

Whats New in my Specialty

"Spine surgery"

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ORTHOPEDIC SPINE SURGERY

OGDEN UT

MAY 17, 2024



Disclosures

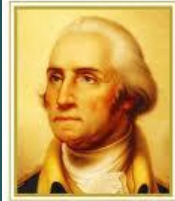
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Disclosures

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- ▶ Neil Callister MD – Hand Surgery
- ▶ Nick Goucher – Foot and Ankle Surgery
- ▶ Casey Bachison MD – Spine Surgery
- ▶ Todd Grunander MD – Joint Replacement
- ▶ Terry Finlayson MD – Orthopedic Trauma
- ▶ Sean Kuehn MD – Orthopedic Trauma
- ▶ Brady Mock MD – Joint Replacement
- ▶ Blake Sellars MD – Hand Surgery
- ▶ Outstanding PA/NP's

Derek Smith, Austin Okelberry, Joe Bowcutt, Colton Peterson, Shannan Montague, Andrew Nelson, Jairon Fessler, Sean Peterson



Objectives

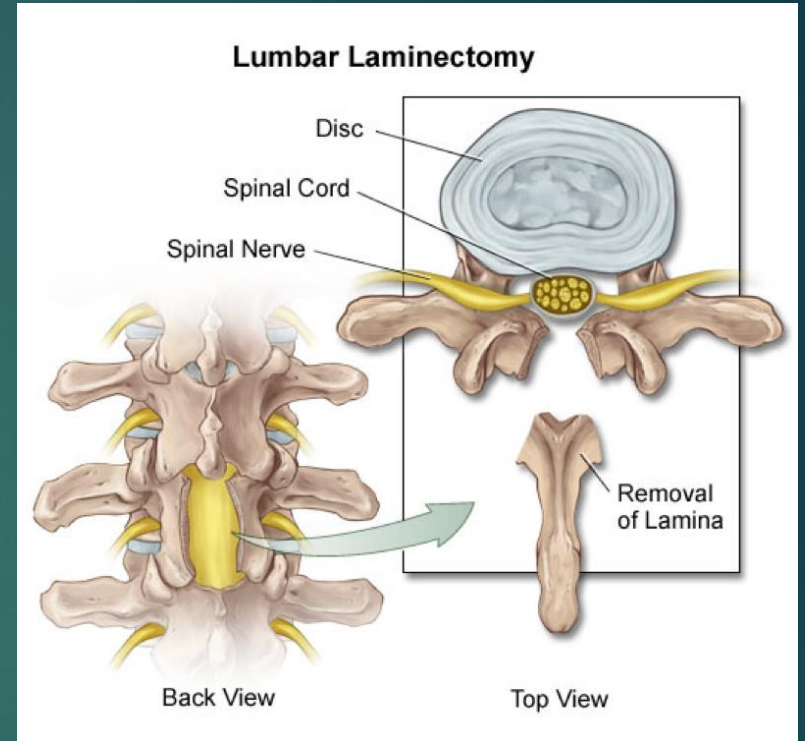
- ▶ The Basics Remain the same
- ▶ Non operative options are expanding to include treatment for DDD
- ▶ Minimally invasive technique are becoming commonplace, including interbody fusions, Lateral fusions and SI joint arthrodesis



The Basics Remain Unchanged

▶ Two major roles of Spinal Surgeons

- Decompression (Laminectomy)
 - Herniated discs
 - stenosis
- Stabilization (Fusion with Hardware)
 - Instability due to deformity, trauma, infection, neoplasm, scoliosis, kyphosis
 - Spondylolisthesis (single most common diagnosis requiring fusion surgery)
 - Restoration of Neuro-foraminal height (NF)



Non-Operative Options

- ▶ Medications – NSAIDS, muscle relaxer, Nerve modulators, Pain medication
- ▶ Physical therapy
- ▶ Injections
 - Epidural injections
 - Medial Branch block/Radiofrequency ablation
 - Basivertebral Nerve ablation – new and promising treatment for previously poorly treated Degenerative disc disease



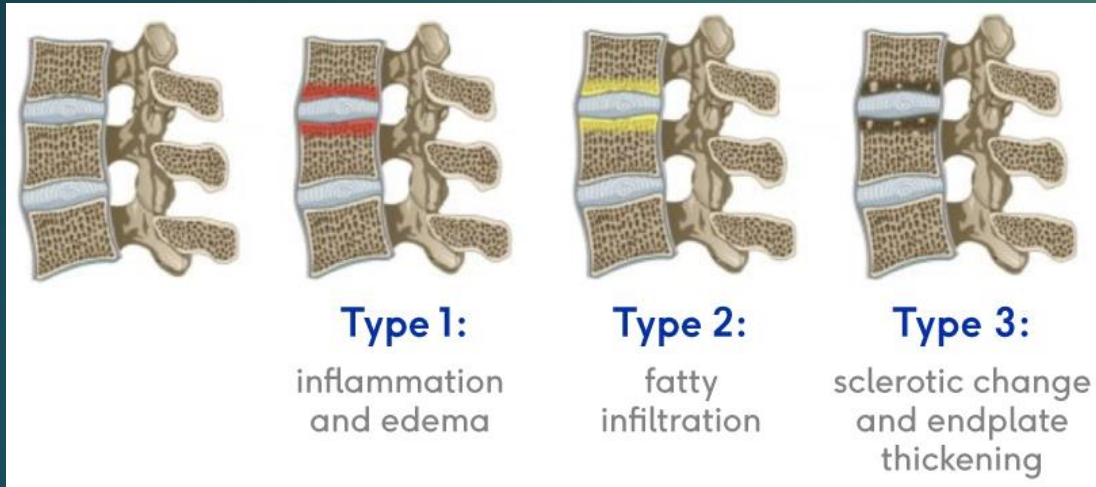
Degenerative Disc Disease

- ▶ Historically isolated DDD is one of most complicated and poorly treated conditions of the spine.
 - Physical therapy
 - NSAIDS
 - Fusion (Trouble is there's no stenosis or instability)
- ▶ Typically patient presents with back pain. Seldom have sciatica



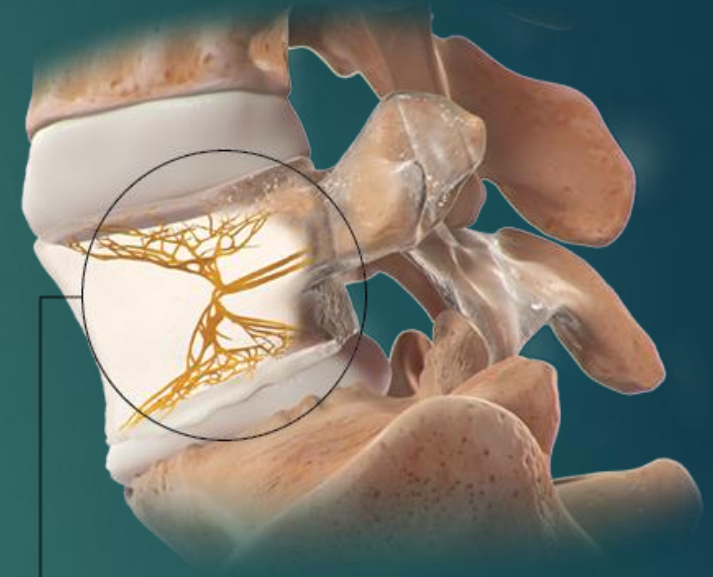
Degenerative Disc Disease

- ▶ Back pain
- ▶ Modic changes



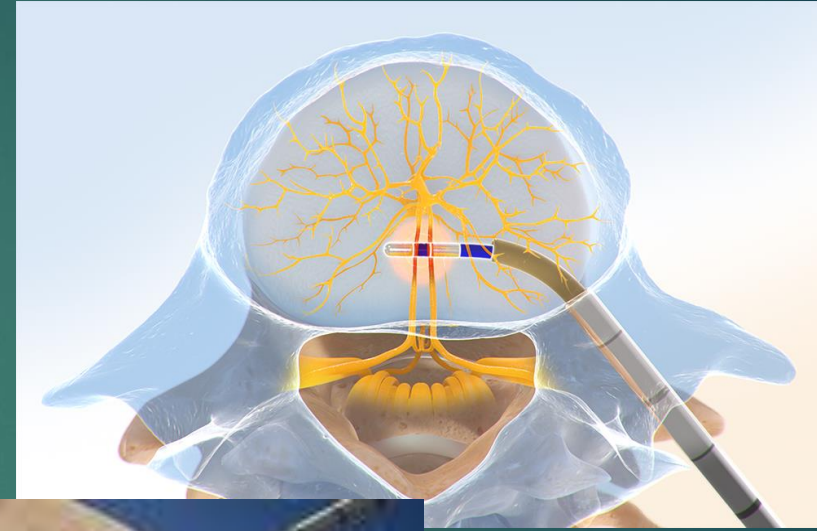
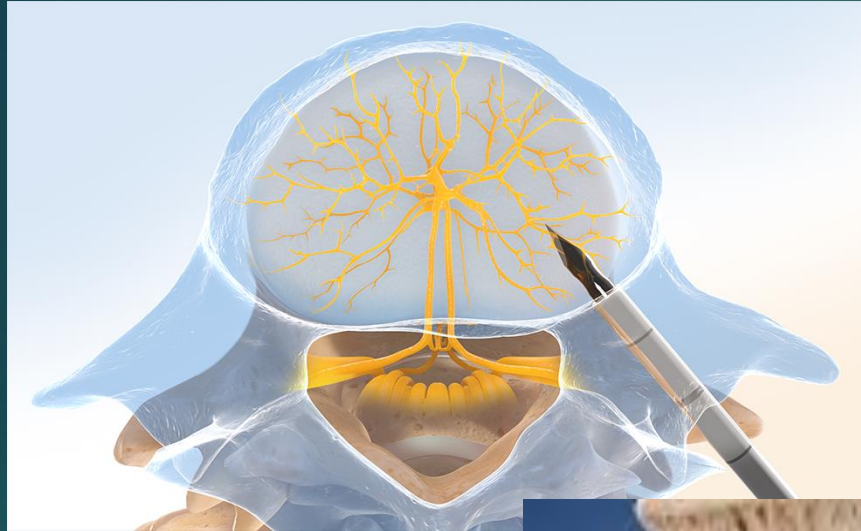
Basivertebral Nerve Ablation

- ▶ Basivertebral Nerve provides innervation to the Vertebral endplate at the superior and inferior aspects of a single vertebral body.
- ▶ An ablation to the BVN inhibits pain transmission from the Disc to the CNS



Basivertebral Nerve

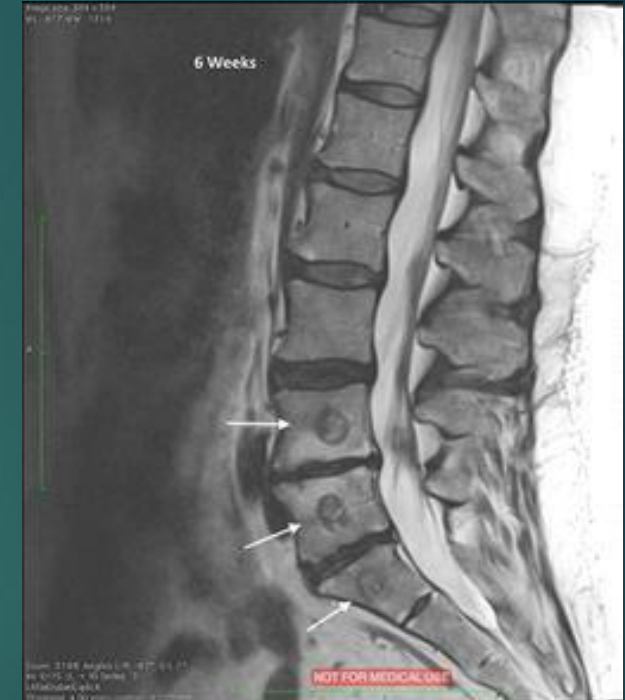
BVN Ablation



BVN Ablation

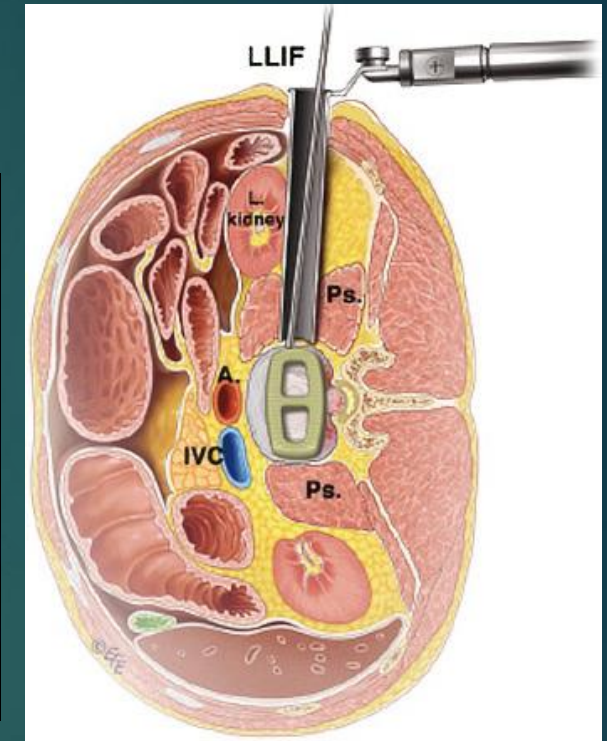
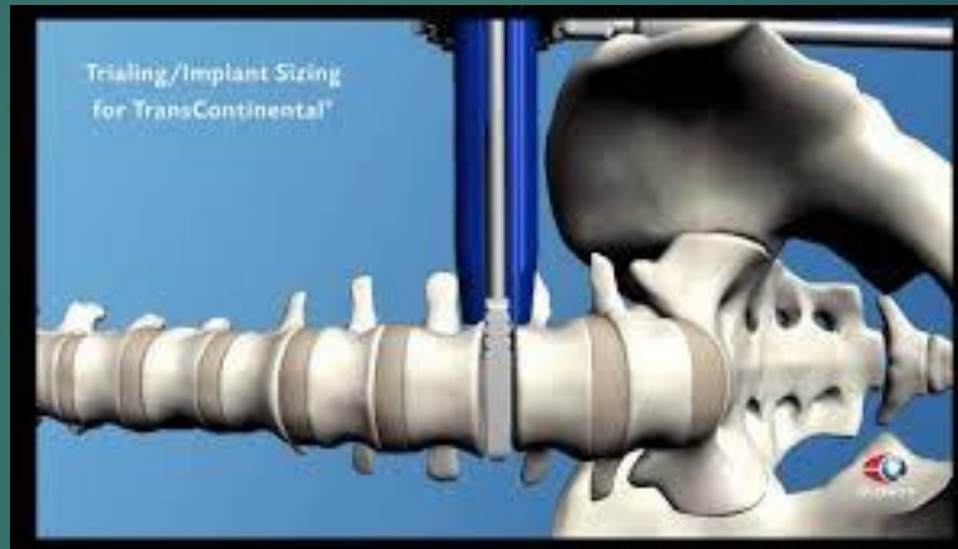
▶ Outcomes

- RTC 140 patients 1:1 BVN ablation/standard conservative Treatment
- At 3 months BVN group showed 20.3 point decrease in ODI
- At 12 months BVN group showed 25 point decrease in ODI and VAS of 3.8
- 64% had >50% improvement with 29% reporting complete relief
- Cross over then reported 25.6 point decrease in ODI



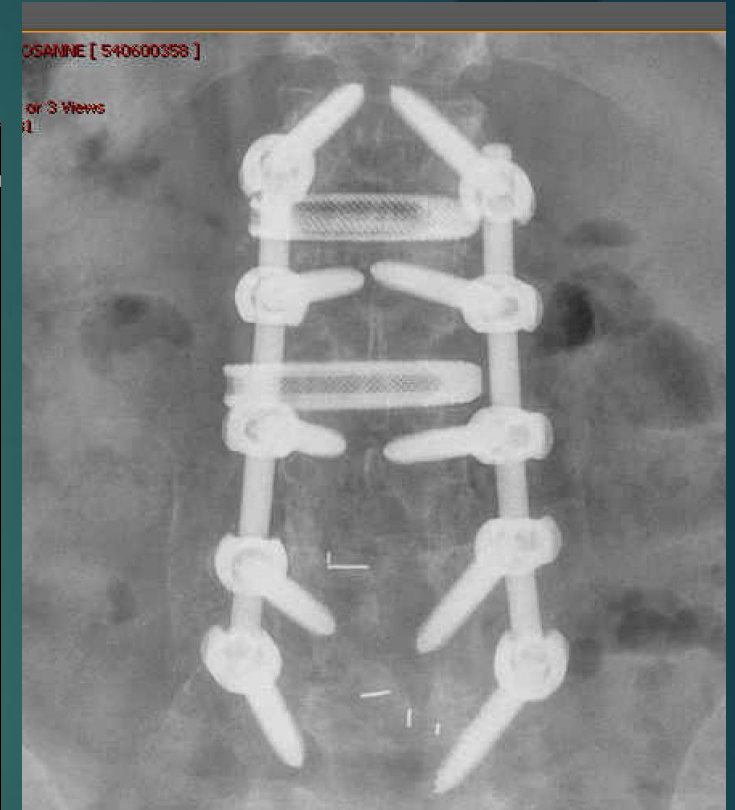
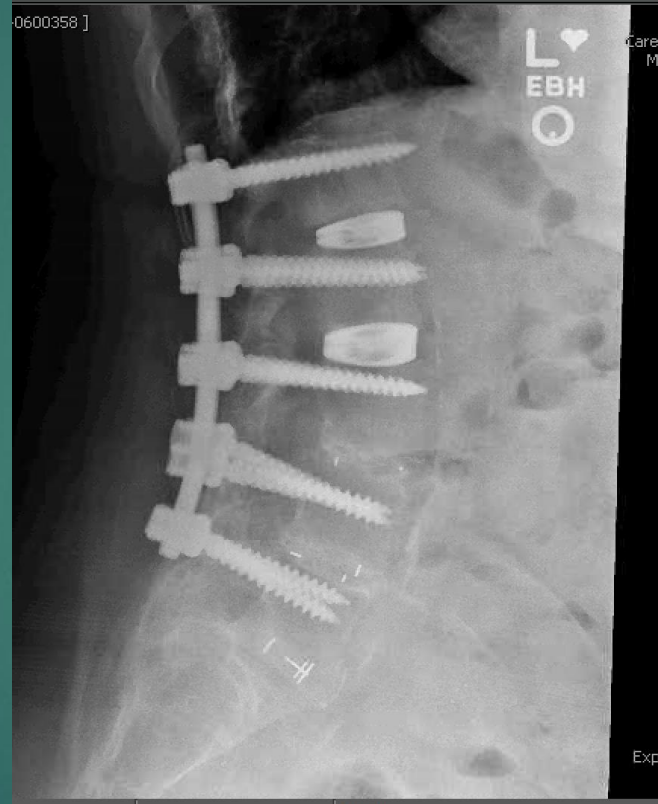
Lateral Lumbar Fusion

- ▶ Minimally Invasive Surgical Technique for fusion of the lumbar spine
- ▶ 4 cm flank incision, Approach through a lateral retroperitoneal plane
- ▶ Decreases amount of dissection to the posterior muscle groups



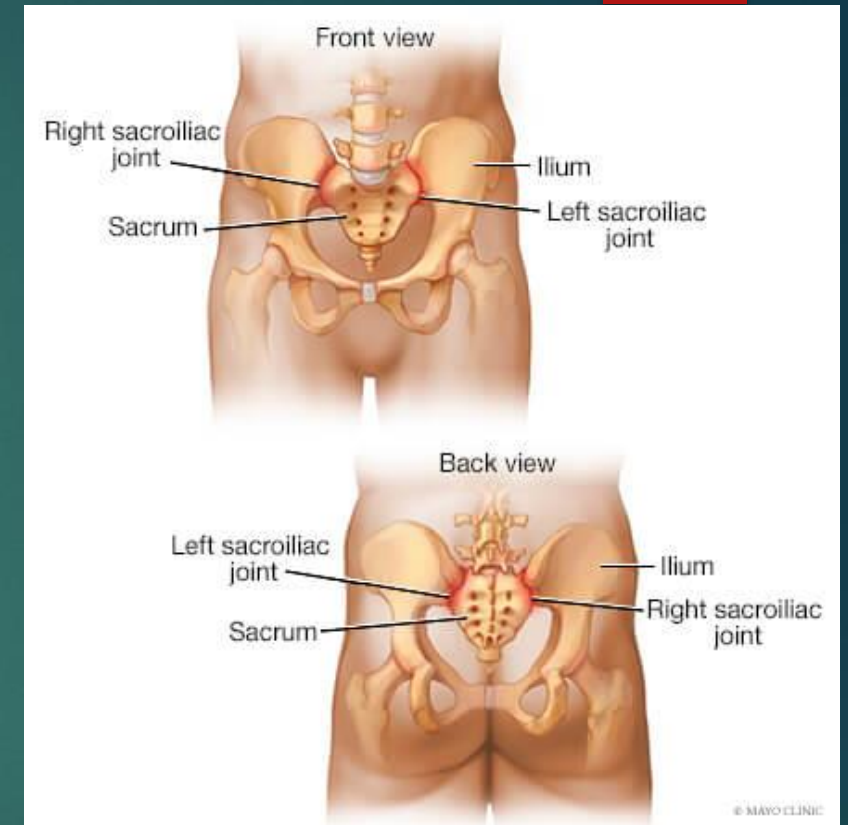
Lateral Lumbar Fusion

- ▶ Placement of Large Cages (Tall and Long)
- ▶ Better maintenance of interbody height
- ▶ Better restoration of foraminal height
- ▶ Can eliminate need for laminectomy
- ▶ Posterior screws are placed percutaneously.



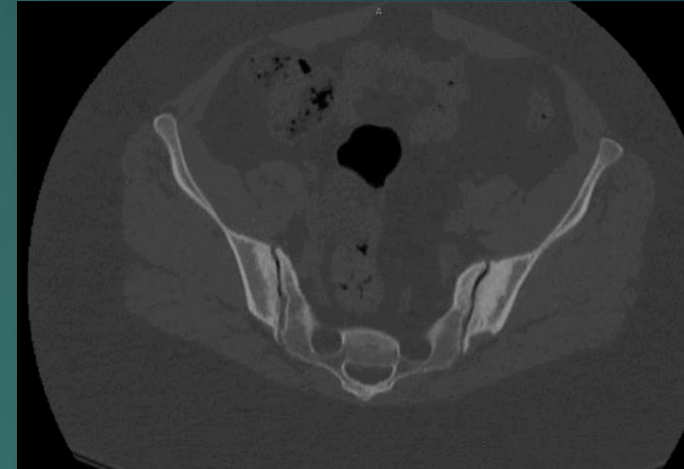
Sacroiliac Joint Arthrodesis

- ▶ SIJ dysfunction historically poorly treated
- ▶ Difficult to approach
- ▶ Difficult fusion
- ▶ Very morbid open procedure requiring extensive muscular stripping/trauma to expose joint for fusion
- ▶ Increased success of long spinal fusions leads to increased SIJ arthrosis/Pain



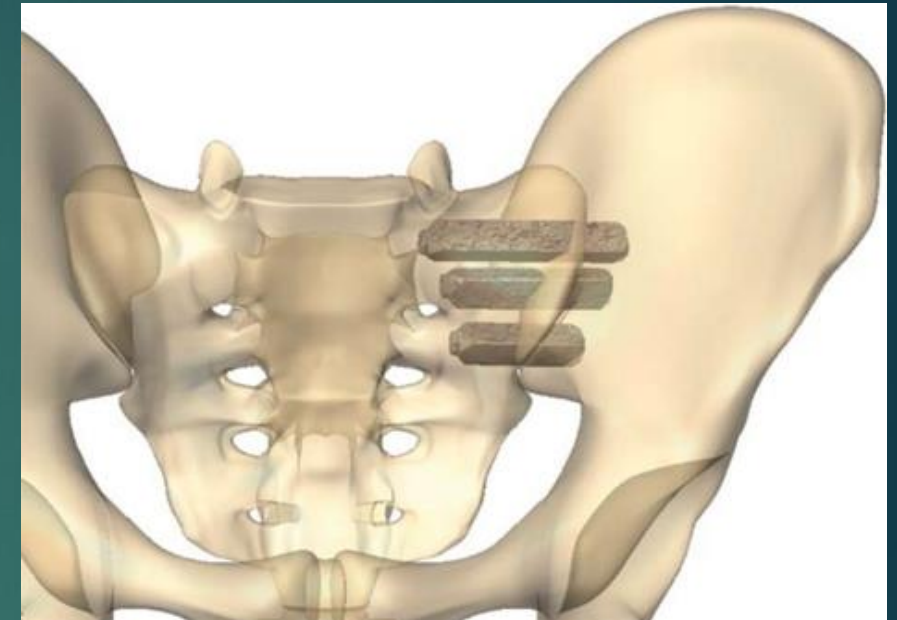
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Sacroiliac Joint Arthrodesis

- ▶ MIS Techniques for SIJ fusion becoming available
- ▶ Porous titanium screws, wedges, triangles available for implantation
- ▶ Provide fusion of SIJ via ongrowth and ingrowth through porous surface
- ▶ Implants placed through a single 2 cm incision.



Sacroiliac Joint Arthrodesis



Other New Technologies

- ▶ Spinal Robotics
- ▶ Endoscopic spinal surgery
- ▶ Motion preservation surgery



Questions



Thank You



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