

# The Total Disc Arthroplasty

## TDA

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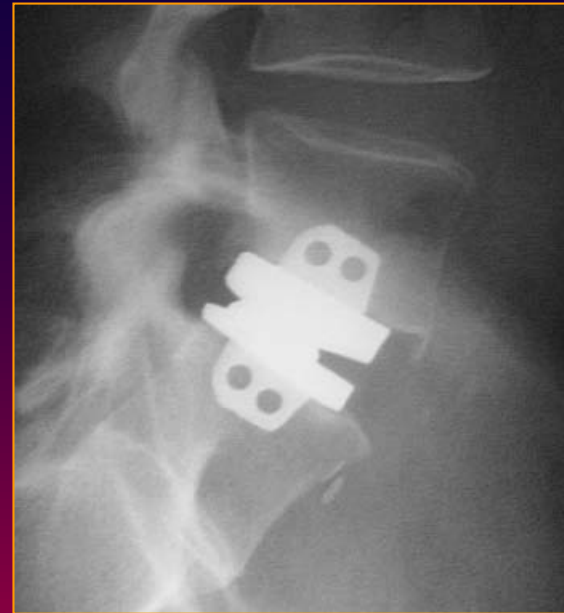
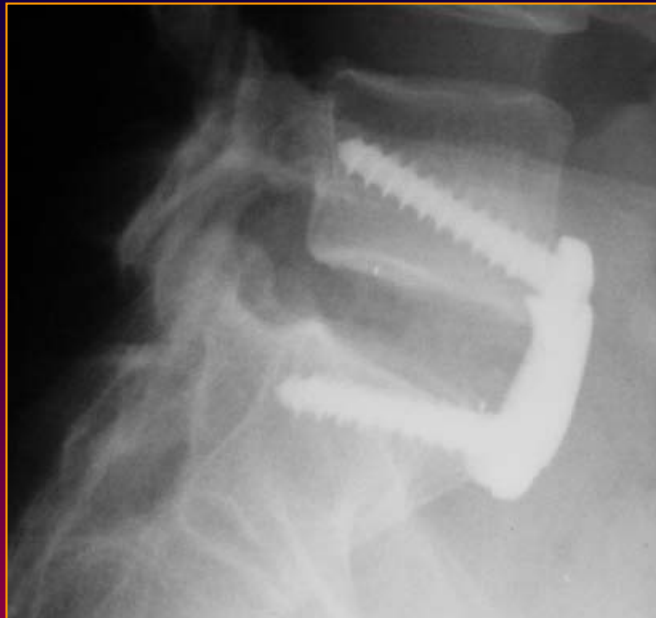
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# The Degenerative Disc Disease

## Surgical Treatment



**InterBody FUSION** versus **Disc ARTHROPLASTY**

# The Total Disc Arthroplasty

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## Goals of Lumbar TDA ?

- ❑ Pain relief
- ❑ Improved function
- ❑ Restoration of sagittal/coronal balance
- ❑ Increased foraminal height
- ❑ Prevention of recurrent spondylosis
- ❑ Avoidance of adjacent level breakdown
- ❑ Longevity

# The Total Disc Arthroplasty



- Fixed posterior center of rotation
  - Provides shear stability
  - Unloads facet joints
  - Corresponds to closer to patient anatomy
- Metal on metal design
  - Less risk with wear debris
- HA coating fixation
  - which is conducive for bony on growth

# The Total Disc Arthroplasty

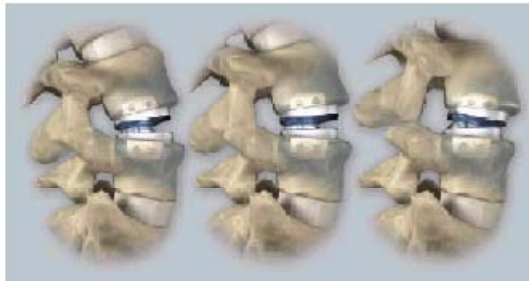
## Maverick Implant Design

### Degrees of AP Freedom

- -5° Posterior Direction
- +10° Anterior Direction

### Degrees of Lateral Freedom

- 7° Right/Left



## Treatment Goal

One of the primary goals of disc replacement surgery is to maintain or restore segment mobility.

# The Total Disc Arthroplasty

## ■ The TDA



- Avoids detrimental stress being transmitted to neighboring segments
- Counteracts early degeneration of these segments

# The Total Disc Arthroplasty

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**The TDA represents a new  
concept of « healing of  
disease » without definitive  
irreversible destruction**

# The Total Disc Arthroplasty

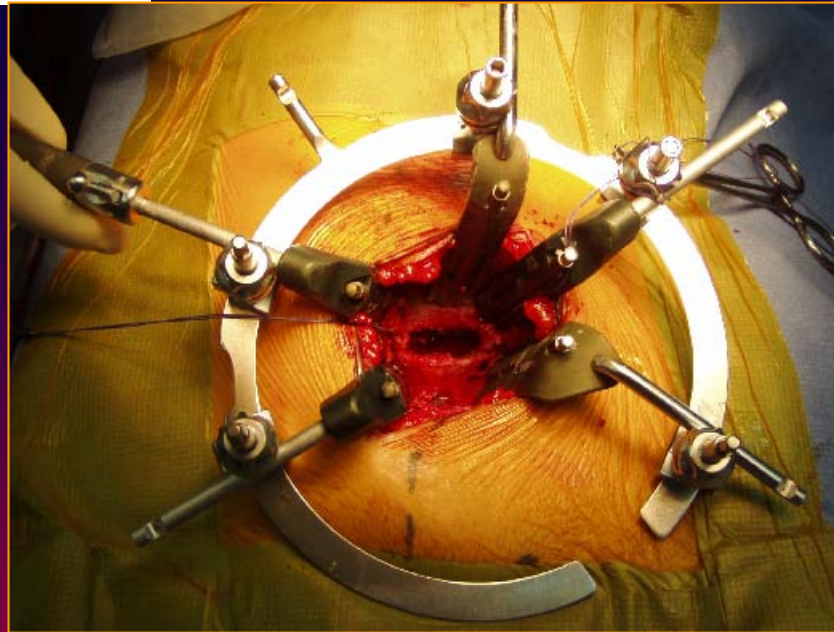


**The retro-peritoneal approach is very little dilapidating.**

- It preserves the lumbar muscles
- It avoids the intraspinal fibrosis



# The Total Disc Arthroplasty

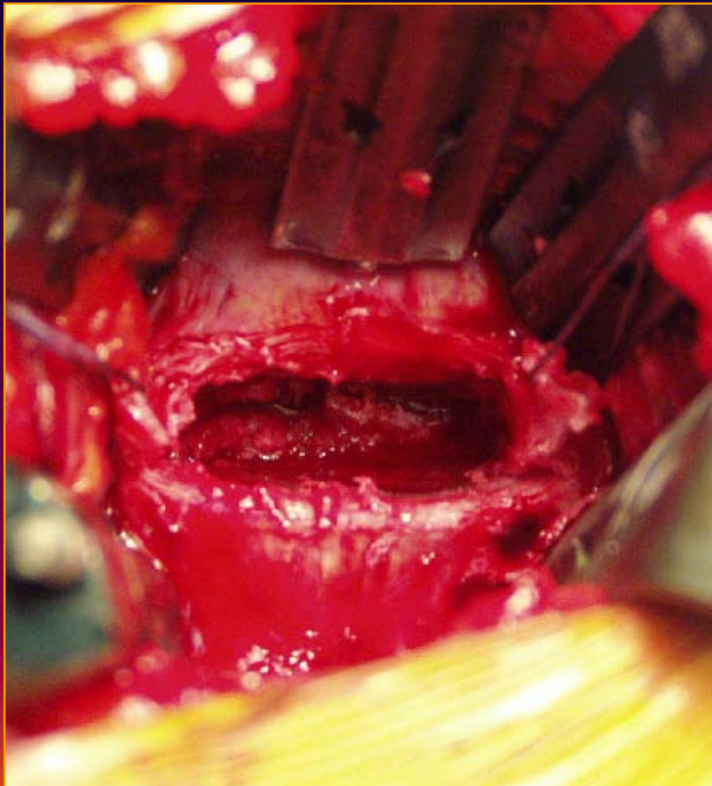


« **Minimal invasive surgery** »

A very good view of the intervertebral space is possible  
with a mini-access (8 cm)

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# The Total Disc Arthroplasty



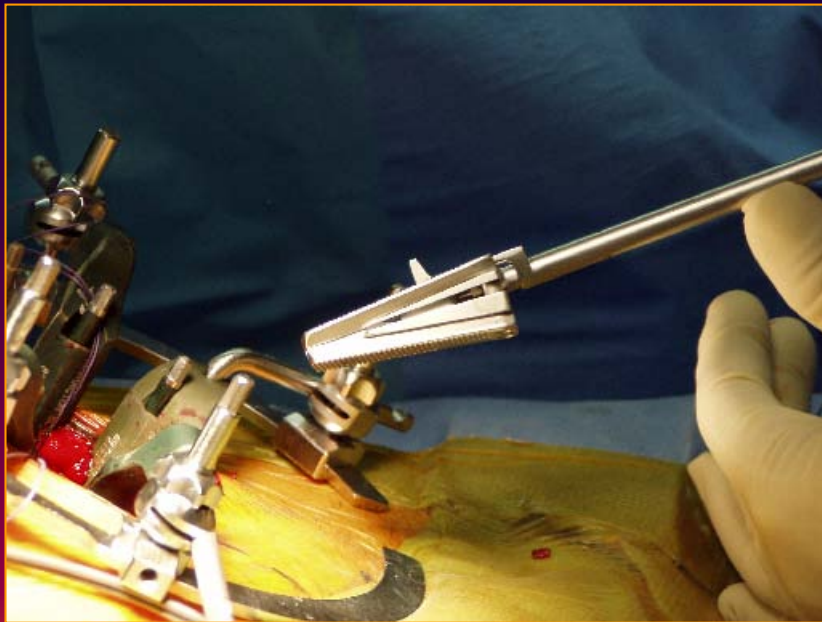
**DISCECTOMY**

**MOBILIZATION OF  
THE SEGMENT**

(Disc Spreader)

(Blunt-Nose Scraper)

# The Total Disc Arthroplasty



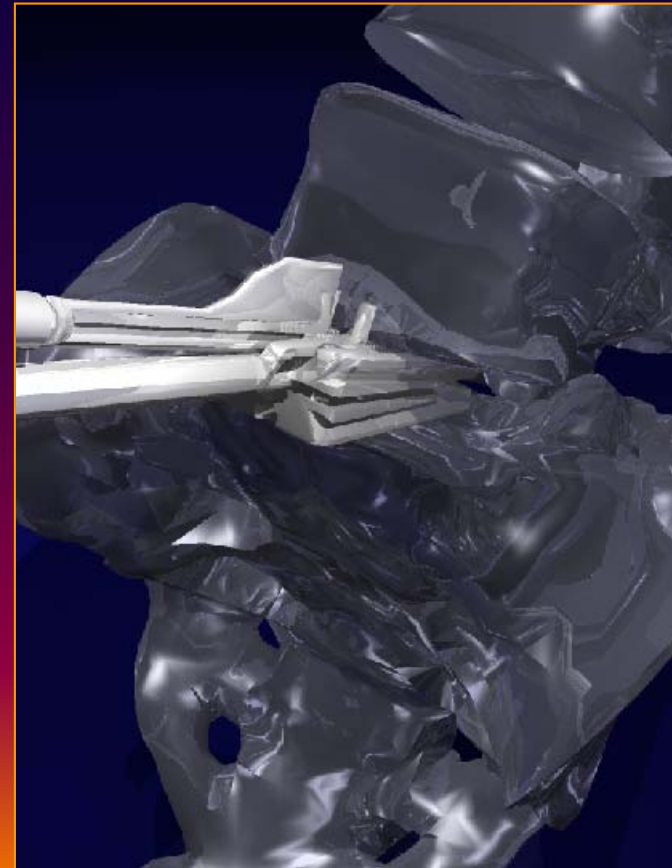
## The « 4 in 1 » instrumentation

Allows a precise  
preparation for a  
prosthesis of optimal size

**Parallel Distraction**  
To determine the implant height

# The Total Disc Arthroplasty

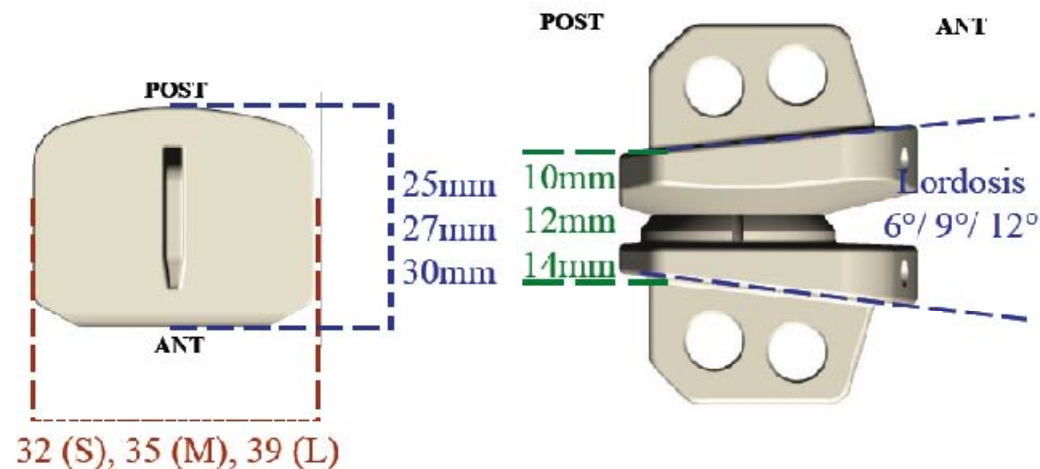
## Cutting process (Keels and Corners)



# The Total Disc Arthroplasty

## Maverick Implant Design

### Complete Implant Sizing





# The Total Disc Arthroplasty

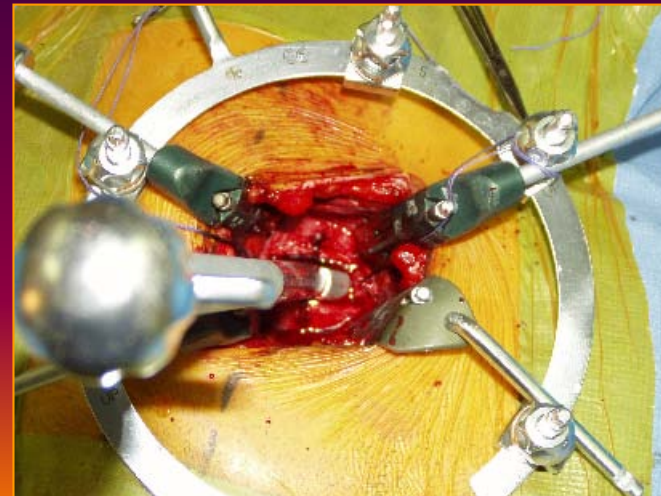
## IMPLANT INSERTION

Correct orientation of the implant components

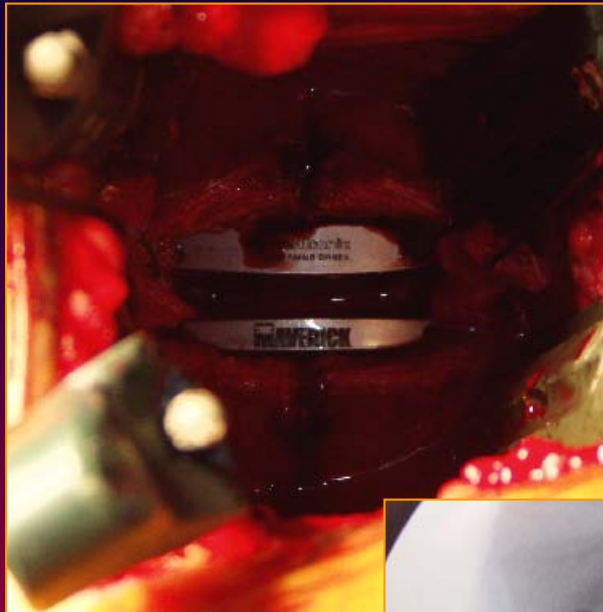
Superior (Socket)

Inferior (Ball)

Impaction into the disc space of the prosthesis on its Inserter



# The Total Disc Arthroplasty

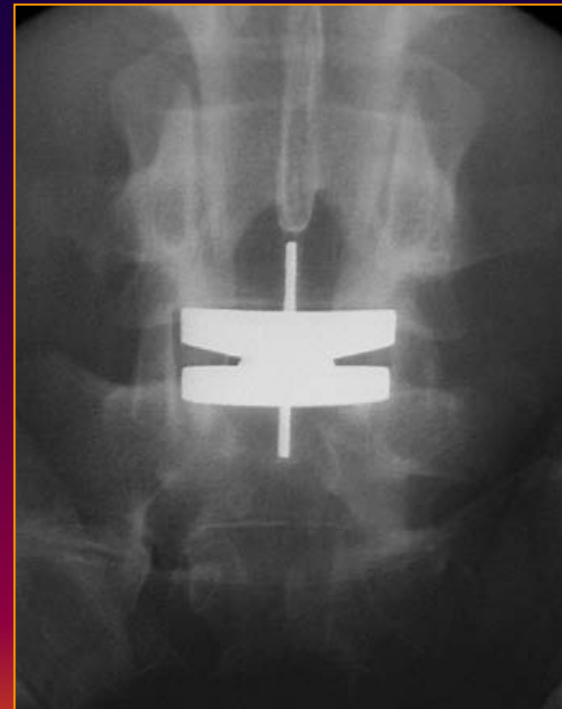


The implant is well impacted into the disc space until the leading end of the implant is positioned at the posterior end of the disc space



Lateral fluoroscopic control is used during the insertion

# The Total Disc Arthroplasty





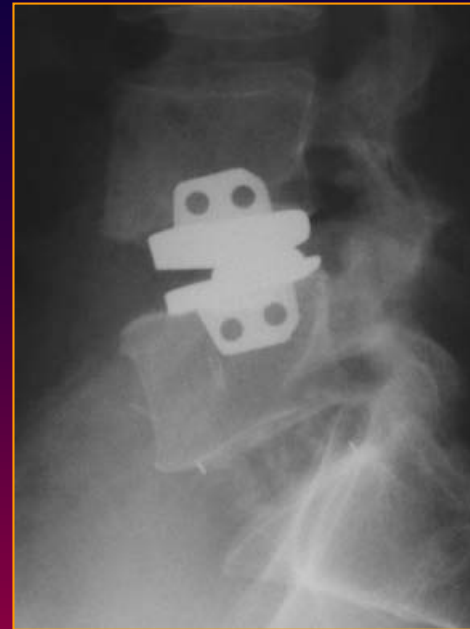
# The Total Disc Arthroplasty



**Male 37 Y**

**Discectomy L4L5, L5S1  
8 Y ago**

# The Total Disc Arthroplasty

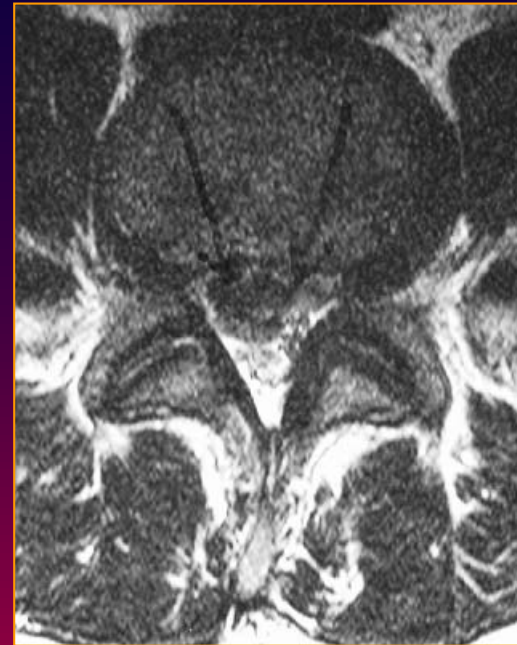
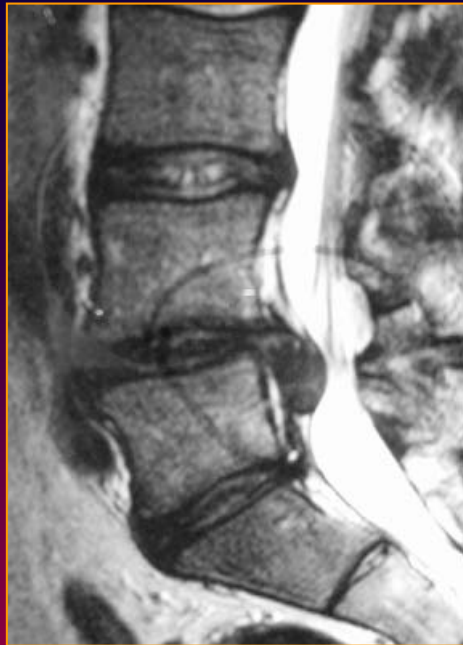


**ALIF L5S1**

**TDA L4L5**

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# The Total Disc Arthroplasty



**M 39 Y**

Discopathy L4L5, L5S1

Severe Discus Herniation L4L5

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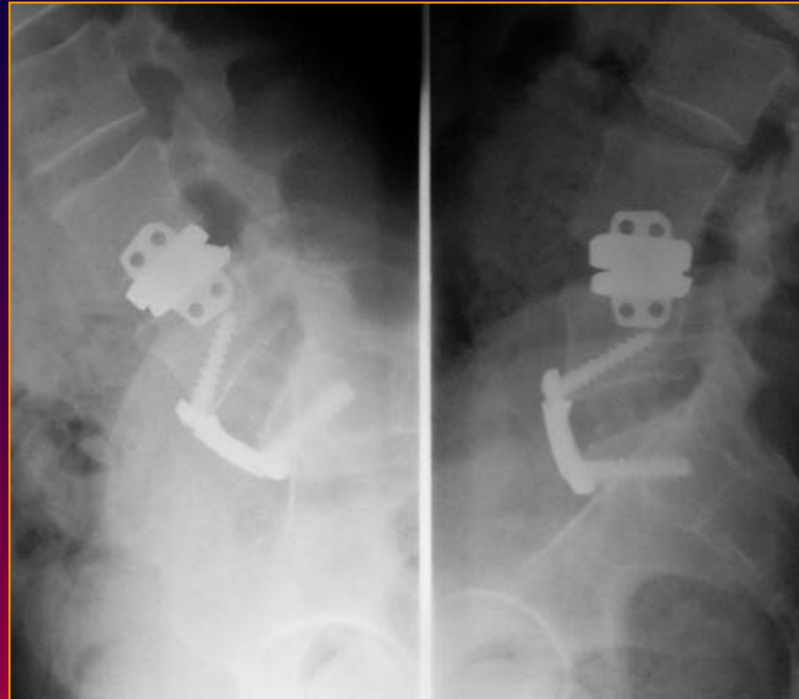
# The Total Disc Arthroplasty



**ALIF L5S1**  
**TDA L4L5**

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# The Total Disc Arthroplasty



**THE TDA RESTORE DE MOBILITY !**

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