

Case Review:

79 year old female with
Adult Degenerative Scoliosis

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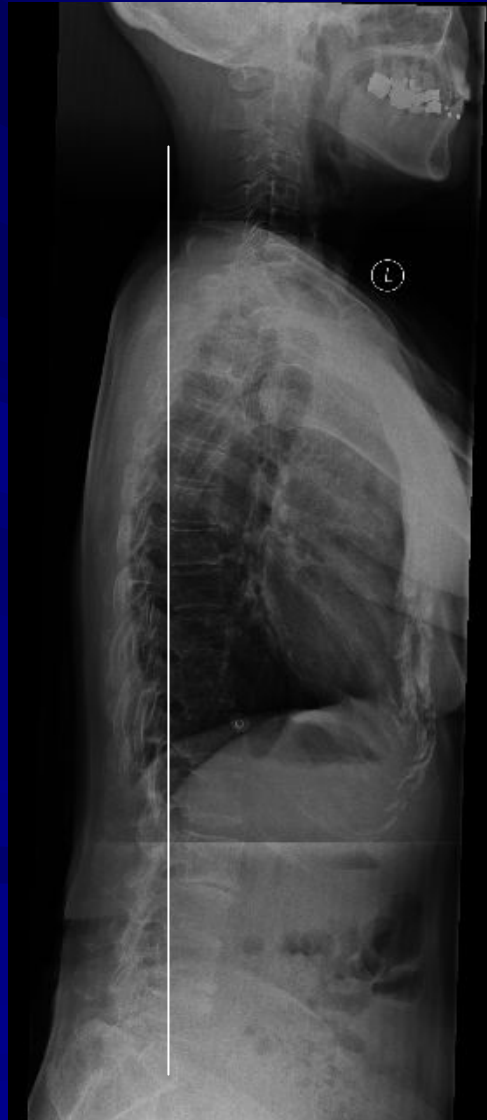
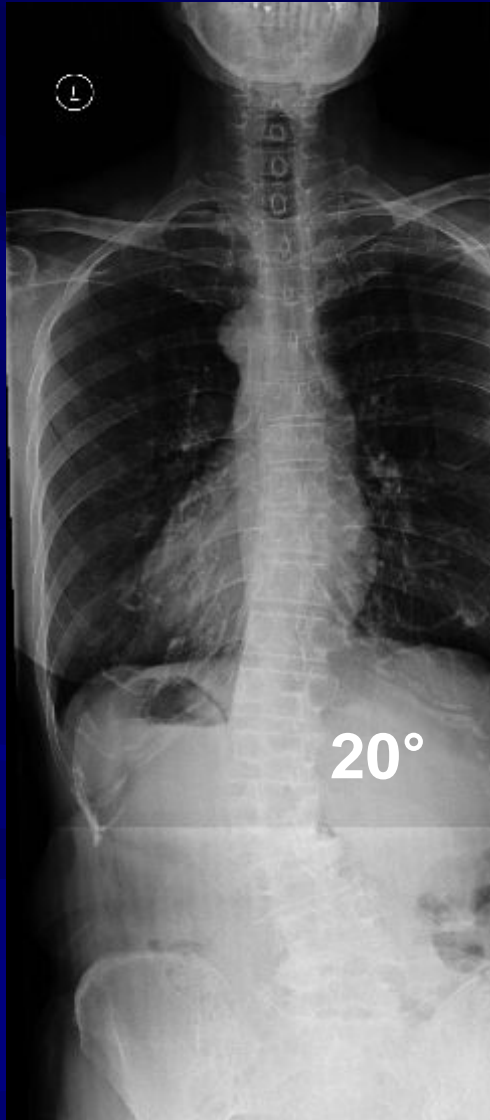
Scoliosis and Spinal Deformity Surgery

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Patient History

- 79 year old female
- Scoliosis
- Herniated disc L2/3, L3/4, and L4/L5
- Spondylolisthesis
- Failed conservative therapy

Pre-op X-rays



- 27° lumbar curve
- Spondylolisthesis at L3-4, L4-5 with cascading spine.
- Note the patient's forward decompensation. (her head is not balanced over her hips)

Bending X-rays



The patient's lumbar spine is rigid on bending.

Flexion/Extension



The rigidity requires osteotomies to create lordosis.

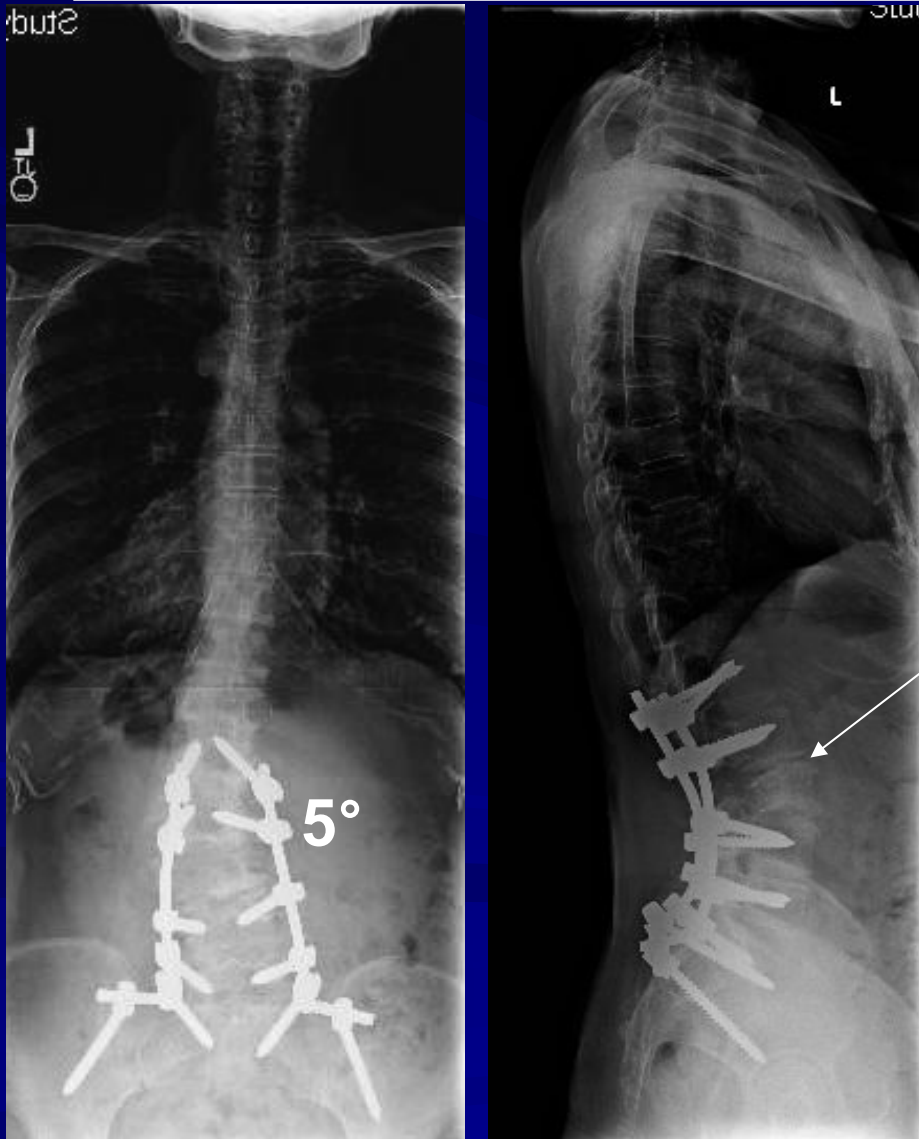
Indications for Surgery

1. Adult scoliosis, degenerative and de novo.
2. Degenerative spondylolisthesis L2-3, L3-4.
3. Severe lumbar kyphosis forward decompensation "flat back syndrome."
4. Coronal plane decompensation with lumbosacral oblique takeoff.
5. Severe spinal stenosis L2-3, L3-4 with combination motor sensory deficit.
6. Failed conservative therapy with low back and leg pain.
7. Severe osteopenia, multiple co-morbidities including hypertension, osteopenia, advanced age.
8. Lumbosacral transitional vertebrae.

Surgical Strategy

1. Segmental spinal instrumentation, L1 to the pelvis. 7 level fusion using CD 5.5 stainless steel screw pelvic fixation.
2. Kyphectomy, corpectomy L3 pedicle subtraction osteotomy, L3 for saggital plane realignment.
3. Posterior spinal fusion L1 to the pelvis using locally harvested autogenous bone and RHBMP.
4. Bilateral iliac crest bone graft exposure sites.
5. Laminectomy L2-3-4 with neuroforaminotomy.
6. Intraoperative SSEP's.
7. Intraoperative fluoro.
8. Osteotomy L2-3 and L4-5 for saggital and coronal plane deformity correction.

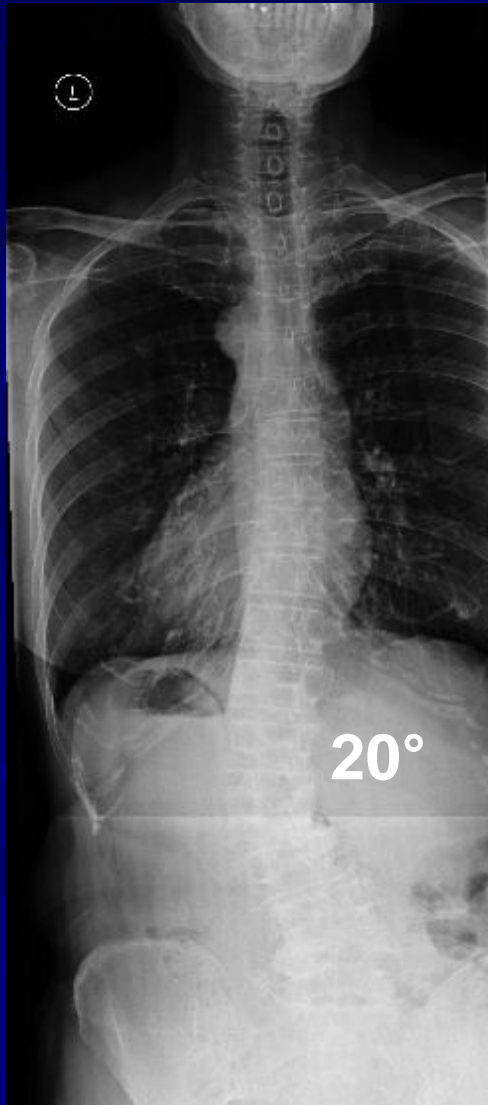
Post-Op Films



At one year post-op the patient was doing well, and walking with minimal pain. Her sagittal balance has been normalized.

Pedicle subtraction osteotomy induced lordosis.

Pre-Op/Post-op Comparison



Pre-Op/Post-op Comparison



The patient was decompensated in a forward position prior to surgery. This put a strain on her back muscles and neck, causing fatigue.

After surgery she was well balanced with her head aligned over her hips.