 operated

COST

1 billion for NHS cost

3 billion DHS benefit

8 billion lost production

History taking

- Acute
- Acute on chronic
- Back or leg pain
- Back pain – sitting intolerance, movements
- Leg pain – above or below the knee
- Night pain
- Claudication symptoms
- Sensory symptoms and its distribution
- Bladder or Bowel symptoms

- Social history
- Occupational history
- Financial history – disability benefits, compensation claim

LOW BACK PAIN

- Neurogenic
- Viscerogenic
- Vasculogenic
- Spondylogenic
- Psychogenic

Spondylogenic

- Trauma
- Infection
- Tumours
- Metabolic

- To know as much about the patient who has the Backache as about the Backache the patient has

THE HISTORY

A doctor who cannot take a good history and a patient who cannot give one are in danger of giving and receiving bad treatment

- 30 year old postman
- Minor backache for 3 months
- Acute right leg pain with sensory symptoms along the back of his leg up to the sole of the foot and the little toe.
- Pain is constant – standing and walking makes pain worse
- SLR 50 degrees tension sign is positive, ankle jerk is absent
- Reduction of sensation lateral two toes

Disc Degeneration with root irritation : Disc Ruptures

- 55 year old self employed joiner
- History of chronic back pain of about 6 years duration with minor recurrent acute episodes controlled by analgesics and osteopath treatment
- Doing a lot of lifting the night before, unable to get out of bed, acute back pain with some pain around both gluteal areas
- Sitting is more painful any bending movement causes pain
- Examination shows a stiff lumbar spine, straight leg bracing 40 degrees both sides, no neurological signs in the lower limbs

DISC DEGENERATION WITHOUT ROOT IRRITATION

- 70 year old lady lives on her own and is a keen walker
- Complains of pain in the back of both legs and calf of six month duration
- Pain gets worse when walking a quarter of a mile
- Moderate back pain claims leg pain is worse than the back pain
- Leg pain is better when she bends forwards like when holding onto a supermarket trolley
- Examination shows reasonable range of lumber spine movements and SLR 70 degrees both sides
- Angle jerk is reduced on both sides, sensation normal, peripheral pulse is normal

SPINAL CANAL STENOSIS

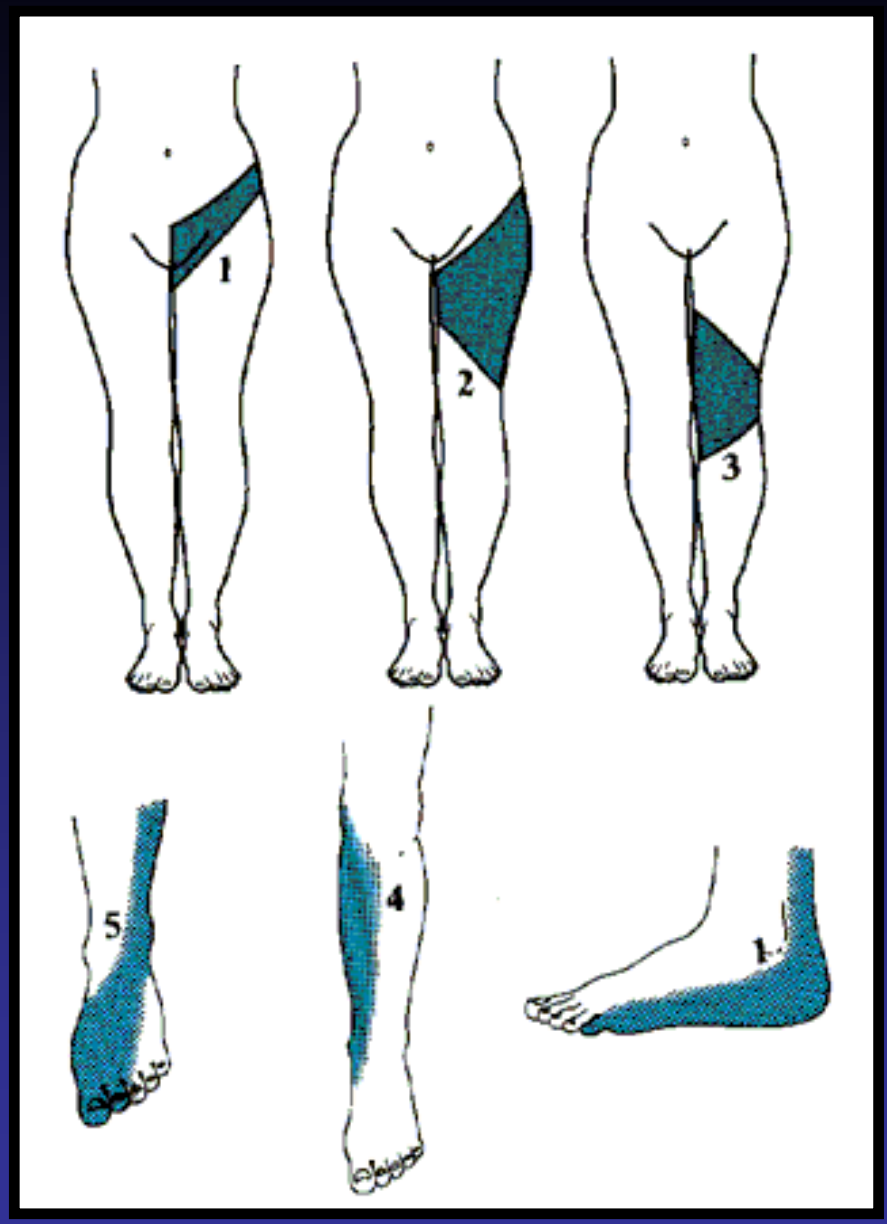
EXAMINATION

10 commandments of examination

1. Look
2. Feel
3. Move
4. SLR
5. Reflexes
6. Motor Power
7. Sensation

Examination 2

8. Hips
9. SI joins
10. Peripheral pulses


1
2
3
5
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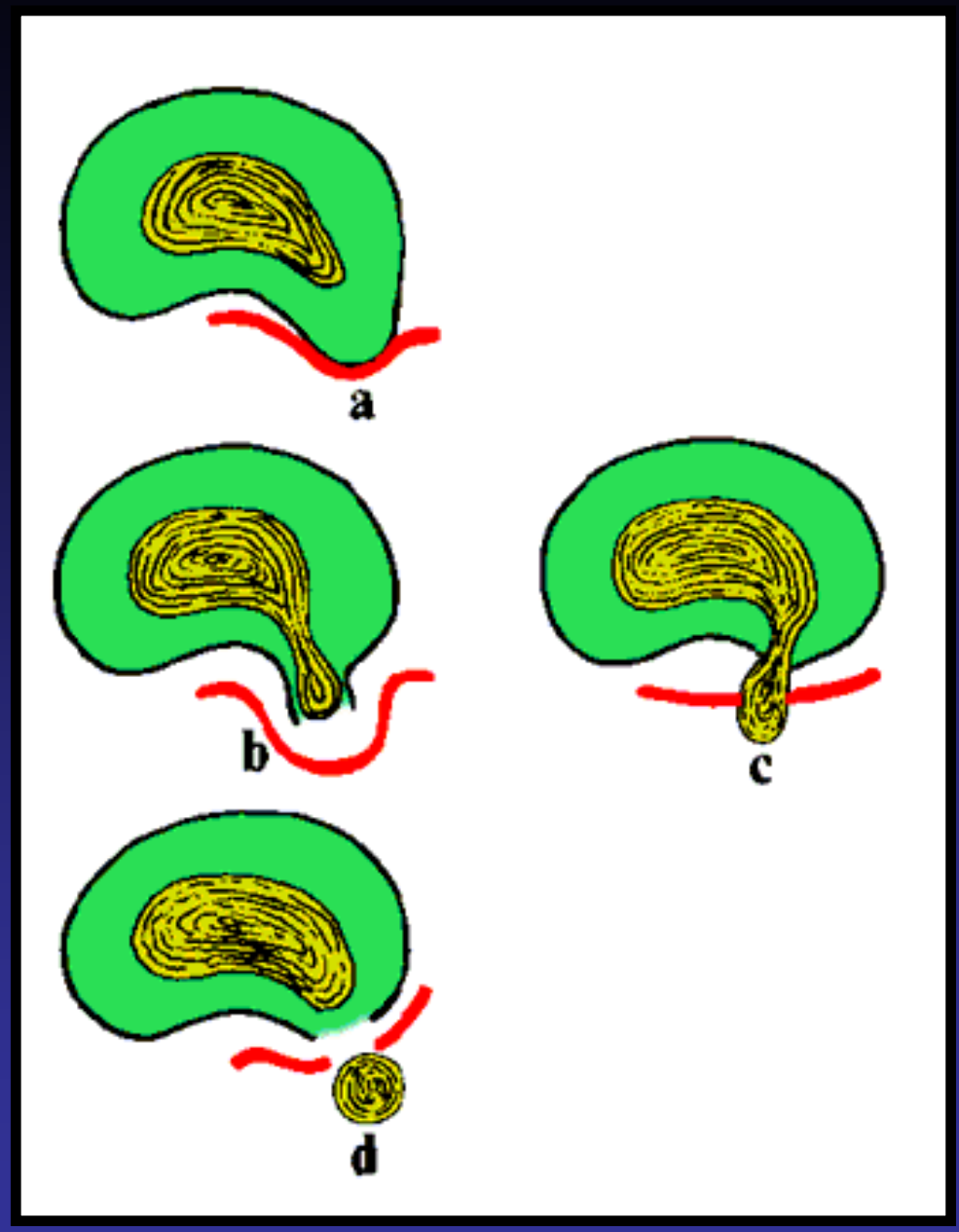
1

Investigation

- Bloods
- X-ray
- MR Scan – Diagnostic. Therapeutic!!
- CT Scan
- Bone Scan
- Nerve conduction studies and EMG


a
b
c
d

MANAGEMENT OF BACKPAIN

CONSERVATIVE TREATMENT

- Mobilisation within pain limits
- Analgesic and anti-inflammatory drugs
- Physiotherapy

Pathological Changes That Initiate Pain

1. Within the disc
   - Annular tears
   - Disc resorption
   - Osteophyte formation

Pathological Changes That Initiate Pain

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2. In facet joints
   - Synovitis
   - Capsular laxity
   - Degeneration of articular cartilage

Pathological Changes That Initiate Pain

1. Within the disc
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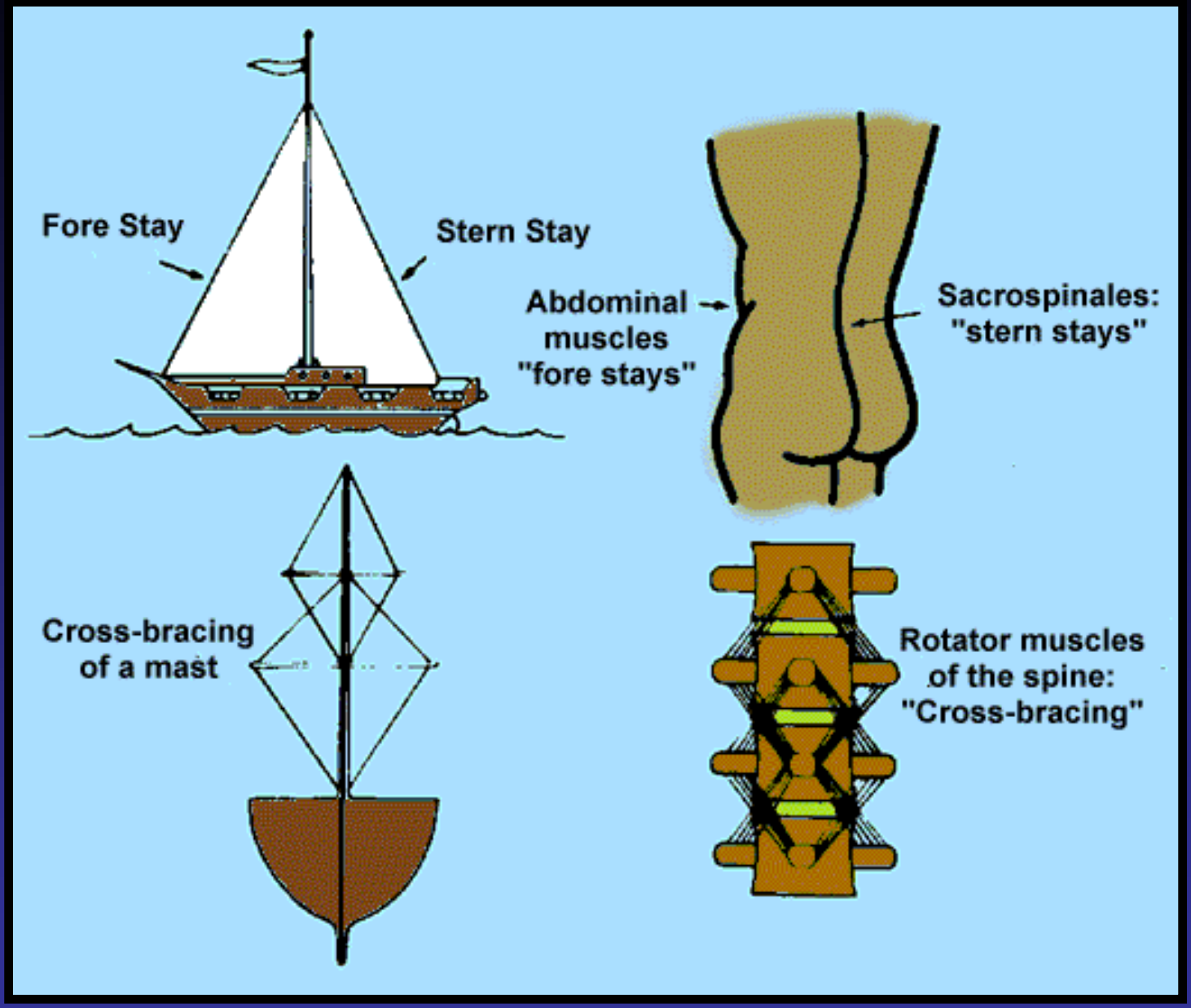
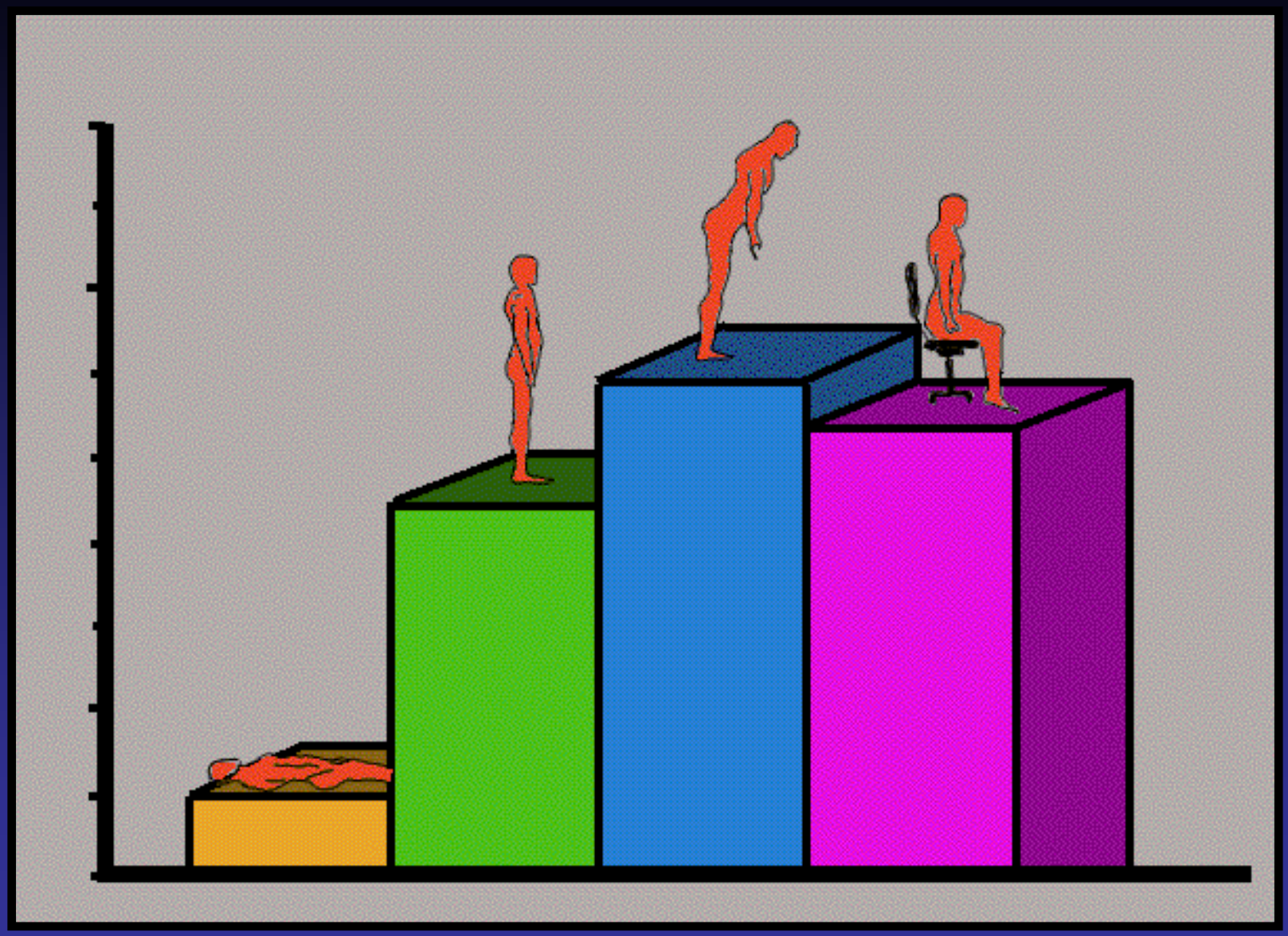
   - Osteophyte formation

2. In facet joints
   - Synovitis
   - Capsular laxity
   - Degeneration of articular cartilage

3. Muscles and ligaments
   - Stretch
   - Tear and hematoma


Fore Stay
Stern Stay
Abdominal muscles "fore stays"
Sacrospinales: "stern stays"
Cross-bracing of a mast
Rotator muscles of the spine: "Cross-bracing"



Intensive Rehabilitation Programme

- Physical
- Psychological (cognitive behaviour therapy)
- Social
- Occupational

Bio psychological approach

INJECTIONS

- Epidural
- Facet joint
- Nerve blocks
- Trigger point

Pain Clinic

1. How long will conservative care take relative to the demands of daily living?
2. What residual neurological deficit will be left?
3. What if conservative treatment does not relieve the pain?

SURGERY

Obsolute Indication

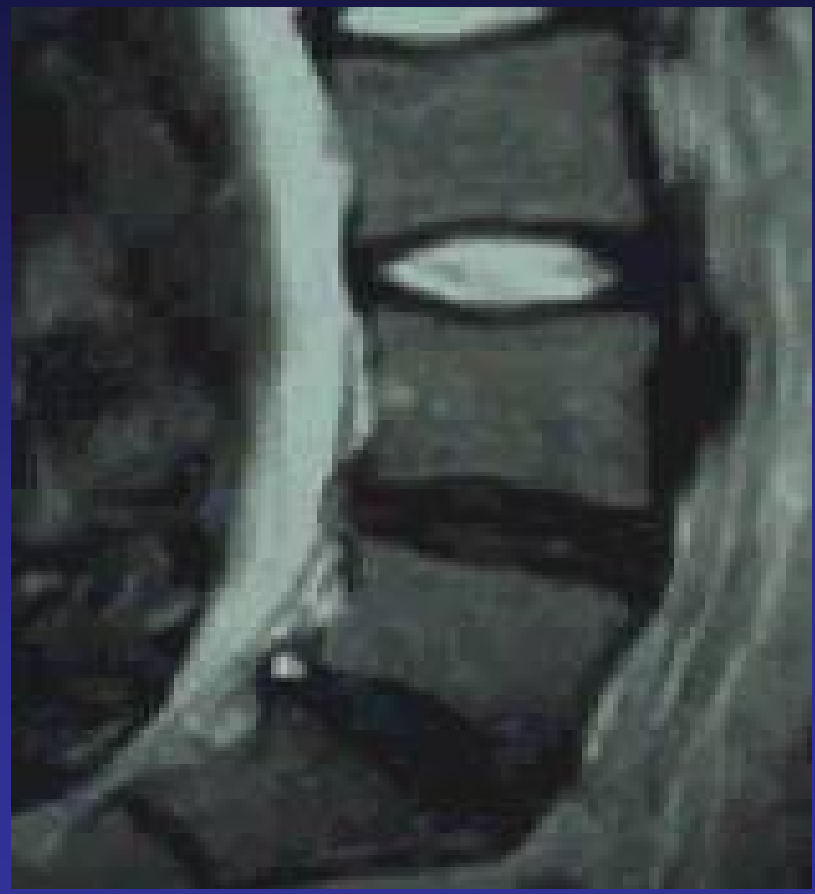
- Cauda Equina Syndrome
- Increasing neurological deficit

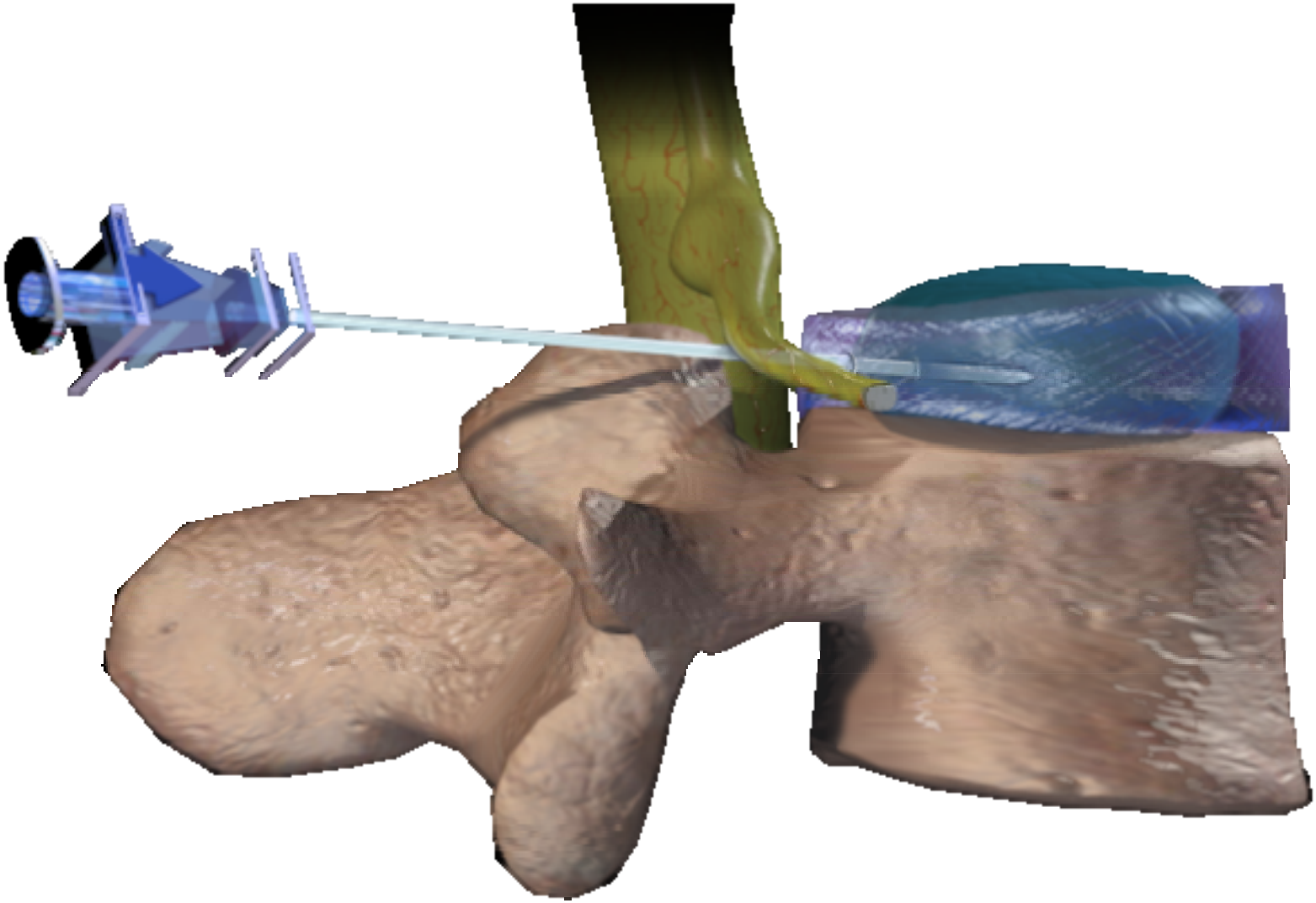
Relative Indication

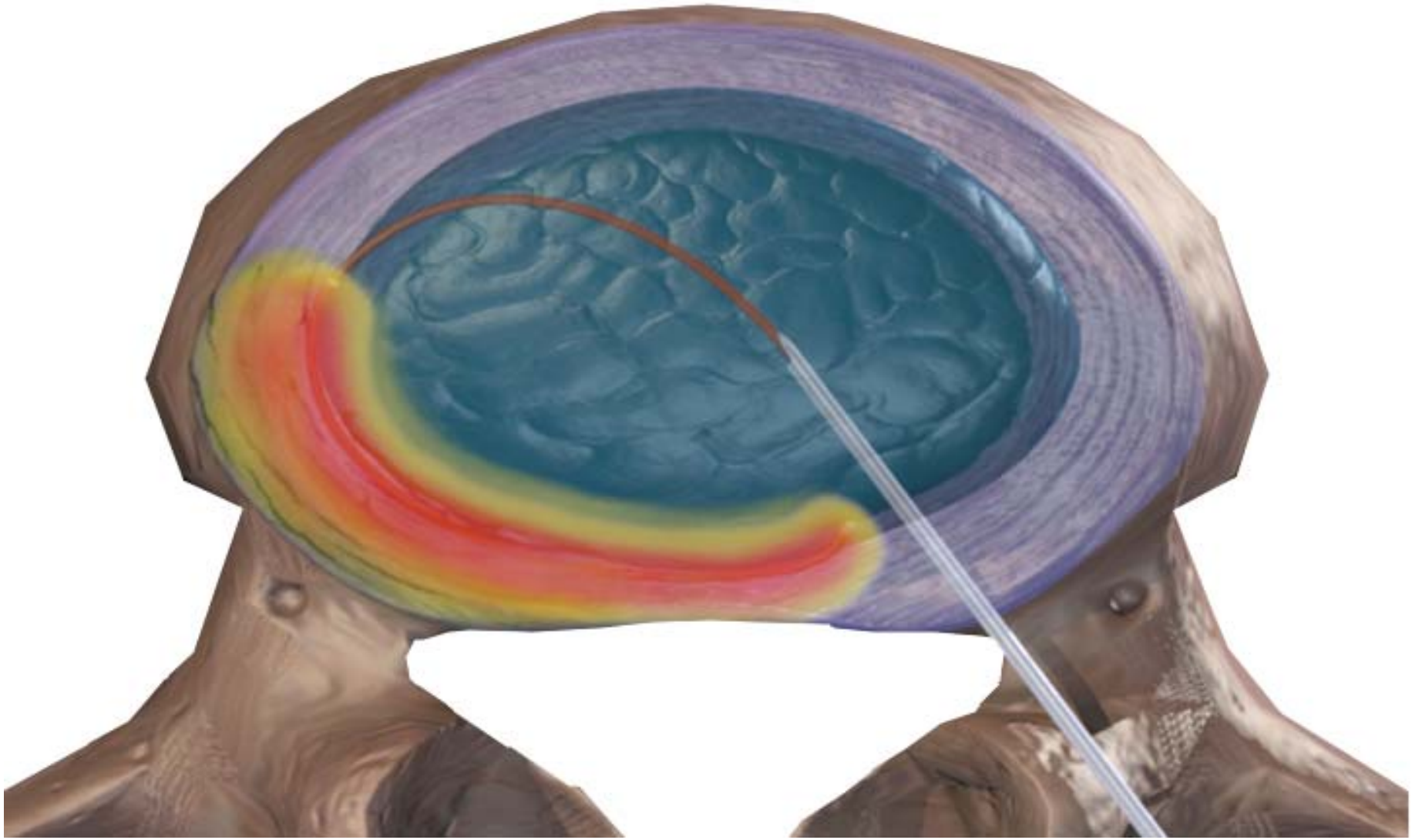
- Failure of conservative treatment
- Recurrent sciatica
- Disc prolapse in a stenotic canal

Degenerative Disc "Back Pain Disc" Treatment Options

- Non-operative Care
- Live in Pain
- Spinal Fusion
- IDET







Nucleoplasty

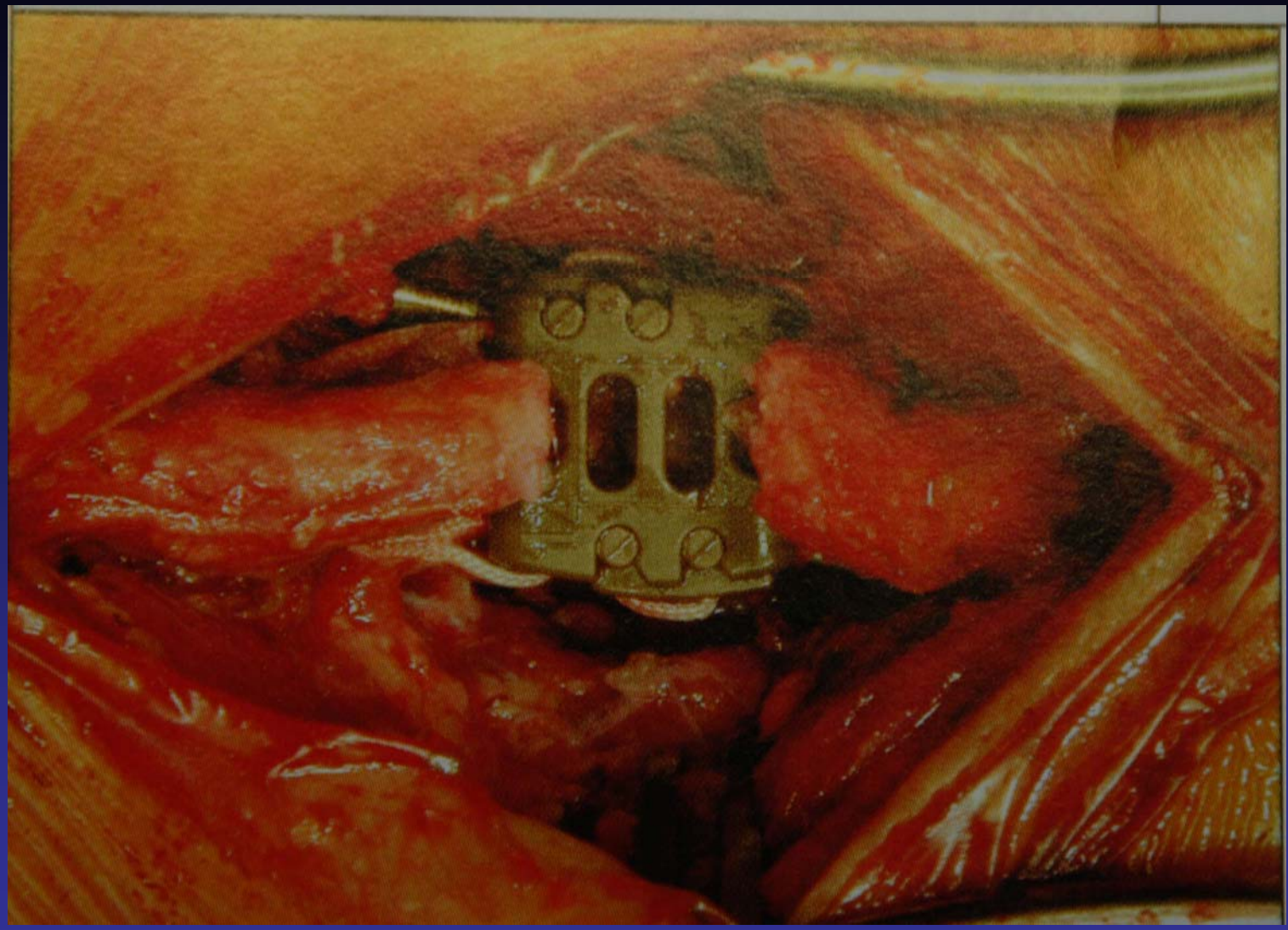
- FENESTRATION
- MICRODISCECTOMY

Surgical options

- Static procedures
  - Instrumented lateral mass fusion
  - PLIF
  - ALIF
  - TLIF
  - Combination procedures
- Dynamic procedures

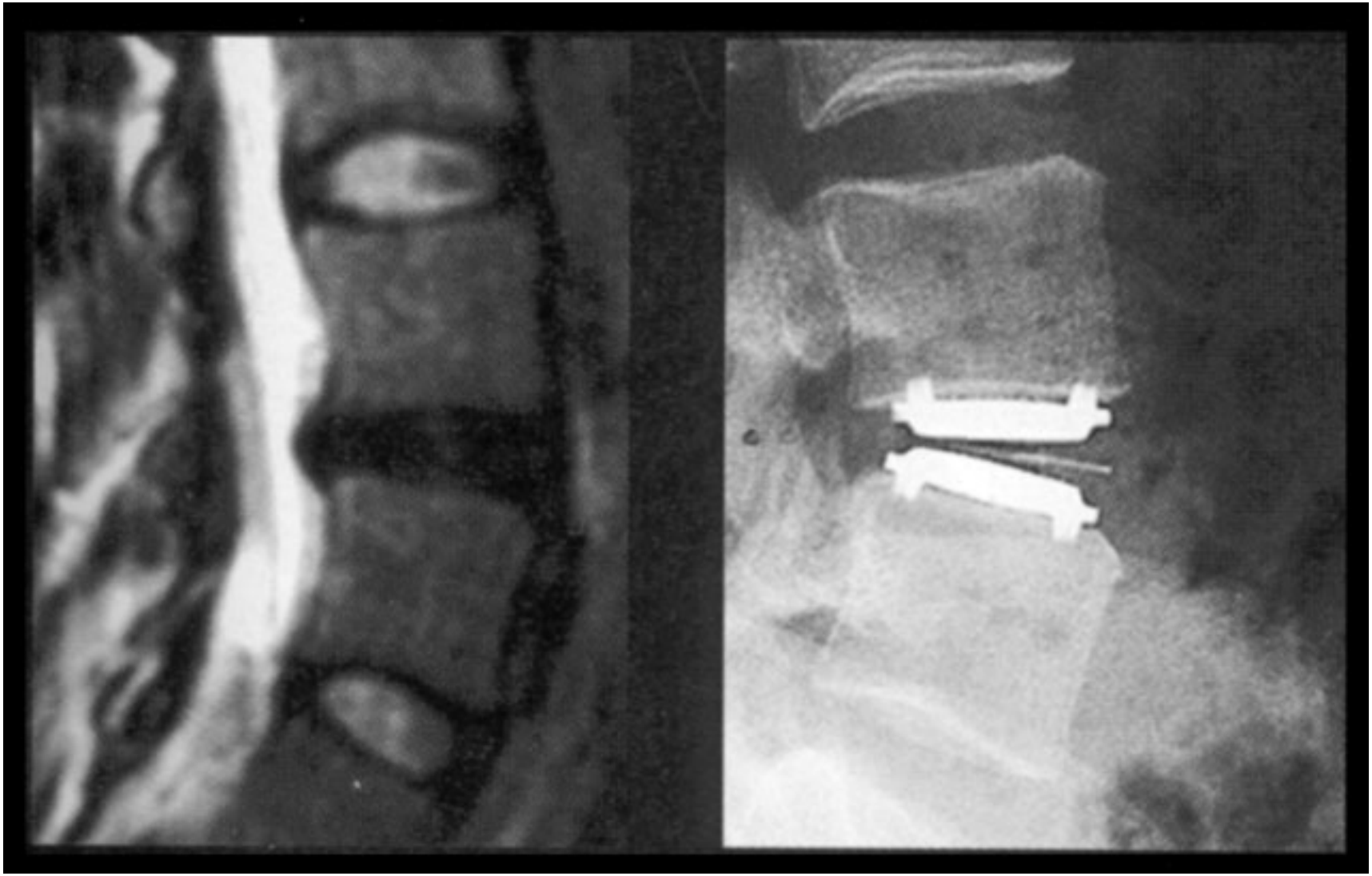
  Wallis dynamic ligament stabilisation

  disc replacement



Wallis dynamic ligament stabilisation

DISC REPLACEMENT



Cochrane Review Updated Jan 2002 – Gibson, Waddel, Grant

No scientific evidence about the effectiveness of any form of surgical decompression or fusion for degenerative disc disease compared with natural history, placebo or conservative treatment

“Dear Sirs:

I saw this very pleasant claimant, George Smith, today, and the poor fellow has not responded to conservative therapy at all. He is totally unable to work. His radiographs show marked disc degeneration, and I plan to bring him into the hospital for a local fusion.”

“Dear Sirs:

I operated on George today, and I am sure he will do well.”

“Dear Sirs:

I operated on George today, and I am a little disappointed with his progress to date.”

“Dear Sirs:

Smith’s radiographs show a solid fusion, but he shows surprisingly little motivation to return to work.”

“Dear Sirs:

This dreadful fellow Smith.”

“Dear Sirs.”

Smith obviously needs psychiatric help”

- Spinal fusion at best has only a small role in managing chronic back pain caused by degenerative disc disease

- Spinal fusion probably has a role in
  - Carefully selected limited groups of patients

- Single level
- Short time off work
- Narrow disc
- Low neuroticism
- Working women

Acceptance for surgery

- High
  - Insured patient
  - NHS patient
- Low
  - Self paying patient

- WRONG PATIENT
- WRONG DIAGNOSIS
- WRONG OPERATION

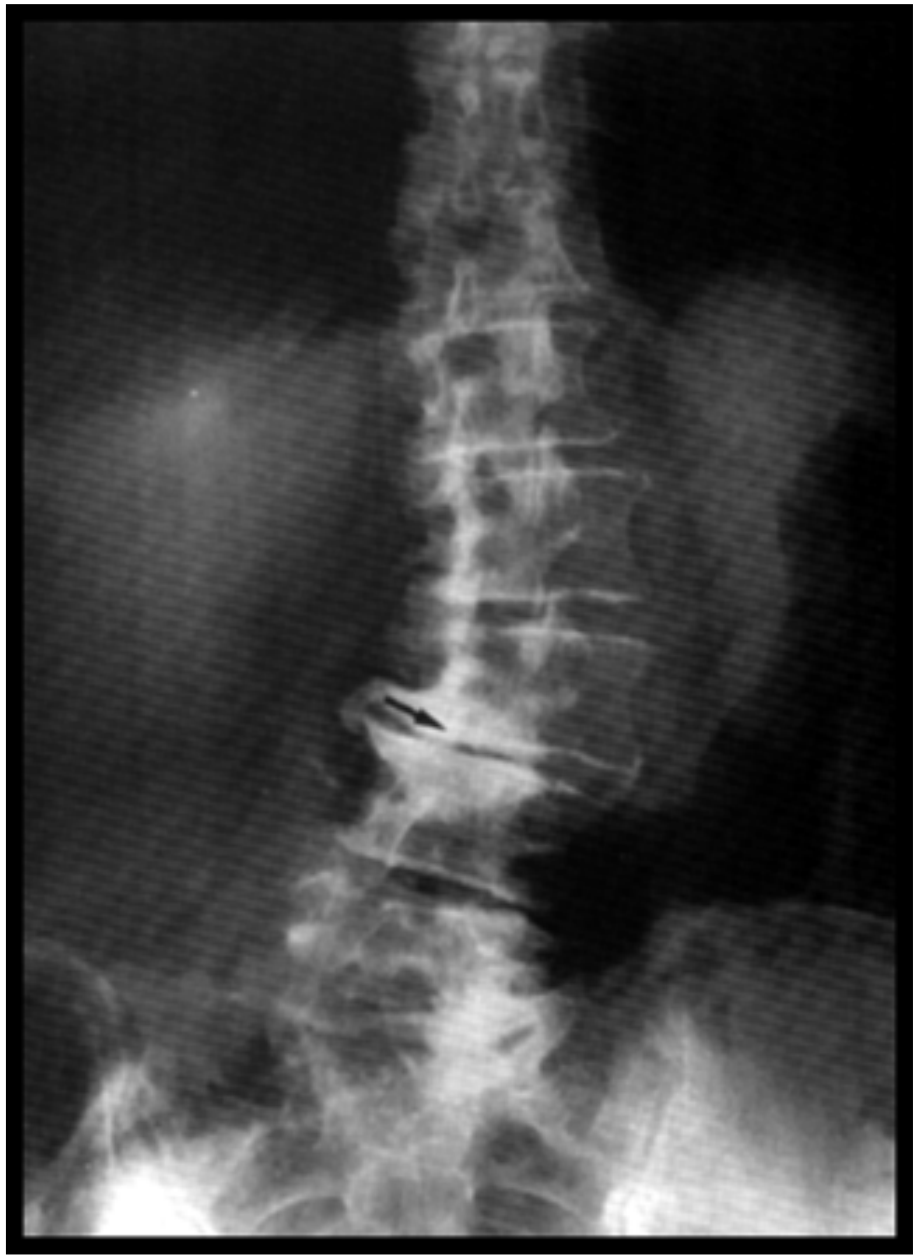
WRONG LEVEL

WRONG LEVEL

WRONG LEVEL

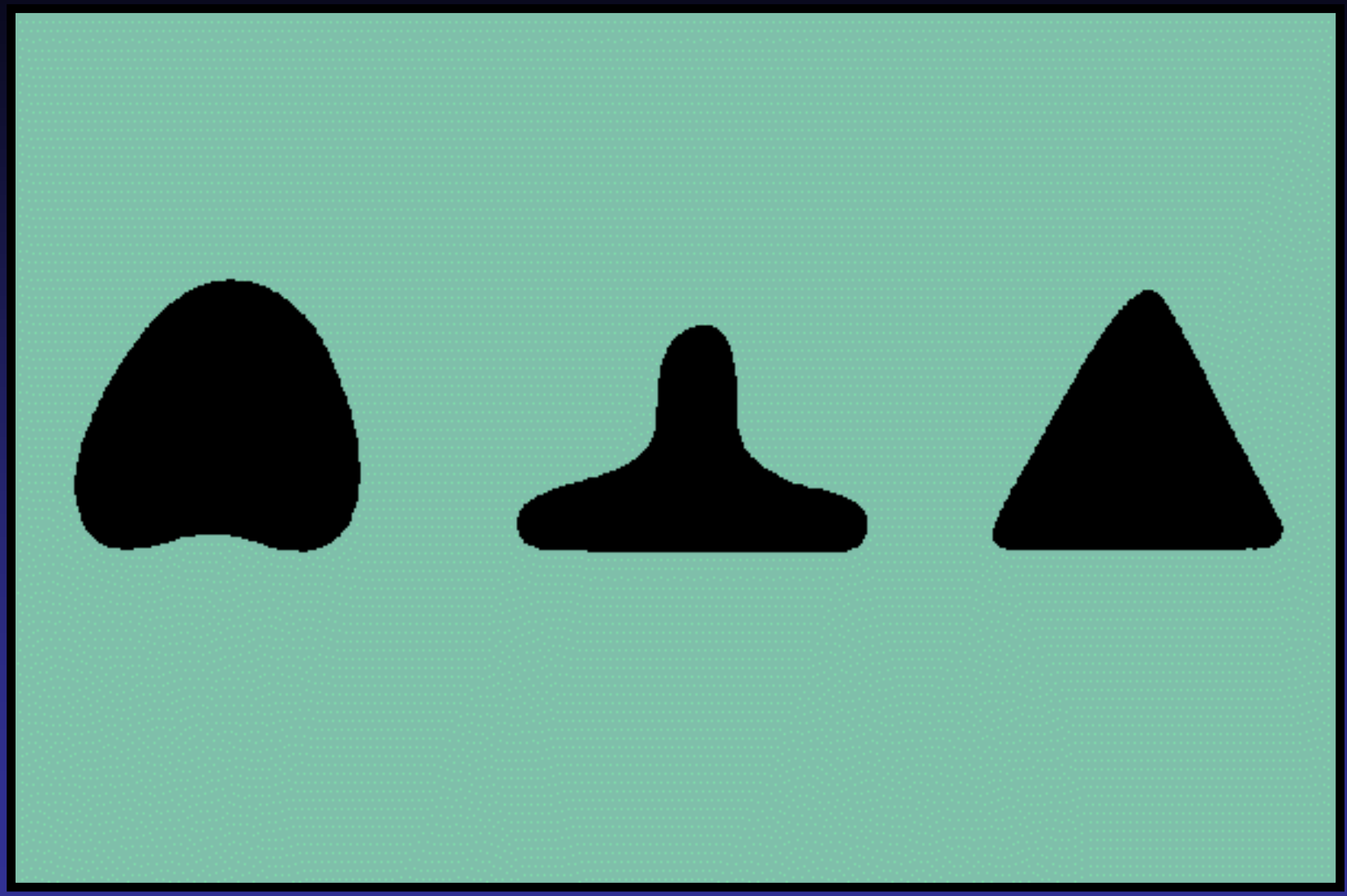
SPINAL CANAL STENOSIS

Elderly women with central stenosis in the absence of neurological signs



CALCITONIN

- 100 IU - calsynar 4 times a week for 4 weeks
- Central analgesia
- ^ blood flow to nerve roots
- Response 2-8 weeks
- 40% respond well

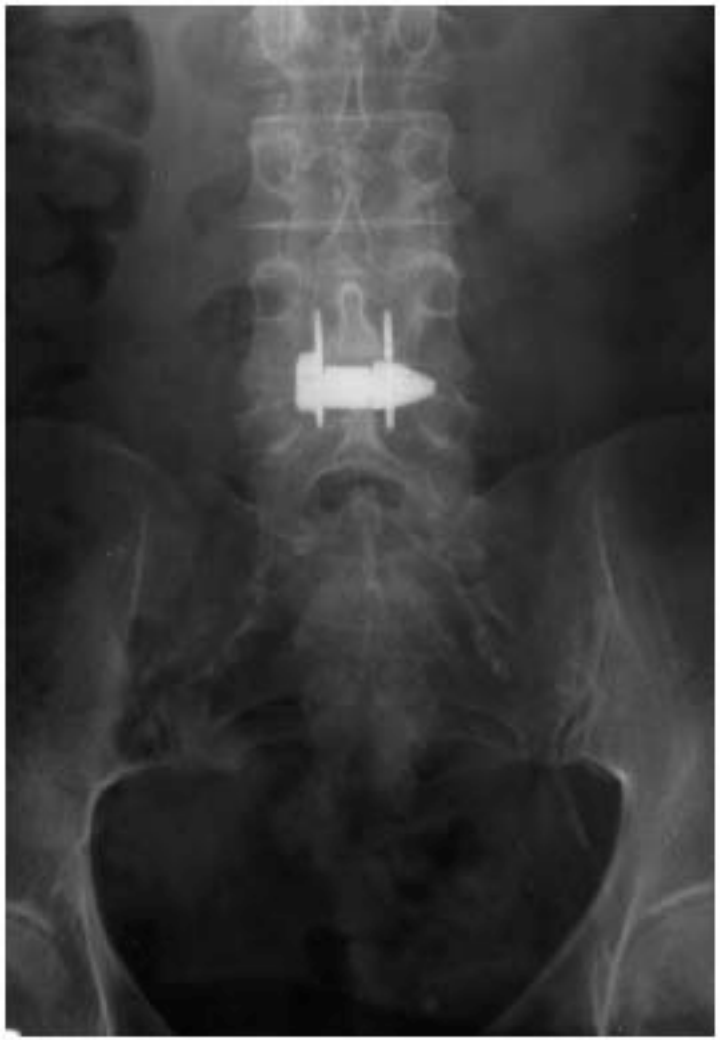


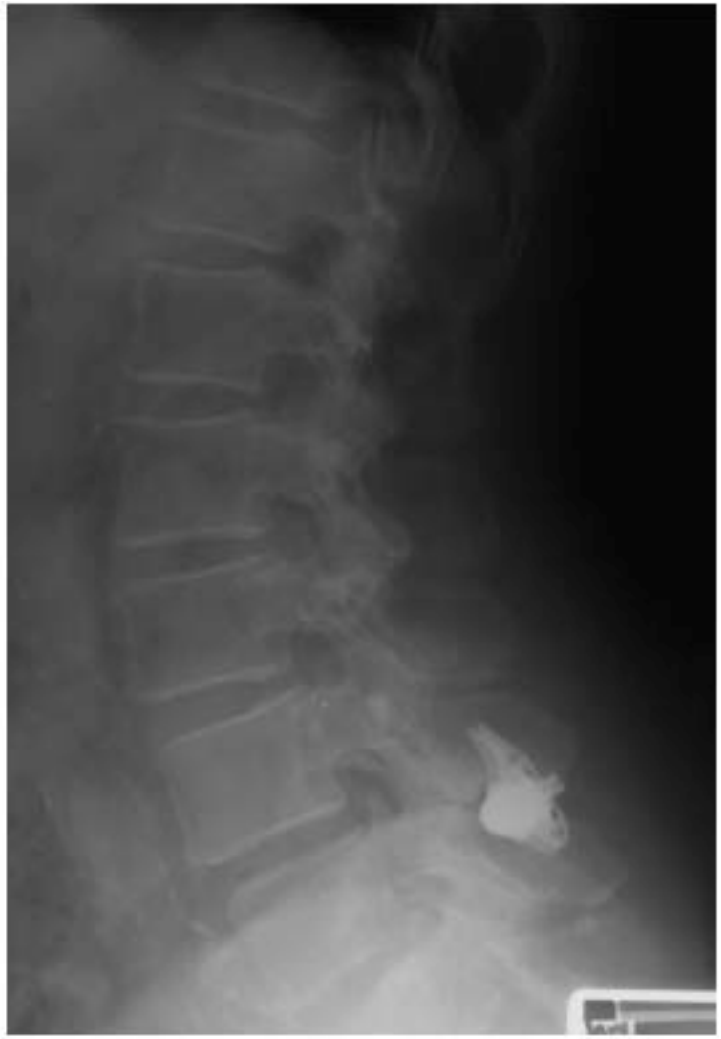
Spinal stenosis with significant claudication symptoms

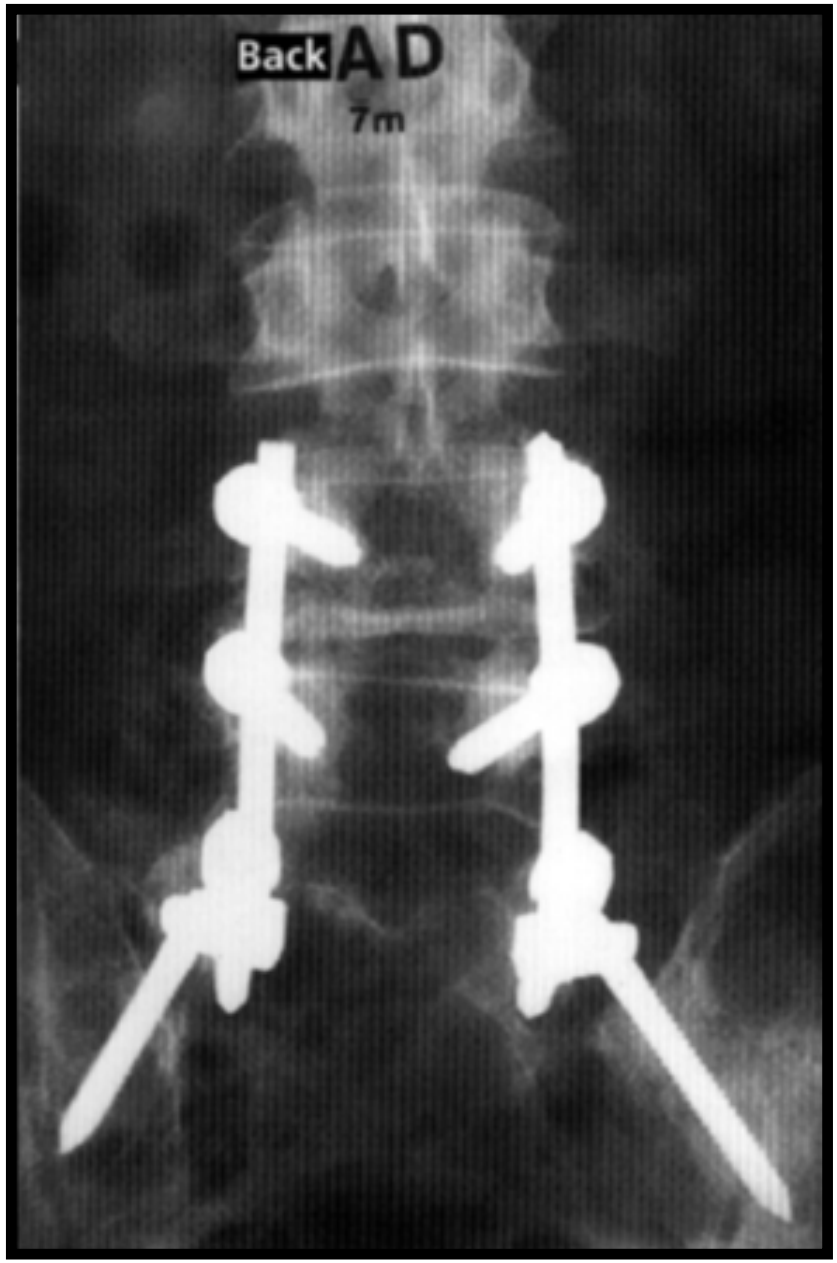
- Interspinous distraction procedures XSTOP
- Decompression with or without stabilisation

Interspinous Distraction Procedures

- XSTOP



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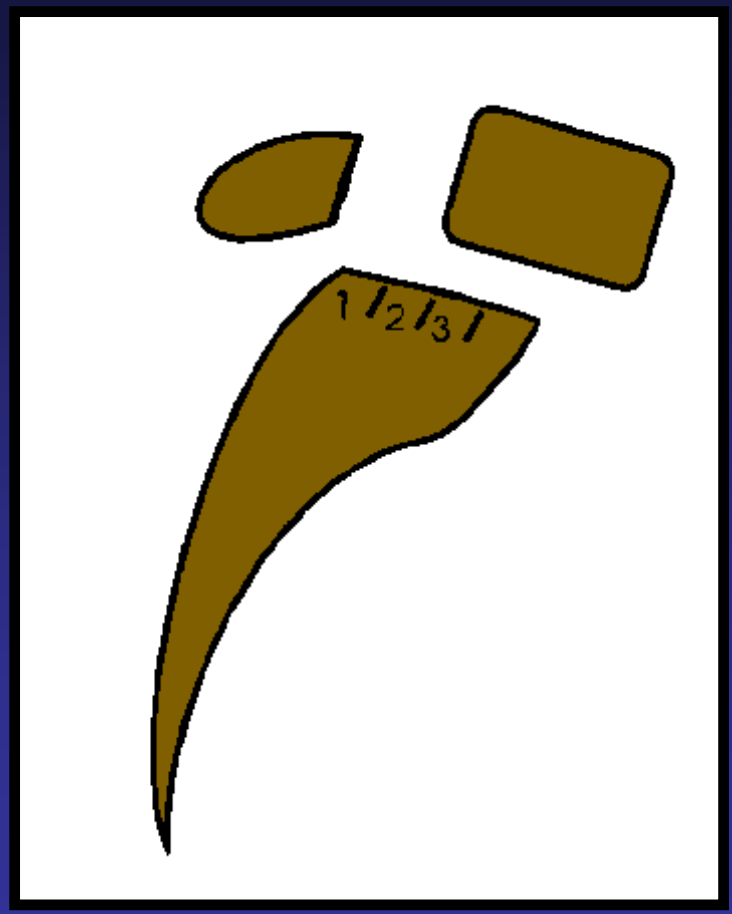
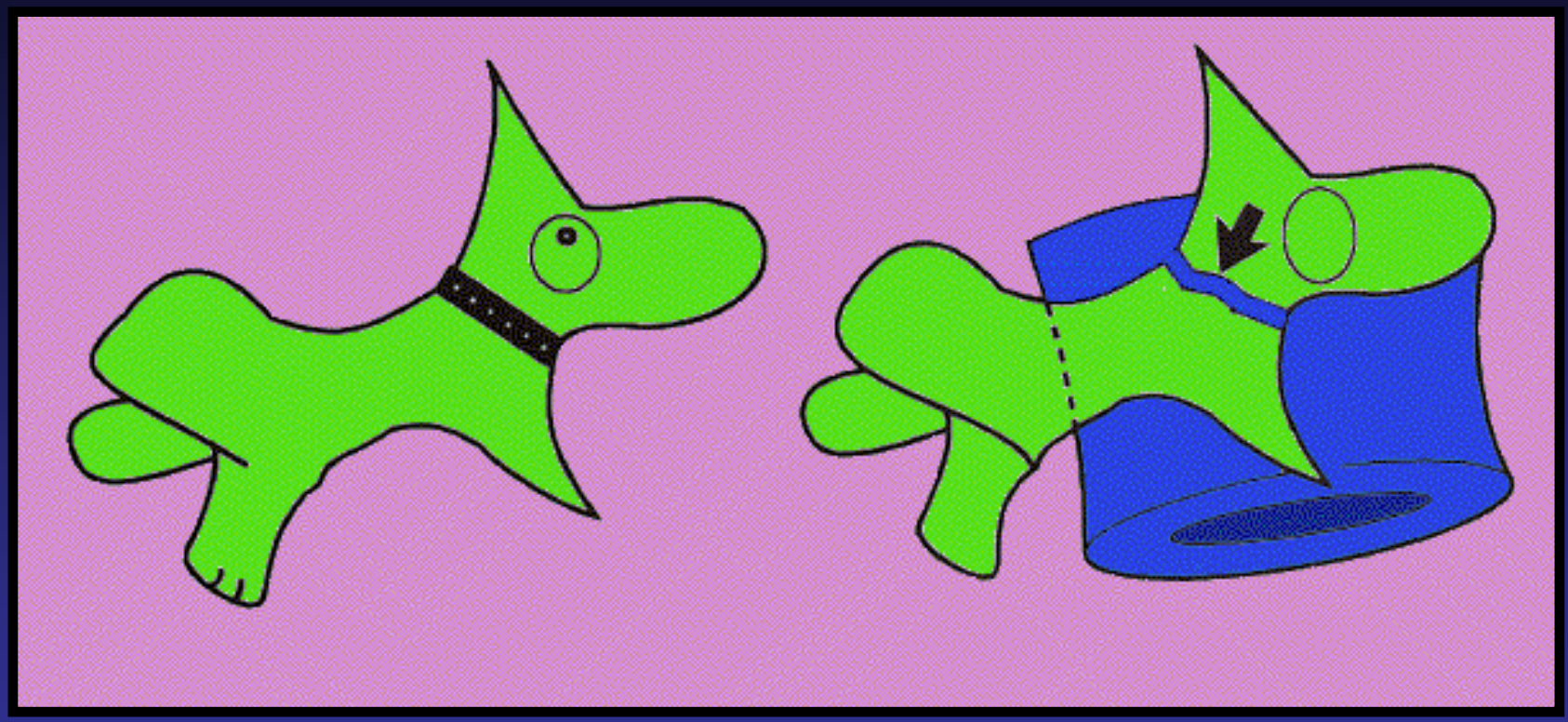
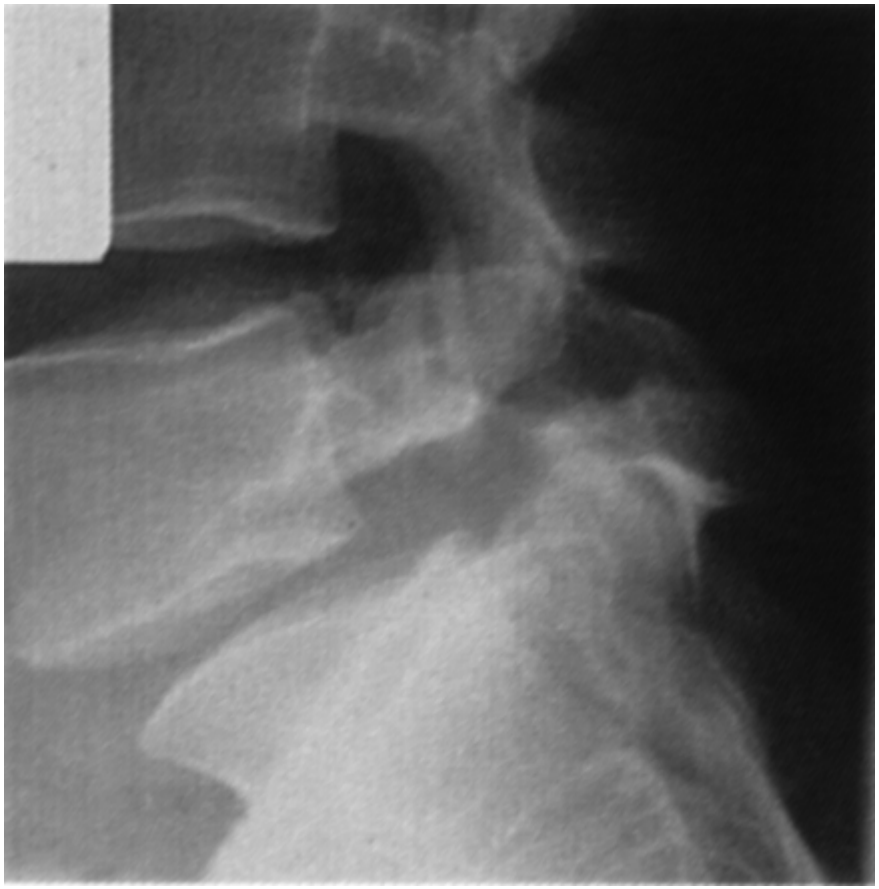
SPONDYLOLISTHESIS

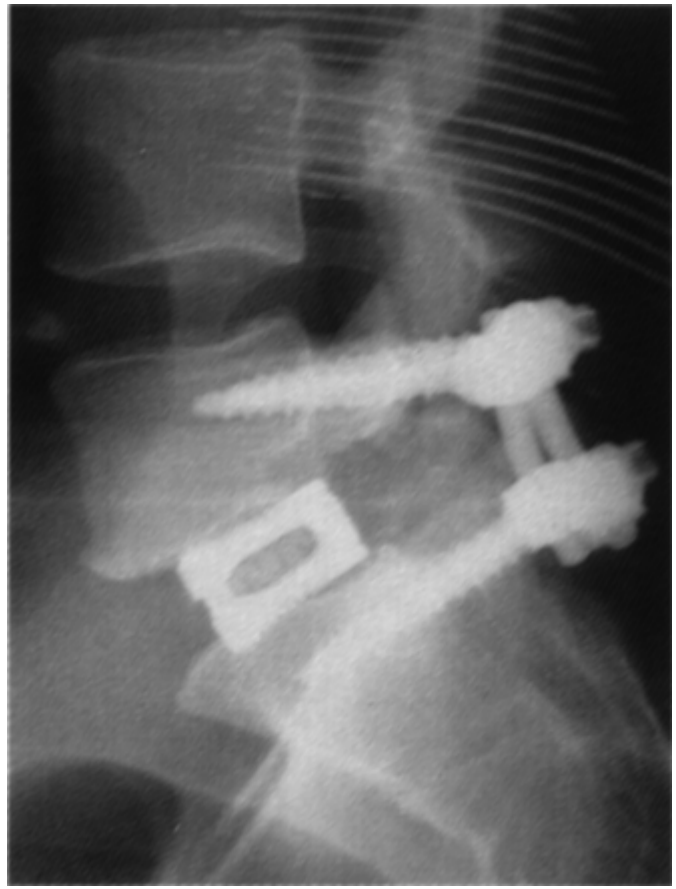




Commonly Accepted Clinical Classification of Spondylolisthesis

Type	Classification	Description
I	Dysplastic	Congenital abnormalities of upper sacrum or arch at L5
II	Isthmic	Lesion in pars interarticulars
		Lytic-fatigue fracture
		Elongated but intact pars
		Acute fracture
III	Degenerative	Facet joint degeneration
IV	Traumatic	Fractures in areas of arch other than pars
V	Pathological	Secondary to generalized or localized bone disease





Vertebroplasty

INTRODUCTION

- Percutaneous vertebroplasty is a therapeutic procedure that involves injection of bone cement into a cervical, thoracic, or lumbar vertebral body lesion for the relief of pain and the strengthening of bone

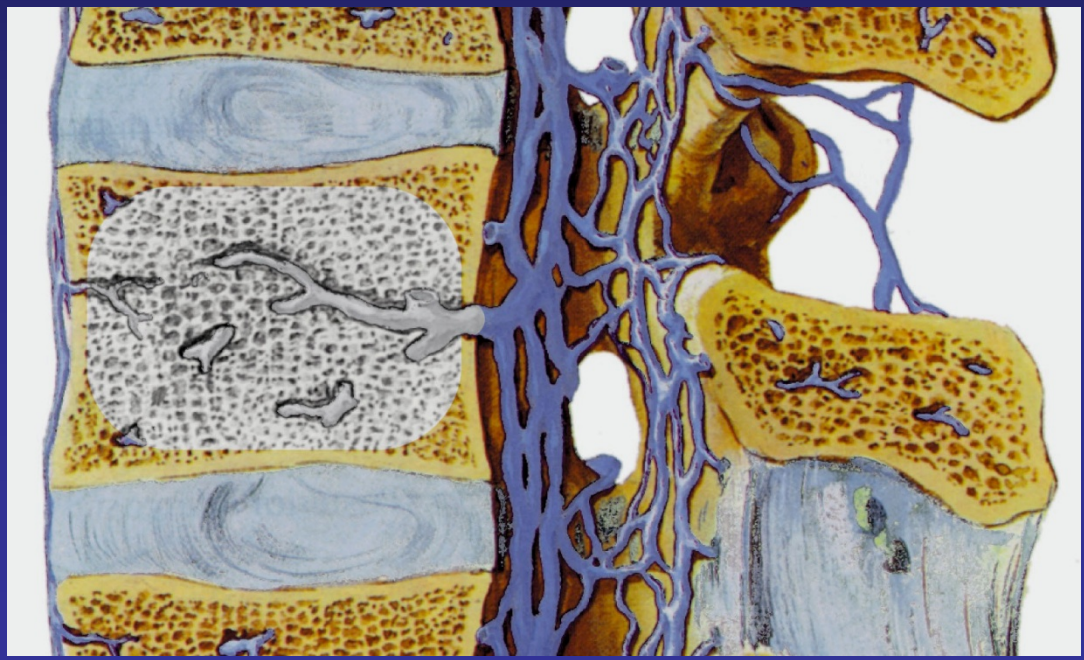
INDICATIONS

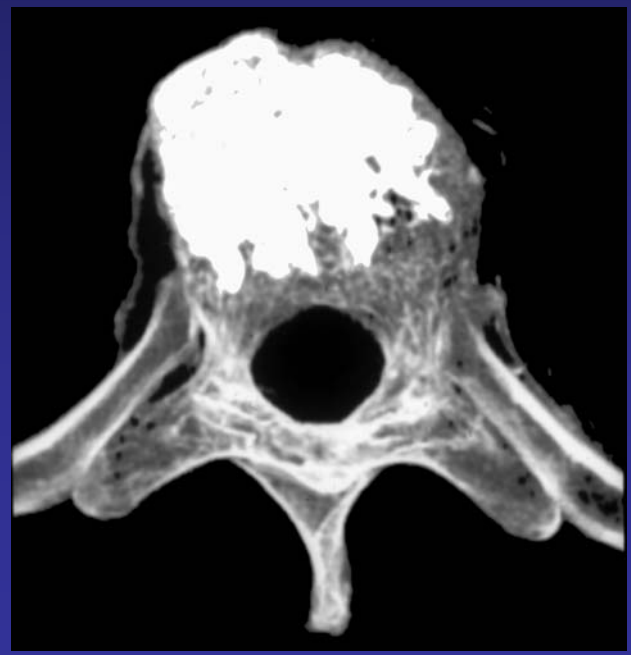
SYMPTOMATIC VERTEBRAL HEMANGIOMAS

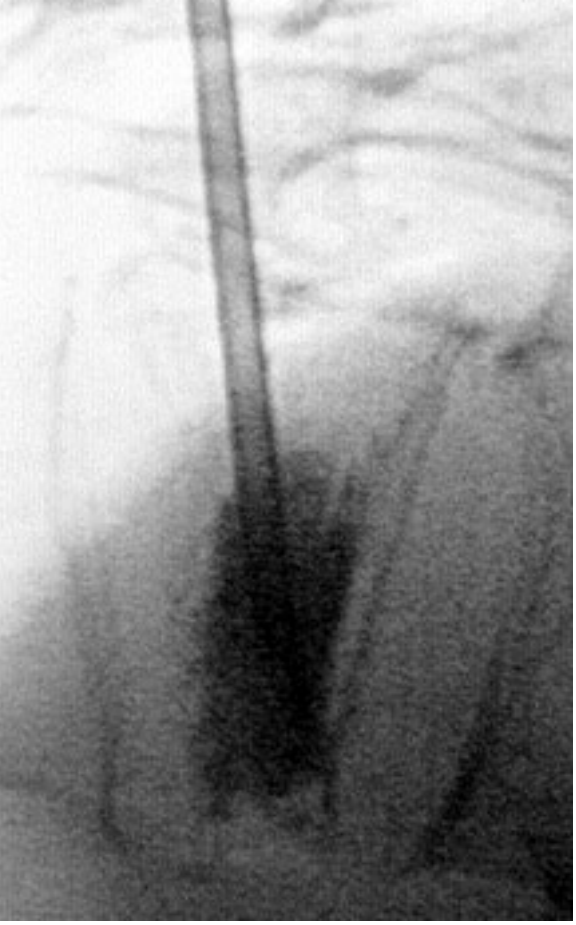
PAINFUL VERTEBRAL BODY TUMORS (METASTASIS, MYELOMA)

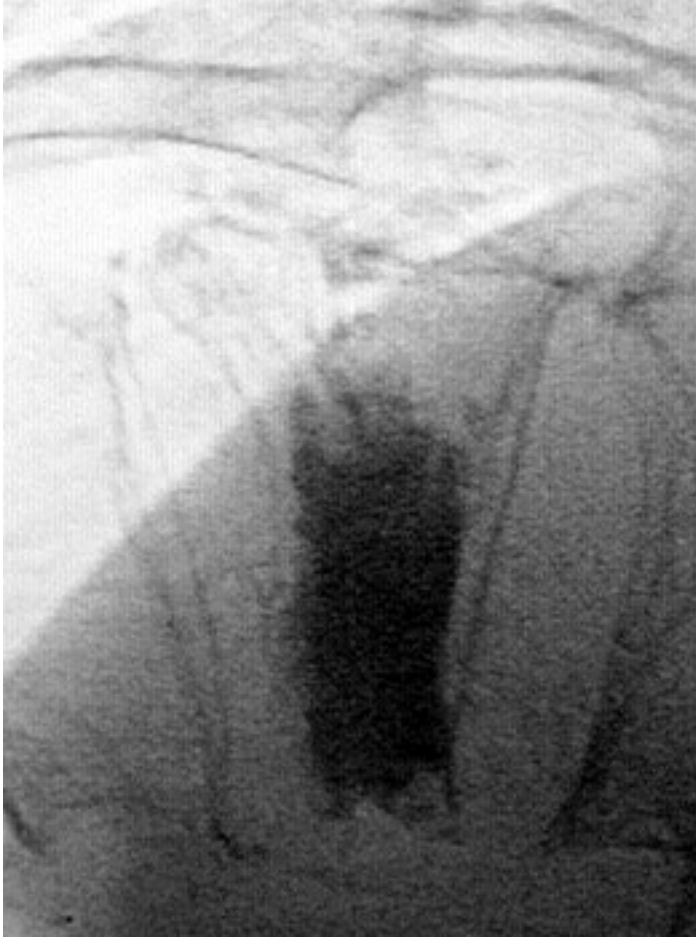
SEVERE PAINFUL OSTEOPOROSIS

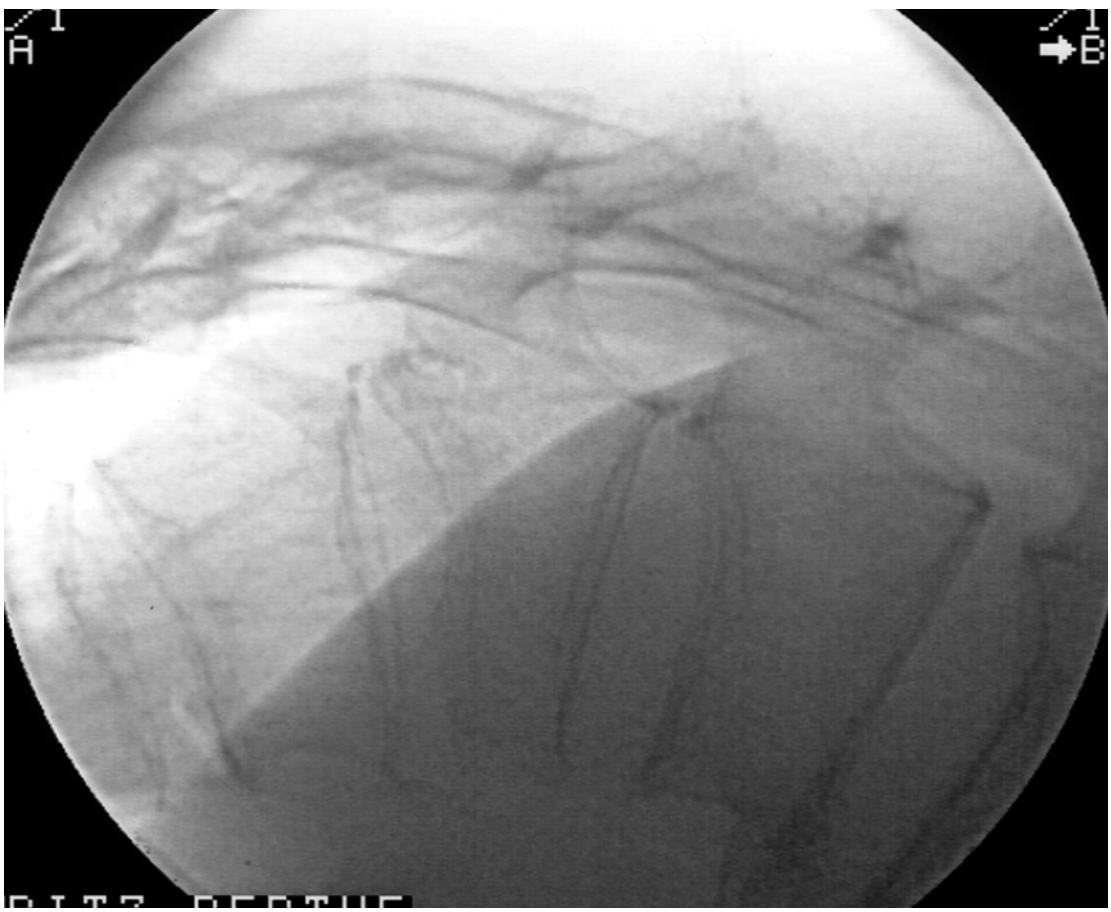
- The role of percutaneous cementoplasty is :
  - to treat pain
  - to consolidate the spine





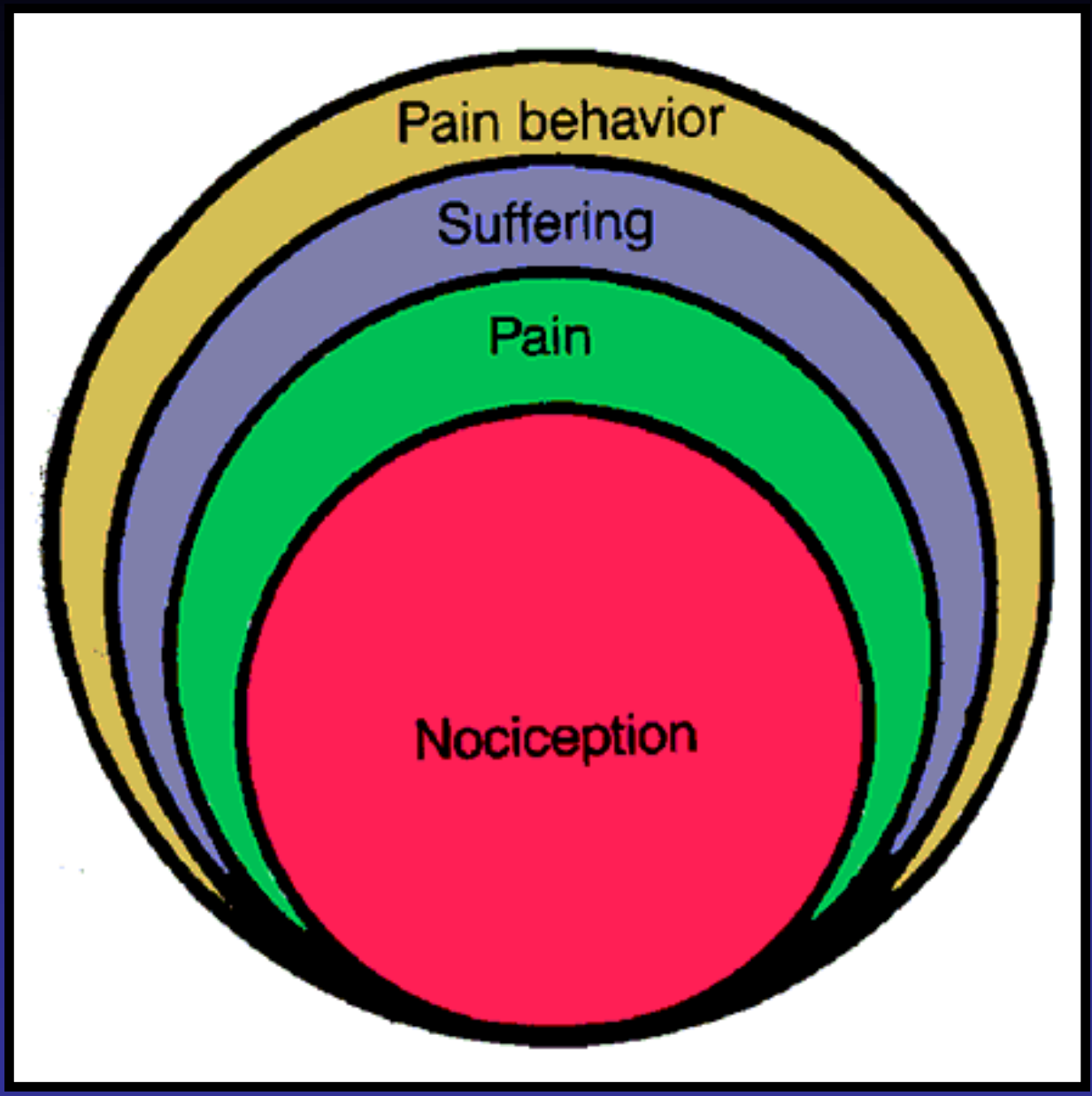


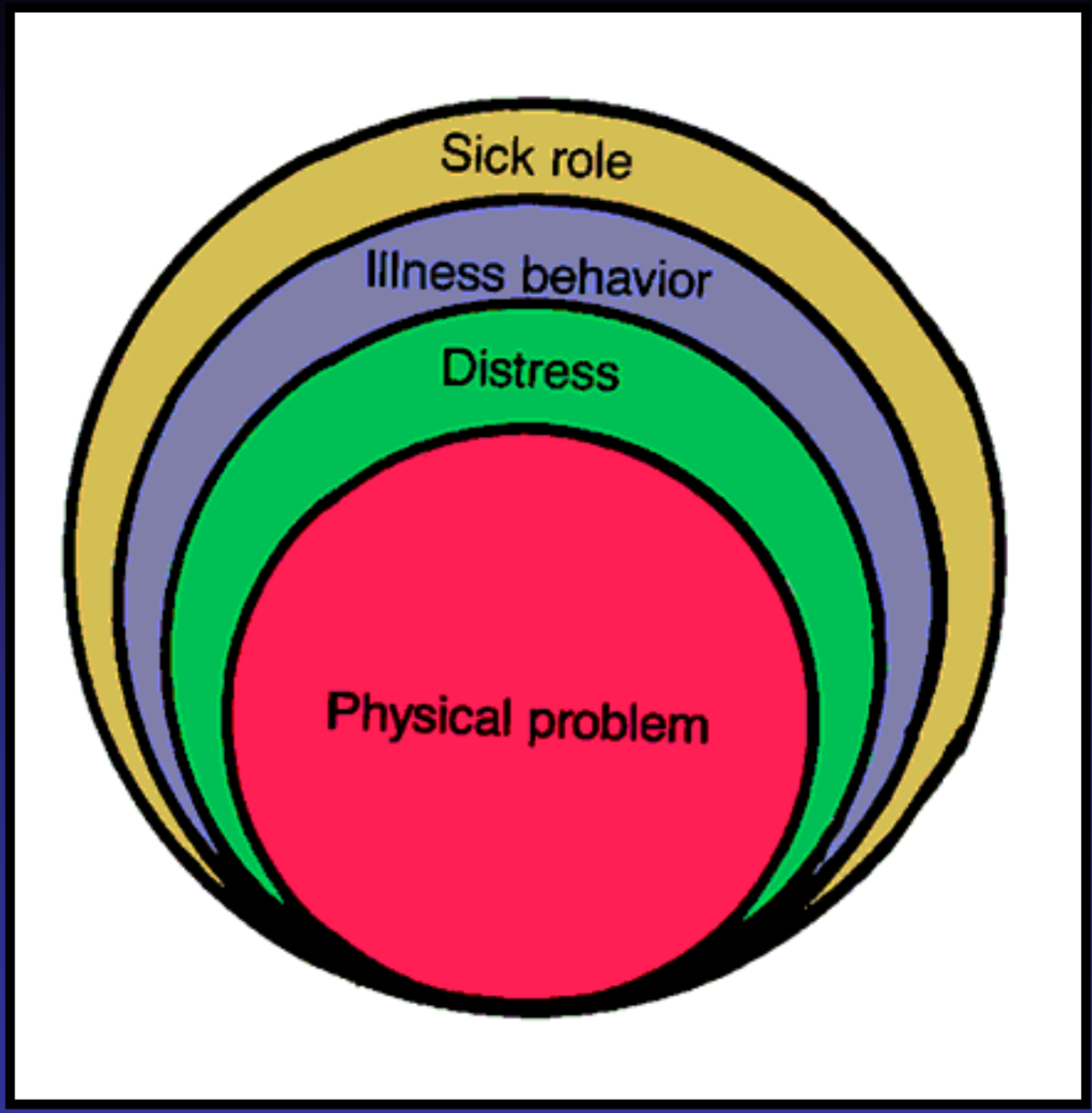


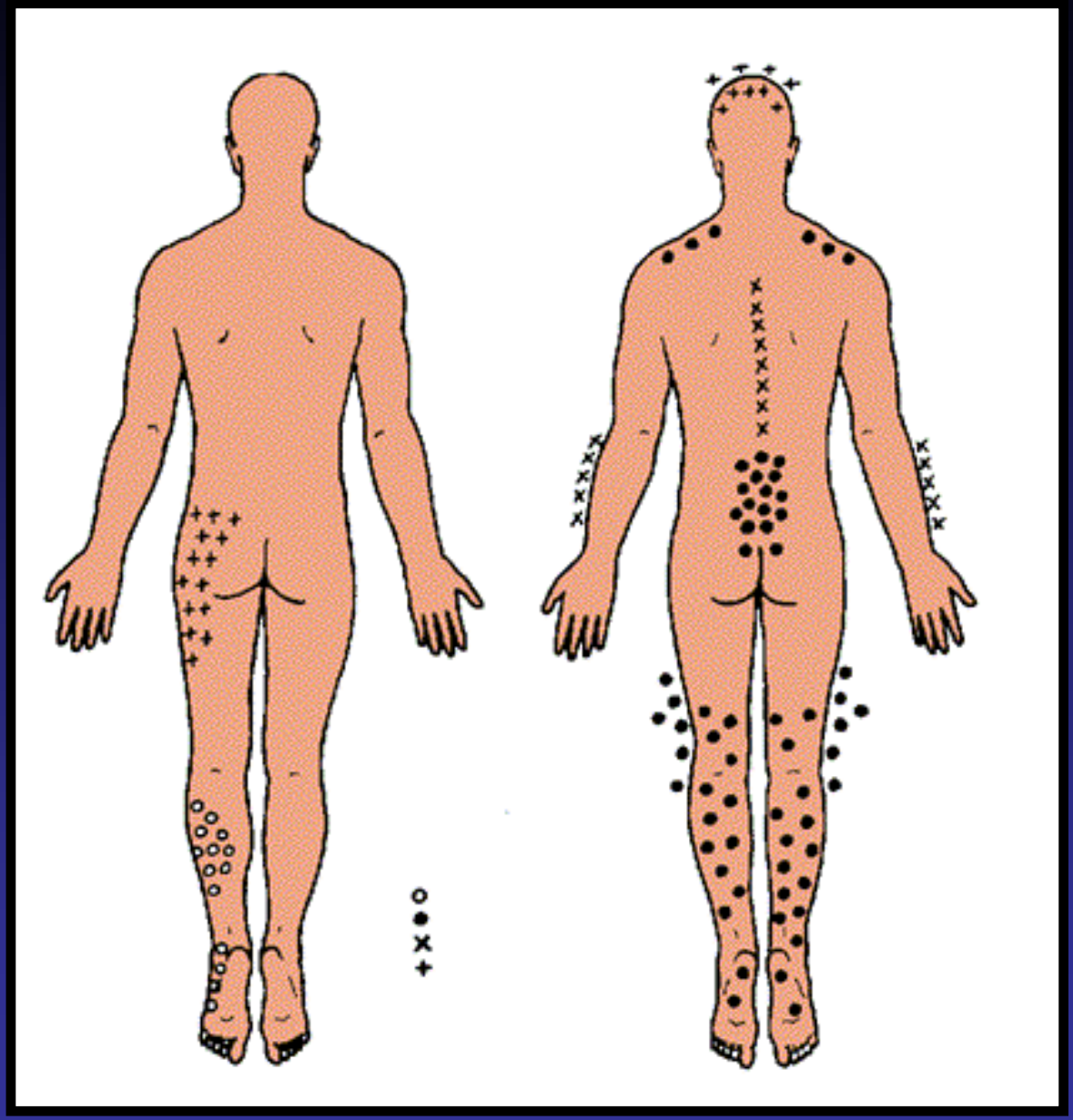

A
B

Nonorganic Spinal Pain

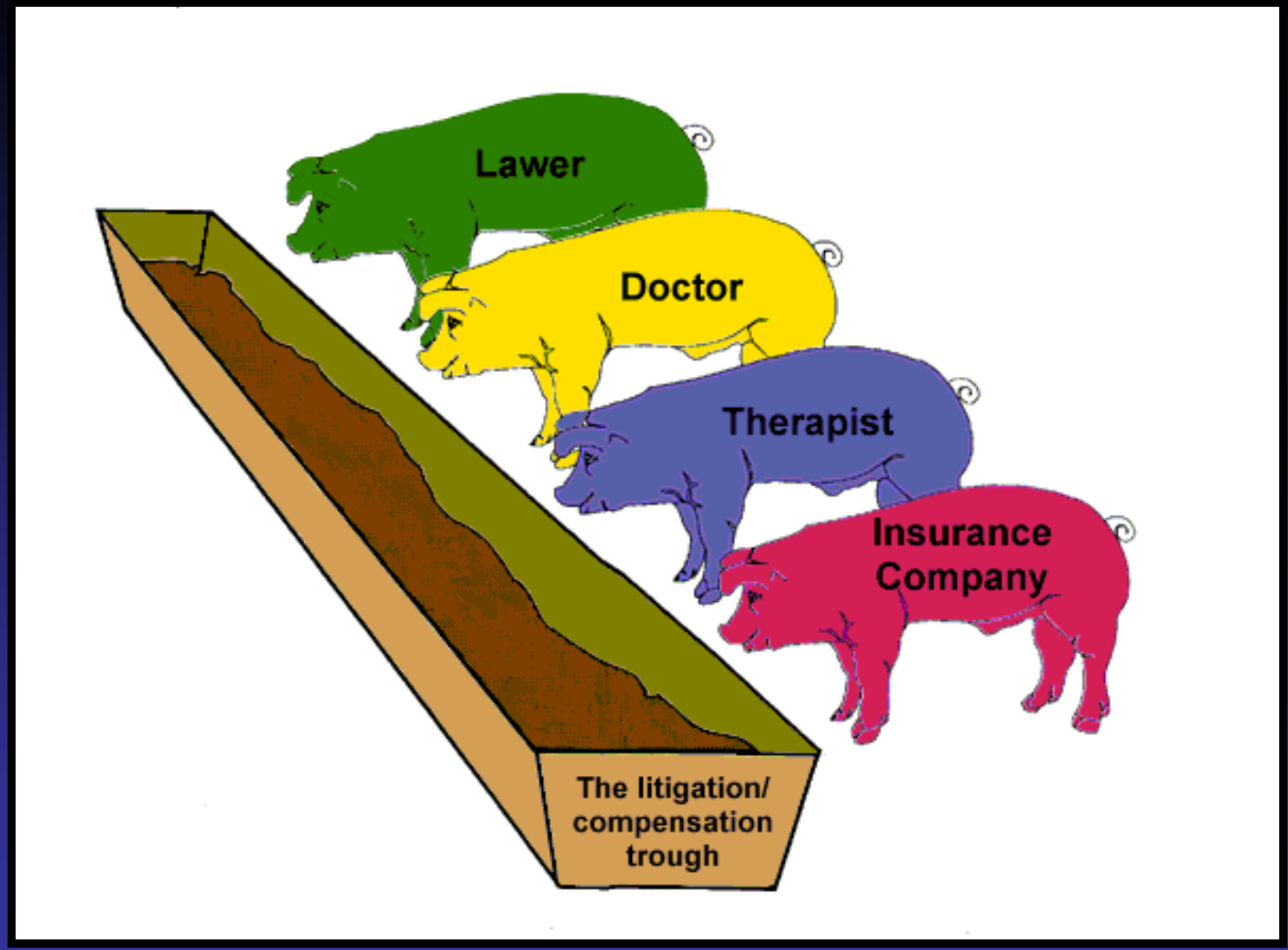
1. Psychosomatic spinal pain
   - Tension syndrome (fibrositis)
2. Psychogenic spinal pain
   - Psychogenic modification of organic spinal pain
3. Situational spinal pain
   - Litigation reaction
   - Exaggeration reaction


Pain behavior
Suffering
Pain
Nociception


Sick role
Illness behavior
Distress
Physical problem



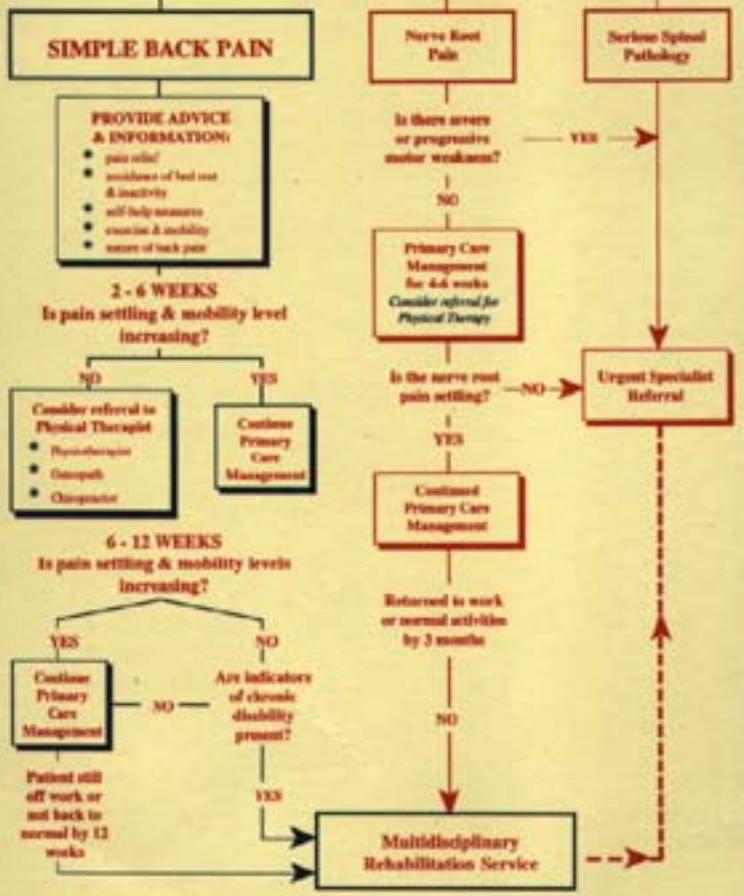
- Stoic
- Race horse syndrome
- Razor’s edge syndrome
- Worried-sick syndrome
- Last straw factor
- Camouflaged emotional breakdown
- “What if I settle” syndrome
- “Head to toe” syndrome


Lawer
Doctor
Therapist
Insurance Company
The litigation/ compensation trough

When to refer to secondary care

Overview of Guidelines

DIAGNOSTIC TRIAGE



East Lancashire Health Authority

Simple Back Pain Overview

First six weeks are crucial in preventing chronicity

PROMOTE	CONSIDER	AVOID
✓ **Positive attitudes**	? Physical Therapy	✗ Rest
✓ **Realistic expectations**	? Exercise on prescription	✗ X-rays
✓ **Exercise and mobility**		✗ Opiates
✓ **Early return to work**		✗ Hospitals

People still off work and/or normal activity between 6 - 12 weeks are in the 'pre chronic stage'.

- Review diagnostic triage
- Consider referral for:
  - Physical Therapy
  - Second GP Opinion

The probability of becoming disabled due to back pain is increasing

People still off work and / or normal activity by this stage (6 - 12 weeks) should ideally be referred to a multidisciplinary rehabilitation service.

ELHA is currently reviewing the configuration of secondary services for back pain, with a view to commissioning such a multi-disciplinary service.

SERIOUS SPINAL PATHOLOGY

Red Flags

- Significant trauma / RTA
- Structural deformity
- Widespread neurology
- Persisting severe restriction of lumbar flexion
- Age of onset less <20 or >55 years
- Constant progressive non-mechanical pain
- Thoracic pain
- Previous history of carcinoma
- Previous history of drug abuse/HIV
- Systemically unwell
- Weight loss
- Previous history of systemic steroids

When there is Red Flag indicators urgent Specialist referral is recommended

CAUDA EQUINA SYNDROME / WIDESPREAD NEUROLOGICAL DISORDER

- Difficulty with micturition
- Loss of anal sphincter tone or faecal incontinence
- Saddle anaesthsia about the anus, perineum or genitals
- Widespread (>on nerve root) or progressive motor weakness in the legs or gait disturbance

Urgent Specialist referral is recommended

- Patients with red flag signs
- Patients not responding to adequate conservative treatment of 6 weeks
- MR scans showing:
  - large sequestrated disc prolapse with significant clinical signs
  - Significant spinal canal spenosis
- Spondylolisthesis with severe recurrent leg and back pain
- Osteoperotic fractures with severe pain not settling even after 6-8 weeks

Patients who could be managed in primary care

- Multi level disc disease with facet joint problem
- Minor to moderate disc bulge with radicular symptoms
- Moderate spinal canal stenosis
- Spondylolisthesis with moderate back and leg pain

1. Do you have an accurate diagnosis? Is this a soft tissue syndrome, a discogenic problem, a root encroachment problem, a cauda equina encroachment problem or a combination of various syndromes?

2. Do you have the anatomical level?

3. Do you know your patient? Is he or she accurately reporting the disability, or is there some embellishment for medical-legal or compensation purposes?

4. What is the functional limitation? Is this collection of minor symptoms of nuisance value to the patient, or is there chronic cauda equina compression to the point that the patient needs aids for ambulation?

Recap

- History
- Clinical Examination
- Investigations

Diagnosis

Disc Degeneration with root irritation : Disc Ruptures

DISC DEGENERATION WITHOUT ROOT IRRITATION

SPINAL CANAL STENOSIS

Management

- Conservative
- Minimally invasive treatment
- Surgery

Conservative management

- Physiotherapy
- Injections
  - For back pain – facet joint injections
  - For leg pain – nerve root block, lumbar epidural

Intensive Rehabilitation Programme

- Physical
- Psychological (cognitive behaviour therapy)
- Social
- Occupational

Bio psychological approach

Minimally invasive treatment

- **Leg Pain**

  Nucleoplasty

- **Back Pain**

  Discogram – Proceed to IDET for symptomatic disc

Surgery

- **Radicular Pain**

  Significant disc prolapse

  Discectomy

- **Back Pain with instability**

  Fusion

Surgical options

- Static procedures
  - Instrumented lateral mass fusion
  - PLIF
  - ALIF
  - TLIF
  - Combination procedures
- Dynamic procedures

  Wallis dynamic ligament stabilisation

  disc replacement

Spinal stenosis with significant claudication symptoms

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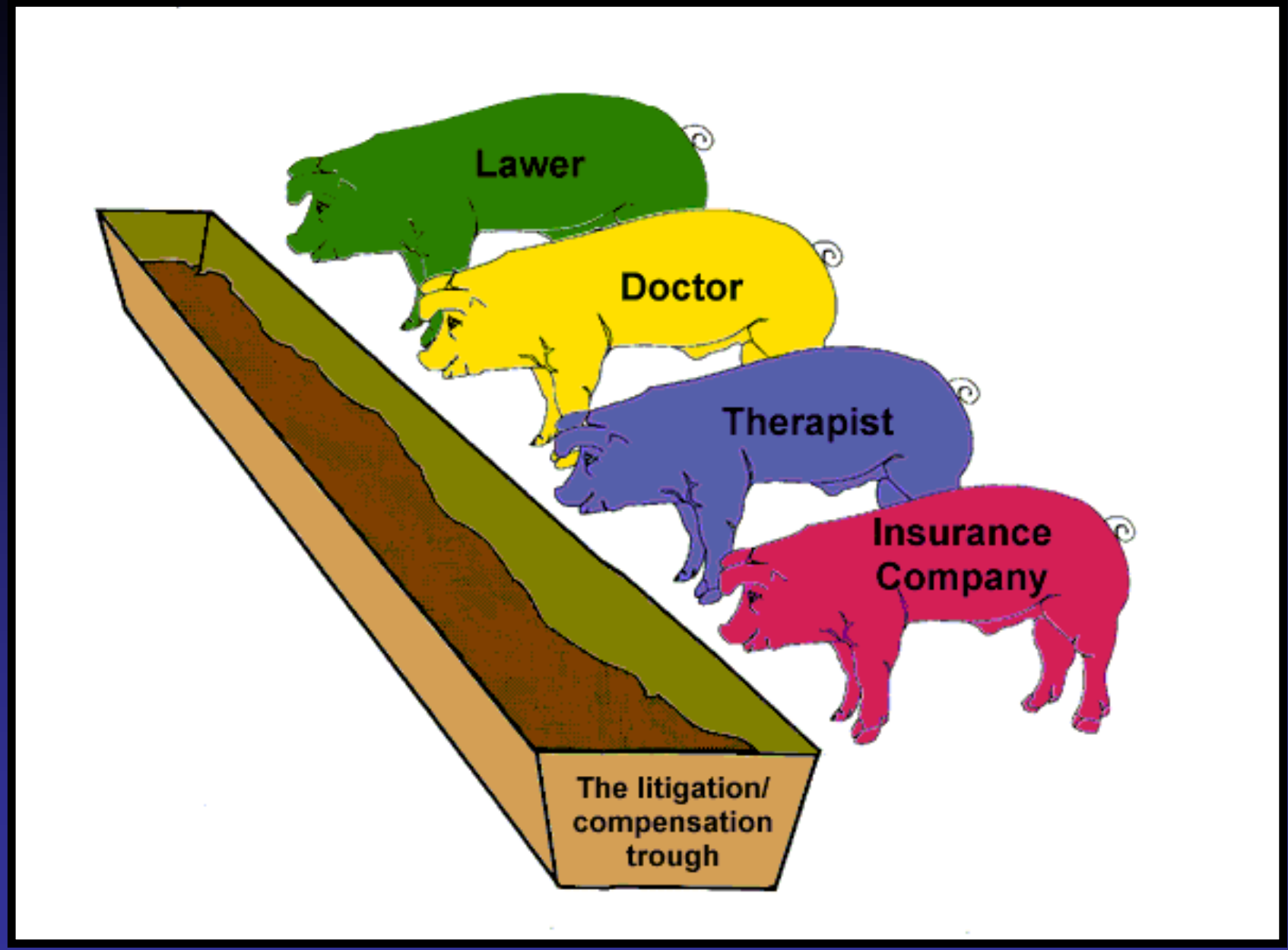
Lawer
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Pathological Changes That Initiate Pain

Dynamic MR Scan

Gene Therapy

- Inhibit degeneration
- Improve quality of disc


Thank You