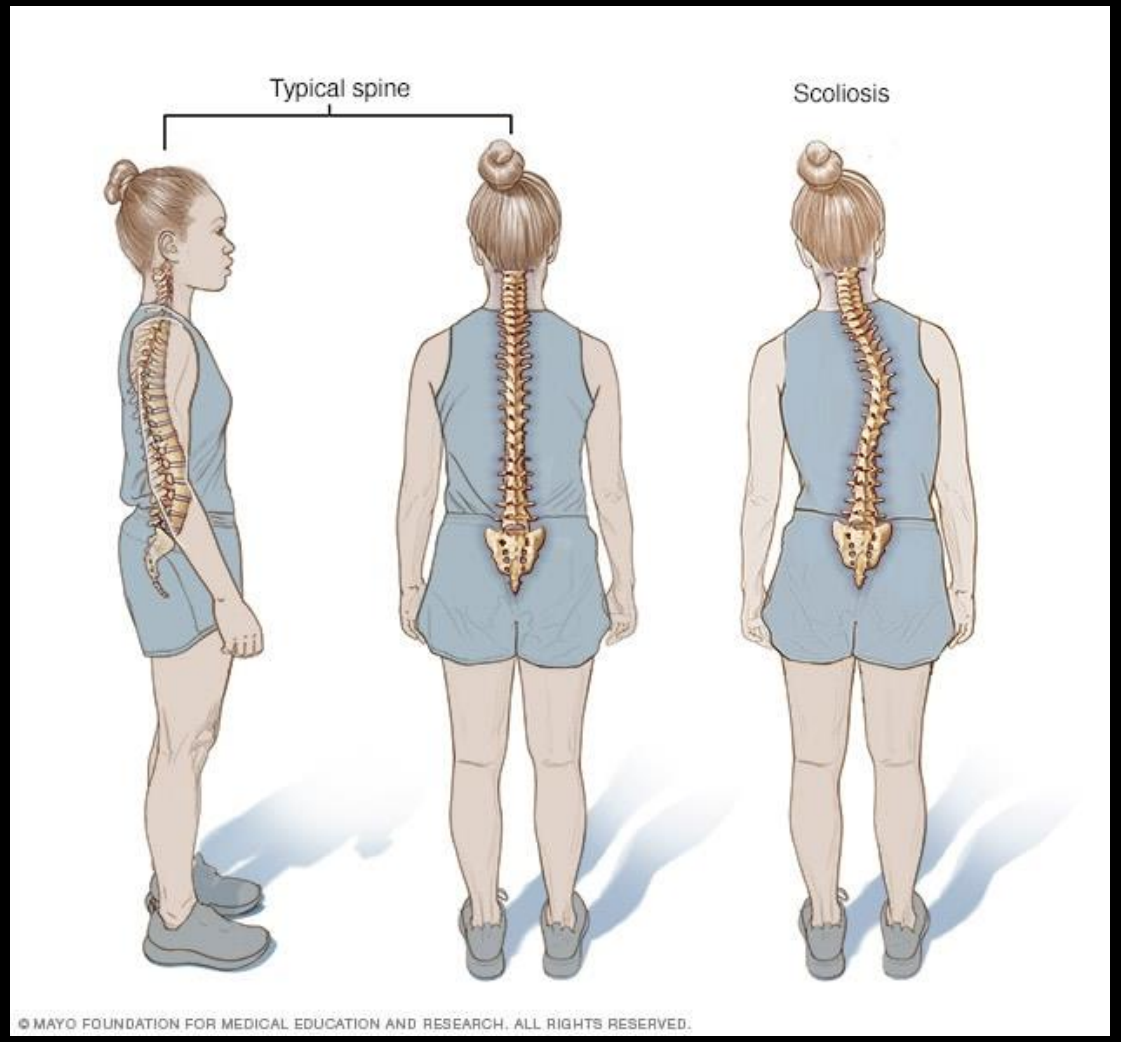
Posterior Spinal Fusion for Type 1 Adolescent Scoliosis

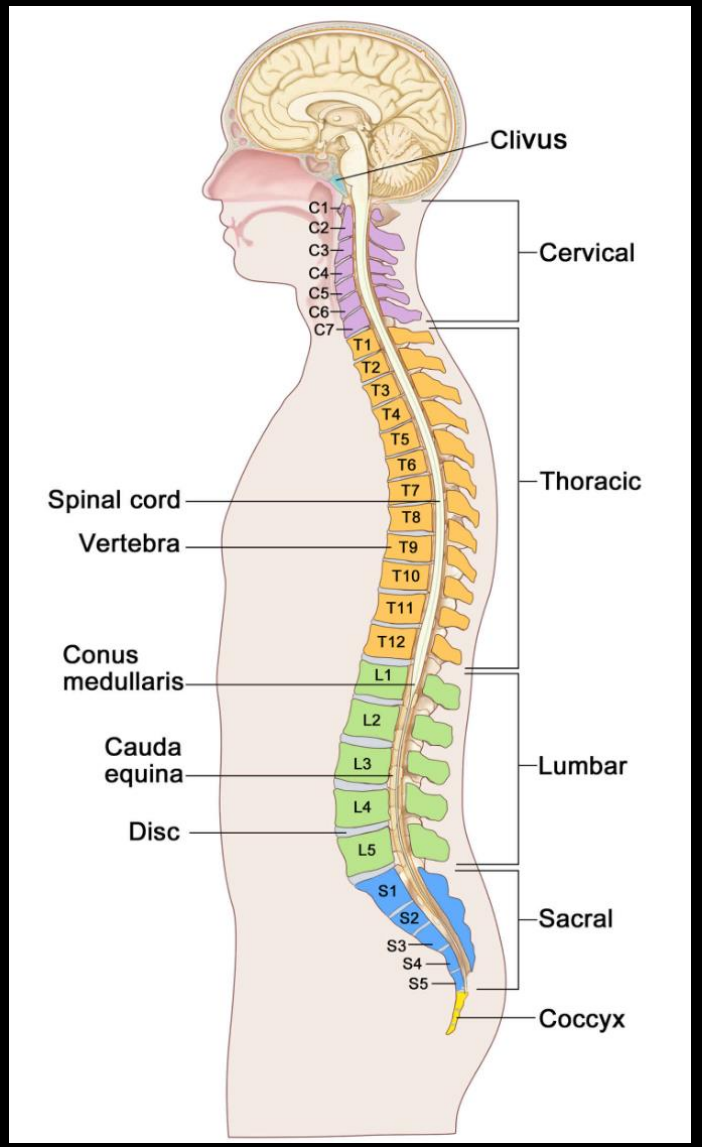
Minha Rasheed

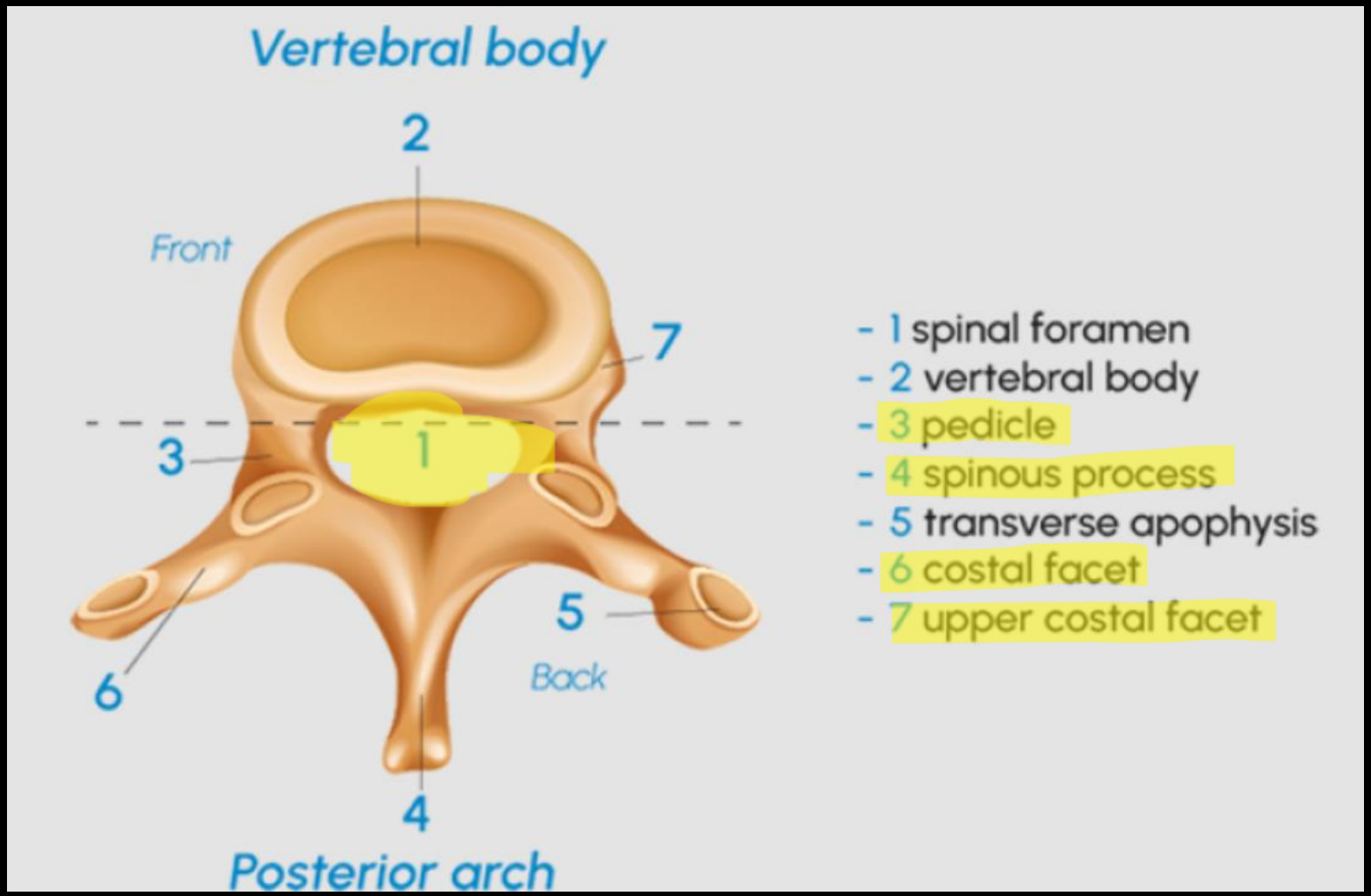
Scoliosis



- Spinal curvature on the right or left side of the spine
- Congenital, Idiopathic, and Neuromuscular Scoliosis
- Why Treat Scoliosis:
  - Breathing Issues
  - Chronic Back Pain
  - Cosmetics

Basic Relevant Spine Anatomy



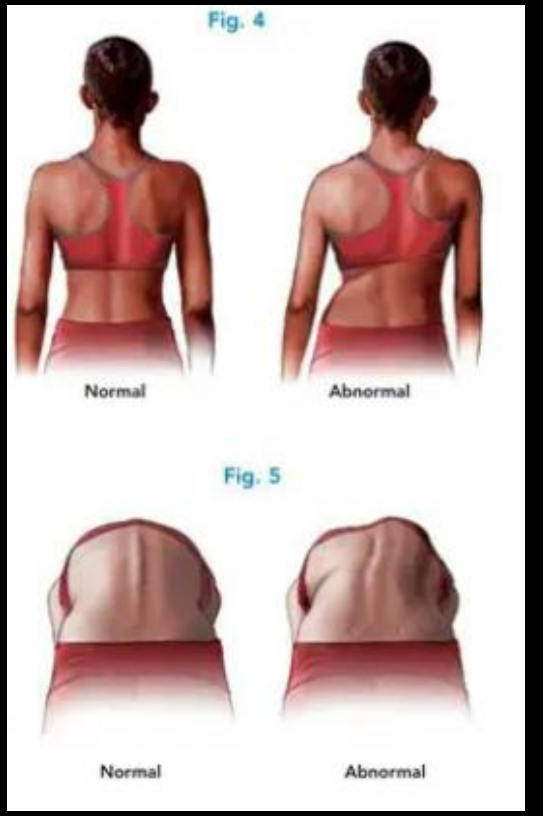


Case Introduction

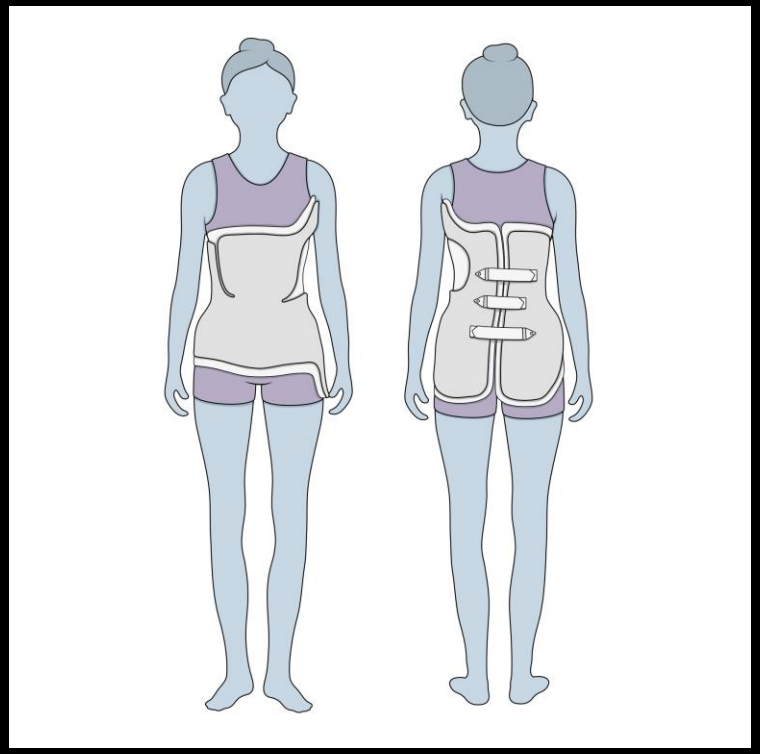
- G.I, 16-year-old female
- Type 1 Diabetes
- Type 1 Curve of 53 degrees
- Lower non-structural curve of 34 degrees
- Physical Exam: Adam's Forward Bending Test







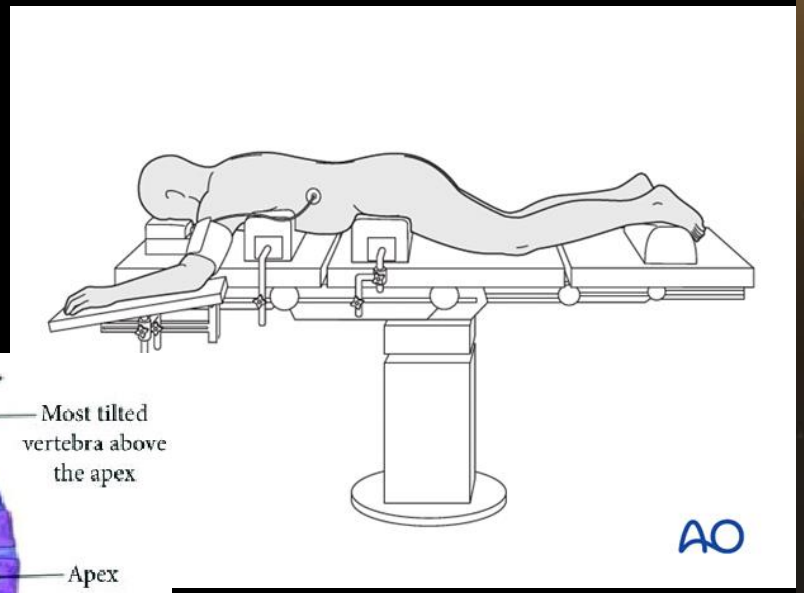
Before Considering Surgery

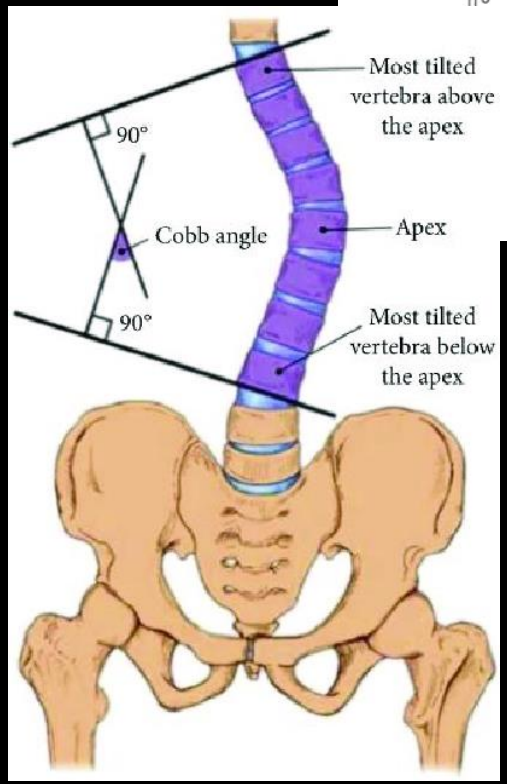


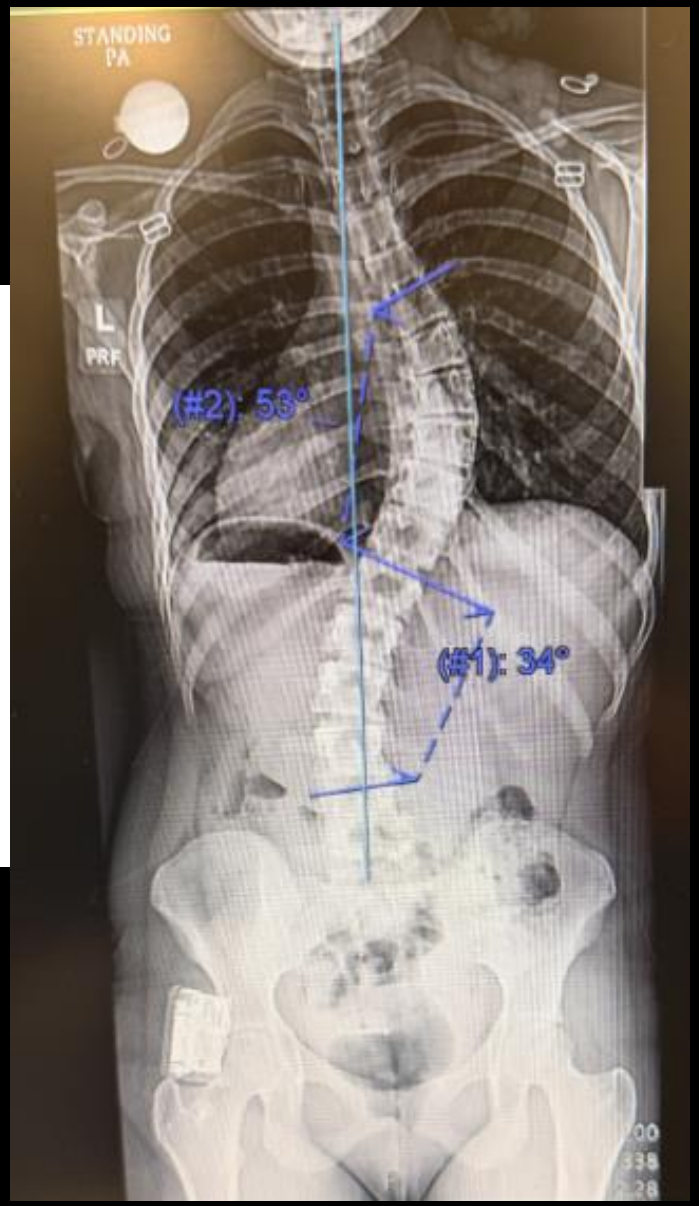
- Bracing
  - Until Curve gets over 50 degrees
  - Growing Children
  - 18 hours a day
  - Goal to Stop the curve from getting worse
  - Adherence in children
    - “Early Adherence to Prescribed Brace Wear for Adolescent Idiopathic Scoliosis Is Associated With Future Brace Wear”
    - 97 percent of adherent patients had bracing success vs 71 percent of non-adherent

Pre-Op

- Patient Position: Bolster
- T3-T12







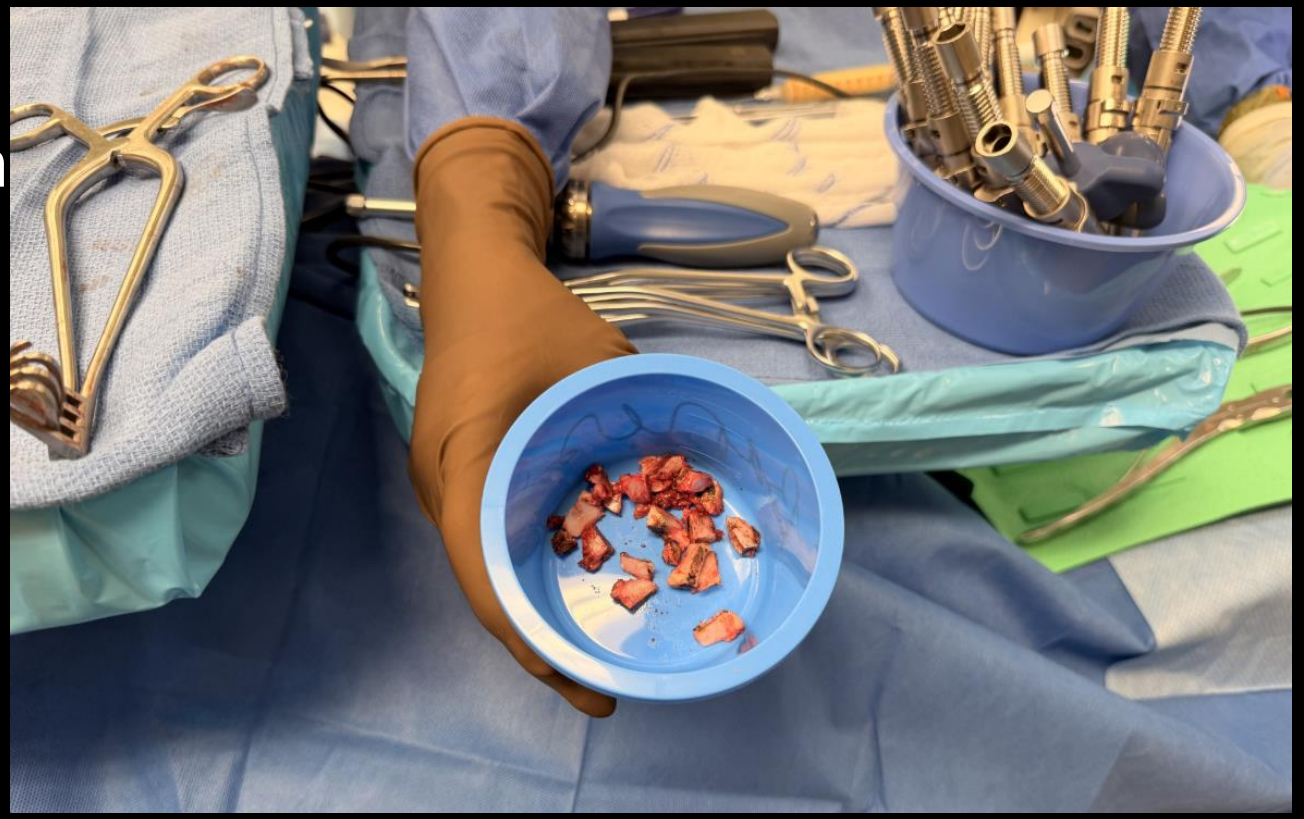


Surgical Approach

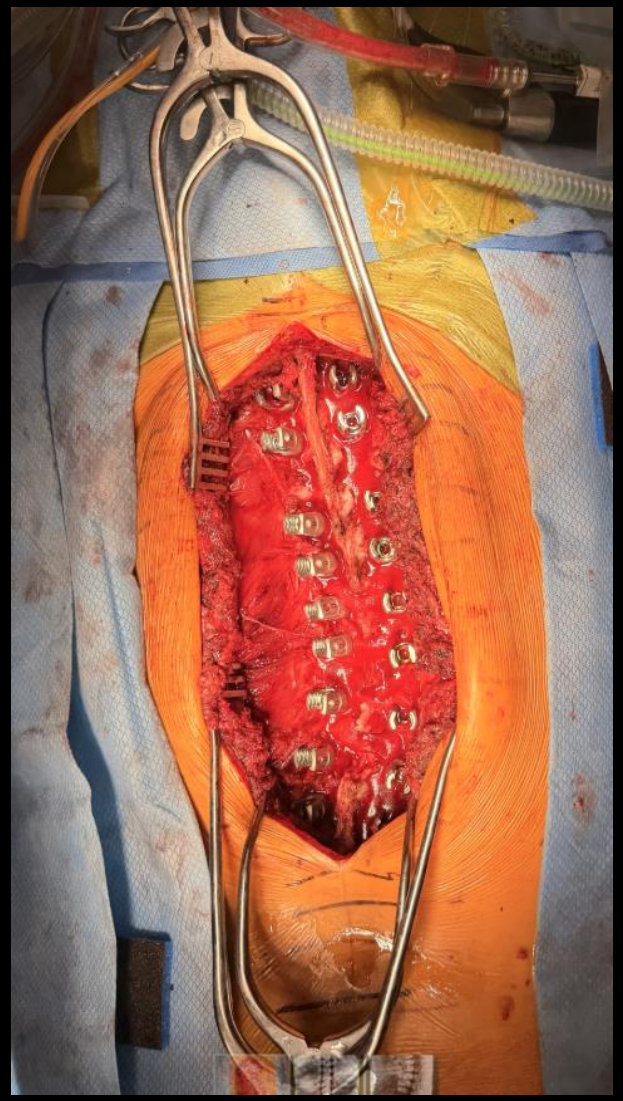
- Anesthesia, Spinal Cord Monitoring, Cell Saver
- Incision & Exposure
- Screw Placement
- Rod Placement & Curve Correction
- Bone Grafting
- Closure

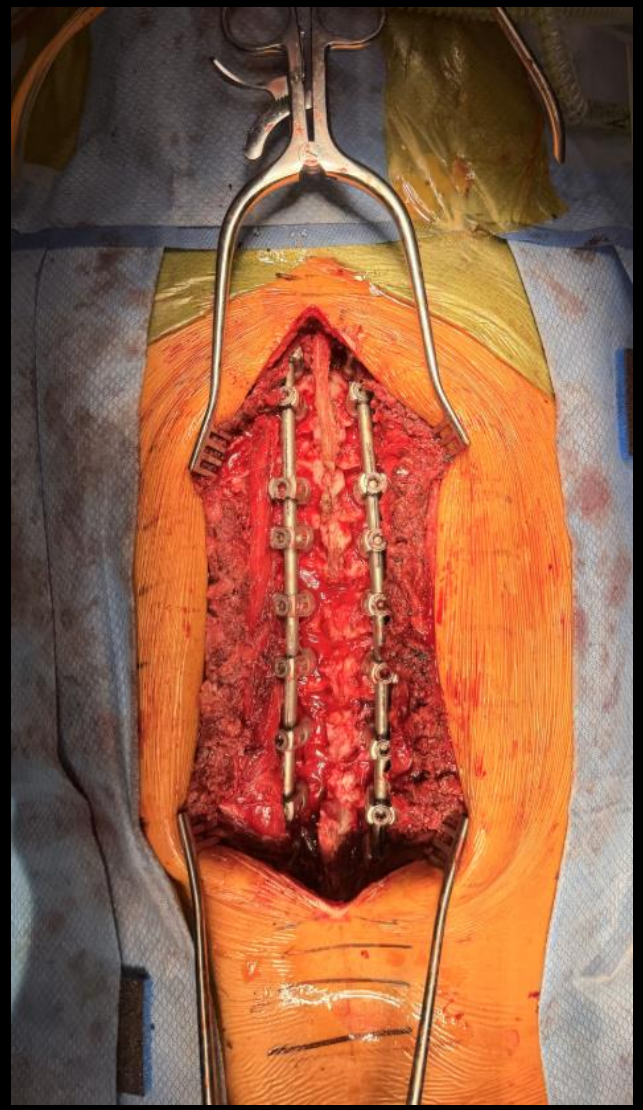
Preparing for Metal

- Removal of facet joints for flexibility and better insertion of screws



Pedicle Screw and Rods Placement



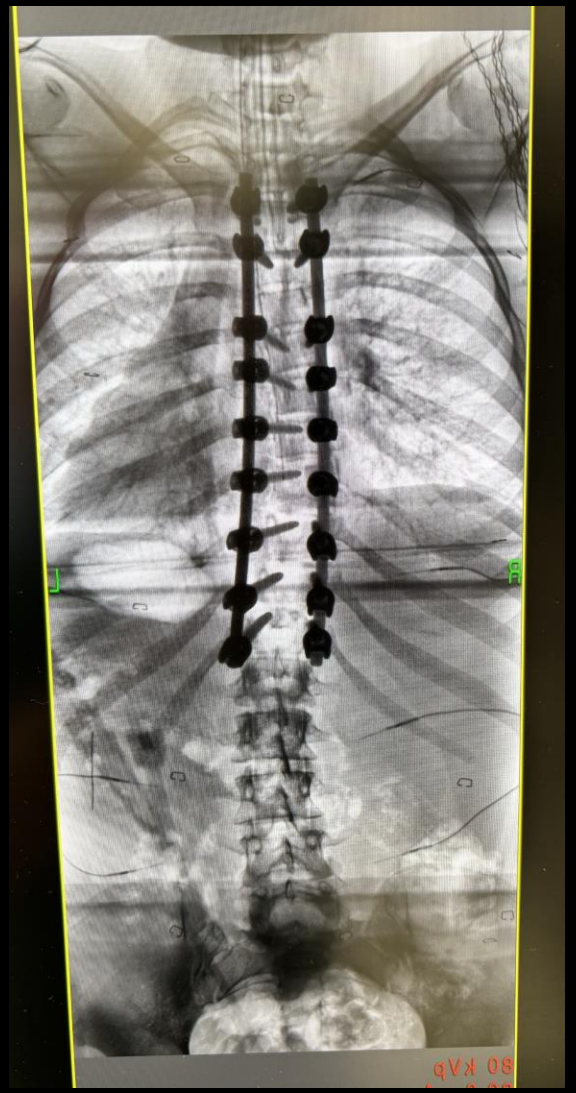


- Screws placed using navigating
- 40-25-millimeter screws
- Skipped T5
- Cobalt Chrome and Titanium rods

Bone Graft and Closing

- Beta Iodine to bacteria from producing biofilms on metal hardware
- Bone Graft composed of Patient's Facets and Cadaver
- 3 Layers of suture and Dermabond
  - Surgical Surgeon's Knot and Running Subcuticular Stitch

Post-Op





- Physical Therapy one day after surgery
- Post-Op visits with X-Rays
- Full Fusion 6-12 Months
- Curve now around 15 degrees
- No limitations on activity once fully healed

THANK YOU!!!!



Resources

- Preparation posterior procedures
- Early Adherence to Prescribed Brace Wear for… : Spine
- Adolescent Idiopathic Scoliosis - Spine – Orthobullets
- Posterior Screws - No direct vertebral body derotation for Lenke 1