ILIF™
Interlaminar Lumbar Instrumented Fusion

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Will ILIF™ Replace Pedicle Screw Instrumentation/Procedures?
WHY REPLACE TRADITIONAL PROCEDURES WITH MAXIMUM ACCESS SURGERY?

Reduce Pain
Traditional Posterior Instrumented Fusion

- Bilateral pedicle screws
- Wide dissection to transverse processes
- Significant bone removal
- Potential for increased complications
- Often paired with interbody implants

Pedicle Screws
Potential Instrumented Fusion Complications

- **Potential destabilization**
  - Wide exposure may cause severe atrophy of paraspinal muscles

- Increased OR time, blood loss, infections, dural tear, malpositioned implants, pseudarthrosis, reoperation

- Adjacent segment degeneration

- **Older patient population with likely comorbidities**
  - Cardiovascular disease
  - Low respiratory reserve
  - Exercise intolerance
  - Diabetes
  - Osteoporosis, etc.

Pedicle Screws
Potential Improvements for Instrumented Fusions

Surgeons determined to:
- Reduce patient morbidity
- Minimize dissection and boney removal
- Minimize operative time
- Reduce complications with geriatric or comorbid patients
- Limit surgery to midline if possible
Dr. Hibbs first spinal fusion in 1912; cortical tibial wedge between the spinous processes

Cervical Gallie fusion with sublaminar wiring
ILIF™ Construct

ILIF (Interlaminar Lumbar Instrumented Fusion)

1. Improved Direct Decompression
2. Posterior Fusion
3. Posterior Fixation
4. Biologics
The total population over 60 years-old worldwide will rise from 605M in 2000 to 1.2B in 2025.

Lumbar spinal stenosis (LSS) is the most common reason for back surgery in patients over 50.

“Spinal stenosis is the most common surgical indication for the geriatric patient.”

WHERE TO USE ILIF™?

• Elderly, low demand patient

• Central, lateral recess, and foraminal stenosis

• Instability is present, but trying to avoid pedicle screws

• Co-morbidities are present
WHEN NOT TO USE ILIF

“If you’re a hammer, not every indication is a nail.”

- Severe osteoporosis
- Isthmic spondylolisthesis (pars defect)
- Spondylolisthesis with gross instability (>Grade 1)
- Previous laminectomy at operative level
WHY THE ILIF™ PROCEDURE

- Allow safe access to neural elements for decompression
- Minimal disruption to the soft tissue
- Maintain sagittal balance
- Fusion surface equal or better than current standard
- Robust fixation without burning any bridges
- Time saving
Affix® as an adjunct to interbody fusion: XLIF, TLIF, ALIF
Case Studies
Pedicle Screw Replacement
Case Presentation # 1

The 90% Patient Profile

- Sex: Female
- Age: 89 YO
- Physical Complaints: Back and Leg Pain
- Diagnosis: Stenosis - central, lateral recess, foraminal
- Surgical Plan: ILIF™ L4-5 with decompression
Case Presentation # 1

- Fixation: 35mm Affix® II
- Spacer: 12mm Magnitude
- EBL: 125cc
Case Presentation # 2

The 5-10% Patient Profile

- 58 y/o male
- 2-year history of LBP
- Bilateral anterior thigh pain and intermittent inguinal discomfort; LBP becoming more disabling
- L2-3 spondylolisthesis with stenosis
- Central, lateral recess
- Comorbidities: exam non-focal
- **TREATMENT:** L2-3 XLIF® with ILIF™
Case Presentation # 3

The L5-S1 Patient Profile

- Patient: 53 y/o male with an acute onset of left leg and severe LBP. Pt s/p micro 3 years prior
- PE: Weakness with PF 4/5, Achilles Reflex absent and 10/10 pain
Patient underwent an L5/S1 ILIF with the bladed plate
Leg pain had immediate resolution
Incision equal or smaller than previous microdiscectomy
Dr. Thompkins ILIF + TLIF Technique

- 250+ cases with ILIF/TLIF approach
- Average blood loss: 120cc
- Average length of surgery: 1:25
- Average length of stay: 2.5 days
- Preliminary VAS
  - Radicular – 75% reduction
  - LBP – 60% reduction
# Dr. Thompkins TLIF + ILIF Technique

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tr>
<td>- Increased fusion surface</td>
<td>- Increased operative time</td>
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<tr>
<td>- Anterior column support</td>
<td>- Increased cost</td>
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<td>- Possible increased fusion rates and construct rigidity</td>
<td>- Minor increase blood loss</td>
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<td>- Possible decrease discogenic back pain</td>
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Will/Should ILIF™ Replace Pedicle Screw Instrumentation/Procedures?

**Yes**
- Augmentation for anterior support
- Pt with significant comorbidities
- Stenosis with mild to moderate instability

**NO**
- Deformity case
- Isthmic spondylolisthesis
- Gross instability
In Summary . . .

- MINIMALLY INVASIVE IS:
  - Less operative time
  - Less blood loss
  - Less postoperative pain
  - Less post op medications
  - Less hospital stay
  - Rapid return to normal activity
  - Improved Quality of Life
The End