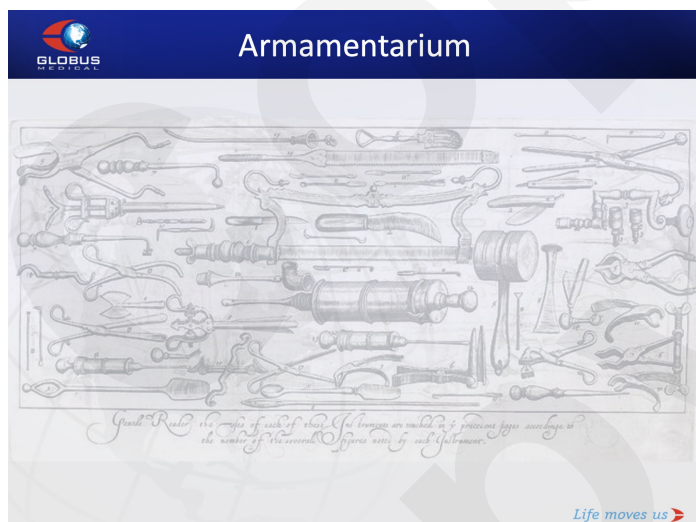




Deformity

- Spondylolisthesis
- Scoliosis
- Kyphosis
 - Paediatric
 - Adult degenerative



Indications for Surgery

- **What are you trying to achieve?**
- **MISS is a Tool in Surgical Armamentarium**
 - Use when appropriate to achieve your goals
 - Non-maleficence - "first, do no harm" (primum non nocere).

Indications for Surgery - DRS

- **Decompression**
 - Spinal cord / nerve roots
- **Realignment**
 - Correct deformity
- **Stabilisation**
 - Prevent / Treat
 - Neurological deficit / deformity / pain
 - (Non fusion technology form of "stabilisation")

All may require fusion

Require Instrumentation

Instrumentation increases fusion

Fusion

- **Fusion – think:**
 - α contact surface area ($1/\alpha$ subsidence)
 - $\uparrow$ compression $\downarrow$ tension
 - autograft > allograft > synthetic
 - vascular > avascular
 - structural graft > non structural
 - BMP...
 - And unfortunately fusion may not be α clinical outcome

Aims of Deformity Surgery

- Balanced spine
- Halt progression of deformity
- Pain relief (limb > back)

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MIS Deformity Questions

- Do you need facetectomies / osteotomies?
- Do you need direct neuronal decompression?
- How will you achieve fusion?

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- Joints are designed to move
- Fusion is abnormal
- Beware – nature against you!

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Techniques

- ALIF
- TLIF
- LLIF
- Perc Screws

Front Back and Sides



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Adult Deformity Correction Through Minimally Invasive Lateral Approach Techniques

Gregory M. Mundis, MD,* Behrooz A. Akbarnia, MD,*† and Frank M. Phillips, MD†

SPINE Volume 35, Number 26S, pp S312-S321
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A Prospective, Nonrandomized, Multicenter Evaluation of Extreme Lateral Interbody Fusion for the Treatment of Adult Degenerative Scoliosis: Perioperative Outcomes and Complications

Robert E. Isaacs, MD,* Jonathan Hyde, MD,† J. Allan Goodrich, MD,† William Blake Rodgers, MD,§ and Frank M. Phillips, MD¶

SPINE Volume 35, Number 26S, pp S322-S330
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Instrumentation-Related Complications of Multilevel Fusions for Adult Spinal Deformity Patients Over Age 65: Surgical Considerations and Treatment Options in Patients With Poor Bone Quality

Christopher J. DeWald, MD, and Thomas Stanley, MD

SPINE Volume 31, Number 19 Suppl, pp S144-S151
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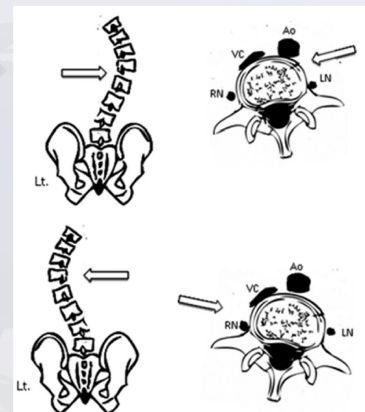
Medical Complications of Surgical Treatment of Adult Spinal Deformity and How to Avoid Them

Eli M. Baron, MD,* and Todd J. Albert, MD†

SPINE Volume 31, Number 19 Suppl, pp S106-S118
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Remember Rotated Anatomy



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Better
A SURGEON'S NOTES ON PERFORMANCE
Atul Gawande

1 found I had been gripping the book so tightly my fingers hurt!
John Carey

By the bestselling author of *Complications*
and *The Checklist Manifesto*

Abilities / Adaptation

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Performance measure

Plateau

Steep acceleration

Slow beginning

Number of trials or attempts at learning

open	ask (guided)	blind
tell (structured)		
hidden		unknown

B is better teacher

Awareness

Unconscious

Conscious

Incompetence

Competence

Order of learning:
Open – Mini – MIS

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A man's got to know his limitations

Life moves us ➤

Life moves us ➤

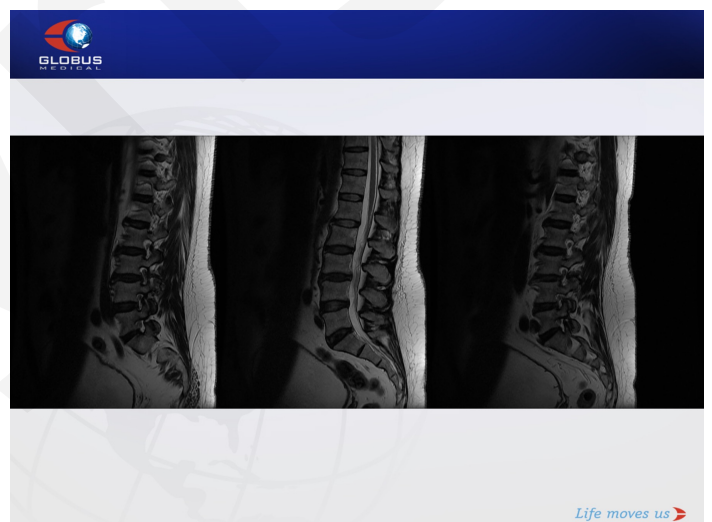
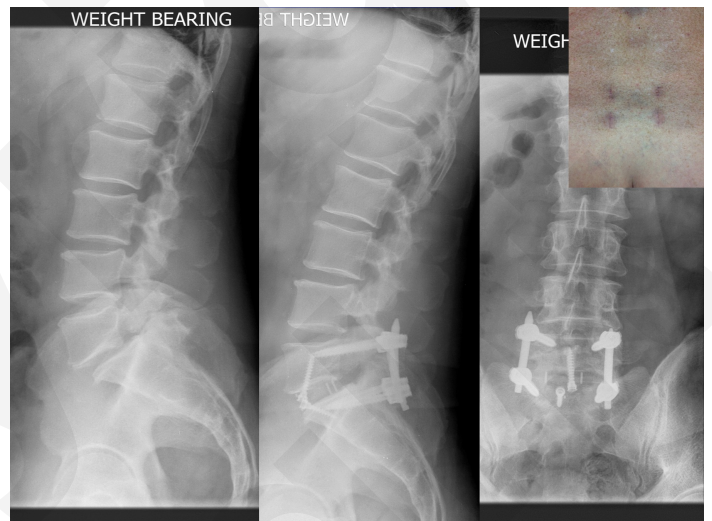
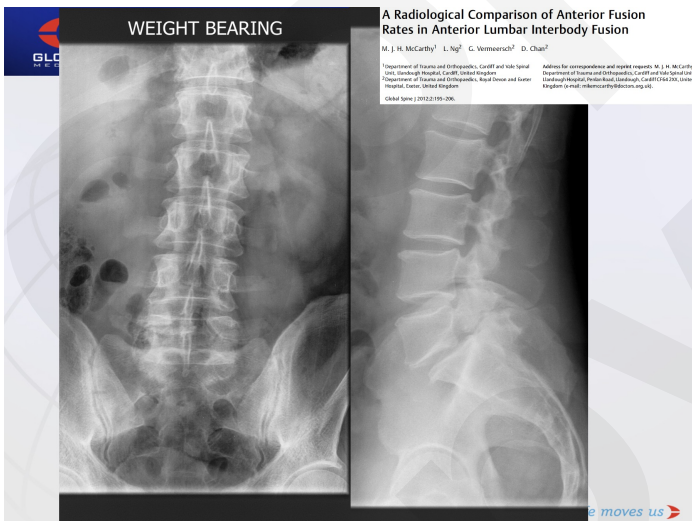
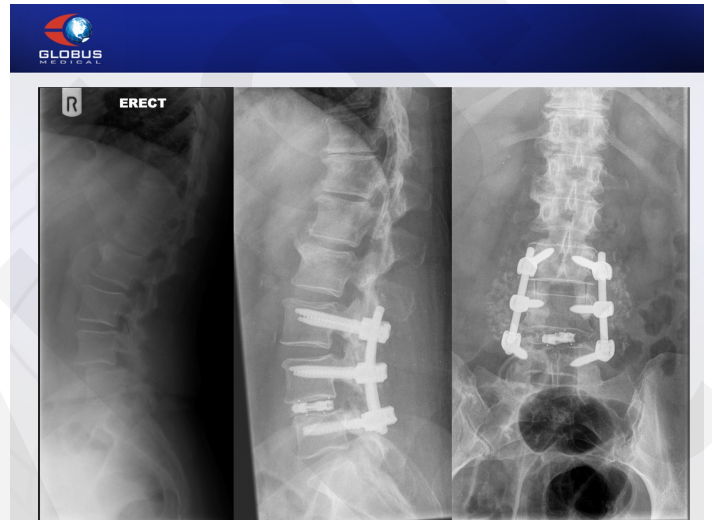
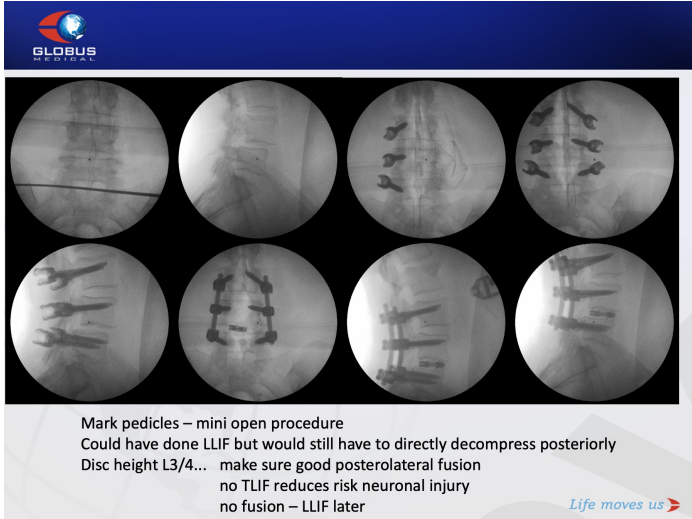
Spondylolisthesis

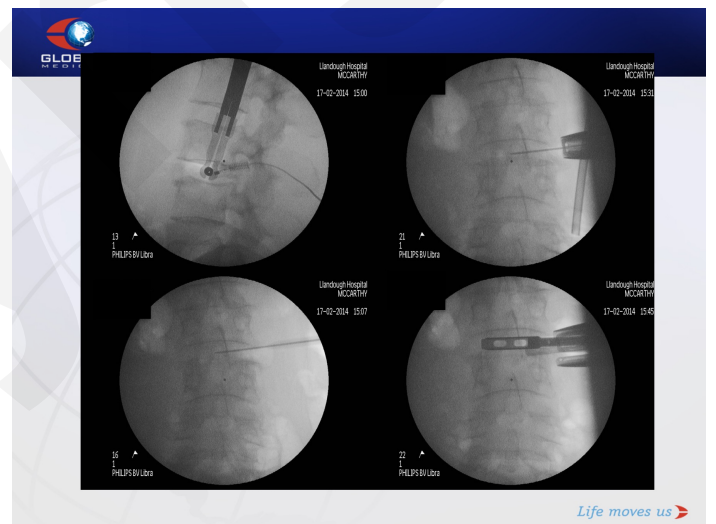
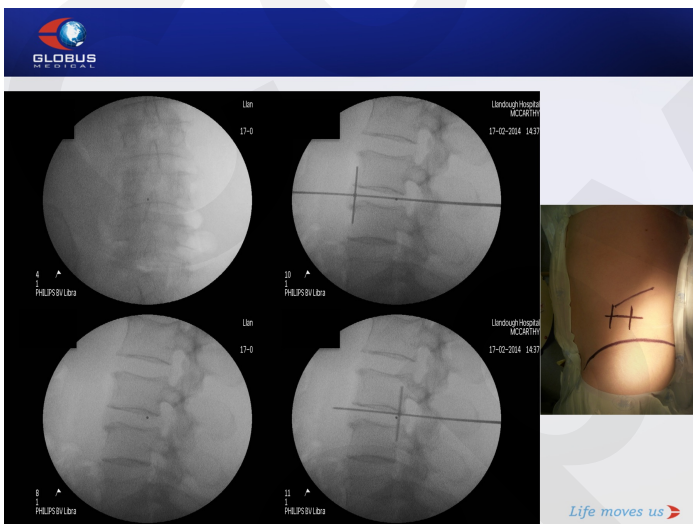
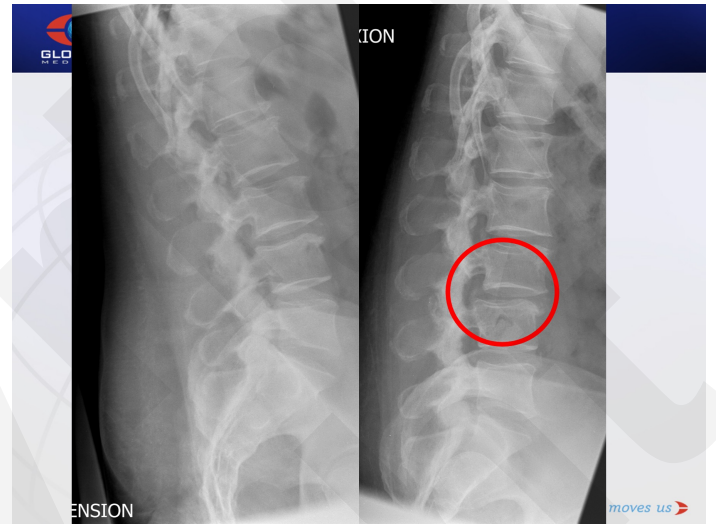
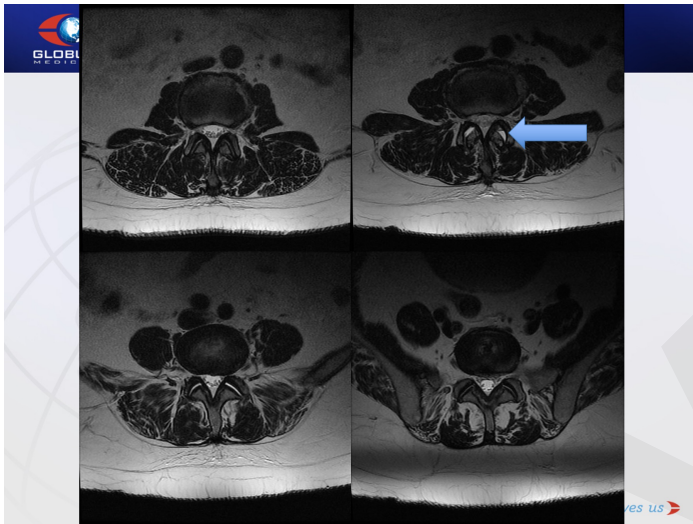
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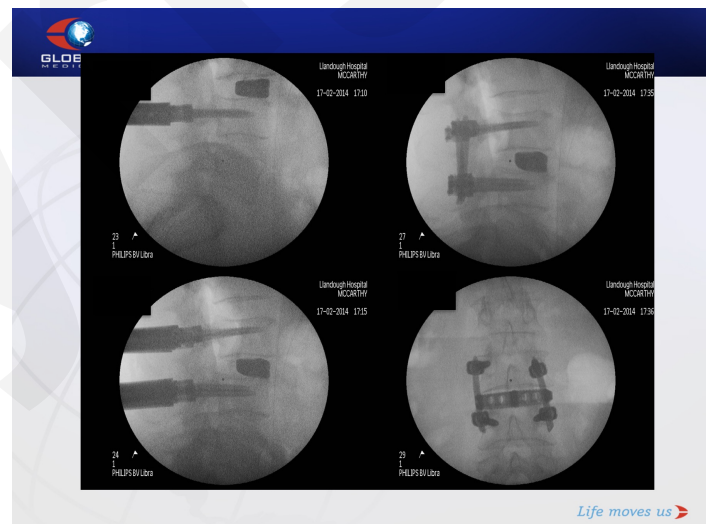
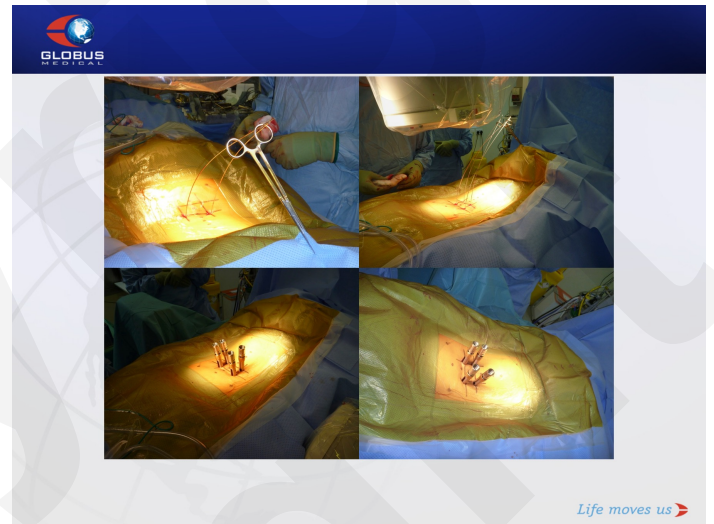
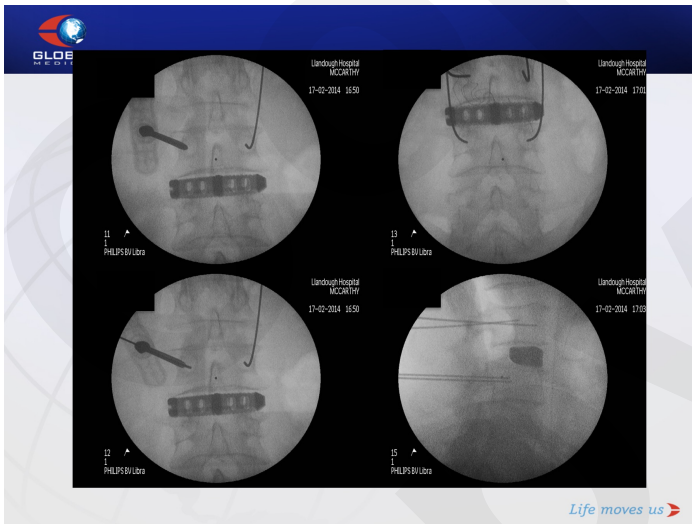
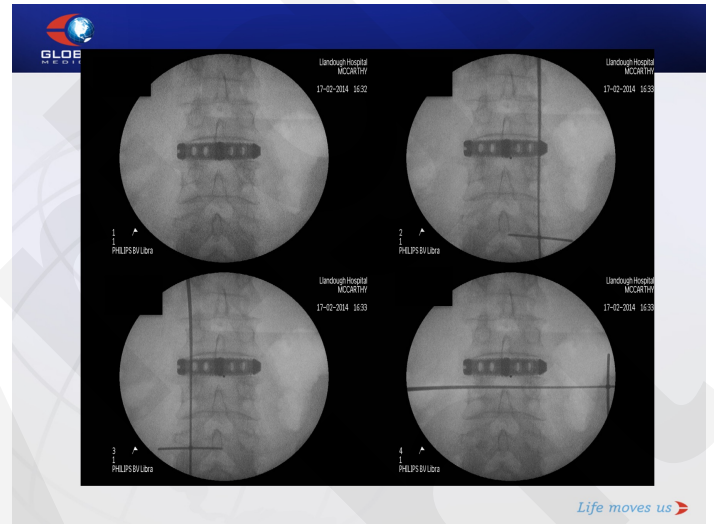
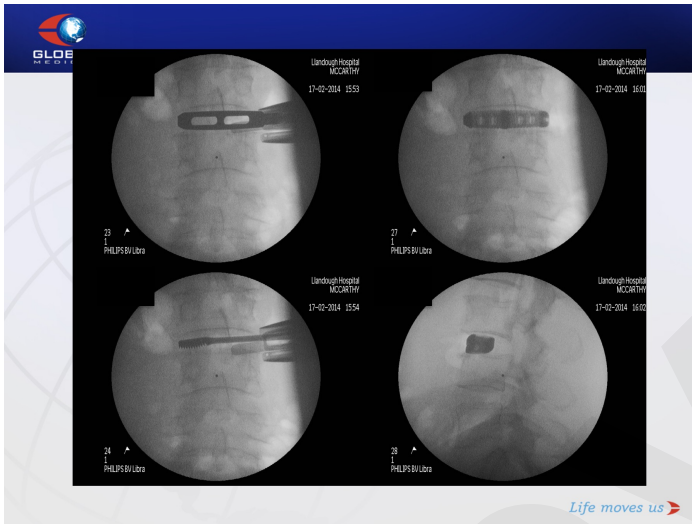
L3/4 Degenerative Spondylolisthesis – bilateral stenosis

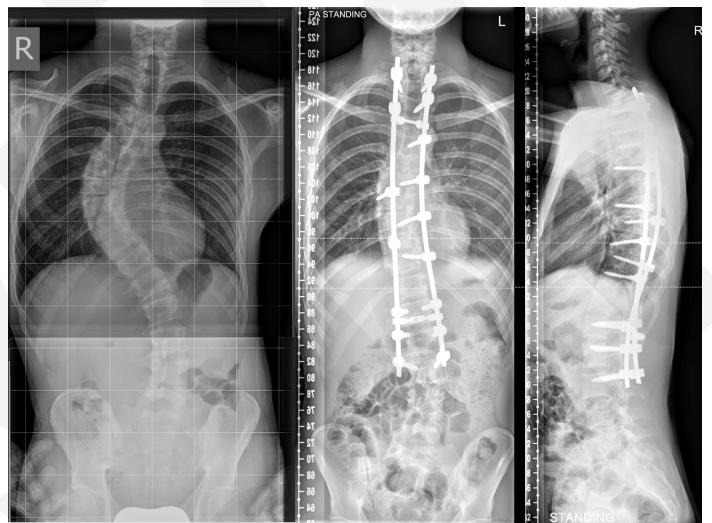
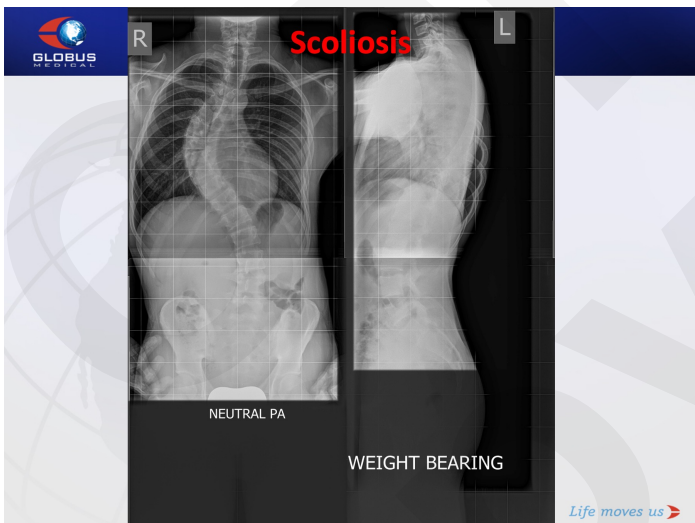
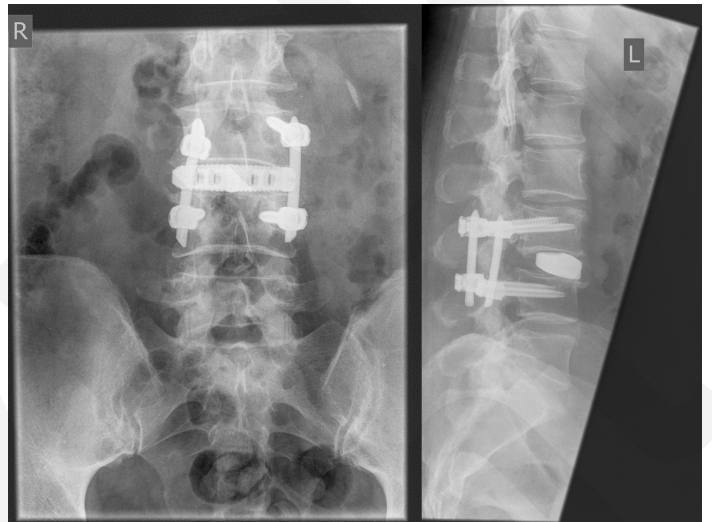
L4/5 Degenerative Spondylolisthesis – bilateral stenosis and foraminal

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GLOBUS MEDICAL Endoscopic Scoliosis Correction

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GLOBUS MEDICAL Growing Rod Constructs

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Degenerative Deformity

WEIGHT BEARING BEARING

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