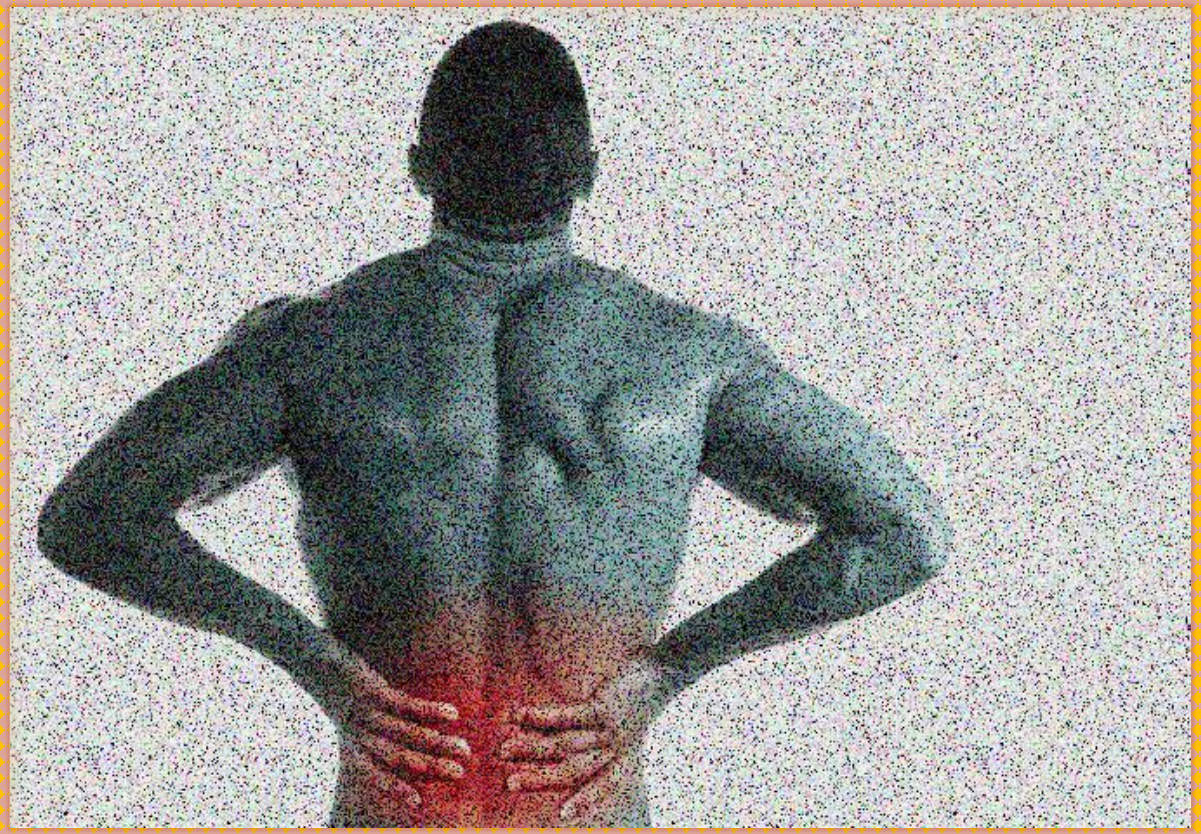
# PENANGANAN TERKINI LOW BACK PAIN



*Dr. Larona Hydravianto, MKes, SpOT (K) Spine*
*RS Darmo Surabaya*

# LOW BACK PAIN

**Back pain is one of the most common causes for patients to seek medical care in both primary care and emergency setting**

**Low back pain is a common global public health problem. The point prevalence of low back pain (LBP) in 2017 was estimated to be about 7.5% of the global population, or around 577.0 million people**

**Lower back pain has been the leading cause of years lived with disability since 1990**

**Studies in European countries indicate the total costs associated with low back pain varies between 0.1-2% of gross domestic product**

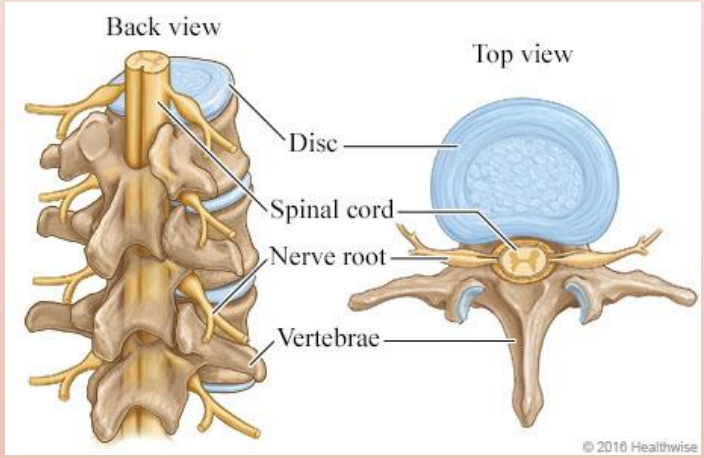
**Over 80% of the total costs attributable to LBP are due to indirect costs such as loss of productivity**

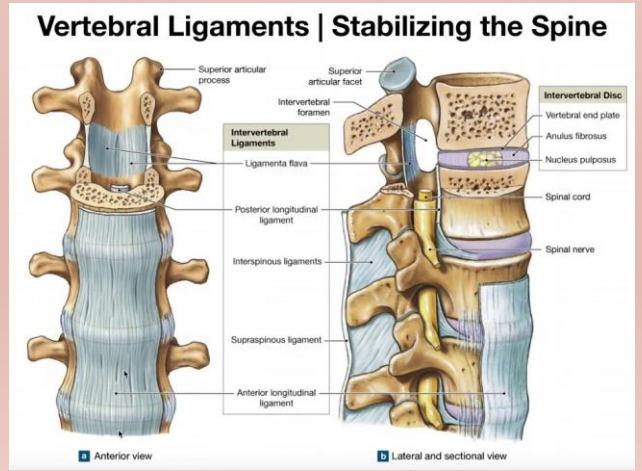
# LOW BACK PAIN

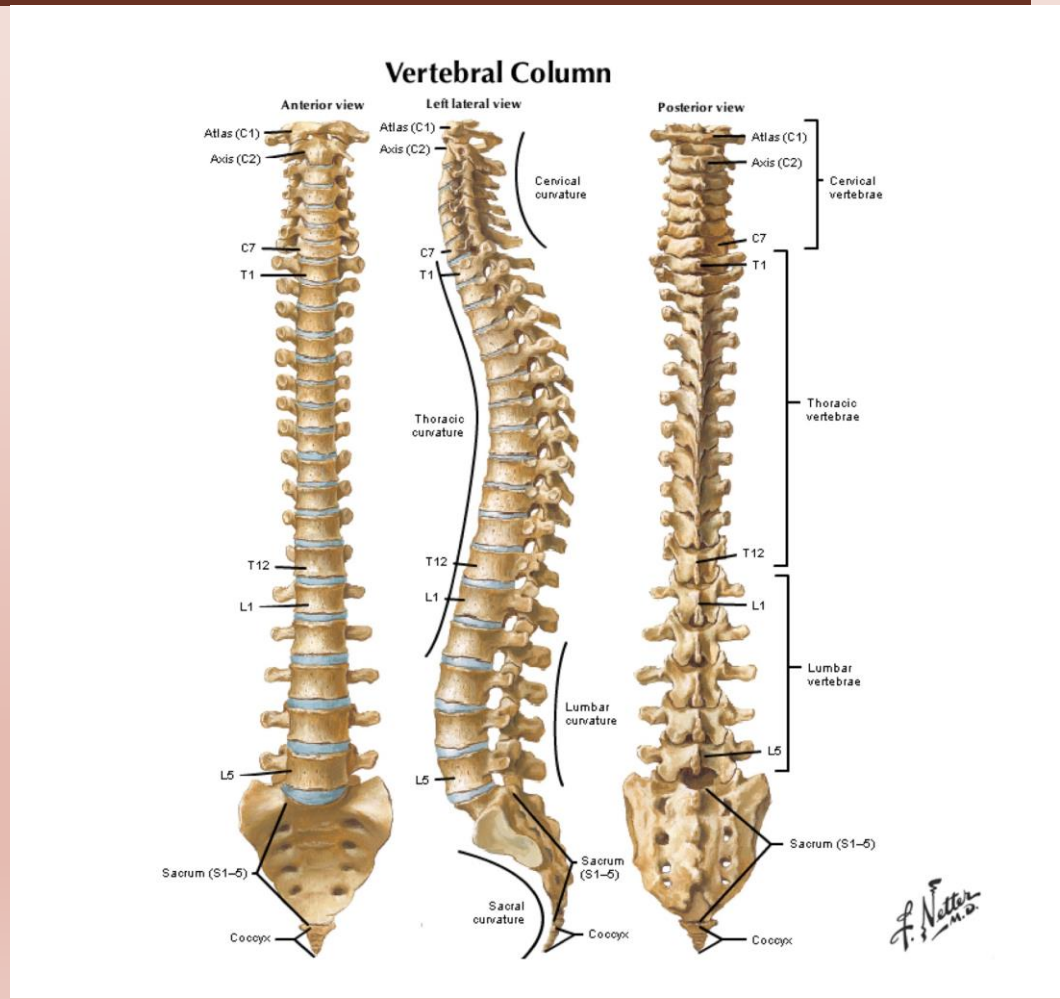
**Low back pain is defined as "pain and discomfort, localized below the costal margin and above the inferior gluteal folds, with or without leg pain"**

# ANATOMY

## Spinal column/ Vertebral column



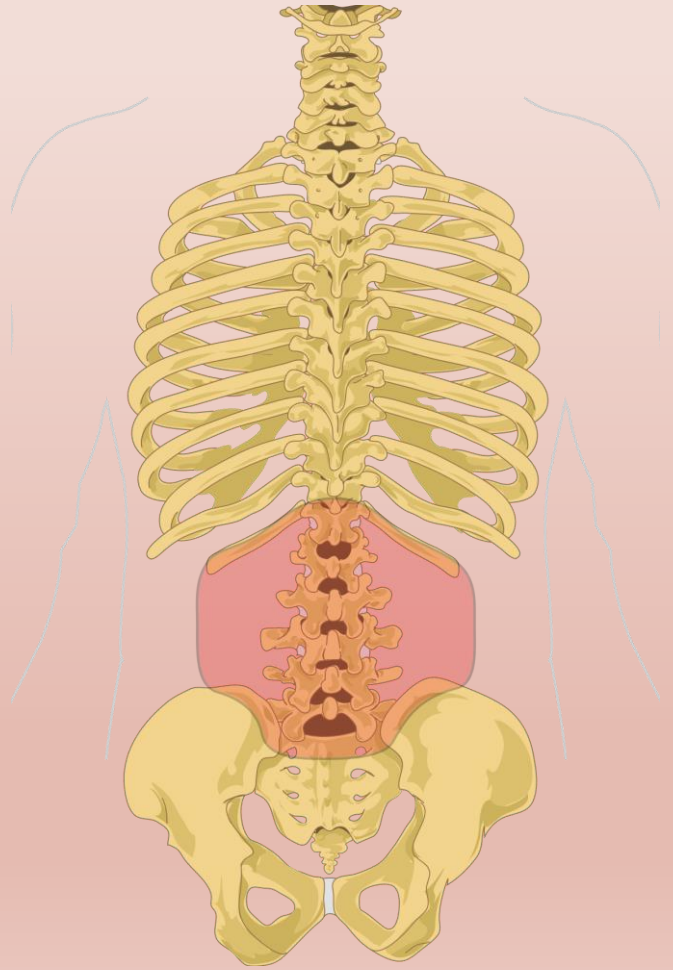



# LOWER BACK

Lower back (lumbar spine) is the anatomic region between lowest rib and the upper part of the buttock.

The lumbar spine connects to the thoracic spine above and the hips below.

It distribute weights from your upper body into the lower extremities.



# NON SPECIFIC LOW BACK PAIN

The most common form of low back pain is "non-specific low back pain" and is defined as "low back pain not attributed to recognizable, known specific pathology".

Approximately 85% of such back pain is classified as non-specific.

Non specific low back pain : no structural change, no inflammation and no specific disease can be found as its cause.

# TYPES OF LOW BACK PAIN

**Duration**

- Acute low back pain : Less than 6 weeks
- Subacute low back pain : Between 6 and 12 weeks
- Chronic low back pain : 12 weeks or more

**Causa**

- Mechanical low back pain
- Non mechanical low back pain
- Internal organs referred pain

## Mechanical low back pain

Including nonspecific musculoskeletal strains, herniated disc (HNP), spinal stenosis compressed nerve roots, degenerative discs or joint diseases, and broken vertebra/ fracture.

## Non Mechanical low back pain

Including tumours, inflammatory conditions such as systemic spondyloarthropathy, and infections.

## Internal organs referred pain

Gallbladder diseases, kidney stones, kidney infections, endometriosis and aortic aneurysm, among others.

# ETIOLOGY

**Congenital**

(scoliosis, spina bifida)

**Trauma**

(sprain, strain, fracture)

**Infection**

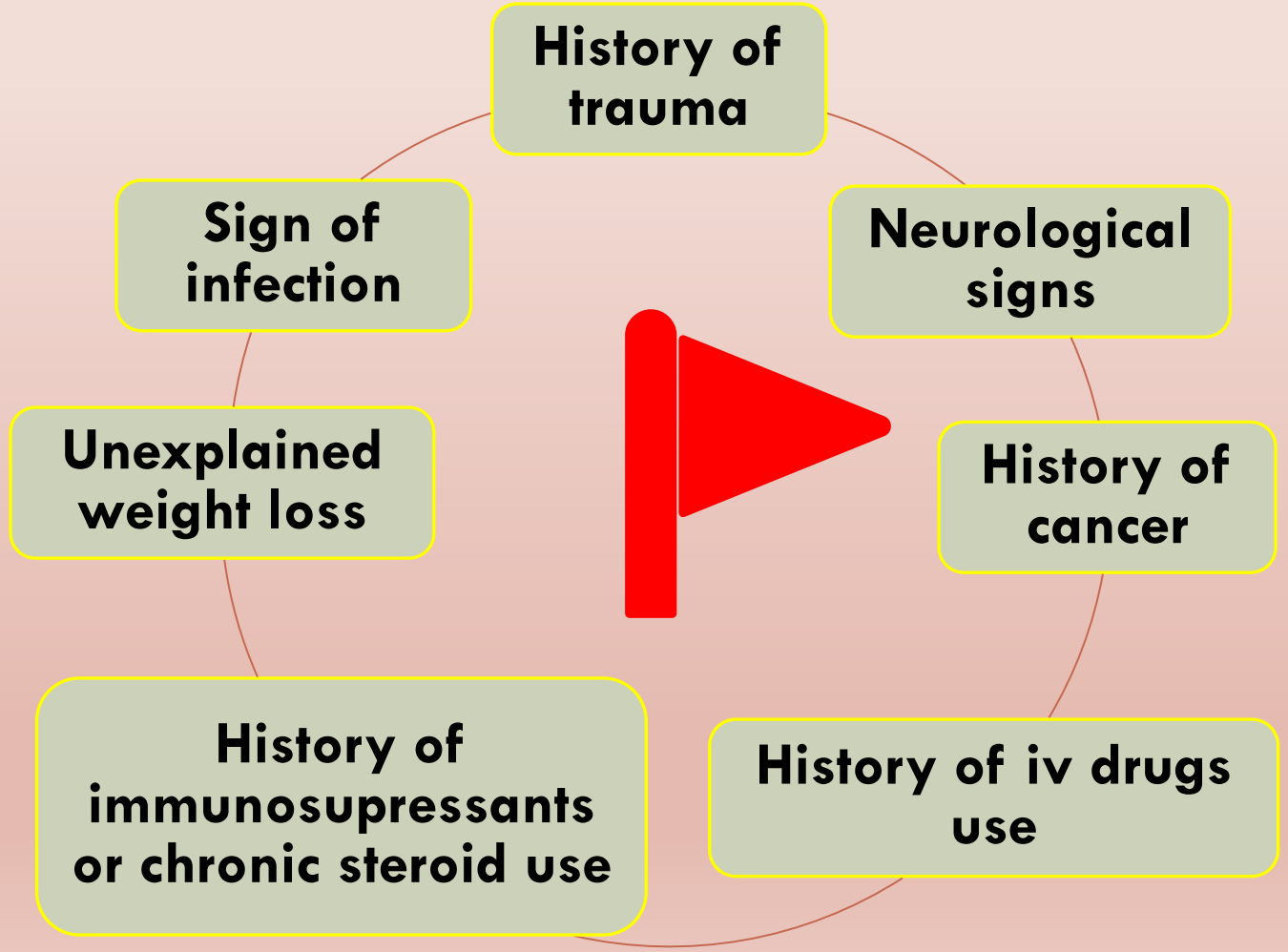
(inflamation, abcess formation)

**Tumor**

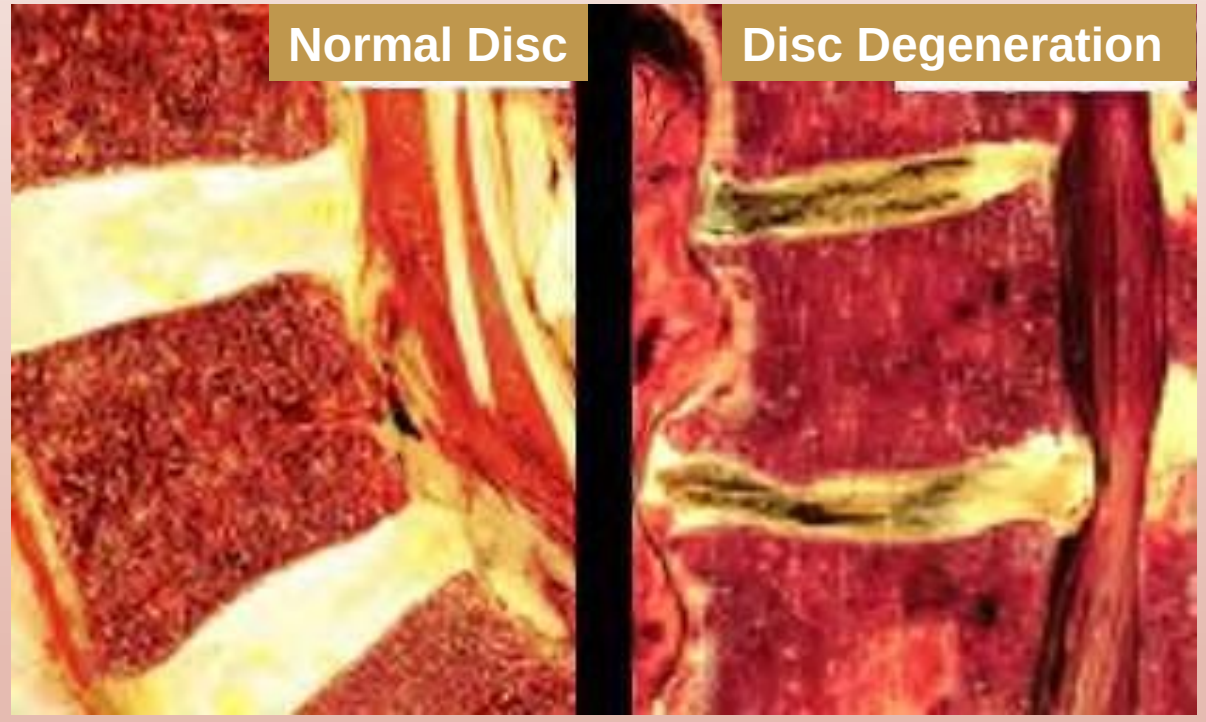
(mass, bone destruction)

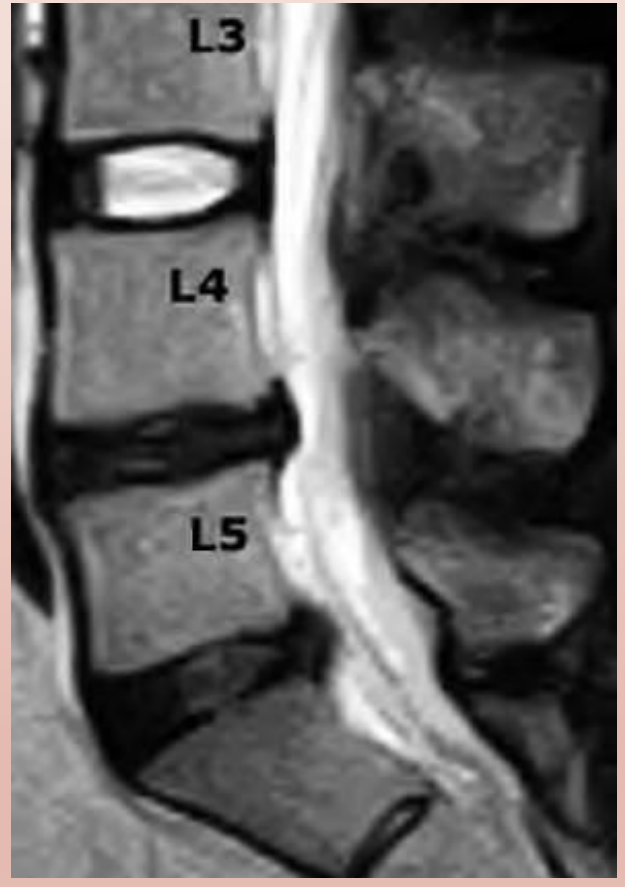
**Spinal degeneration**

# RED FLAGS

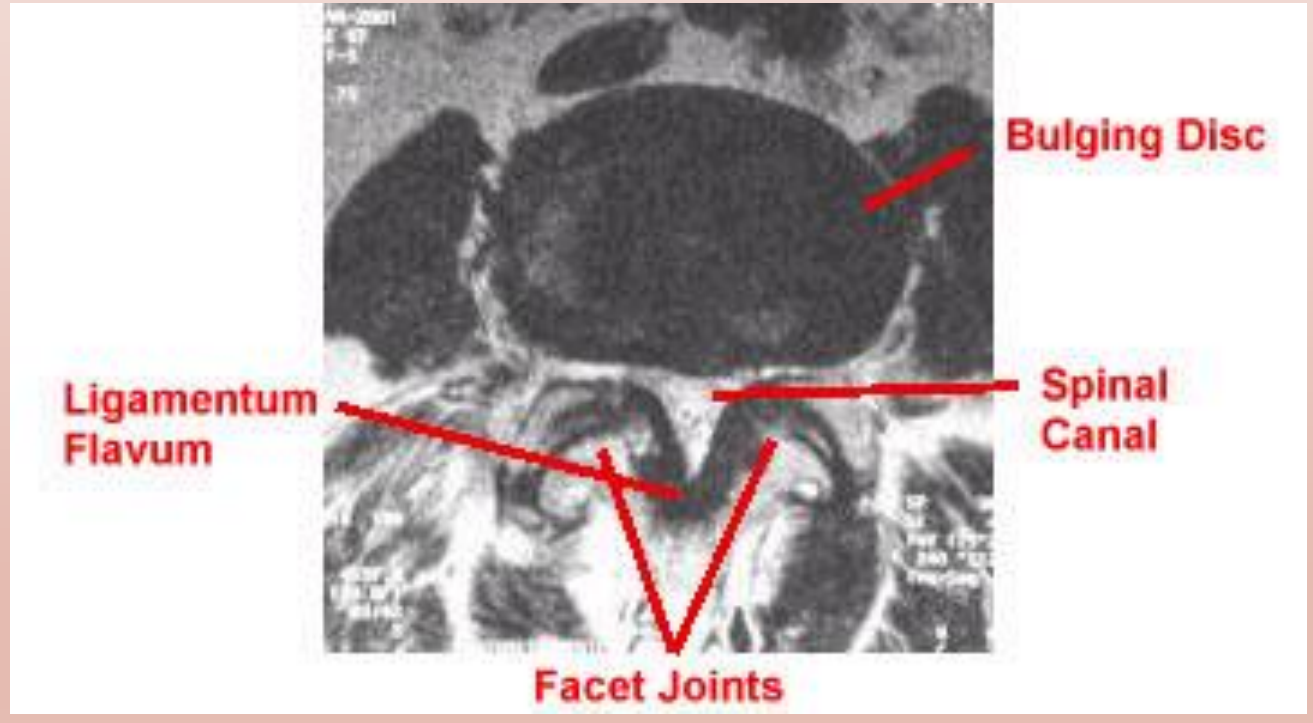

History of trauma
Neurological signs
History of cancer
History of iv drugs use
History of immunosupressants or chronic steroid use
Unexplained weight loss
Sign of infection

# SPINAL DEGENERATION

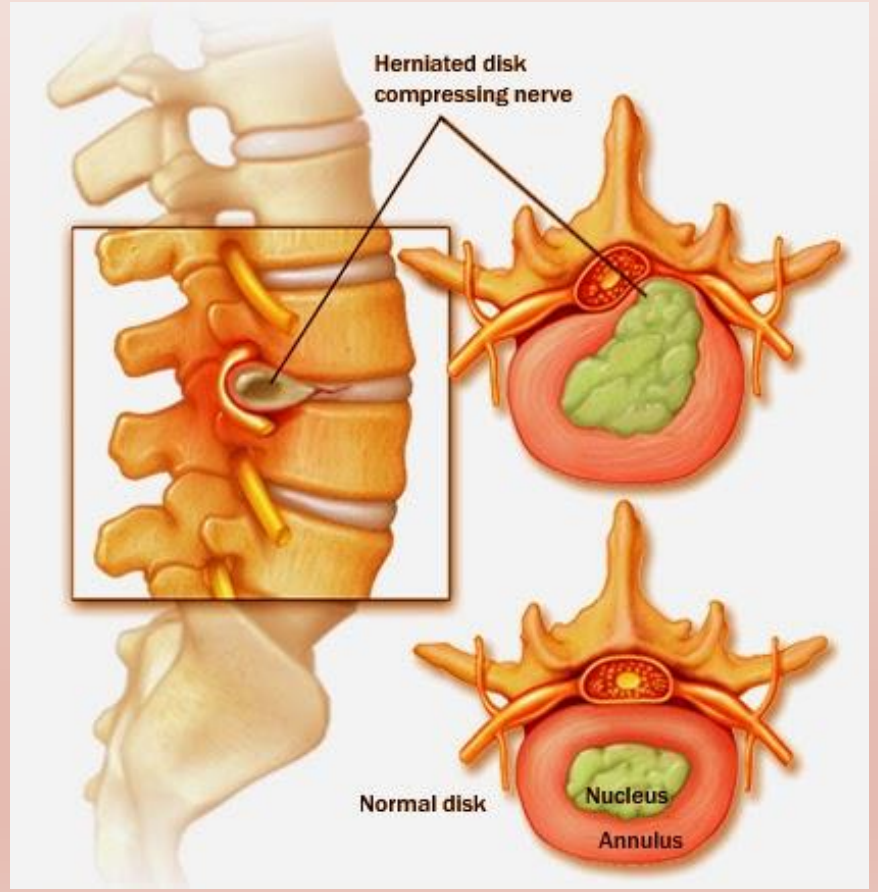


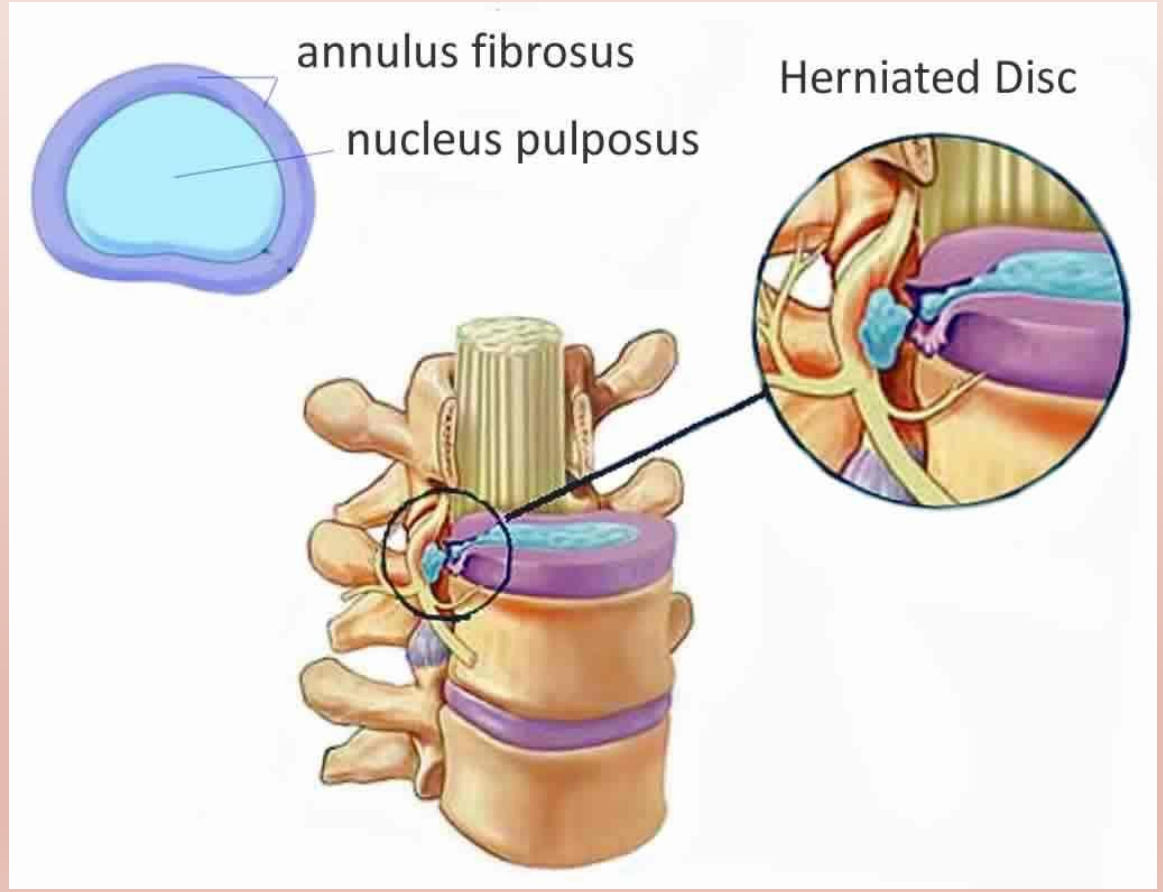



# SPINAL DEGENERATION




# HERNIA NUCLEUS PULPOSUS (HNP)



# MANAGEMENT OF LOW BACK PAIN

**Patient education**

1st line treatment, modification and maintain activity, posture

**Pharmacological treatment**

Acetaminophen, NSAID, COX-2 inhibitors, muscle relaxants

**Non-pharmacological treatment (physical treatment)**

**Surgery**

Failed conservative treatment, red flags

# Low Back Pain Exercises

Standing hamstring stretch

Quadruped arm/leg raise

Side plank

Gluteal stretch

Cat and camel

Pelvic tilt

Partial curl

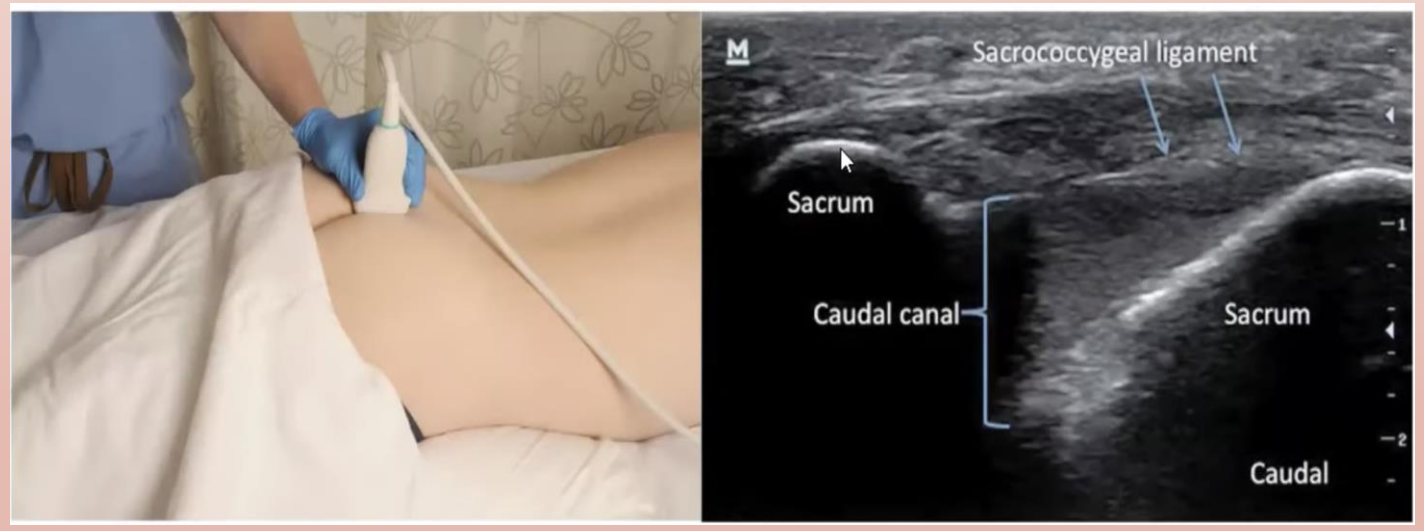
Extension exercise

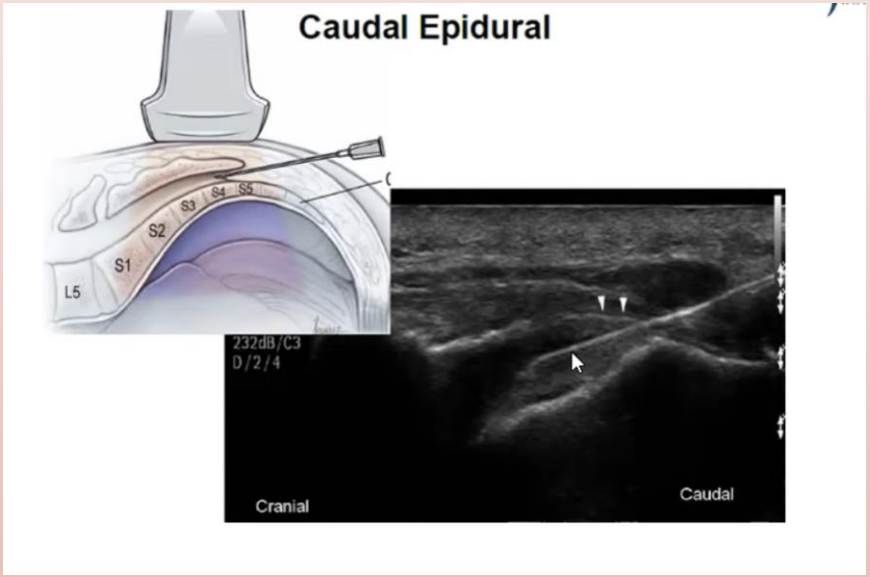
# PAIN INTERVENTION (*INTERVENTIONAL PAIN MANAGEMENT*)

- Selective nerve root block (TESI)
- Medial branch block
- Facet block
- Caudal epidural block (CESI)
- Sacroiliac joint block
- Ganglion impar block

# PAIN INTERVENTION
# (*INTERVENTIONAL PAIN MANAGEMENT*)

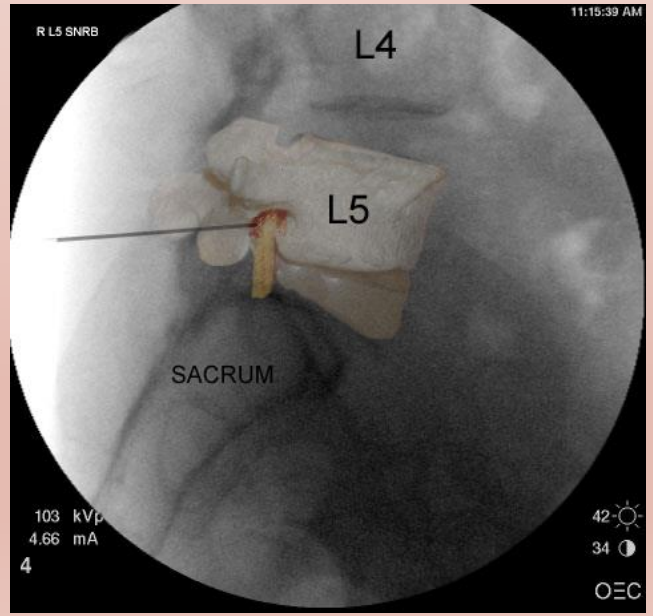
⌘ **Ultrasound guided** ⌘




# PAIN INTERVENTION (*INTERVENTIONAL PAIN MANAGEMENT*)

⌘ **Fluoroscopy guided** ⌘



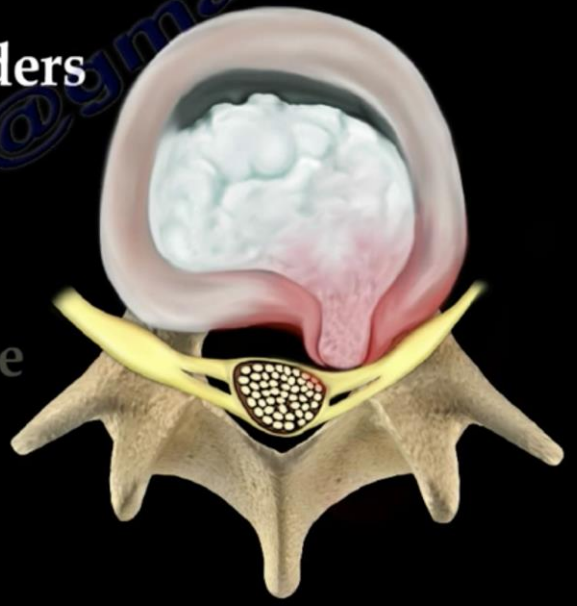
# WHEN TO HAVE SURGERY

- Intervertebral disc disorders
  - Herniated disc
  - Internal disc disruption
  - Degenerative disc disease
- Lumbar stenosis
- Spondylolisthesis
- Degenerative scoliosis
- Sacroiliac Joint Dysfunction

## Common Conditions of Low Back Pain

## Surgical Causes of Low Back Pain

- Intervertebral disc disorders
  - herniated disc
  - internal disc disruption
  - degenerative disc disease
    - usual location is posterolateral



# TYPES OF SURGERY

1. Traditional open surgery

   Open decompression (laminectomy, laminotomy, foraminotomy, discectomy)

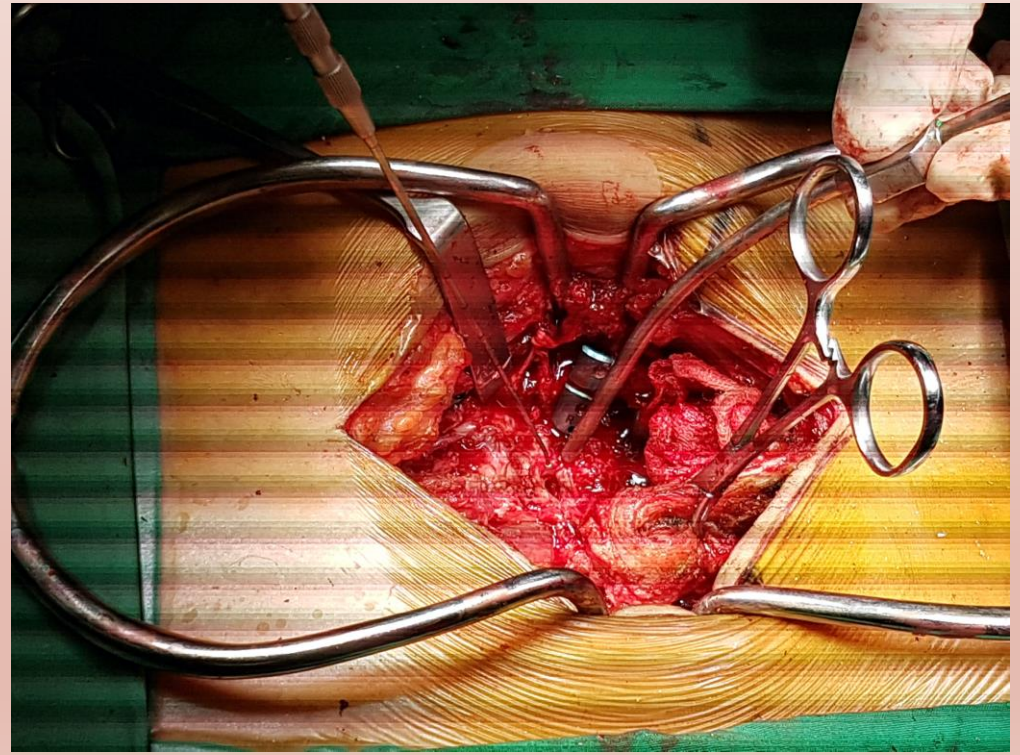
   Open decompression + stabilization (instrumentation)

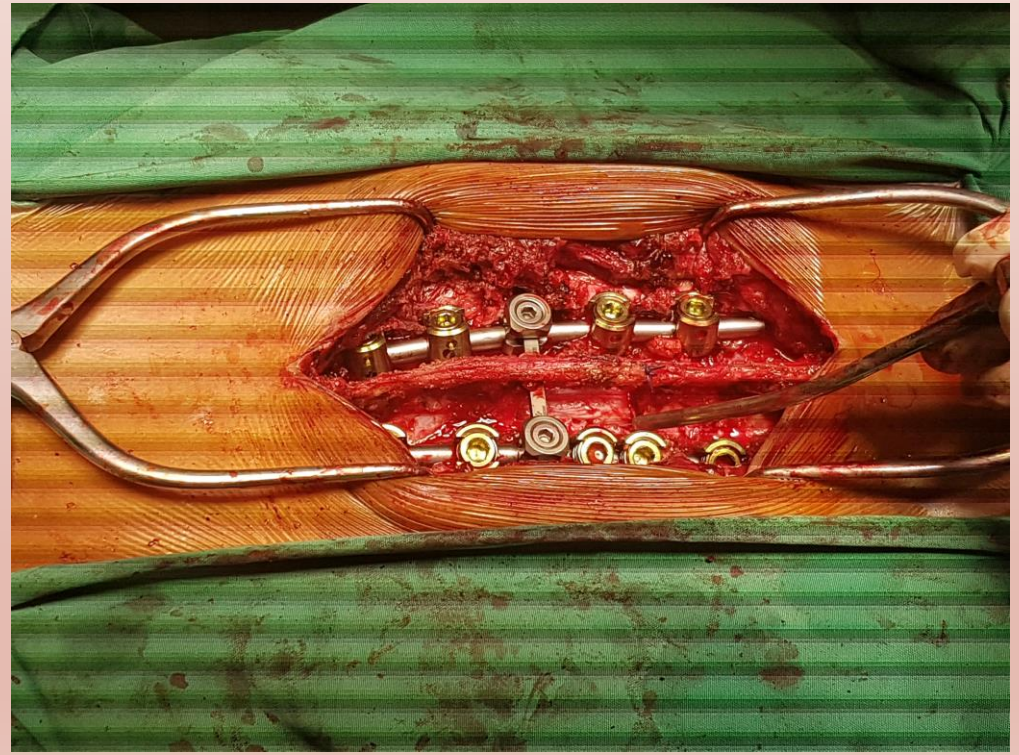
2. MISS (minimally invasive spine surgery)

   Microscopic (tubular system)

   Endoscopic (spinal endoscopy)

# OPEN SURGERY





# MINIMALLY INVASIVE SPINE SURGERY (MISS)

**Minimally invasive spine surgery (MISS) is an alternative to traditional open surgical procedures performed to treat different spinal disorders, such as degenerative disc disease, herniated disc, scoliosis, and spinal stenosis**

**Spine surgery performed minimally invasively offers many potential benefits, such as small incisions, less cutting through soft tissues (eg, ligaments, muscles), outpatient options, less post-operative pain, and faster recovery**

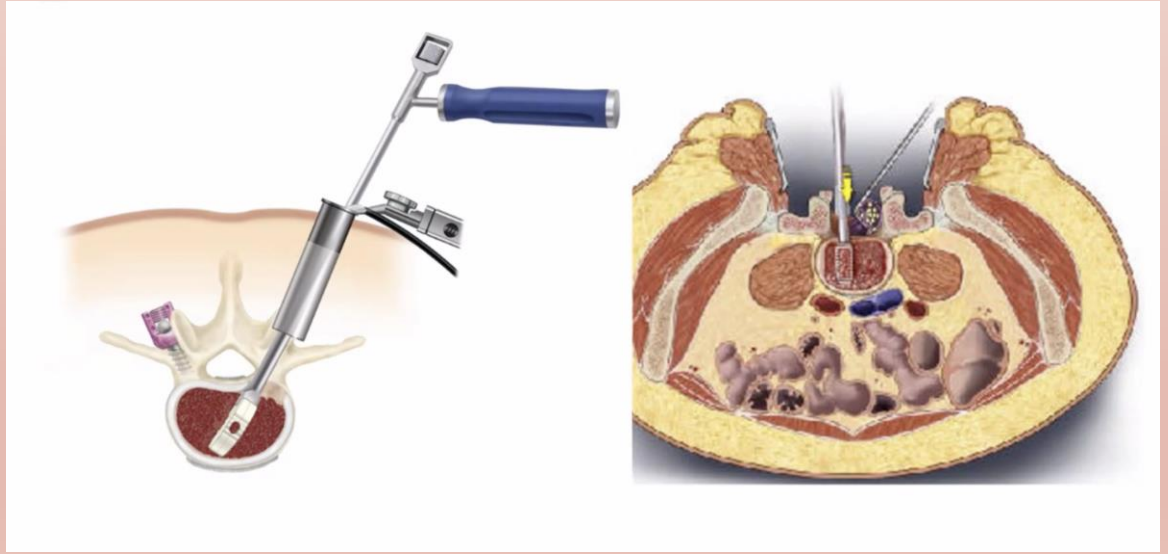
# MINIMALLY INVASIVE SPINE SURGERY (MISS)

## Decompression

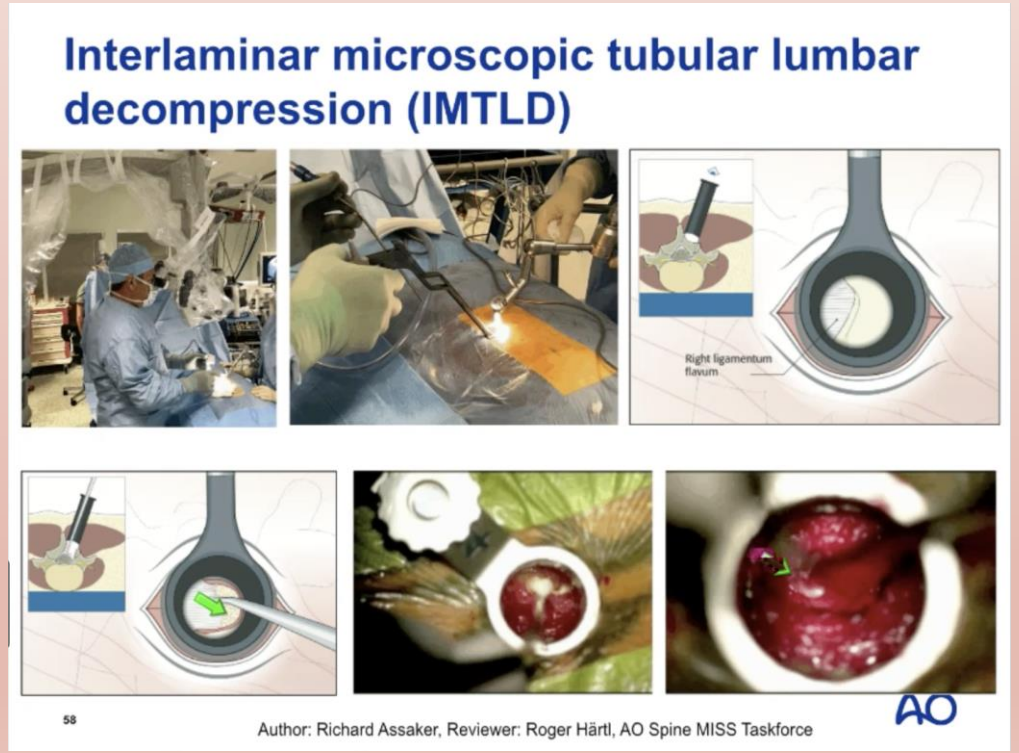
- Micro endoscopic discectomy (MED)
- Percutaneus endoscopic cervical discectomy (PECD)
- Percutaneus stenoscopic cervical decompression (PSCD)
- Percutaneus endoscopic lumbar discectomy (PELD)
- Percutaneus stenoscopic lumbar decompression (PSLD)
- Biportal endoscopic spinal surgery (BESS)
- Unilateral biportal endoscopic decompression (UBE)

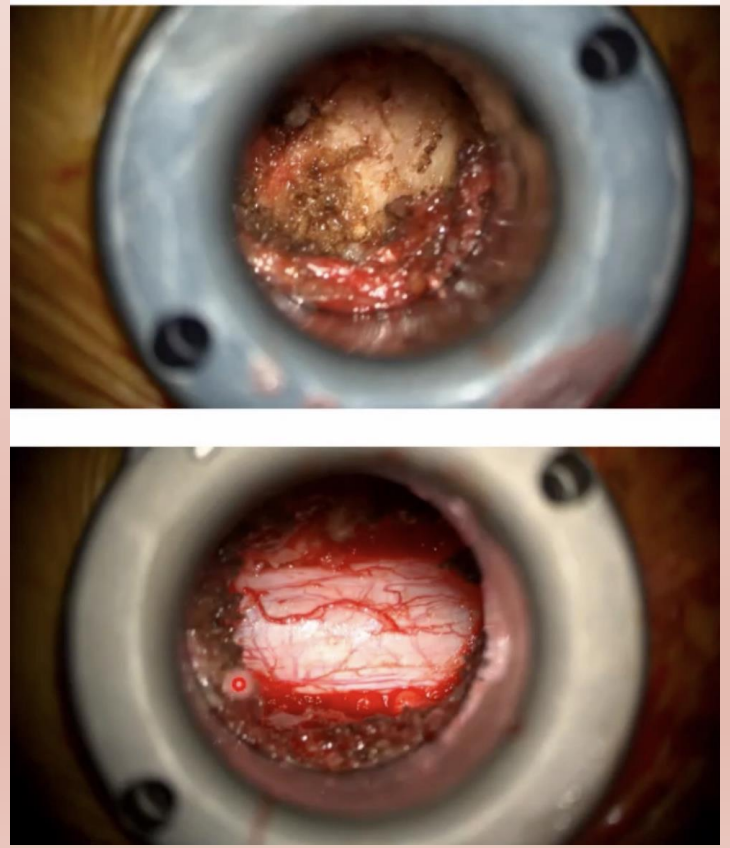
## Stabilization

- MIS System (tubular system)
- Navigation assisted spine surgery
- Robotic assisted spine surgery



# MINIMALLY INVASIVE SPINE SURGERY (MISS)



# SPINAL ENDOSCOPY

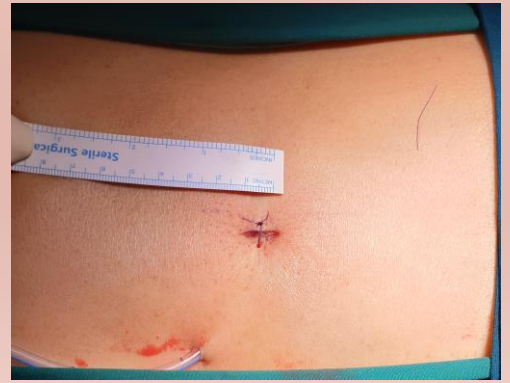
**Adalah suatu metode operasi minimal invasif pada tulang belakang, khususnya untuk menangani kasus2 saraf terjepit di tulang belakang seperti HNP dan spinal stenosis**

# SPINAL ENDOSCOPY

**Metode ini mempunyai beberapa keunggulan, yaitu :**

- **Efektifitas tinggi**
- **Luka sayatan sangat kecil, bahkan kurang dari 1 cm**
- **Rasa nyeri paska operasi minimal**
- **Prosedur operasi lebih aman**
- ***Length of stay* atau lama tinggal di RS lebih singkat, bahkan bisa *one day care***
- **Pasien lebih cepat kembali ke aktifitas normal**
- **Kerusakan jaringan dan perdarahan minimal**

# CURRENT UPDATE

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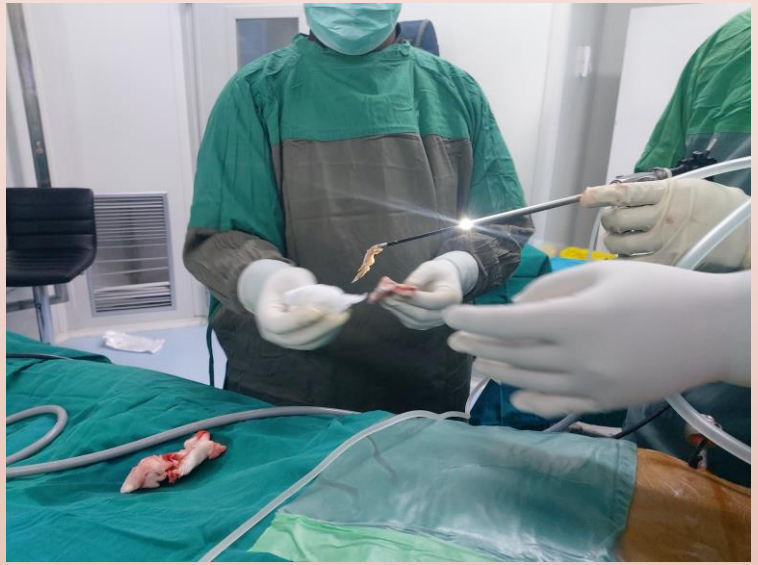
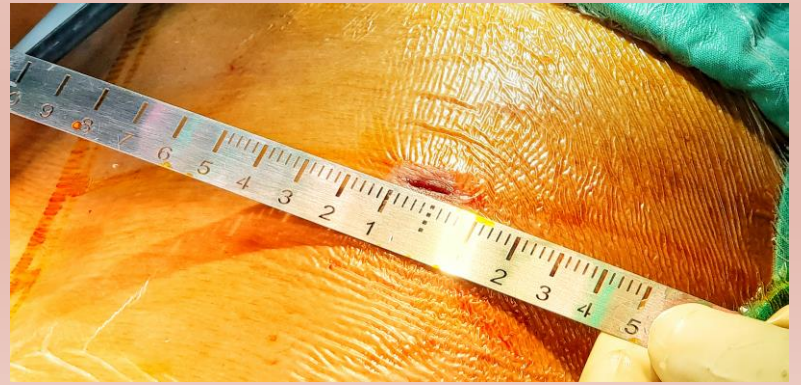



ARCADIS
STUDY 1



# PREVENTION

**Tidak ada cara pasti untuk mencegah nyeri punggung seiring bertambahnya usia, tetapi ada langkah-langkah yang dapat Anda lakukan untuk mengurangi resiko yaitu :**

- **Menjaga agar berat badan Anda ideal**
- ***Good posturing***
- **Berolahraga secara teratur**
- **Hindari stress**
- **Memperbaiki posisi tidur**
- **Mengangkat barang atau benda dengan kekuatan kaki, bukan punggung**
- **Pastikan posisi kerja Anda baik dan ideal**

# THANK YOU