ProLift® Expandable Spacer System Clinical and Economical Advantages

- Dr. Jensen was able to achieve the sagittal correction planned pre-operatively while reducing the need for adjacent level surgery, ***greatly reducing*** associated ***medical costs*** for additional hardware and operating room time
- ProLift's low-profile design ***reduces endplate damage*** compared to static cages, which may contribute to cage migration[1] and possibly ***eliminating future revision surgeries*** (1.4% - 8.0%)[2]
- 3mm bulleted tip is designed for extremely collapsed discs ***reducing the need for distraction and potentially reducing OR time and costs***[1]
- ProLift's in-situ expansion ***eliminates*** the need for ***time consuming sequential trialing*** reducing instrument passes by up to 83% and ***greatly decreasing operating room time***

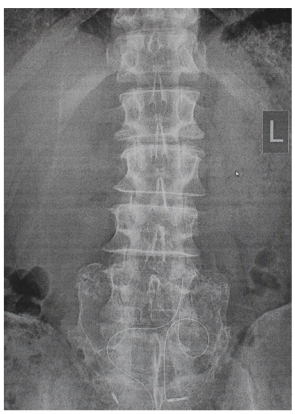
Case Example

- ProLift Expandable Spacer System
- NAUTILUS® Spinal Screw System
- Dr. Wade Jensen
- Dunes Hospital, South Dakota

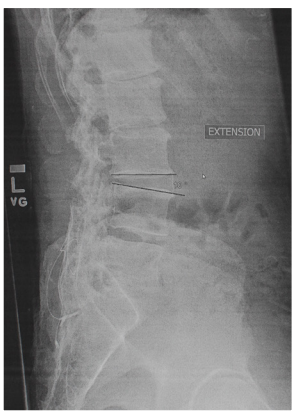
Patient Health & Physical

- 50 YO male with previous 2-level lumbar fusion at L4/L5 and L5/S1 - 19 years ago
- Failed conservative treatment
- Pain pattern in L4 distribution, left side only
- Imaging studies indicated
  - Lumbar lordosis: 30˚
  - Pelvic Incidence within normal range with no pelvic retroversion: 59.5˚
  - Pre-op standing lordosis (L1 to S1): 22˚
  - PI-LL Mismatch: 37.5˚ indicating need for sagittal restoration
  - L3/L4 focal lordosis: Pre-op 10˚
  - L3/L4 Intradiscal angle: Pre-op 7.6˚

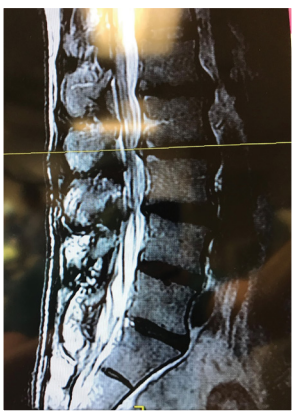
PRE-OP LATERAL X-RAY



PRE-OP LATERAL X-RAY



PRE-OP LATERAL MRI



Diagnosis

- L3/L4 Disc Herniation with Radiculopathy
- L3/L4 Adjacent Level Disease
- L1 to L3 DDD with Minimal Contribution to Symptoms

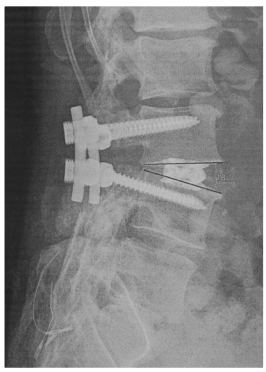
Surgical Plan

- Laminectomy at L3/L4
- Ponte osteotomy at L3/L4
- Interbody placed at L3/L4

Surgical Details

- Surgical time: 2 hours and 15 minutes
- Disc prep and placement for ProLift: 10 minutes 15˚ cage expanded to full height
- Nautilus screws implanted in L3/L4 and compression applied across the disc space
  - L3/L4 focal lordosis: Pre-op 10˚/ Post-op 18.8˚
  - L3/L4 Intradiscal angle: Pre-op 7.6˚ / Post-op 19.6˚

POST-OP LATERAL X-RAY



POST-OP LATERAL X-RAY

1. "Posterior Migration of Fusion Cages in Degenerative Lumbar Disease Treatment With Transforaminal Lumbar Interbody Fusion". SPINE Volume 34, Number 1, pp 4-8, Yasuchikia Aoki, MD, Masatsune Yamagata, MD, Fumitake Nakijama, MD, Yoshikazu Ikeda, MD, and Kazuhisha Takahashi, MD

2. "Minimally Invasive Transforaminal Lumbar Interbody Fusion Using Expandable Technology: A Clinical and Radiographic Analysis of 50 Patients" Choll W. Kim, Todd M. Doerr, Ingrid Y. Luna, Gita Joshua, Sun Ren Shen, Xin Fu, Ai-Min Wu