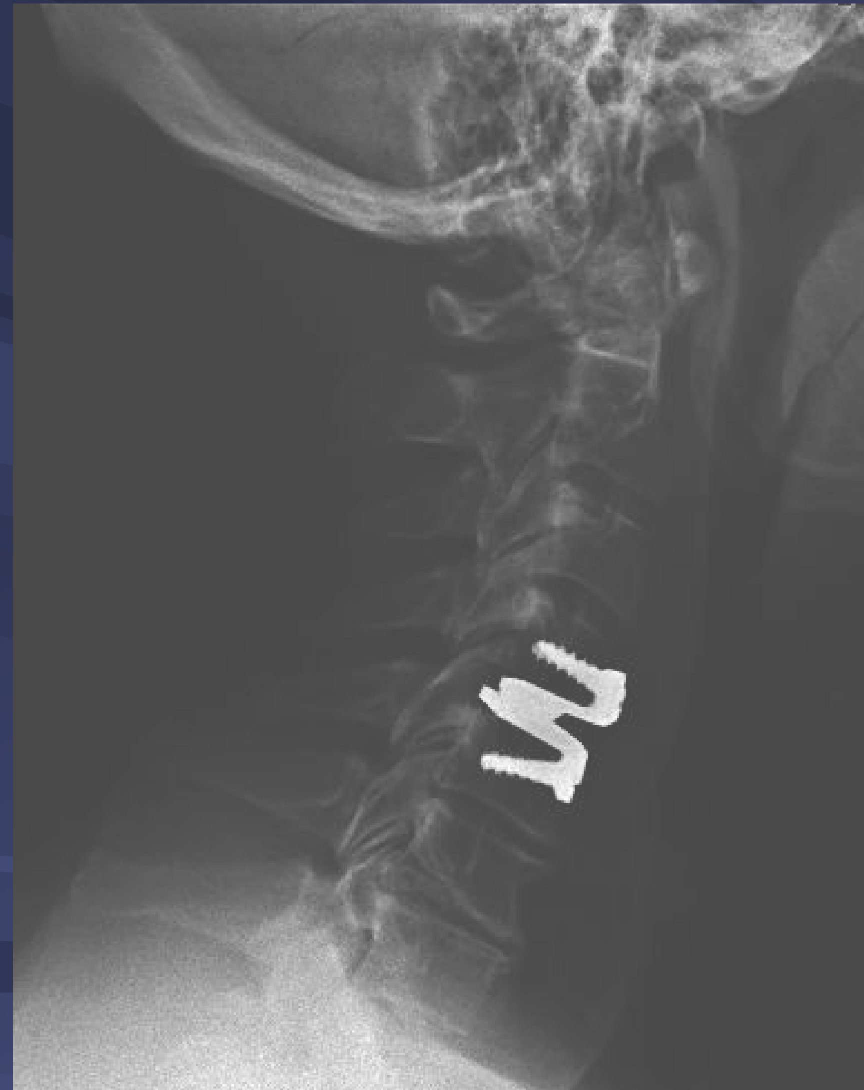

Case Review:

60 year old male, with massive herniation at C4/5. Treated with a Prestige Total Disc Replacement

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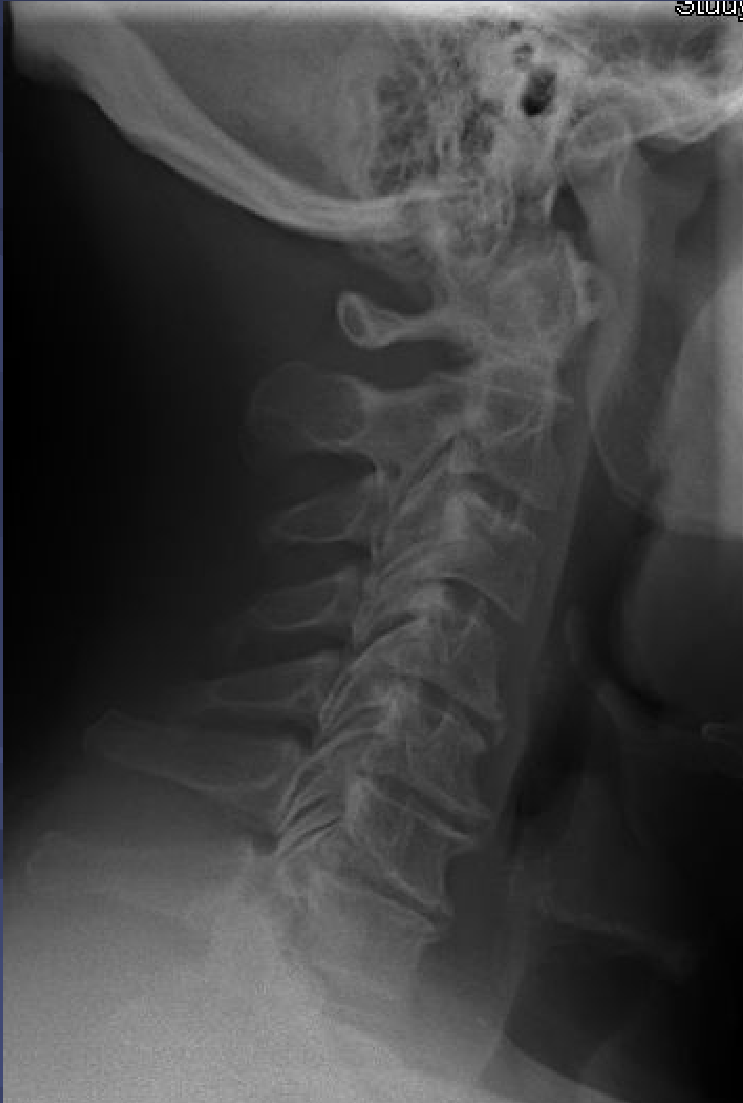
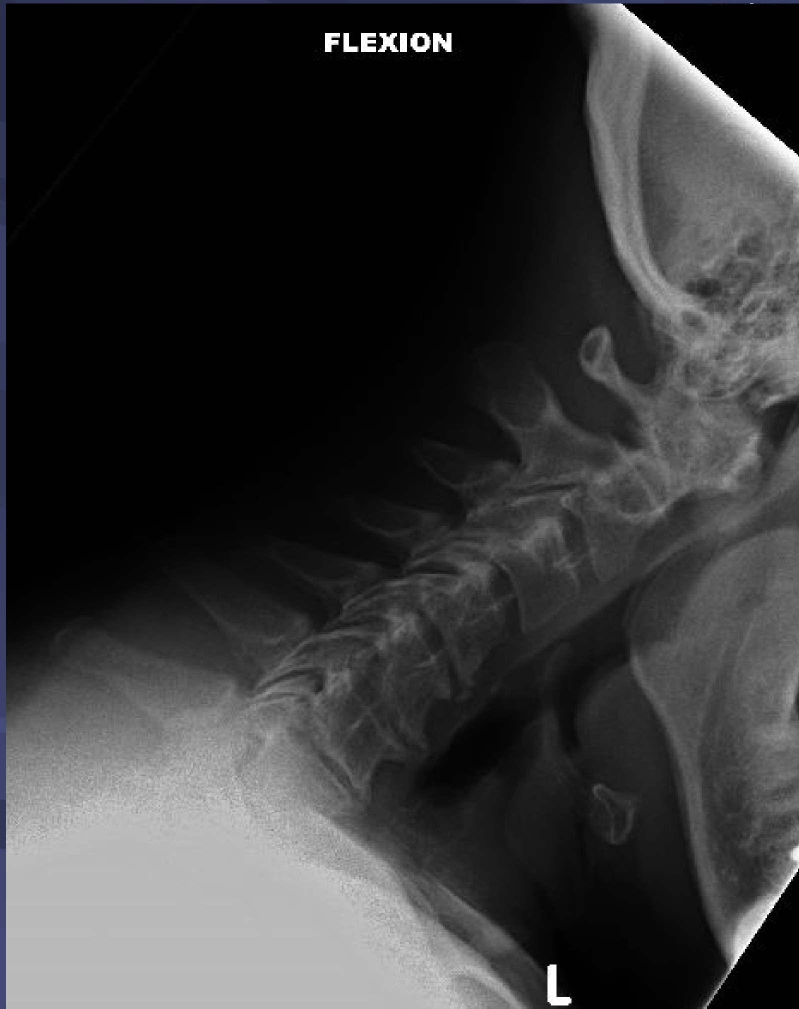
Patient History

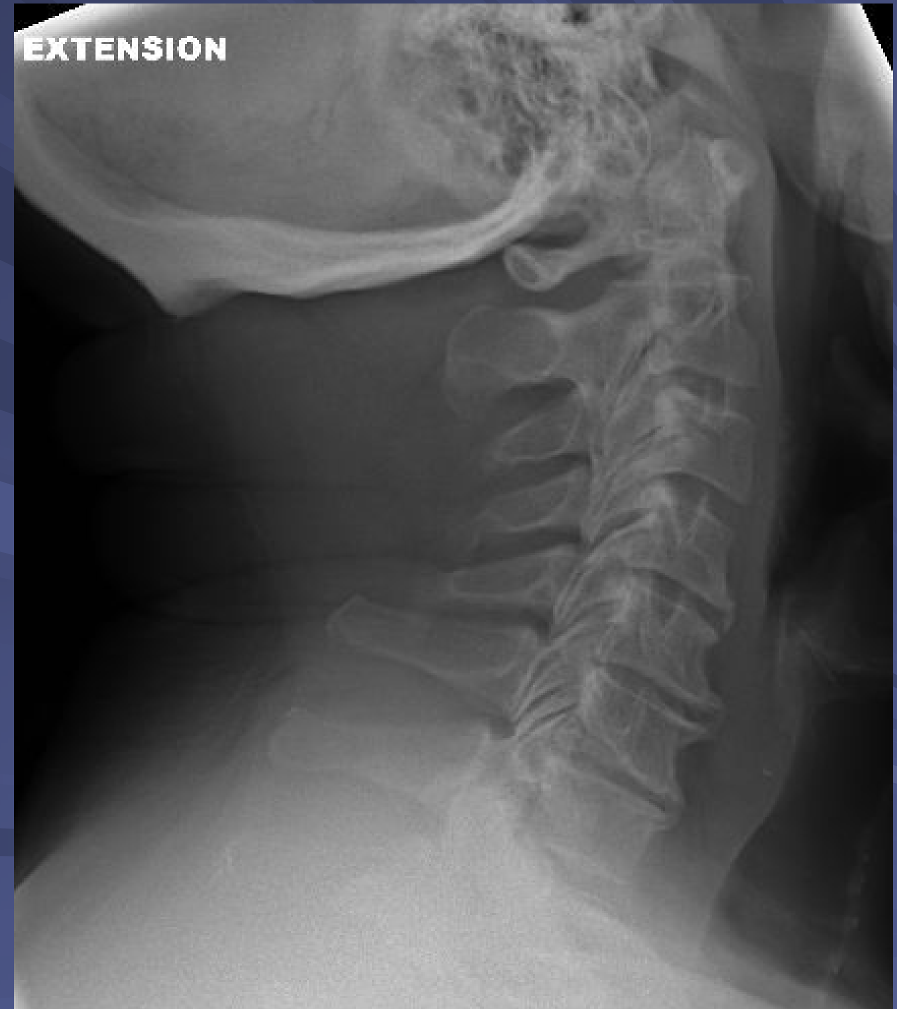
- 60-year-old male
- Significant neck and arm pain with numbness.
- Massive acute soft disk herniation at C4-5 causing significant cord compression and secondary gliosis changes in the cord.
- Significant degeneration at C3-4, C5-6 and C6-7. The juxta vertebral stiffening no doubt concentrated stress through the open C4-5 level which caused the soft disk herniation and compressed the cord at this particular level.
- The problem is at this point that the patient would, in my opinion, need a much larger reconstruction if fusion was done which would include possibly multiple level anterior cervical diskectomy and fusion, and/or possibly that and posterior laminectomy or laminoplasty if the patient's neurologic status did not resolve.
- Therefore, after the alternatives, benefits and complications were discussed with the patient completely, I discussed with him the option of doing a single level anterior diskectomy and doing a total disk replacement at C4-5 interval to these other disks. It was my impression that myeloradiculopathy was no doubt due to the soft disk herniation, and this was a viable option. I told him that he may need further reconstruction including a fusion or a posterior decompression and that there was little precedent for this sort of strategy--the use of artificial disk replacement for myeloradiculopathy +/- gliosis or changes in the cord has been hotly debated.

Pre-op X-rays



Flexion/Extension X-rays





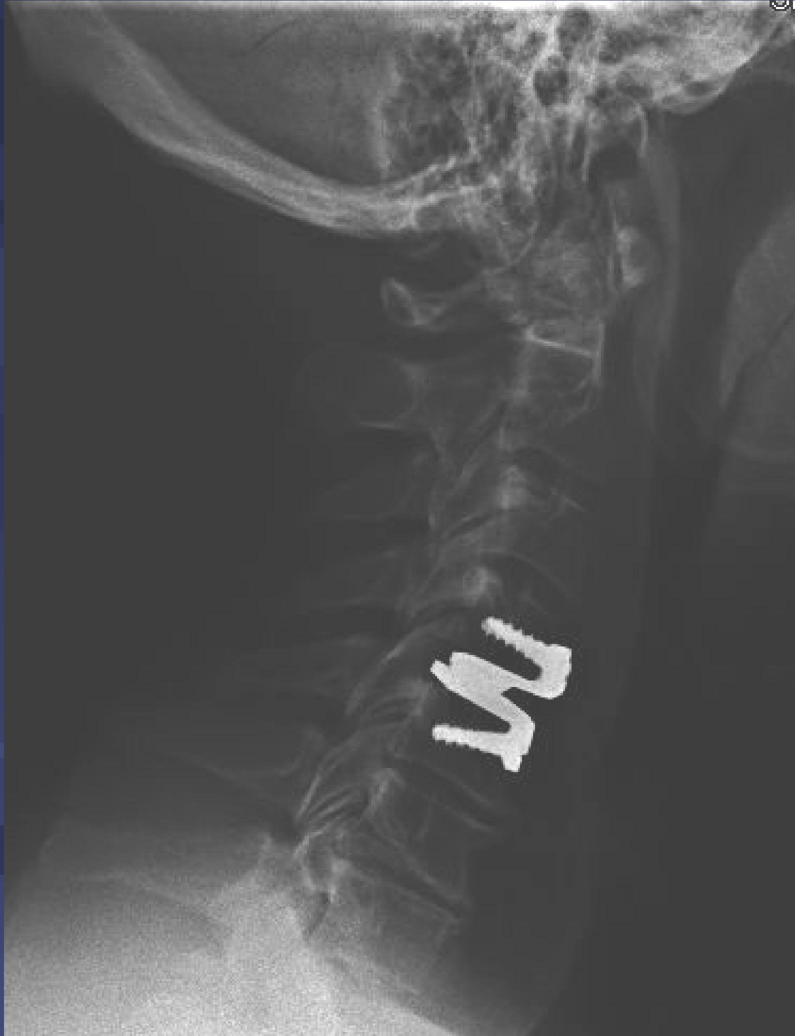
Indications for Surgery

- Myeloradiculopathy due to massive spinal cord compression, C4-5.
- Multiple level degenerative disk disease, C3-4, 5-6, 6-7, with combination of hard and soft disk and superimposed anterior effacement.
- Early motor/sensory deficit due to massive extruded soft disk herniation, C4-5, with gliosis and spinal cord changes.
- Failed conservative therapy.
- Significant arm and neck pain with numbness.

Surgical Strategy

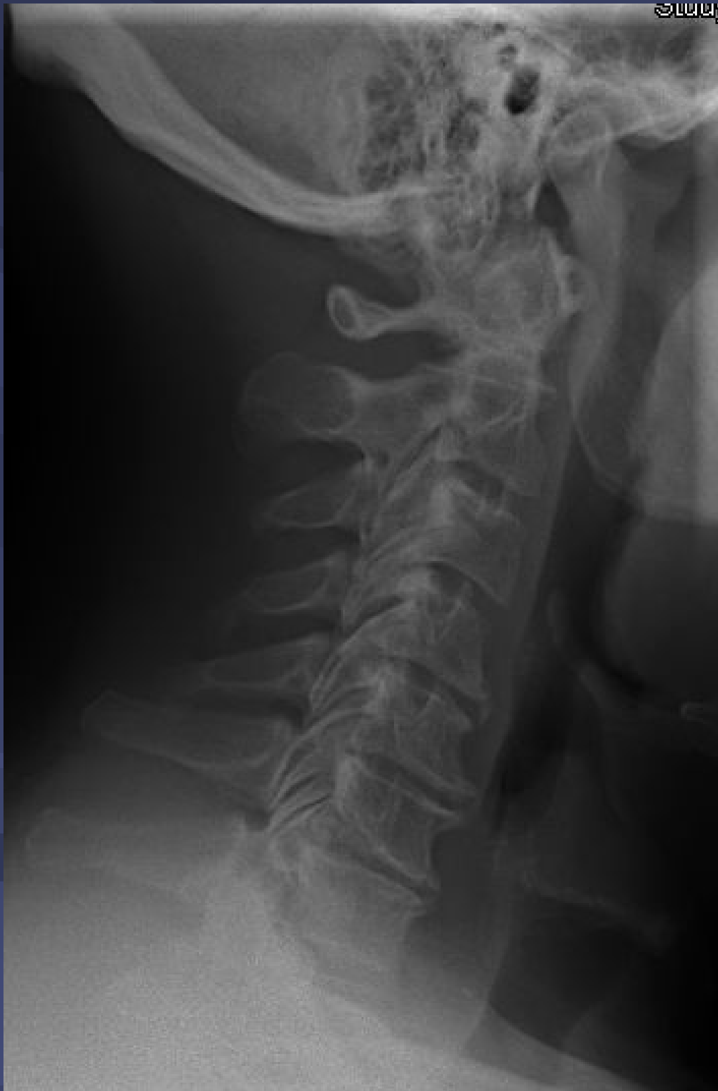
1. Cervical vertebrectomy, C5, for removal of massive anterior and posterior uncovertebral osteophyte and compression.
2. Spinal canal decompression under the microscope for removal of extruded disk herniation soft disk compressing the spinal cord terminally.
3. Bilateral neural foraminotomy with removal of uncovertebral osteophyte, C4-5.
4. Placement of Prestige 7x16 total cervical disk arthroplasty for reconstruction of diskectomy site.
5. Intraoperative somatosensory evoked potential and motor evoked potentials.
6. Intraoperative fluoroscopy.

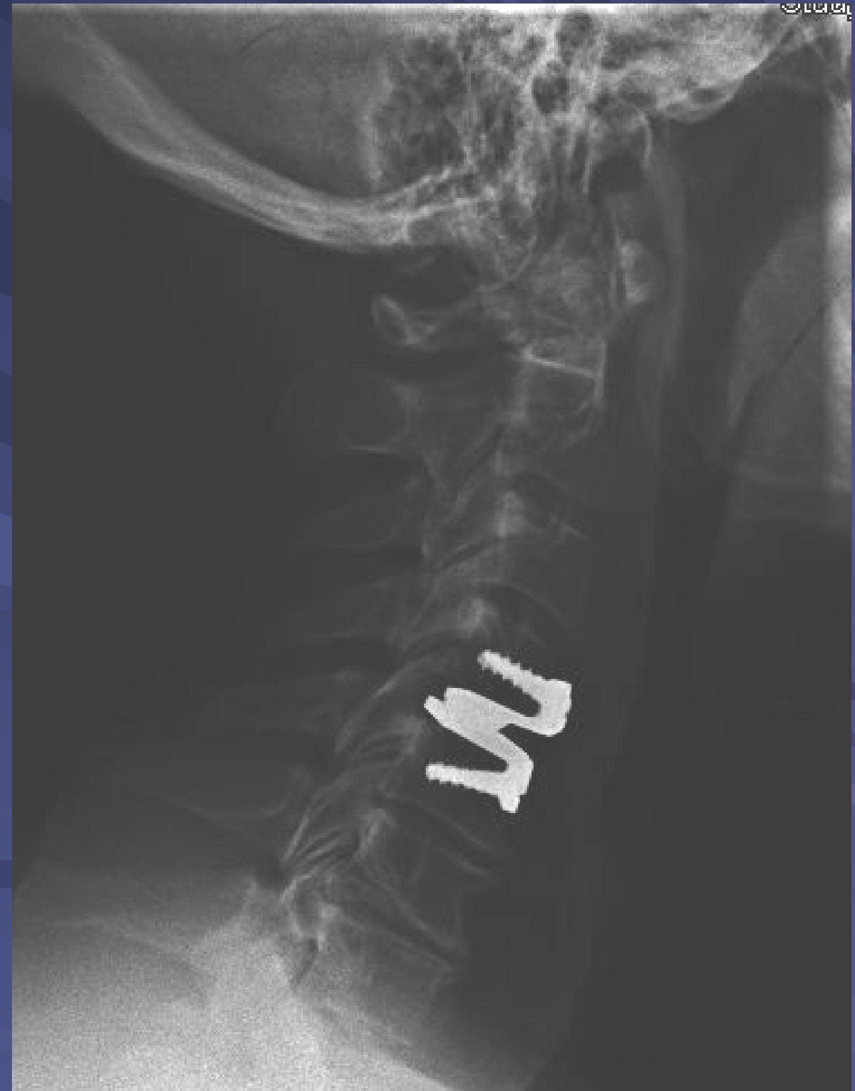
Post-Op Films



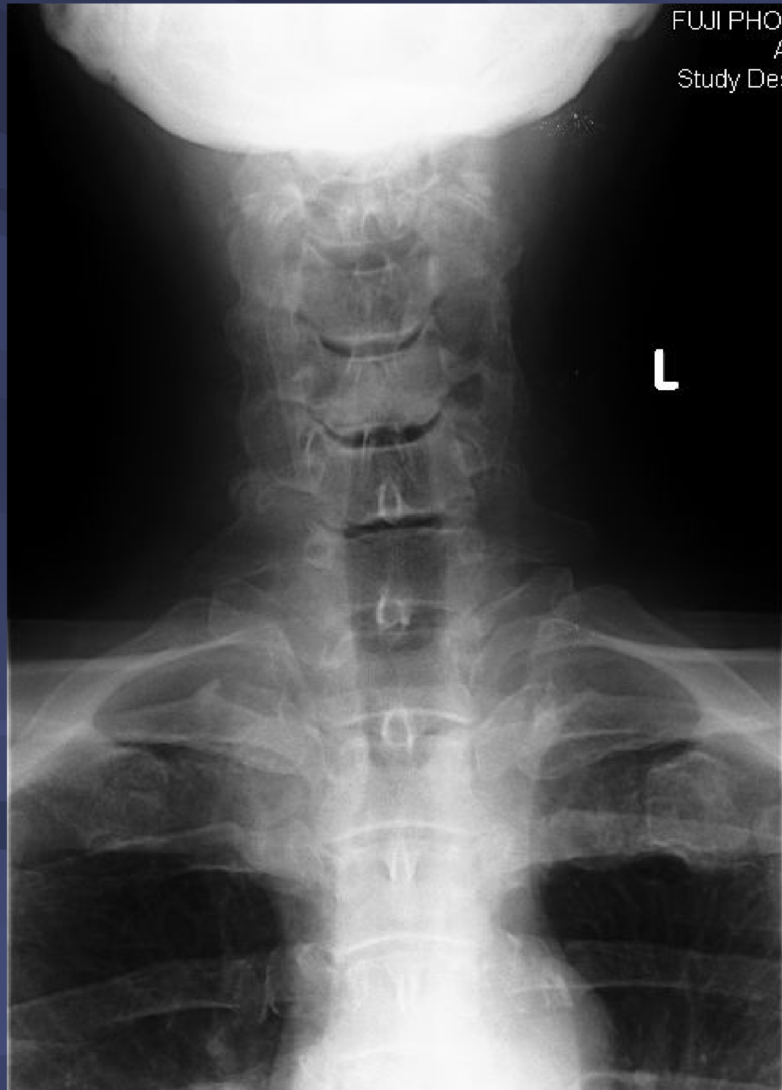
The patient's symptoms resolved immediately following surgery. Within two weeks he resumed his normal activities, including driving an RV across country to work on a Habitat for Humanity construction site.

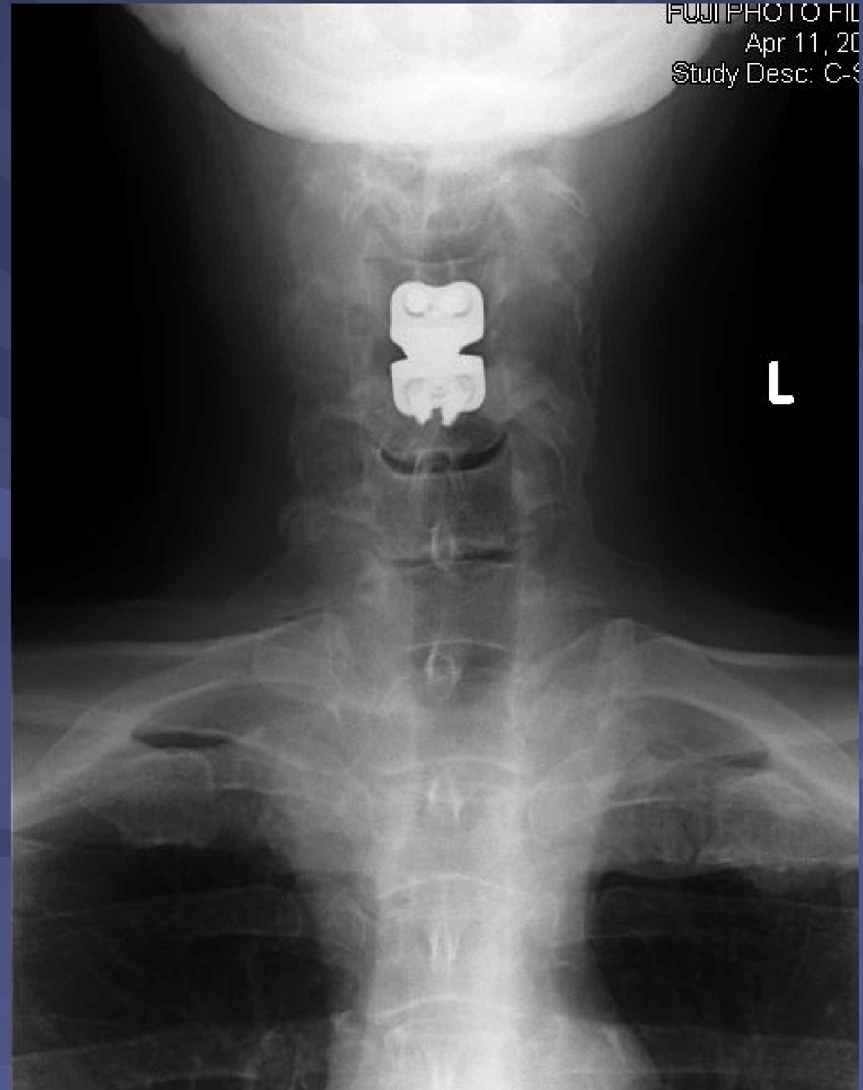
Post-Op Films



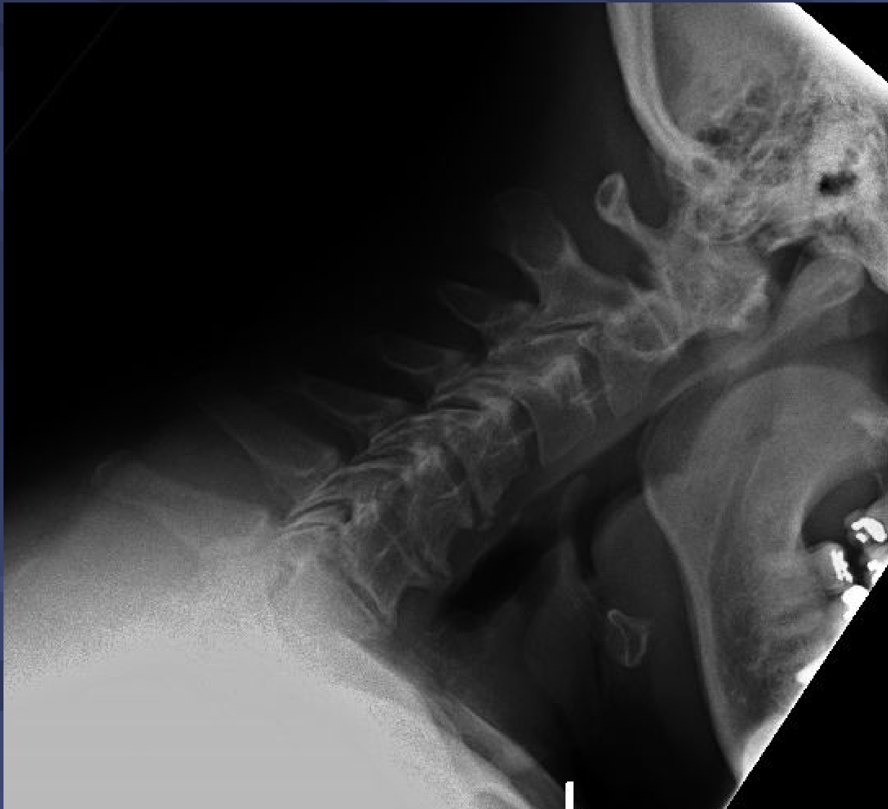


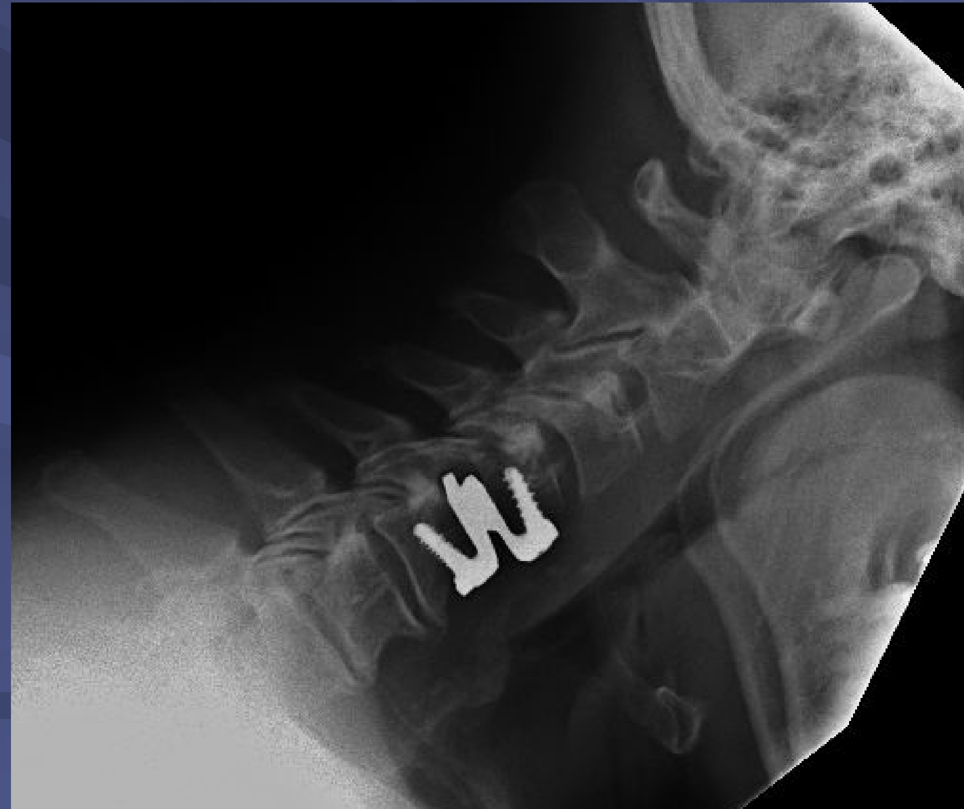
Pre-Op/Post-op Film Comparison





Pre-Op/Post-op Comparison





Pre-Op/Post-op Comparison