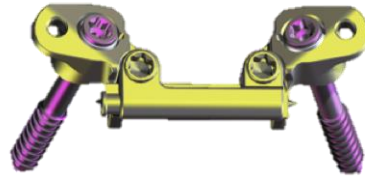
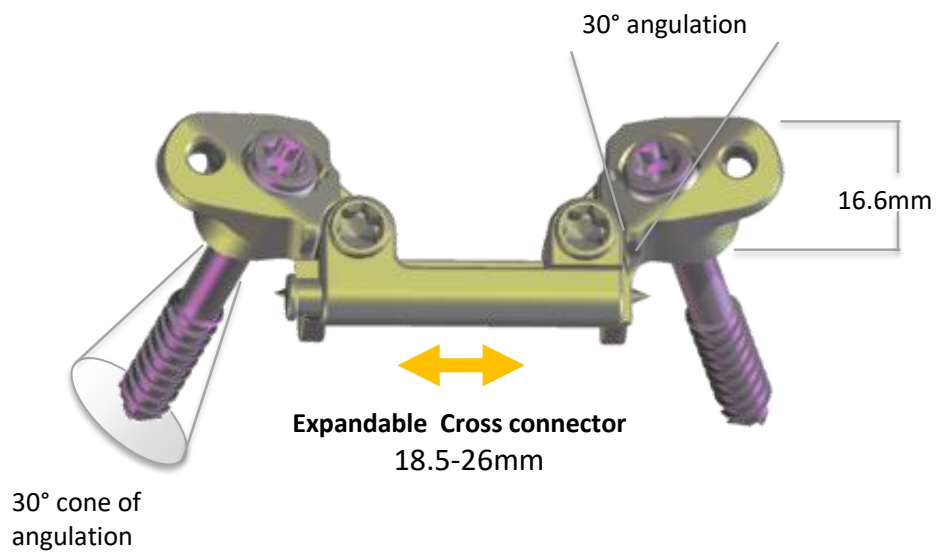


# Facet**LINK**



MINI Surgical Technique

# FacetLINK MINI



# FacetLINK

## Trans-Articular Screws

**4.5mm magenta**



Partially-Threaded

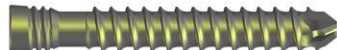


Fully-Threaded

**5.0mm gold**



Partially-Threaded



Fully-Threaded

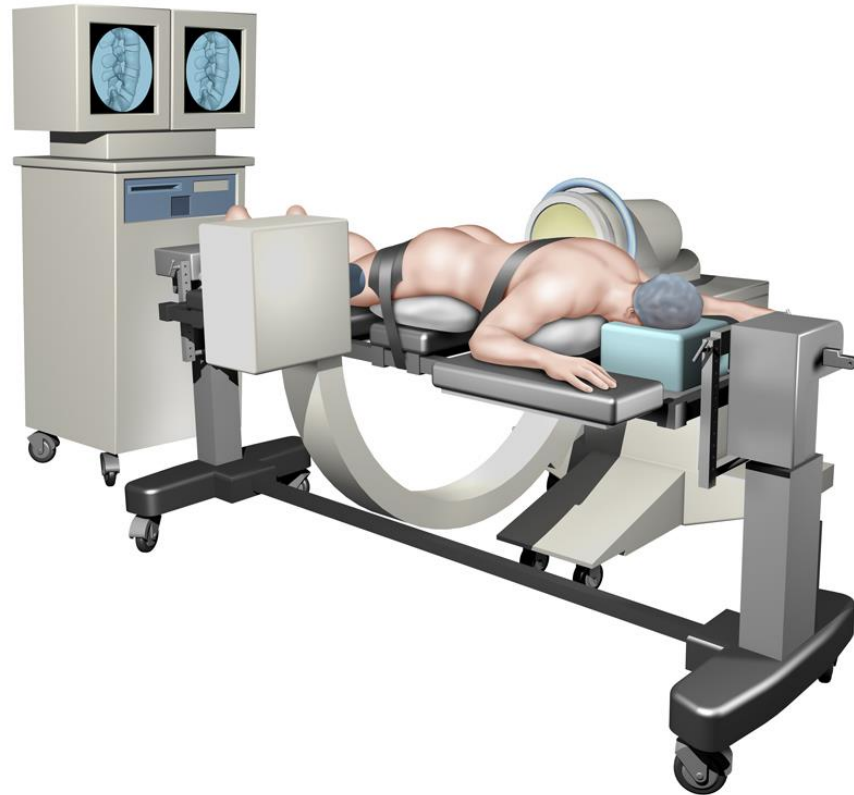
		Thread diameter	
		4.5mm	5.0mm
Length [mm]	25	25	25
	30	30	30
	35	35	35
	40	40	40
	45	45	45
	50	50	50
	55	55	55

# FacetLINK MINI

## Step One

### Room Set Up, Table Selection, and Positioning

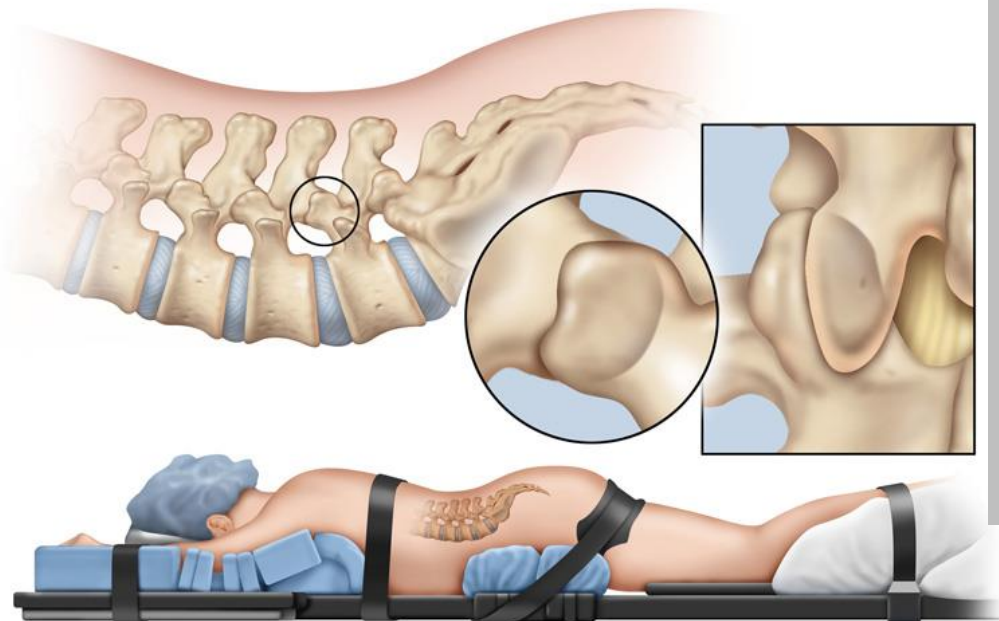
- Screw trajectories are “downward”
- Often helpful to arrange the monitor at the base of the bed
- Images can be viewed without the need to turn your head away from your working area



# FacetLINK MINI

## Step One

Room Set Up, Table Selection, and Positioning (continued)

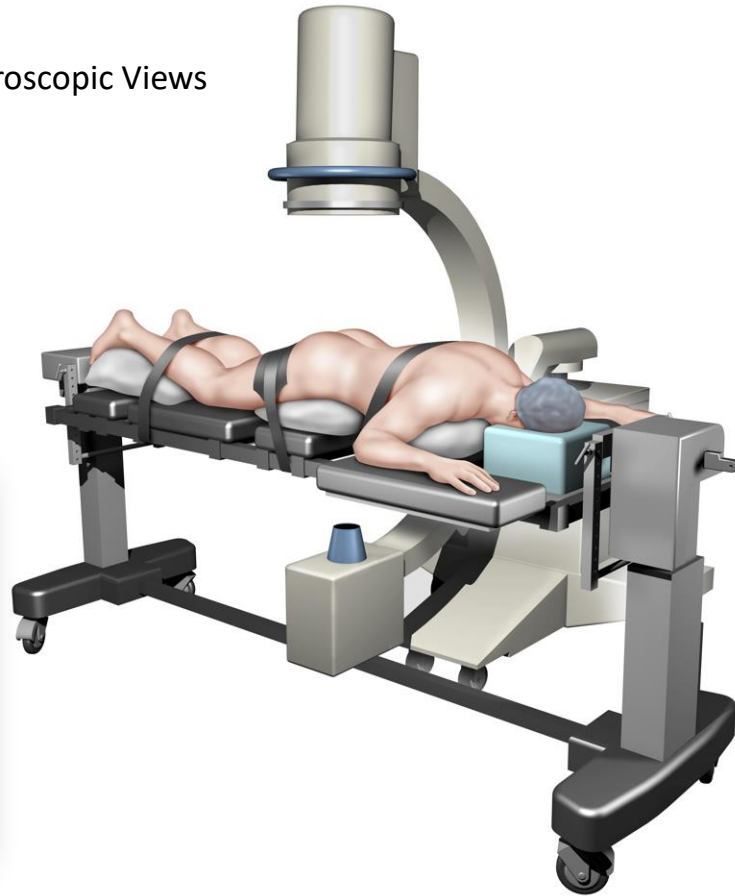
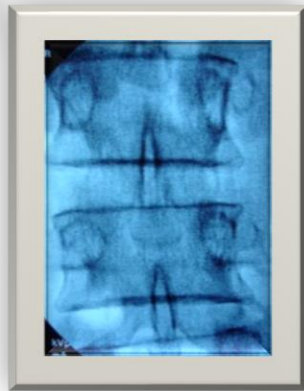


- Legs extended to facilitate lumbar lordosis
- Table capable of fluoroscopic imaging without interference from radio-opaque structures. Views including:
  - **AP**
  - **Lateral**
  - **Oblique (Scotty-Dog)**

# FacetLINK MINI

## Step Two

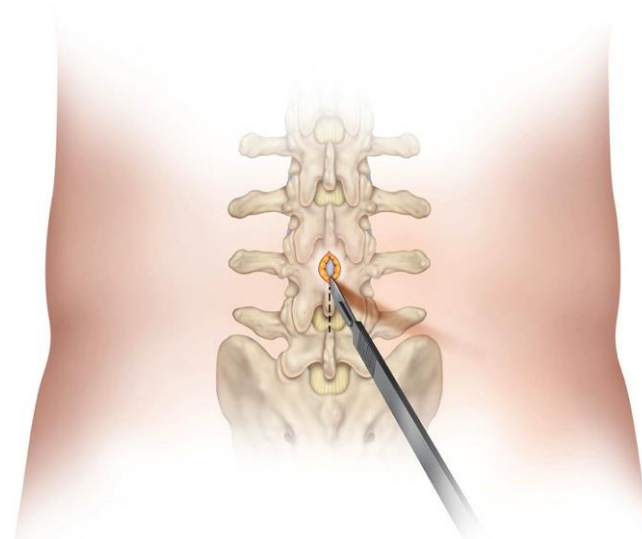
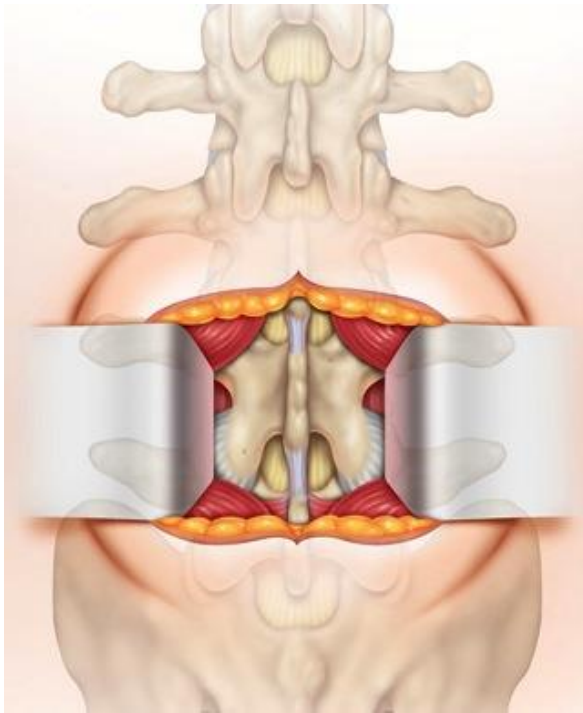
Identify Surgical Level, Obtain True Fluoroscopic Views



# FacetLINK MINI

## Step Three

### Exposure



#### **Please Note:**

It is important that the exposure include full visualization of the Pars Interarticularis, so that the maximum possible amount of bone stock at the waist can be retained when performing the decompression.

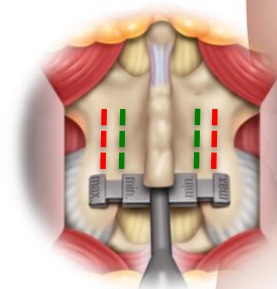
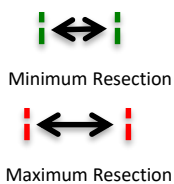
# FacetLINK MINI

## Step Four

### Template Decompression

#### Please Note:

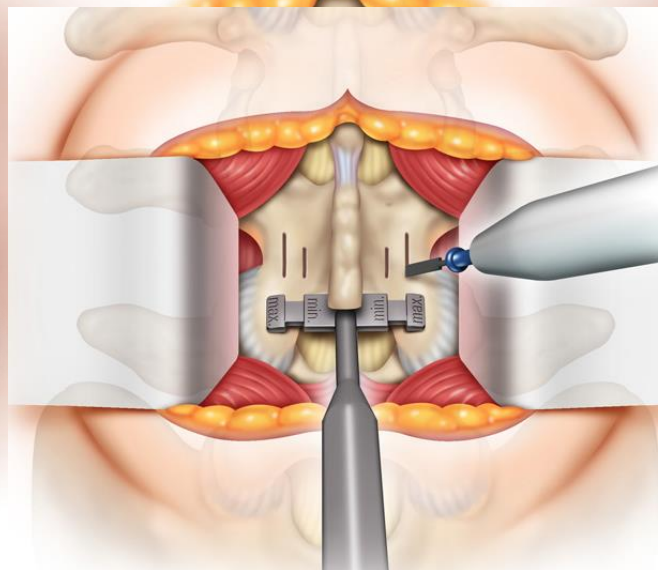
Care should be taken to ensure that a minimum of 6mm of Pars Interarticularis will remain on each side following the decompression.



#### Surgical Pearl:

Ensure the resection gauge is in the midline so that the decompression retains the Mid-Lateral Pars on both sides symmetrically.

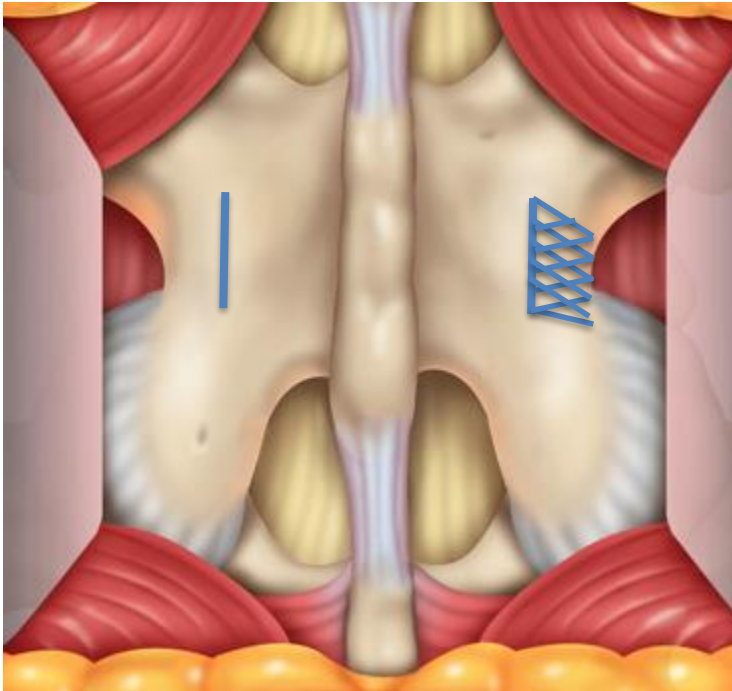
A bovie or sharp instrument can be used to demarcate the lateral boundary of the minimum and maximum decompression





# Facet+LINK MINI

## Pars Integrity



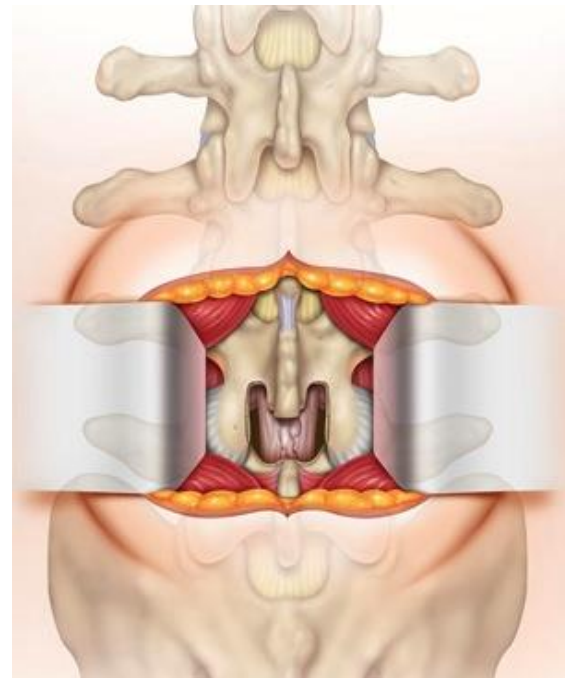
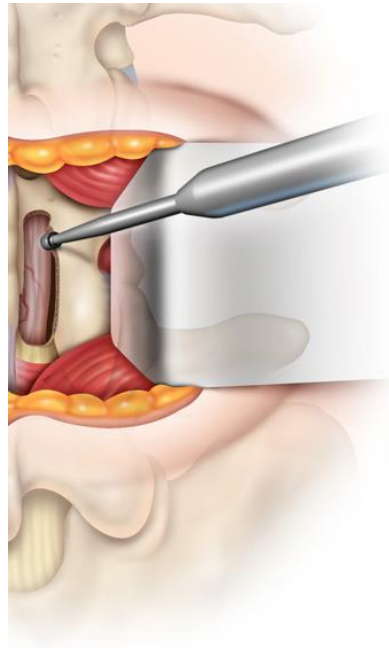
Stability of the fixation depends upon adequate bone stock at the waist of the pars.

# Facet+LINK MINI

## Step Five

Perform Desired Decompression

Straight edges along the medial edge of the pars interarticularis will allow the implant to sit flush within the decompression

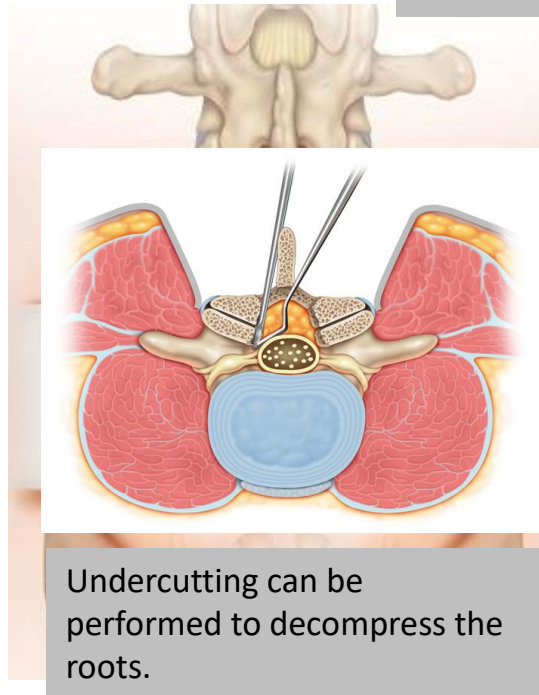


# Facet+LINK MINI

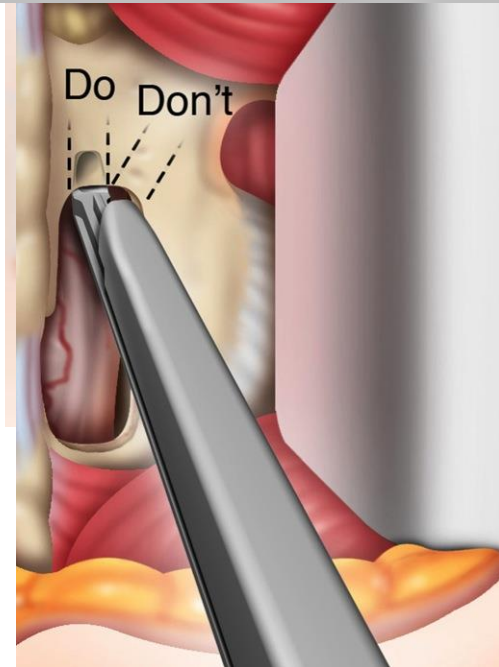
## Step Five

Perform Desired Decompression

Avoid a lateral angulation with the Kerrison!  
As the decompression continues cephalad,  
the angulation should be straight to  
convergent



Undercutting can be performed to decompress the roots.



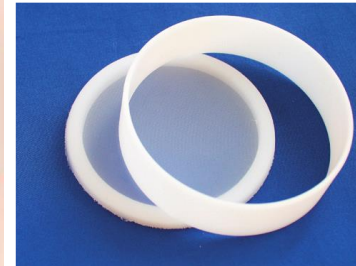
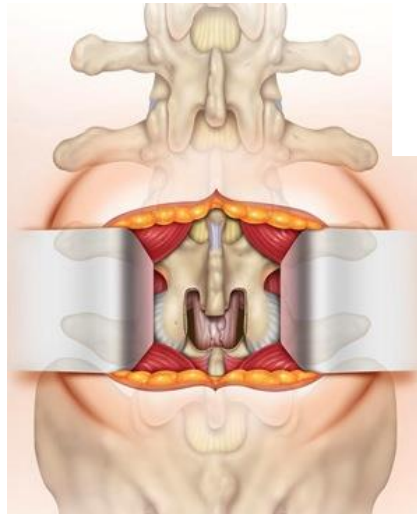
# Facet+LINK MINI

## Step Five (continued)

High Speed Burr and Bone Dust Collector Option

A high speed burr can be used, and has the advantage of being combined with a “bone dust trap” for graft collection

- 1.) Meticulous cleaning of soft tissues off lamina
- 2.) Two suckers are used – use the bone dust collector line during gross decompression
- 3.) Use a matchstick – fine diamond drill fittings do NOT work well as they get too hot and scorch the bone
- 4.) Vancomycin

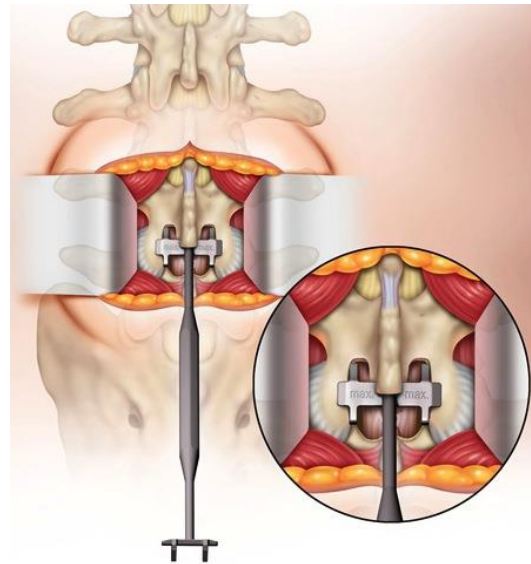


# FacetLINK MINI

## Step Six

### Check Width with Bilateral Resection Gauge

The Bilateral Resection Gauge has two sides (min. and max.), which can be used to verify that the implant will fit within the bounds of the decompression.



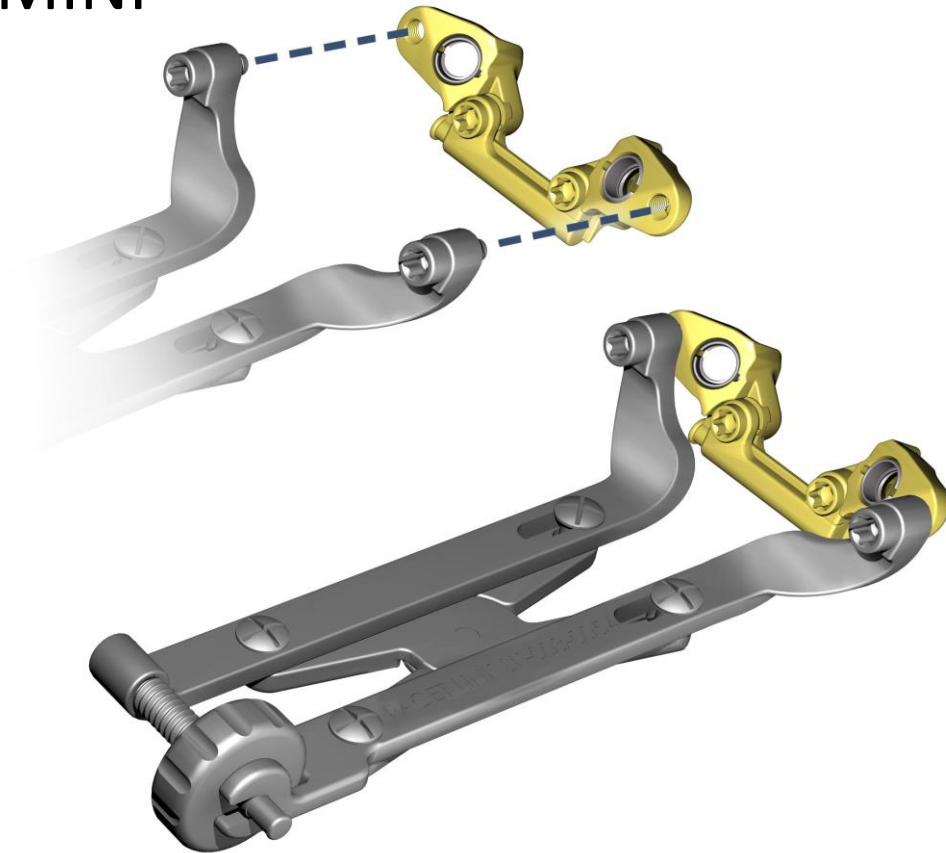
When placing the MINI device, it is helpful to remove *approximately a third of the caudal spinous process* in order to provide easy visualization of implant placement and provide more local autograft for the fusion.

# FacetLINK MINI

## Step Seven

Select Implant and Attach Inserter

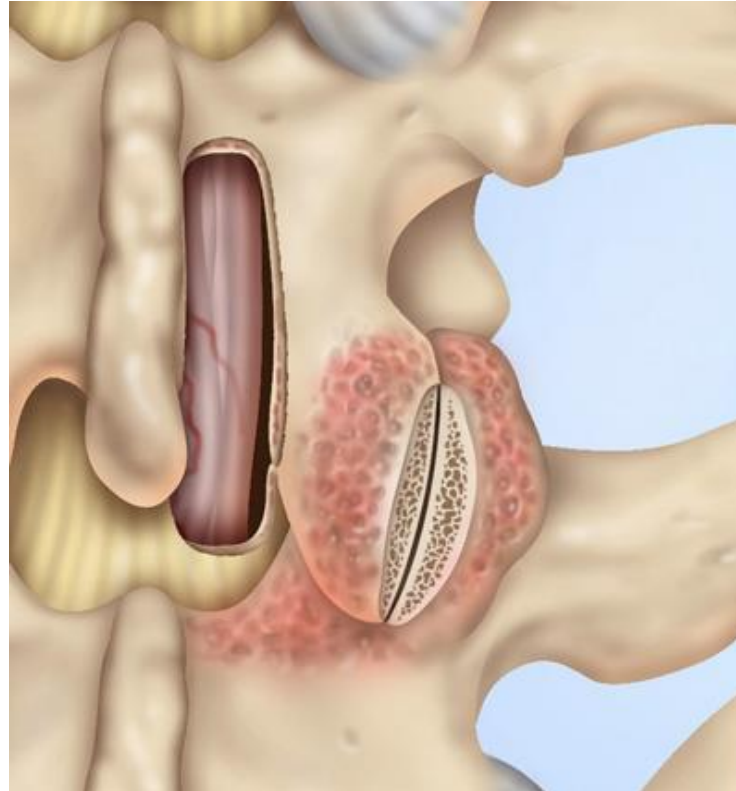
The STANDARD/MINI Inserter captures the device with a stable, screw based interface allowing for control during positioning across the defect.



# Facet+LINK MINI

## Fusion Step

Remove the facet capsule and the dorsal aspect of the joint, taking care to preserve bone stock needed for the fixation. Prepare the dorsal aspect of the inferior articular process and the dorso-lateral aspect of the superior articular process with a burr.



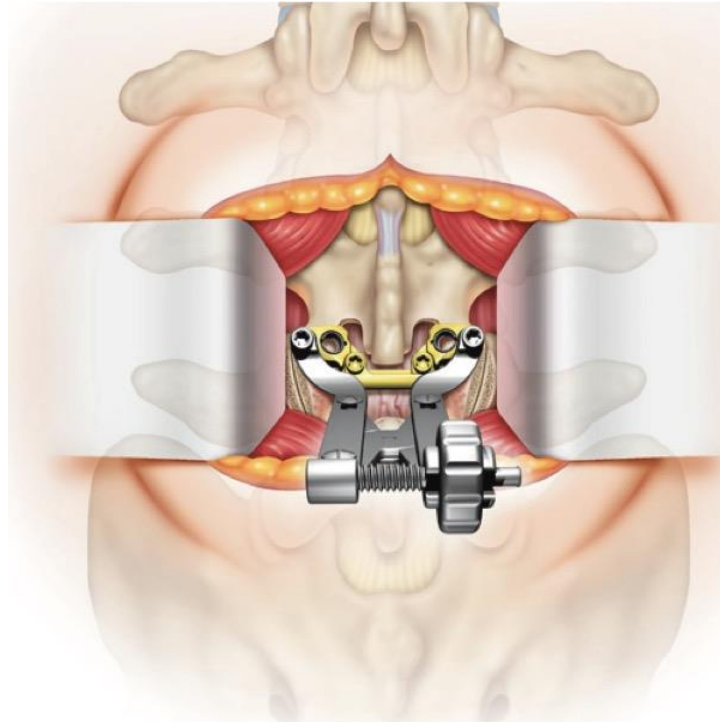
Care should be taken to strike a balance between joint preparation and preservation of bone stock. Debridement of the *dorsal* aspect of the inter-articular joint surfaces *and the adjacent superficial bone is routine.*

# FacetLINK MINI

## Step Eight

### Temporarily Place Implant

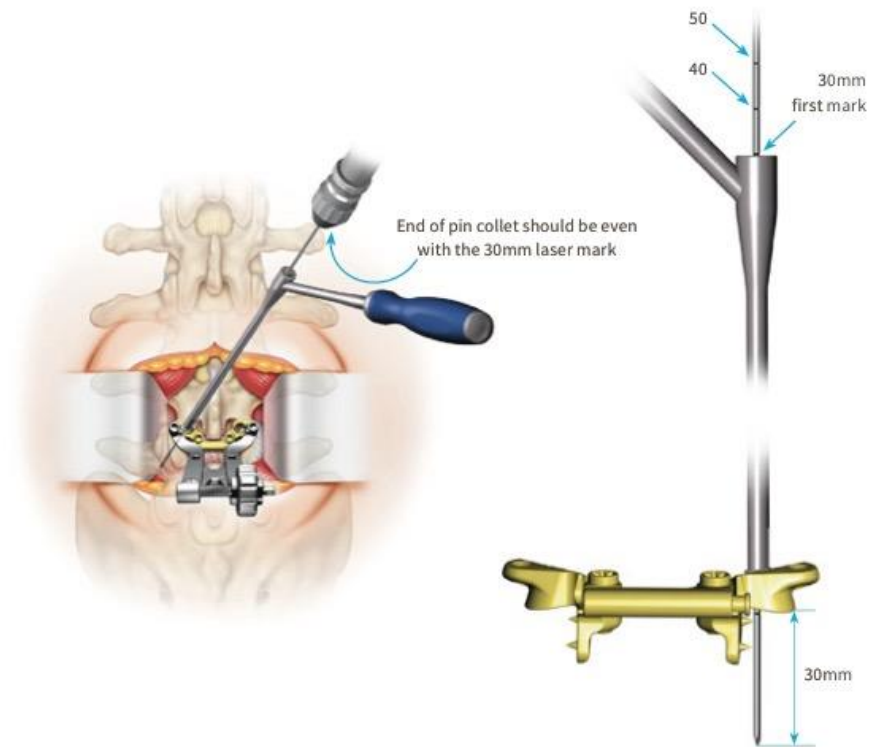
Place the implant in the desired position and squeeze the inserter handle until the appropriate coverage is achieved.





# Facet+LINK MINI

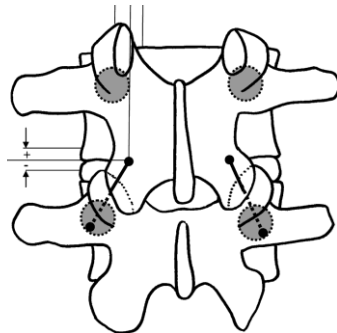
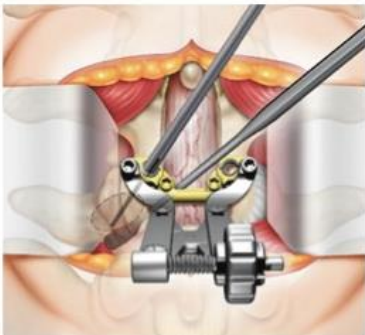
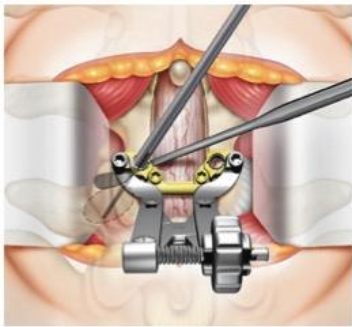
**NOTE:** Guidewire Management



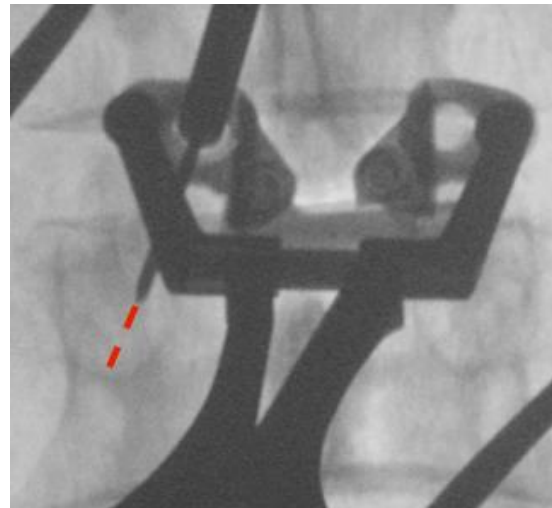
# Facet+LINK MINI

## Step Nine

### Trajectory Orientation – AP View



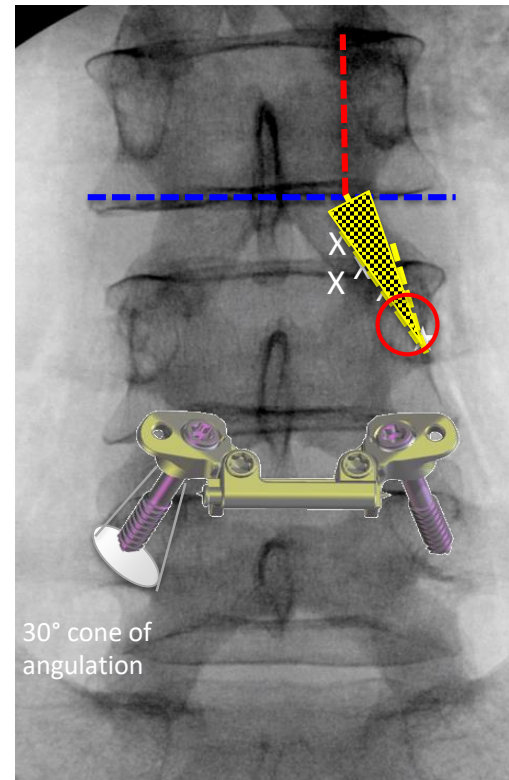
Prior to expansion of the device, it is helpful to palpate the medial aspect of the pedicle with a Woodson or a Nerve Hook. This allows confirmation of the adequacy of the decompression and to proceed with the need for little to no AP fluoroscopy when placing the K-wires.



# Facet-~~LINK~~ Flexible MINI

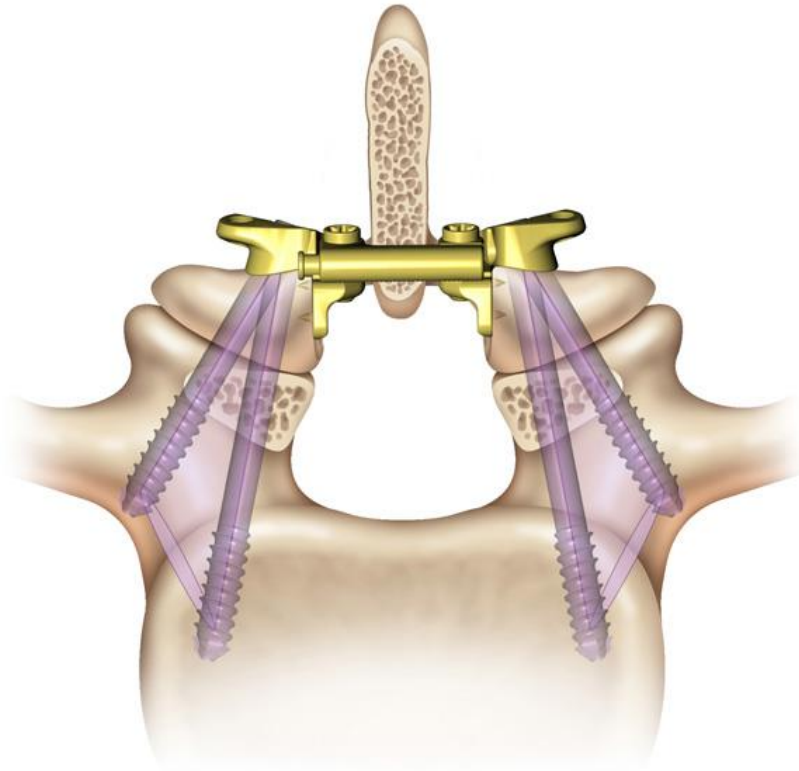
## Trajectories – Radiographic Targeting

- Traditional TFPS starting point is a fixed point
- Screw starting point for our devices is a function of the decompression
- Cross connection of screws adds biomechanical strength and affords more flexibility for screw trajectories
- Regardless of starting point, desired endpoint is inferolateral aspect of the pedicle on the AP View



## Facet+LINK MINI

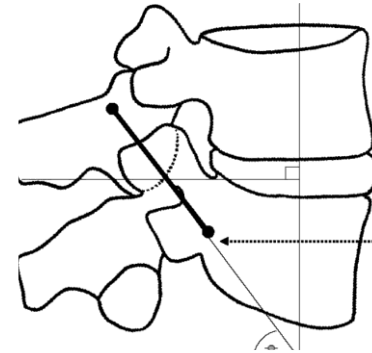
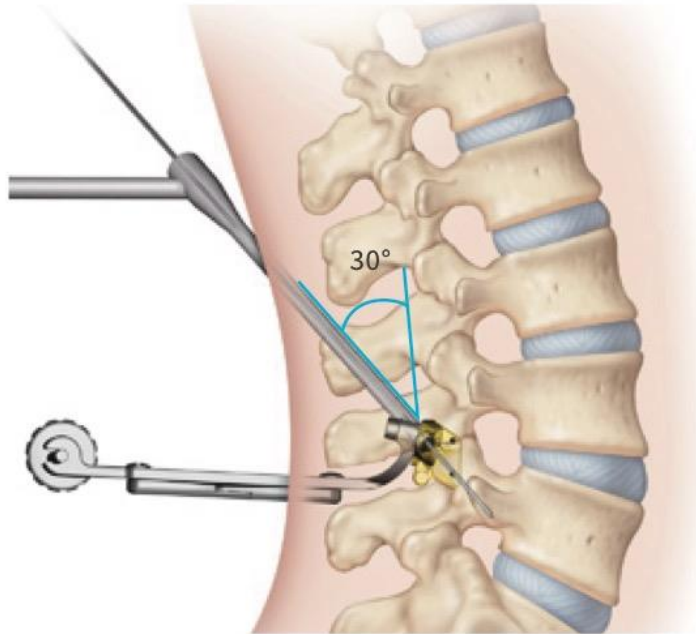
Cross-connection results in a “Tripod” effect, increasing biomechanical strength and offering a “cone of acceptability” in screw targeting



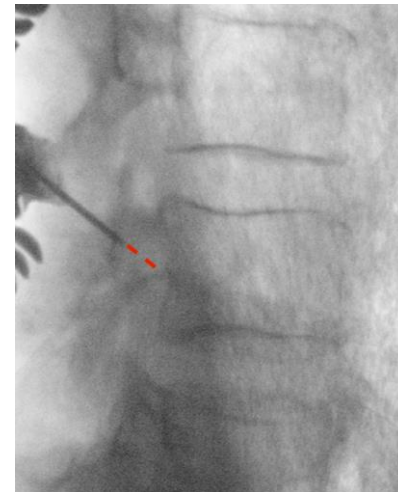
## Flexible Trajectories – Radiographic Targeting

# FacetLINK MINI

## Trajectory Orientation – Lateral View



*Target trajectory under Lateral Fluoro is the bottom of the pedicle near where it meets the vertebral body*

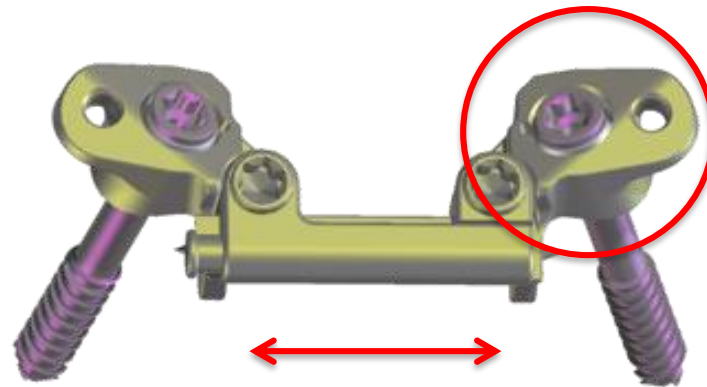


# FacetLINK MINI

Trajectory Orientation – Lateral View

The MINI devices offer flexibility in the trajectory because of the:

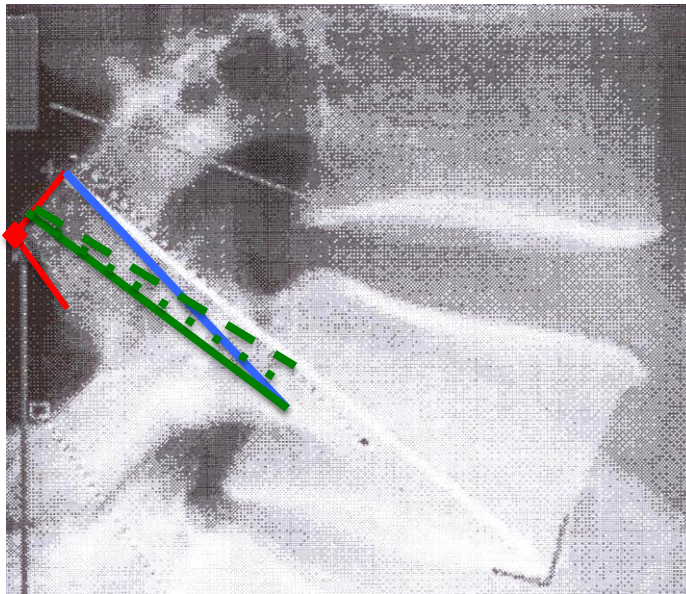
- Cross connection of the screws
- “Clamping” effect of the flanges upon the facets



# Facet+LINK MINI

## Trajectory Orientation – Lateral View

The result is the ability to achieve biomechanical performance without directing the trajectory through the center of the facet complex (which forces a higher and more difficult starting point).



This may well simplify screw placement

- Traditional TFPS Trajectory
- ◆ “Chin”
- Lower starting point afforded by device design characteristics

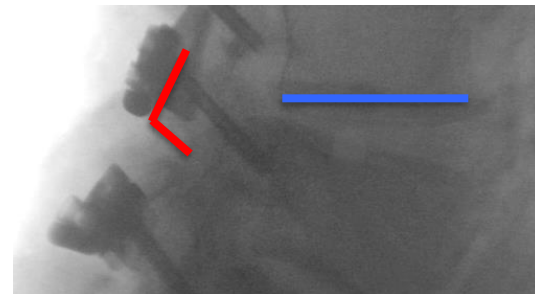
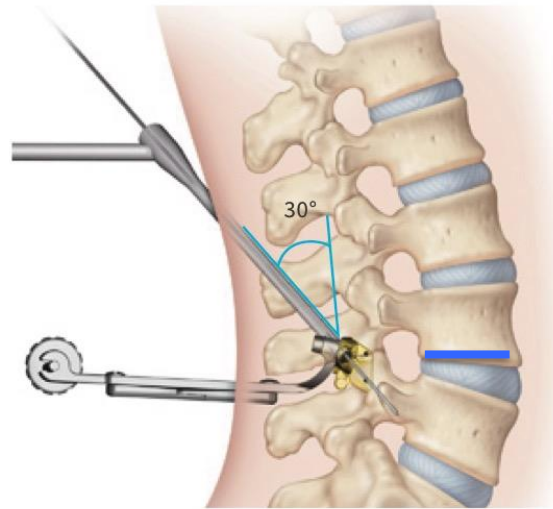
A more caudal starting point and a more shallow angle generally results in fewer soft-tissue and bony obstructions when placing your K-wire...  
\*\*\*Starting point can be moved caudally to any point above the “chin”\*\*\*

# Facet+LINK MINI

## Lateral Targeting

### From the Technique:

An example of a more traditional trajectory – note starting point **at the inferior endplate of the superior vertebral body**. Steep angle requires manipulation around the spinous process of the level above, and potentially a stab incision in a heavier patient.



Note this traditional starting point is significantly cephalad to the “chin”. This trajectory is fine, but not a requirement.

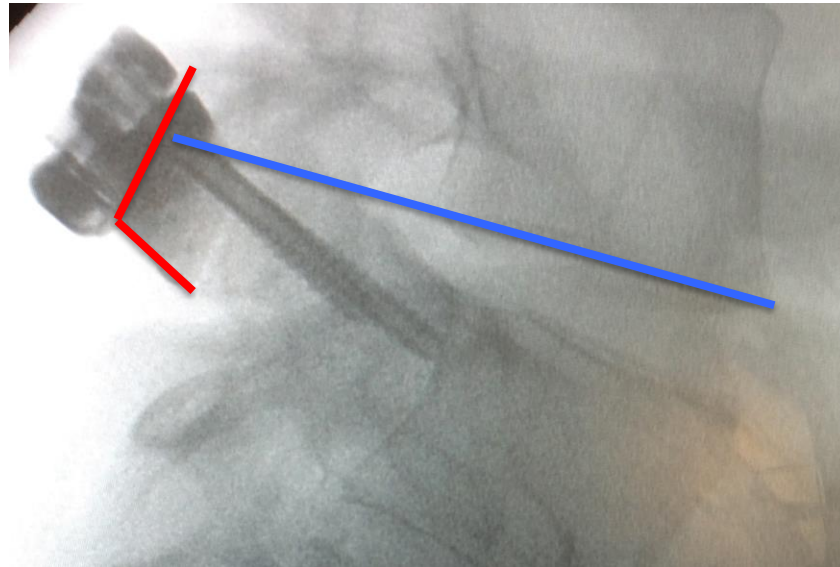


# FacetLINK MINI

## Lateral Targeting

### Transitional Syndrome

Although this starting point seems “traditional” with respect to the inferior endplate of the superior body, this is due to the hyperlordotic nature of the level and the associated retrolisthesis.

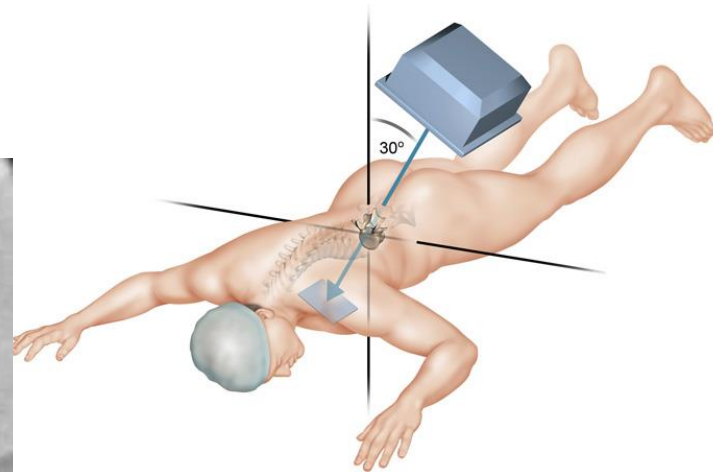


This screw trajectory passes straight through the center of the joint, into the pedicle and enters the vertebral body.

# FacetLINK MINI

## Oblique or “Scotty-Dog” View

- Allows a clear view of screw orientation relative to the facet joint



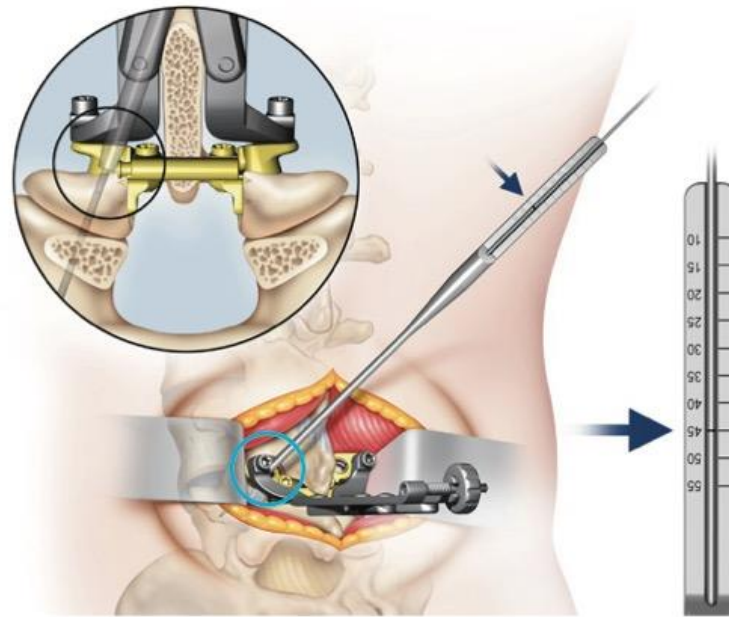
# Facet+LINK MINI

## Step Ten

### Determine Screw Length

#### **Please Note:**

It is important to consider closure of the implant/surface bone gap and the closure of the facet joint gap when determining optimal screw length. *In general, taking 5mm off of the final measurement allows for closure of the facet without the risk of stripping the screw when the tip encounters the hard bone of the base of the pedicle. If the screw trajectory is more in the center of the pedicle, this step is not necessary.*

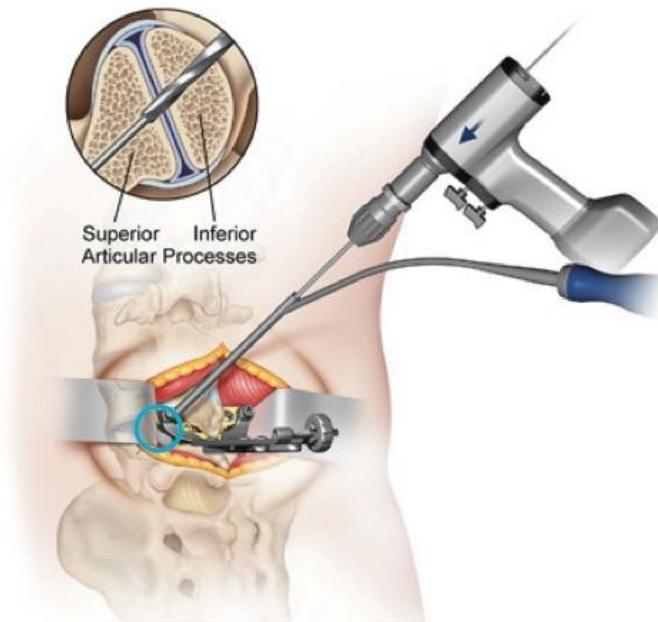


# Facet+LINK MINI

## Step Eleven

### Prepare Pilot Hole

***Care should be taken to ream only until the cortex of the superior articular process has been perforated.*** Reaming beyond this point may inadvertently drive the Guide Wire past the lateral cortex of the vertebral body and into the soft tissues, or will cause the Guide Wire to be pulled out as the drill is removed.

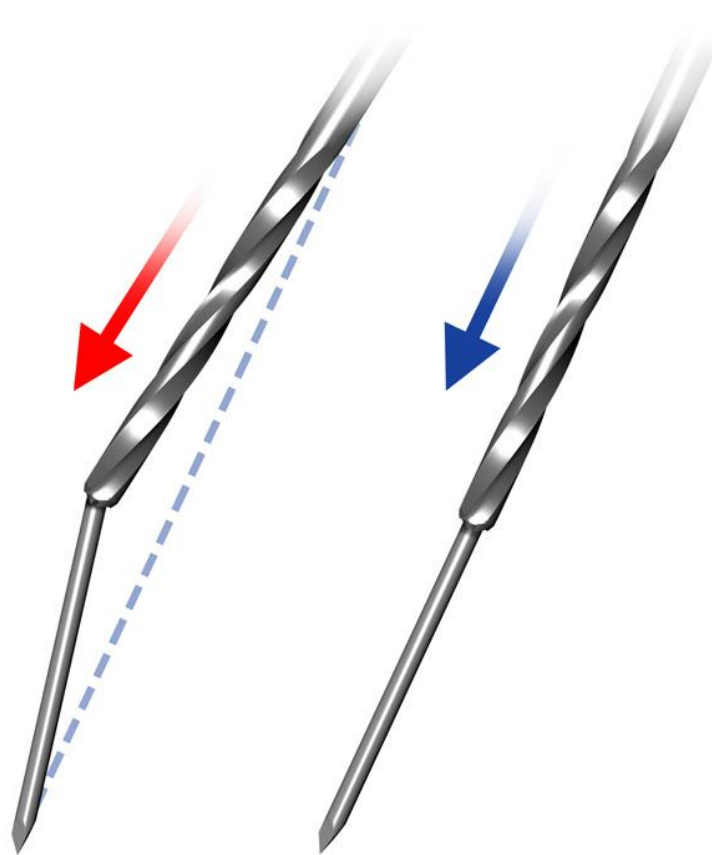


# FacetLINK MINI

## Step Eleven (cont.)

### Prepare Pilot Hole

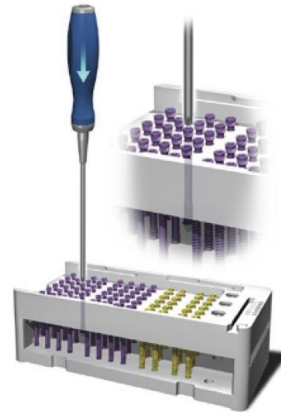
***When advancing the reamer, it is important to stay “in-line” with the guidewire to avoid kinking or breakage.*** Reaming at an off-axis angle may also result in increased likelihood of guidewire binding within the cannulation, resulting in inadvertent guidewire removal when withdrawing the reamer.



# Facet+LINK MINI

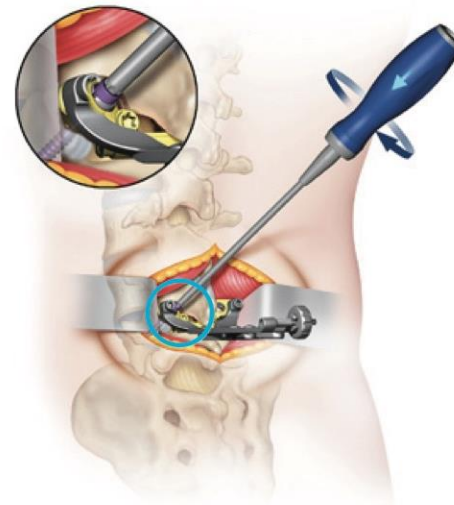
## Step Twelve

Deliver first screw



Remove Guide-wire after 20mm of screw has been delivered to prevent inadvertently advancing the K wire.

Care should be taken to strike a balance between joint preparation and preservation of bone stock. Debridement of the *dorsal* aspect of the inter-articular joint surfaces *and the adjacent superficial bone is routine.*



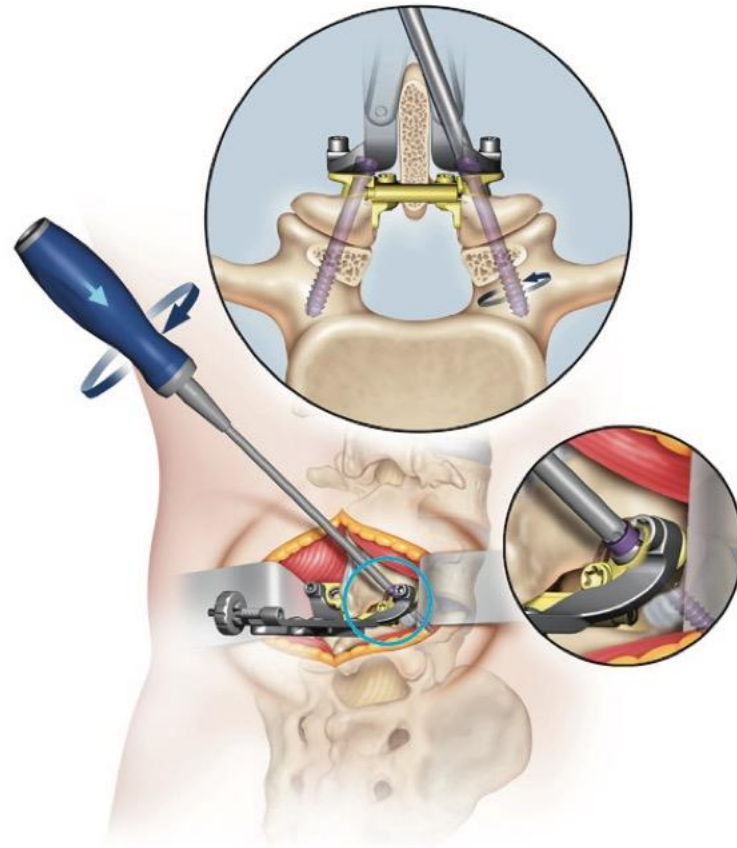
# Facet+LINK MINI

## Step Twelve (cont)

Deliver second screw.

*To prevent asymmetrically applying torque to the device (which can displace it), stop tightening the first screw once it contacts the device. This usually means the head is about 5mm proud. Tighten the second screw, then do the final tightening on the 1<sup>st</sup> screw, with the torque limiting driver.*

*Verify the chosen screw lengths are optimal before proceeding to "final tight", to reduce the need for screw removal and replacement, and the difficulty in doing so.*

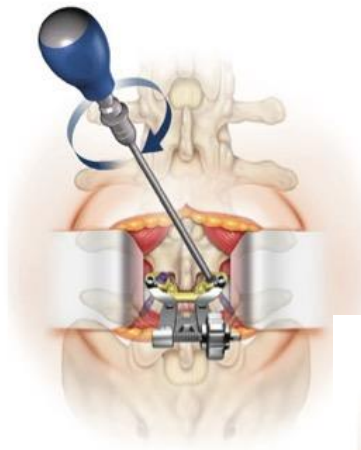
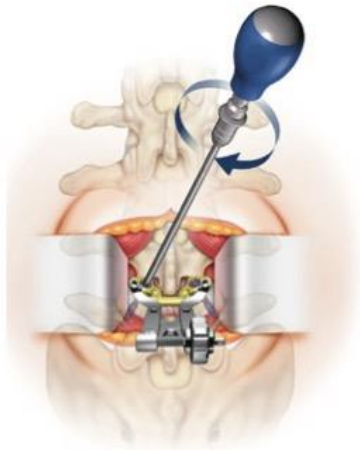


# FacetLINK MINI

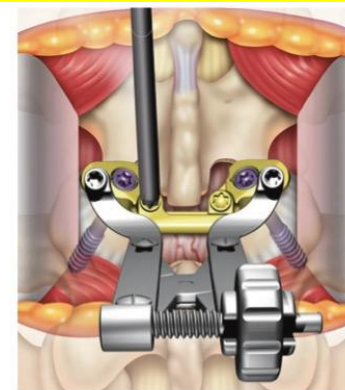
## Step Thirteen

### Final Screw Tightening

The torque-limiting driver is used for final tightening of the two screws and the monorail screws. *It is possible to strip the screws on the cross connector if the torque limiting driver is not used.*



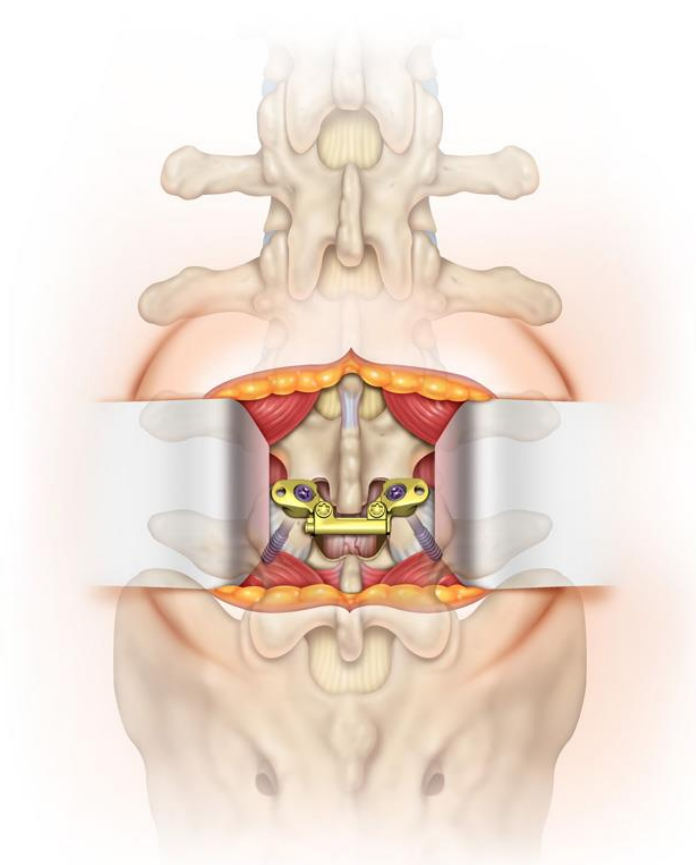
**Important:** Prior to tightening the monorail, squeeze the inserter





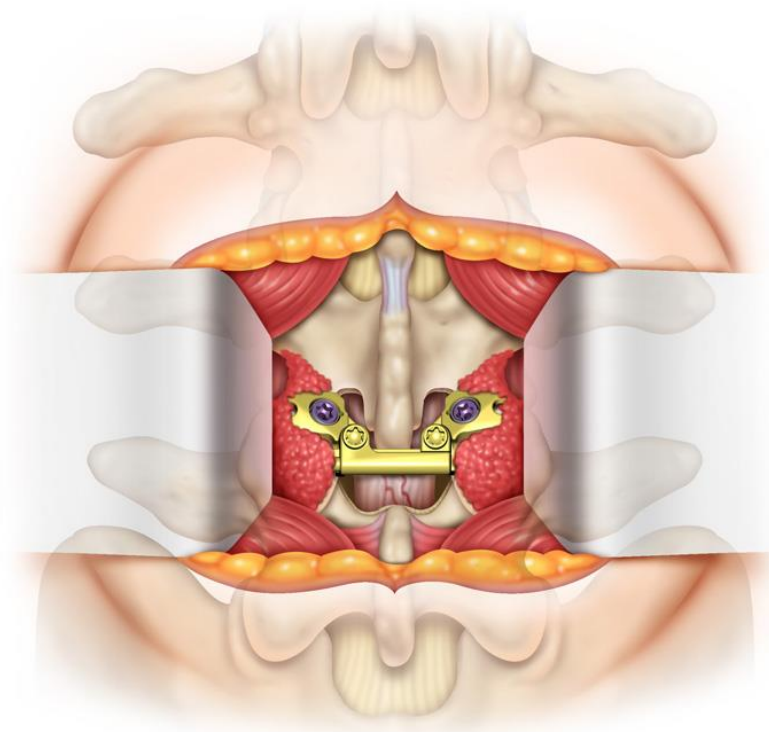
# Facet+LINK MINI

Final Construct



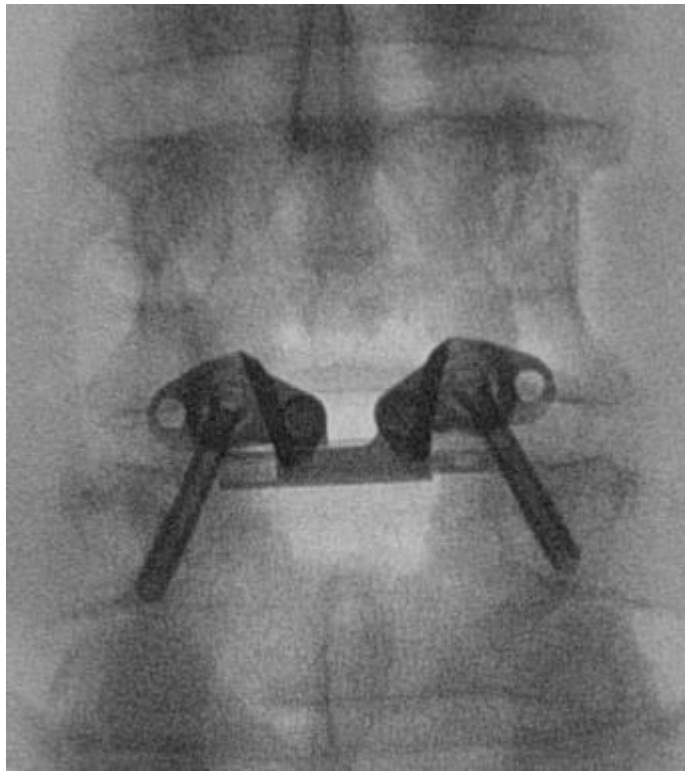
# FacetLINK MINI

Pack Graft for the Fusion



# FacetLINK MINI

Final Images



**FacetLINK** MINI

## Discussion

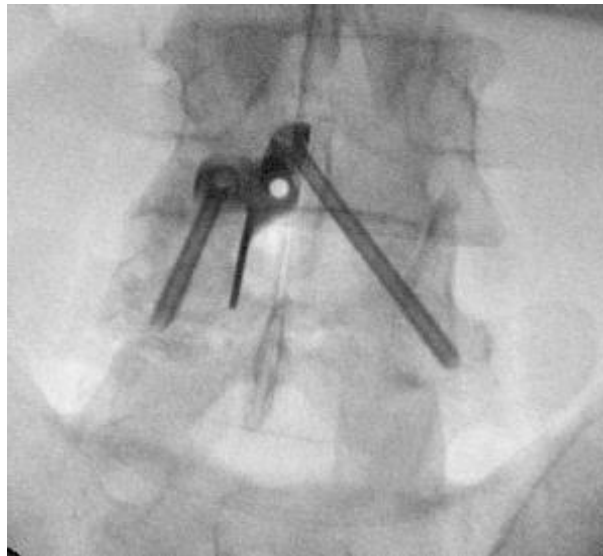
- Thoughts, questions?

# Facet+LINK

HEMI Surgical Technique

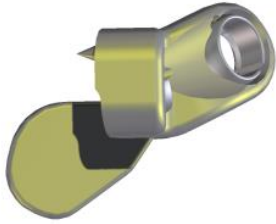
# Room Set Up and Prep

- Identical to MINI Technique
- Screw Targeting:
  - Identical to MINI for Ipsilateral Screw
  - Contralateral Trajectory similar to a Magerl Screw

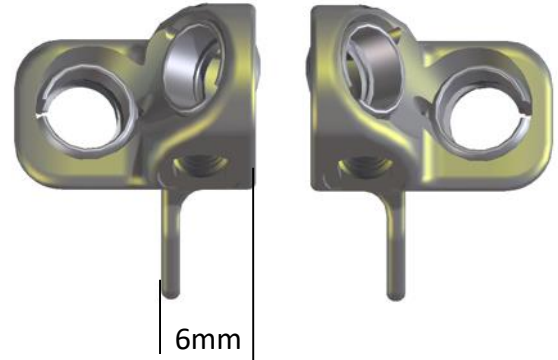


# Facet+LINK HEMI

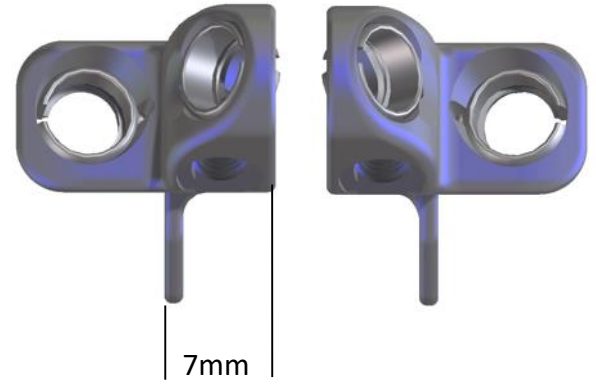
HEMI -left-



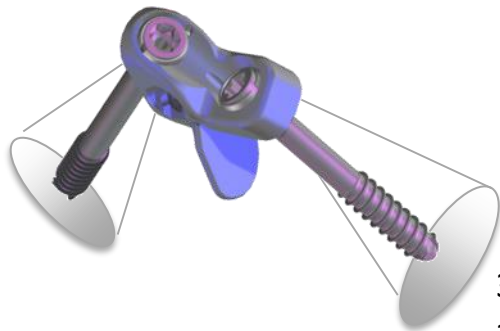
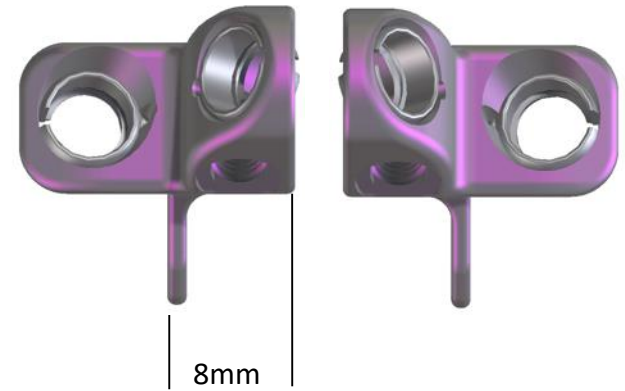
6mm  
gold



7mm  
blue



8mm  
magenta



30° cone of  
angulation

# Facet+LINK HEMI

## Trans-Articular Screws

**4.5mm magenta**



Partially-Threaded



Fully-Threaded

**5.0mm gold**



Partially-Threaded



Fully-Threaded

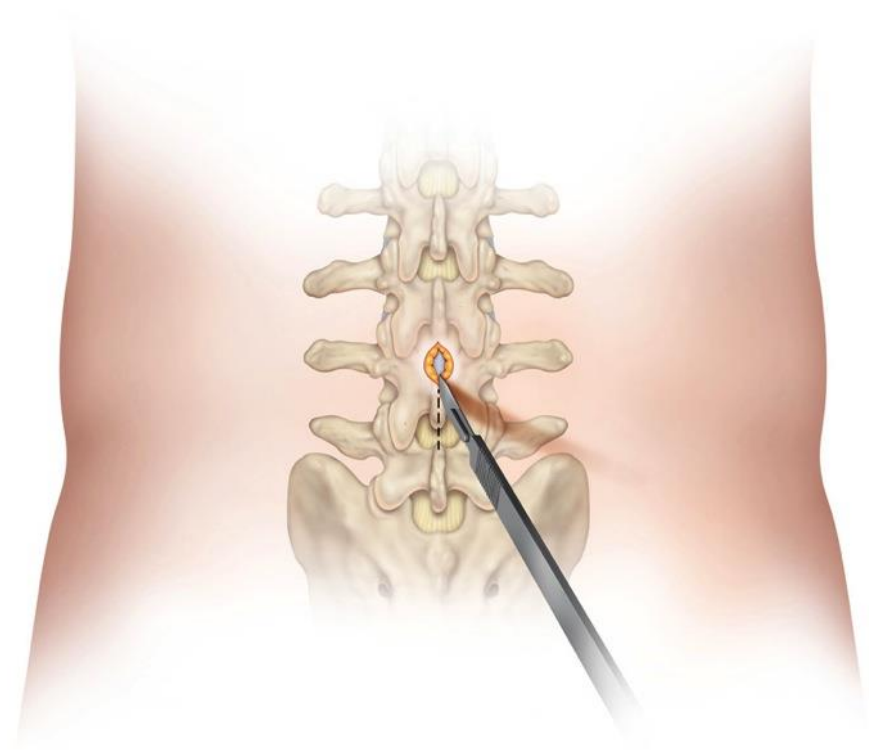
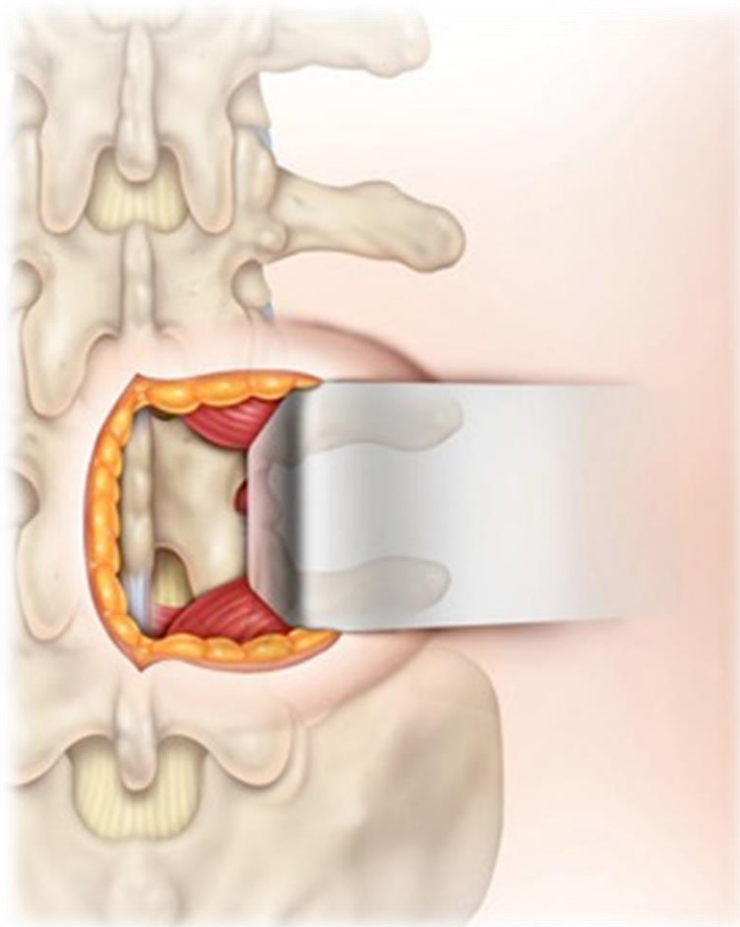
		Thread diameter	
		4.5mm	5.0mm
Length [mm]	25	25	
	30	30	
	35	35	
	40	40	
	45	45	
	50	50	
	55	55	



# Facet+LINK HEMI

## Step Three

### Exposure



### **Please Note:**

It is important that the exposure include full visualization of the Pars Interarticularis, so that the maximum possible amount of bone stock at the waist can be retained when performing the decompression.

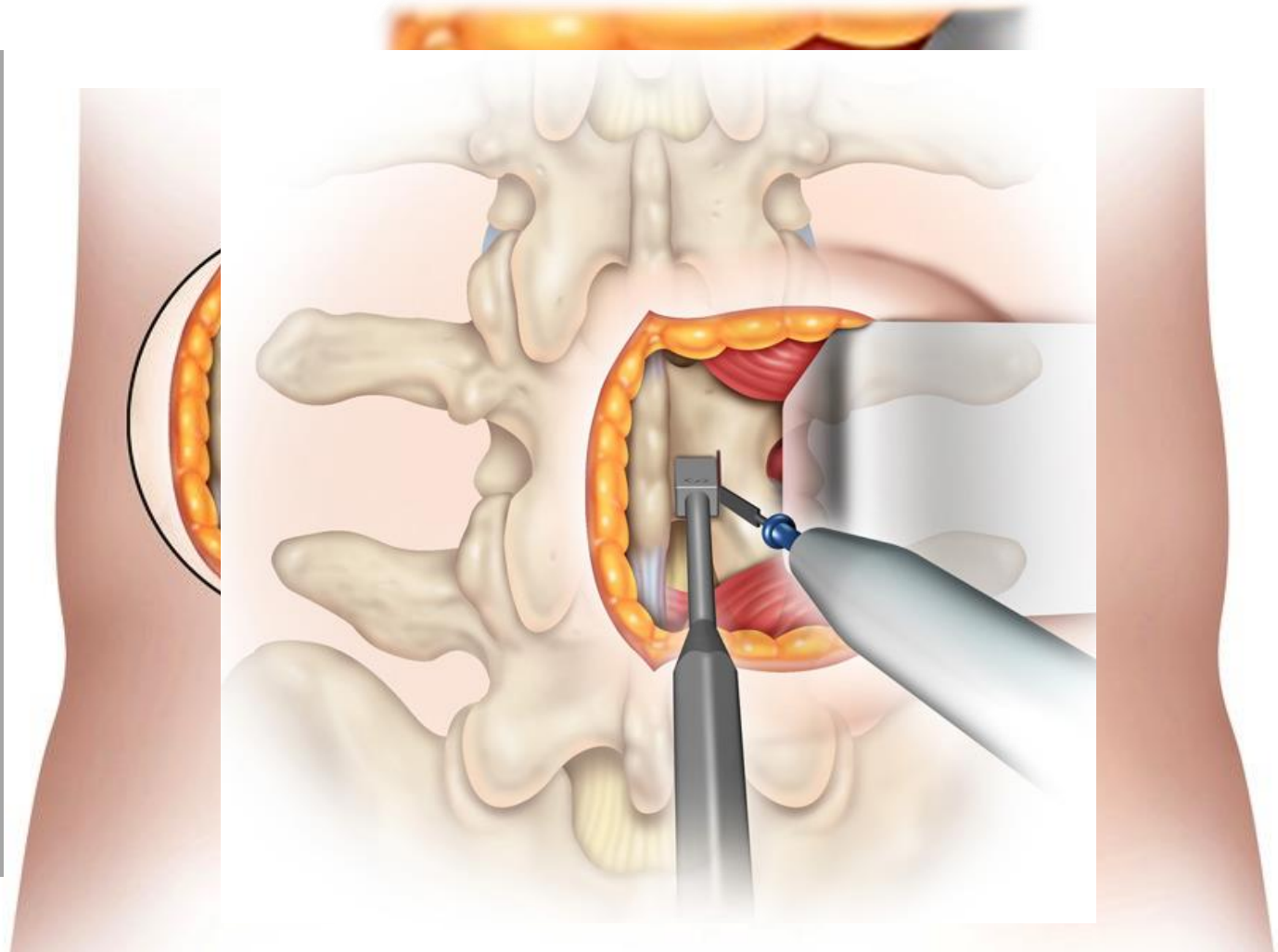
# Facet+LINK HEMI

## Step Four

### Template and Perform Decompression

Exposure should be carried out just lateral to the Pars Interarticularis to allow for clear visualization prior to bony resection. ***Care should be taken to ensure that a minimum of 6mm of Pars Interarticularis will remain following the decompression.***

A bovie or sharp instrument can be used to demarcate the lateral boundary of the maximum decompression

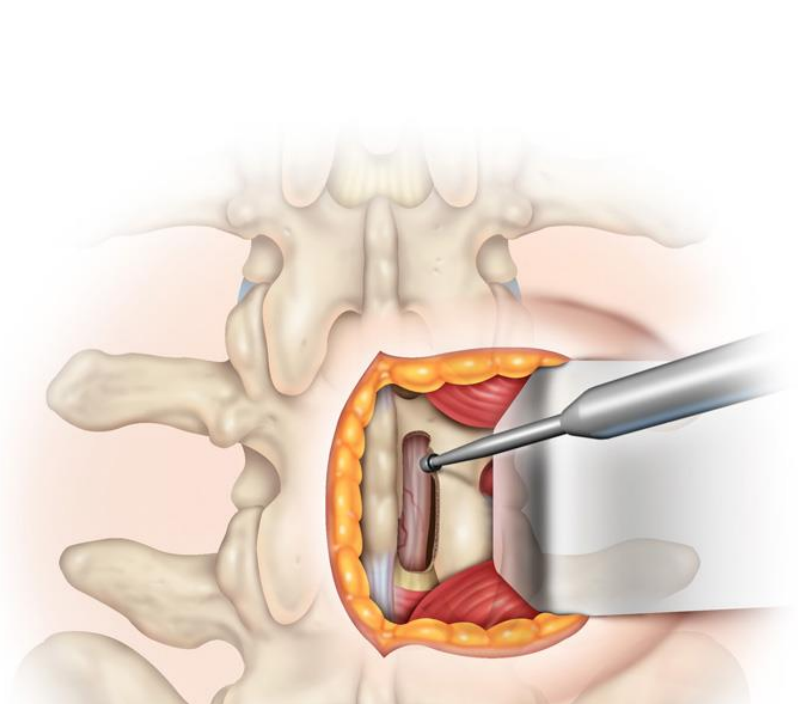
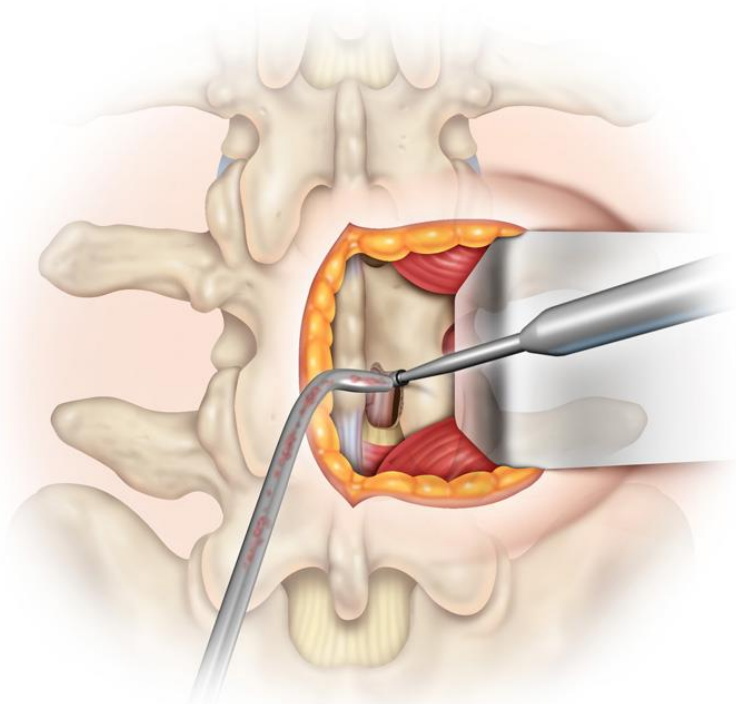


# Facet+LINK HEMI

## Step Four

### Measure and Perform Decompression

Using your preferred technique,  
with either a high speed burr...



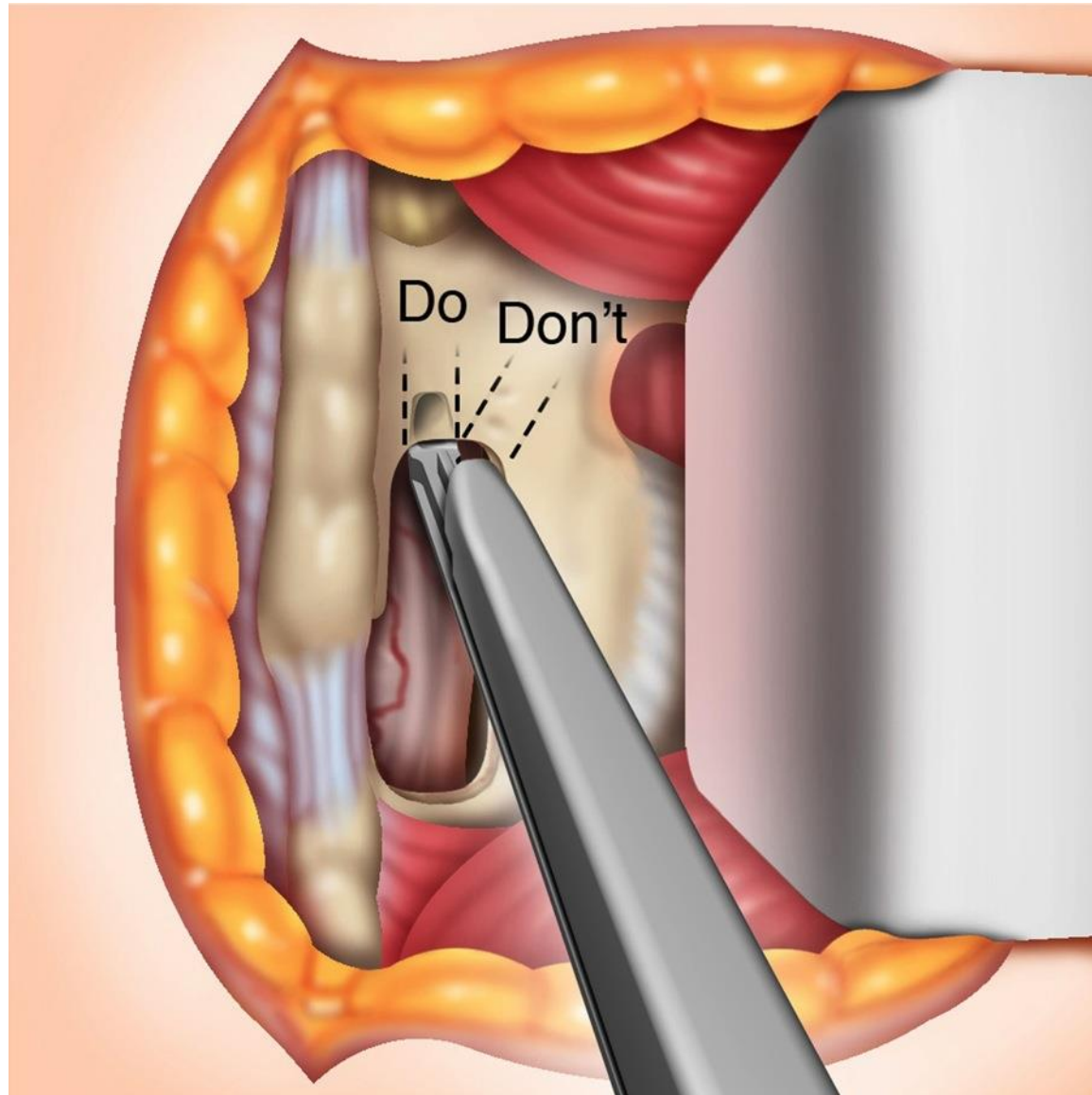
# Facet+LINK HEMI

## Step Four

Measure and Perform  
Decompression

... or a Kerrison

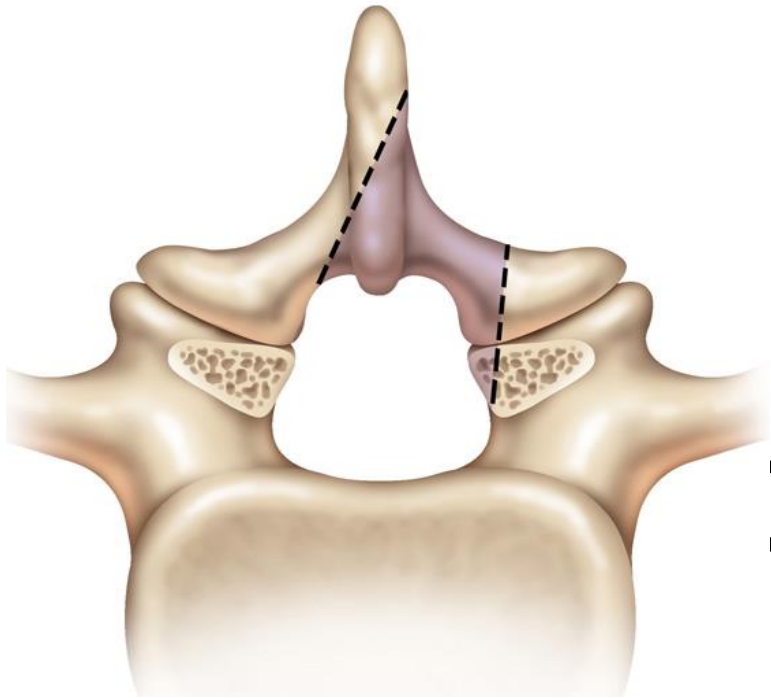
If a Kerrison is used,  
avoid a lateral  
angulation to  
preserve Pars  
integrity!



# Facet+LINK HEMI

## Step Four

Perform Sublaminar  
Contralateral Decompression



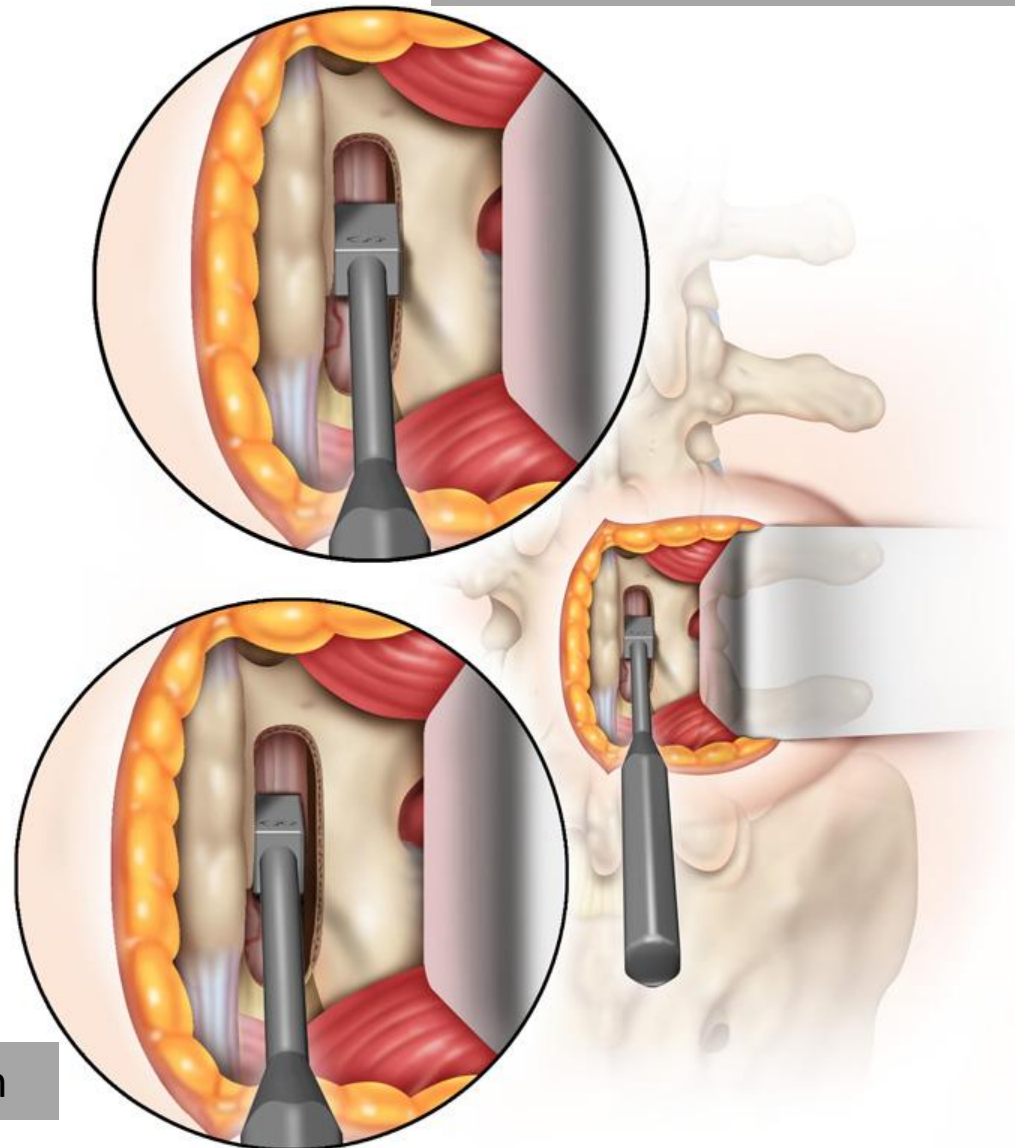
# Facet+LINK HEMI

## Step Five

Check appropriate implant size

Gauge checks min (6mm) and max (8mm) widths. An ideal fit is achieved when the implant makes good contact to the Pars Interarticularis on its lateral side and to the spinous process on its medial side.

Maximum dimension = 8mm

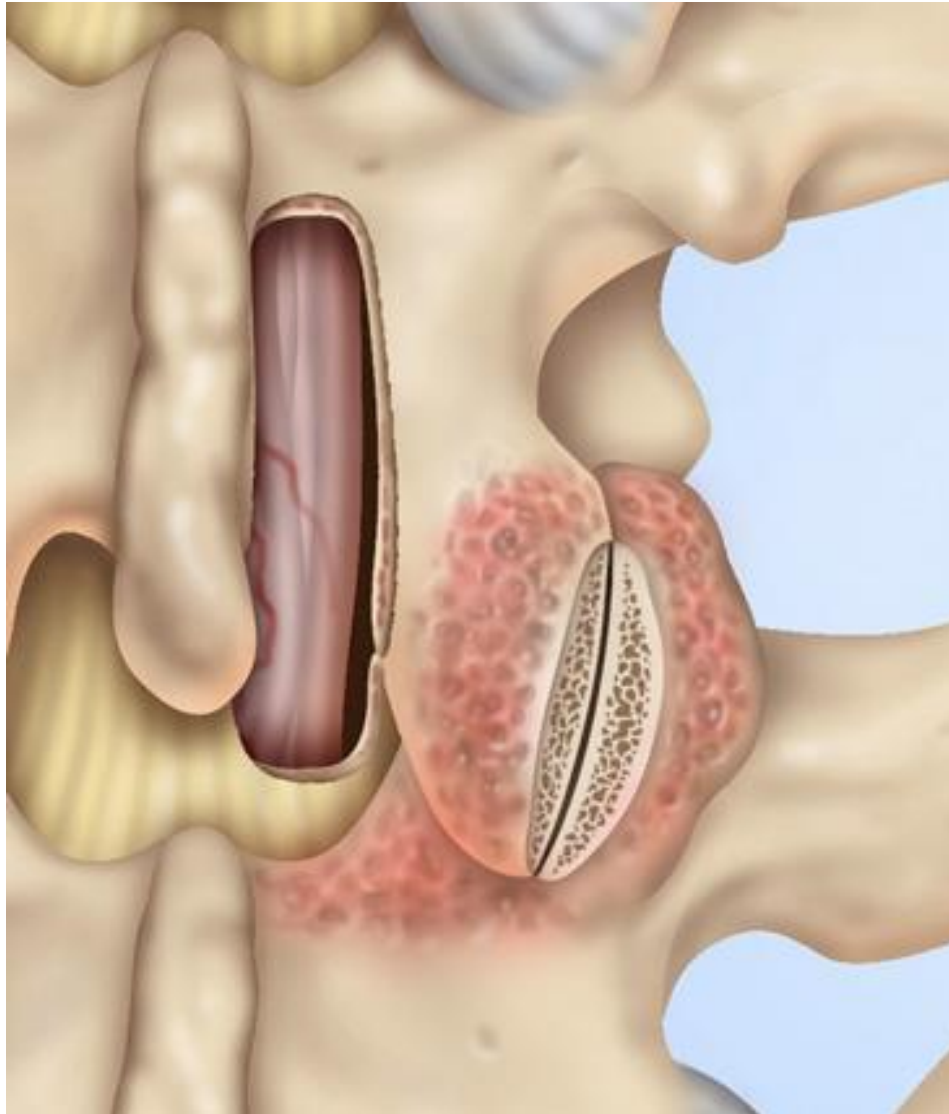


Minimum dimension = 6mm

# Facet+LINK HEMI

## Fusion Step

Remove the facet capsule and the dorsal aspect of the joint, taking care to preserve bone stock needed for the fixation. Prepare the dorsal aspect of the inferior articular process and the dorso-lateral aspect of the superior articular process with a burr.

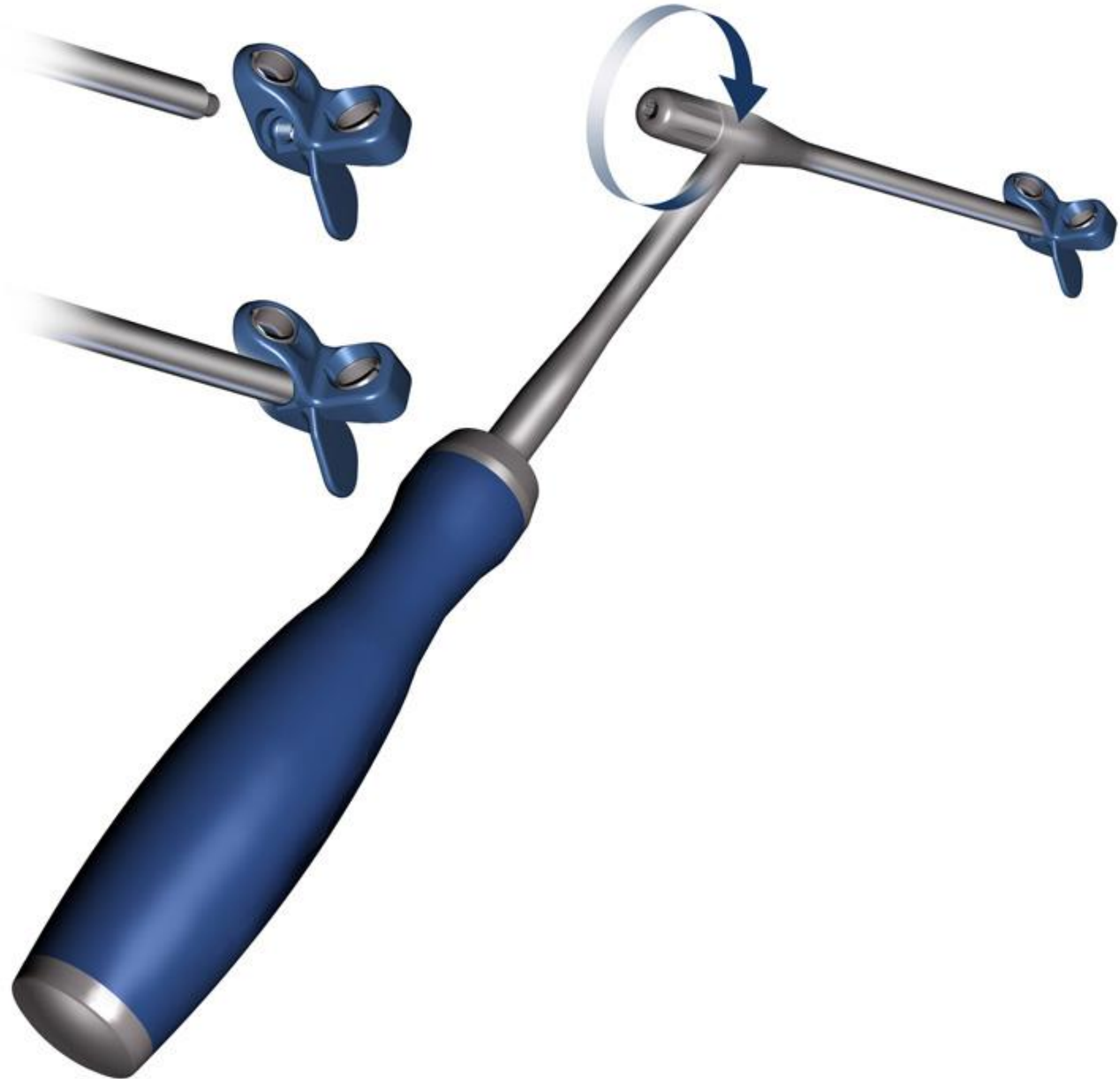


Care should be taken to strike a balance between joint preparation and preservation of bone stock. Debridement of the *dorsal* aspect of the inter-articular joint surfaces *and the adjacent superficial bone is routine.*

# Facet+LINK HEMI

**Step Six**

Select HEMI Implant

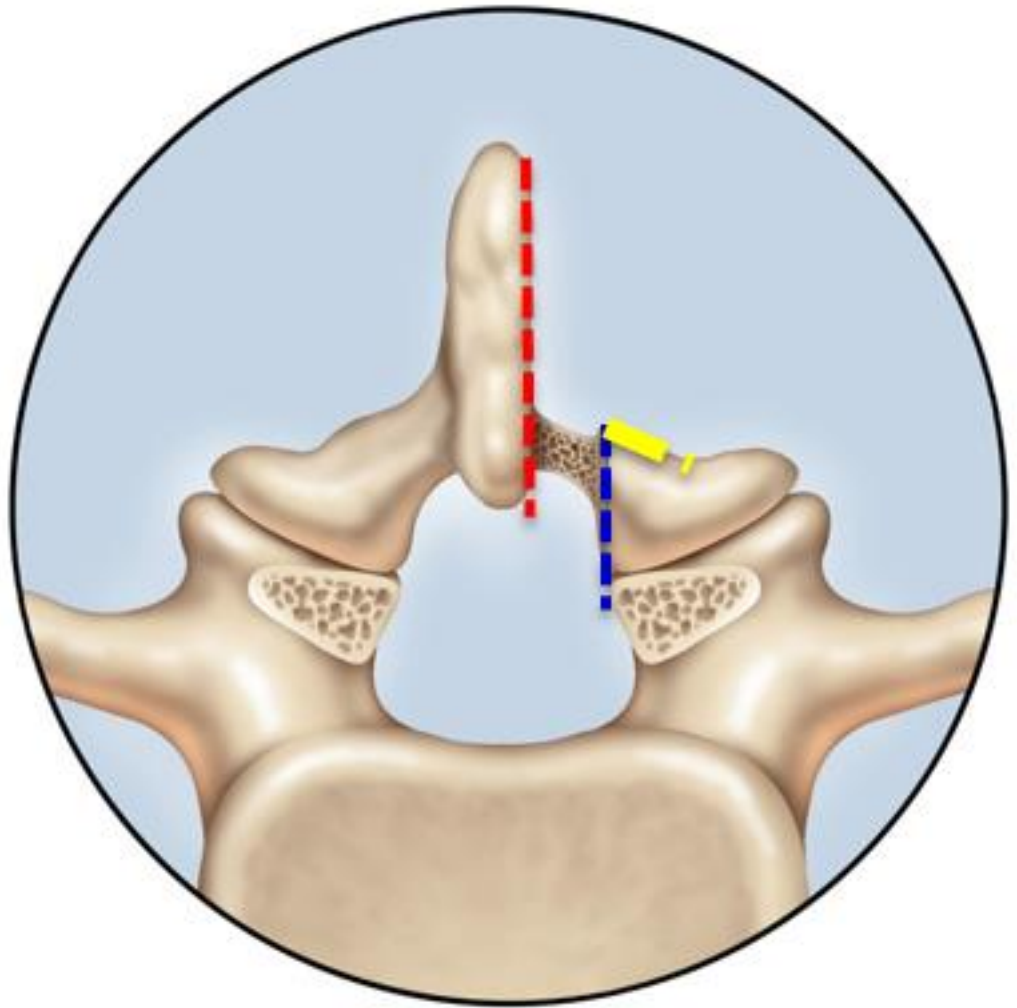




# Facet+LINK HEMI

Recommendation: Surface Bone Preparation – It is helpful to plane:

- the lateral surface of the spinous process,
- the medial aspect of the resected pars,
- and the surface of the facet

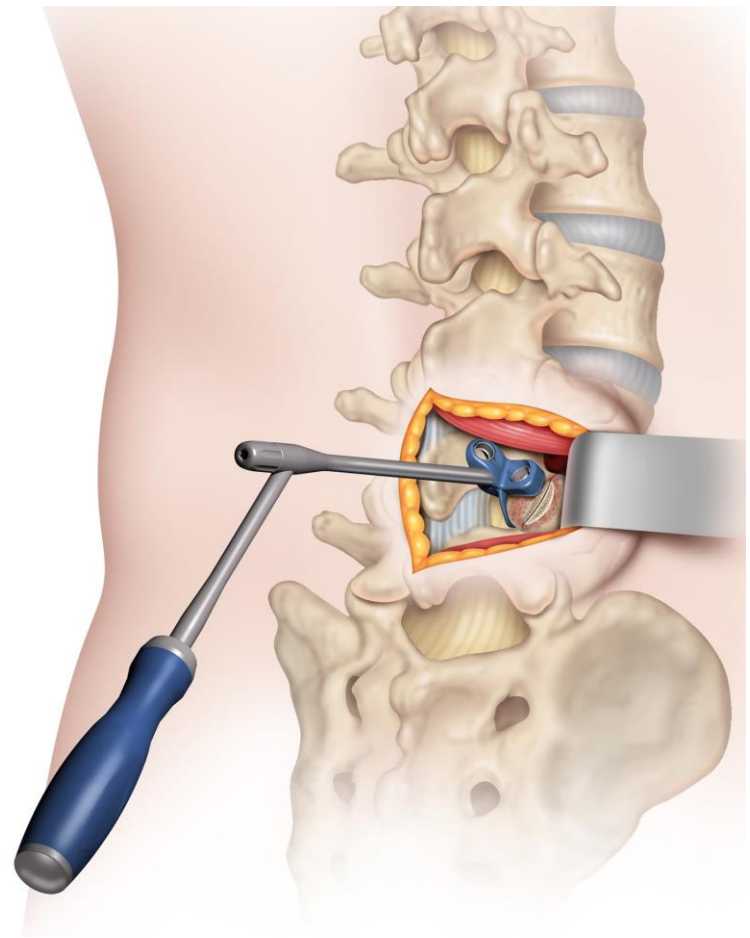
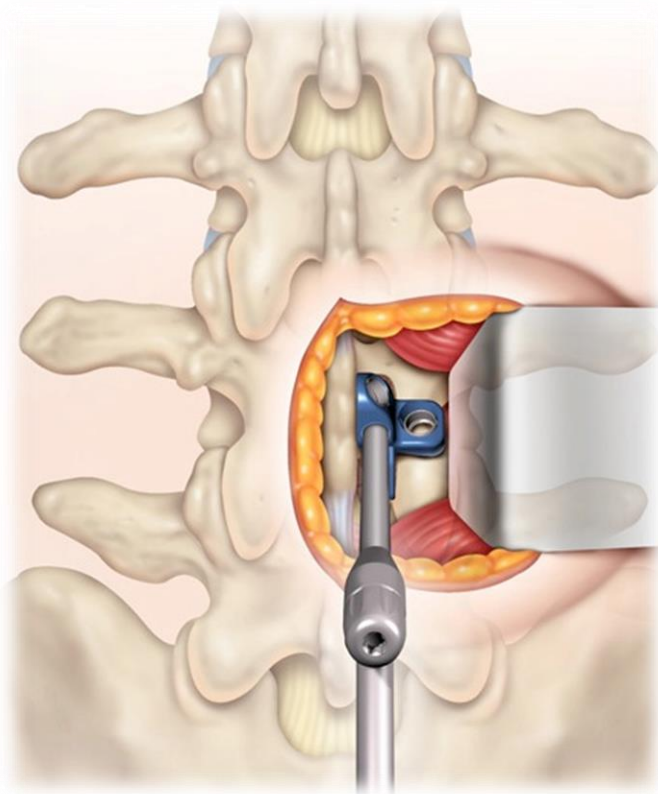


# Facet+LINK HEMI

## Step Seven

### Temporarily Position Implant

*The medial flange should be in the upper 1/3 of the spinous process from a cephalocaudal perspective.*



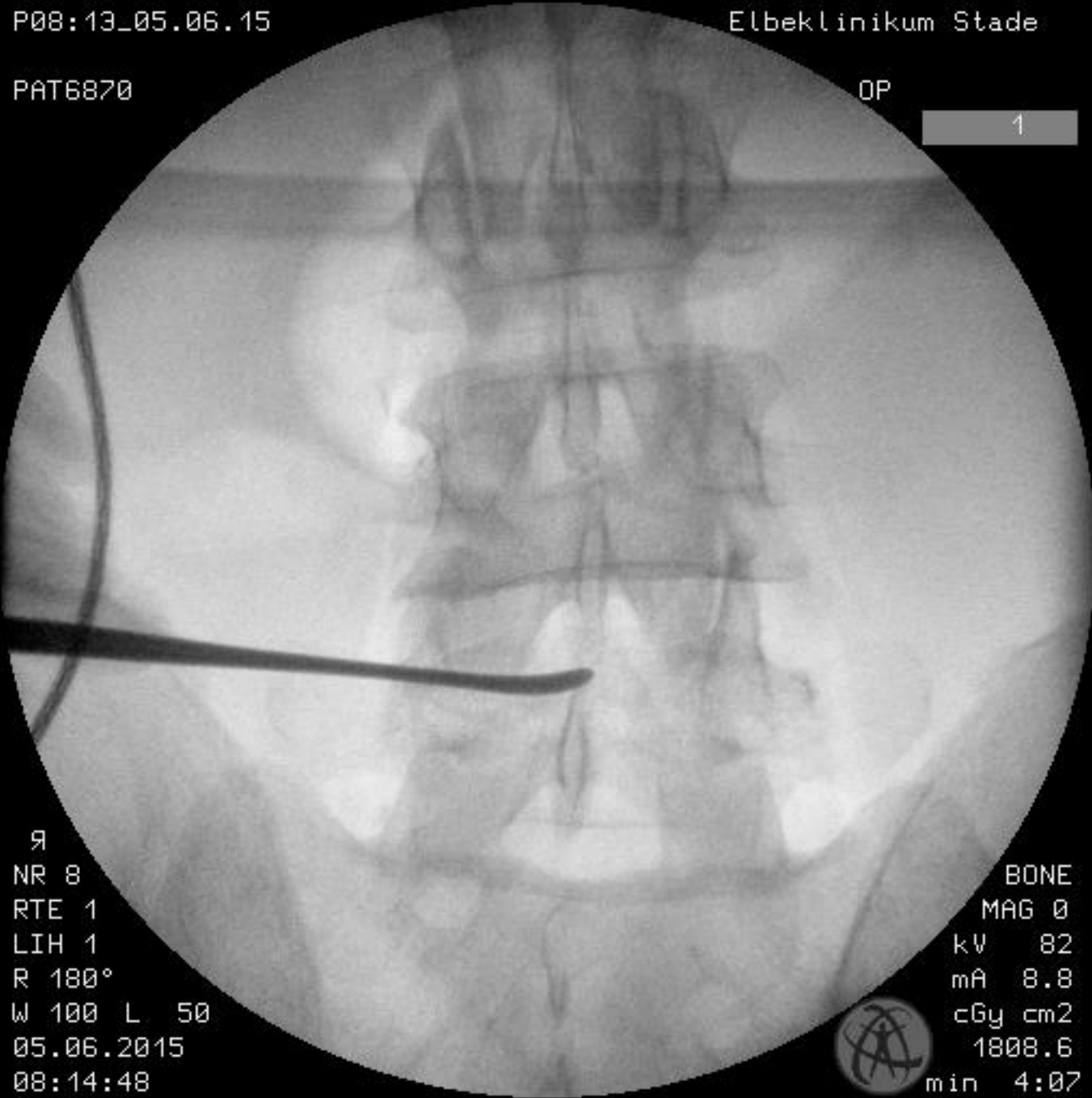
P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

1



Я  
NR 8  
RTE 1  
LIH 1  
R 180°  
W 100 L 50  
05.06.2015  
08:14:48

BONE  
MAG 0  
kV 82  
mA 8.8  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

4

9  
NR 8  
RTE 1  
LIH 1  
R 180°  
W 100 L 50  
05.06.2015  
08:33:08

BONE  
MAG 0  
kV 79  
mA 9.0  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

5

9  
NR 8  
RTE 1  
LIH 1  
R 180°  
W 100 L 50  
05.06.2015  
08:33:19

BONE  
MAG 0  
kV 79  
mA 9.0  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

7

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
10:50:27

BONE  
MAG 0  
kV 77  
mA 9.0  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

8

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
10:54:53

BONE  
MAG 0  
kV 83  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

9

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
10:56:19

BONE  
MAG 0  
kV 83  
mA 8.7  
cGy cm2  
1808.6  
min 4:07





P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

11

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
10:56:28

BONE  
MAG 0  
kV 83  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

13

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
10:56:37

BONE  
MAG 0  
kV 83  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

14

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
10:58:17

BONE  
MAG 0  
kV 110  
mA 7.2  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

15

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:00:09

BONE  
MAG 0  
kV 79  
mA 9.0  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

16

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:01:41

BONE  
MAG 0  
kV 80  
mA 8.9  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

18

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:02:05

BONE  
MAG 0  
kV 83  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

19

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:02:21

BONE  
MAG 0  
kV 83  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

22

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:03:59

BONE  
MAG 0  
kV 84  
mA 8.7  
cGy cm2  
1808.6  
min 4:07





P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

23

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:04:10

BONE  
MAG 0  
kV 83  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



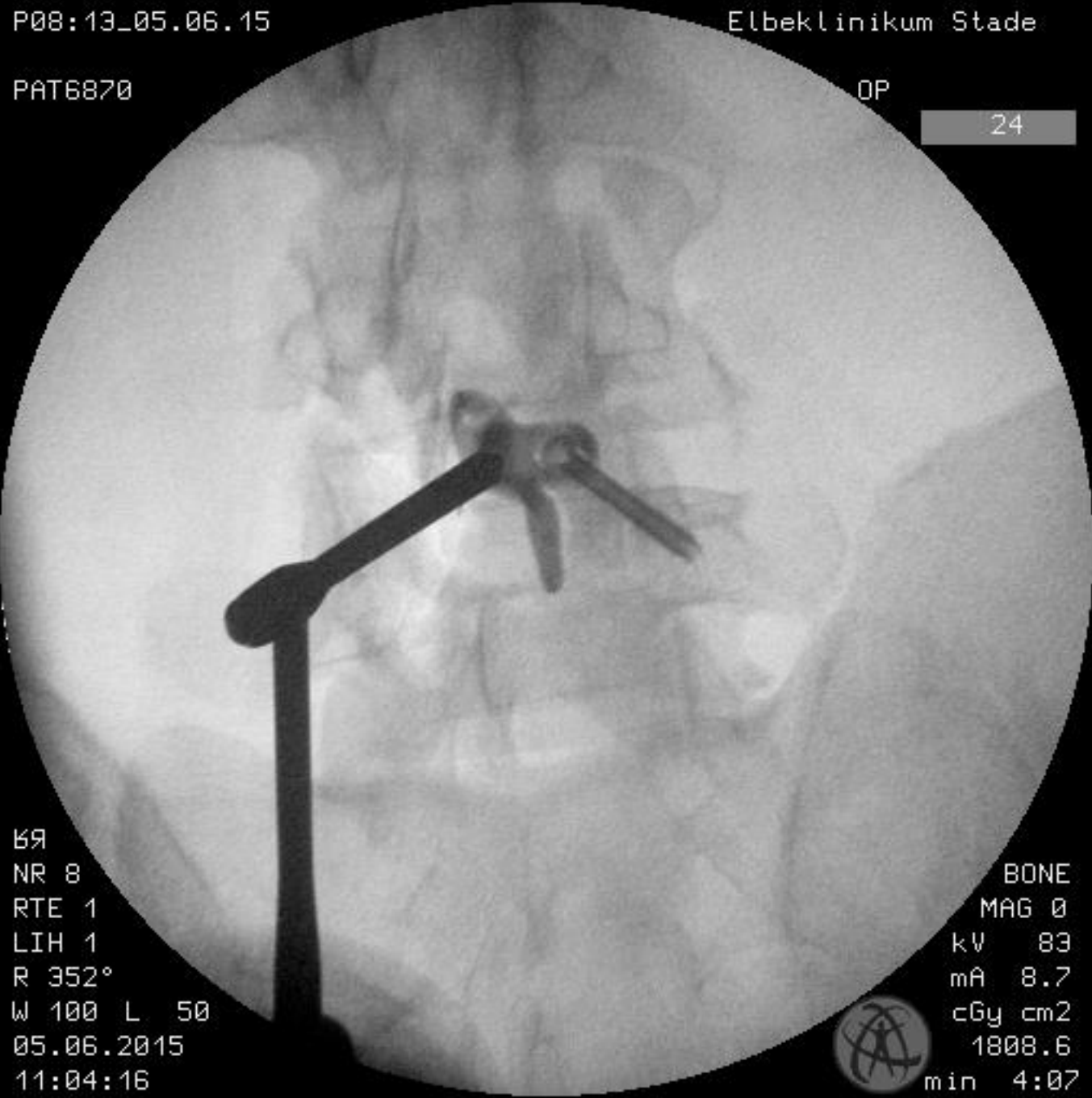
P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

24



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:04:16

BONE  
MAG 0  
kV 83  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

25

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:04:53

BONE  
MAG 0  
kV 81  
mA 8.8  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

26

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:06:57

BONE  
MAG 0  
kV 81  
mA 8.9  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

27

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:07:49

BONE  
MAG 0  
kV 81  
mA 8.8  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

28

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:09:08

BONE  
MAG 0  
kV 84  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

29

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:15:18

BONE  
MAG 0  
kV 81  
mA 8.8  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

30

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:15:49

BONE  
MAG 0  
kV 82  
mA 8.8  
cGy cm2  
1808.6  
min 4:07





P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

31

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:15:59

BONE  
MAG 0  
kV 82  
mA 8.8  
cGy cm2  
1808.6  
min 4:07



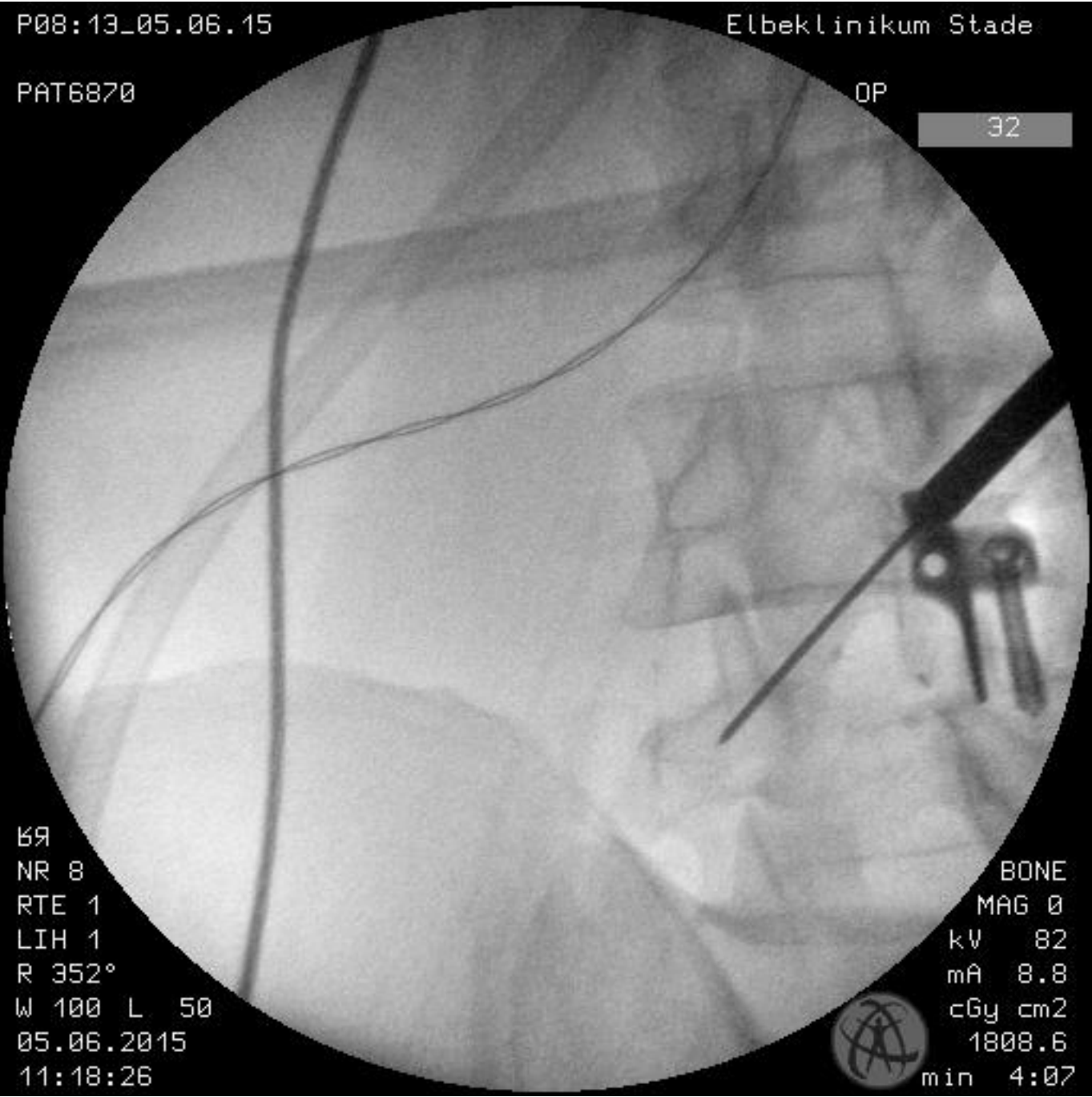
P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

32



69  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:18:26

BONE  
MAG 0  
kV 82  
mA 8.8  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

33

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:19:03

BONE  
MAG 0  
kV 82  
mA 8.8  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

34

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:19:35

BONE  
MAG 0  
kV 110  
mA 7.2  
cGy cm2  
1808.6  
min 4:07



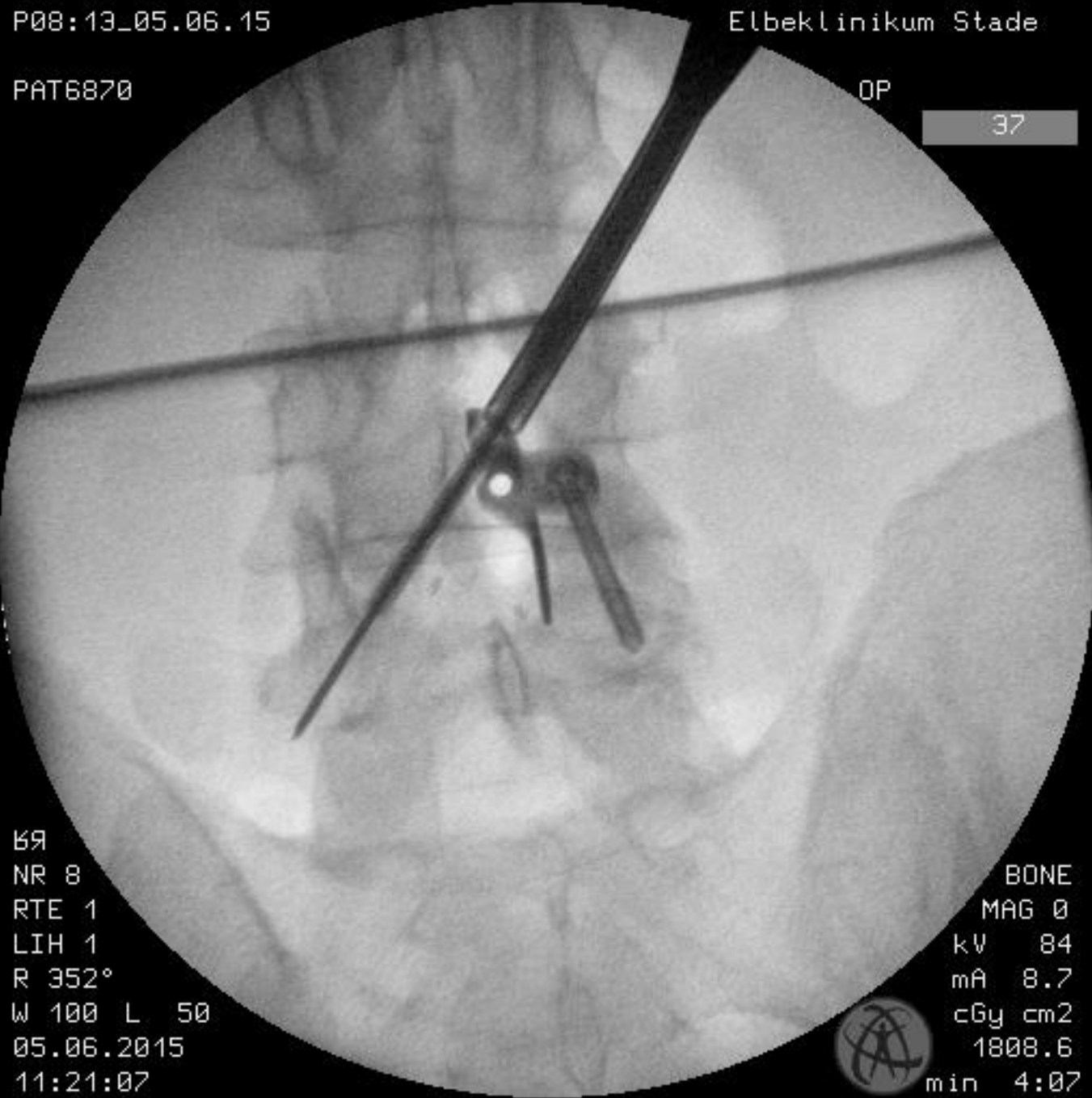
P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

37



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:21:07

BONE  
MAG 0  
kV 84  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



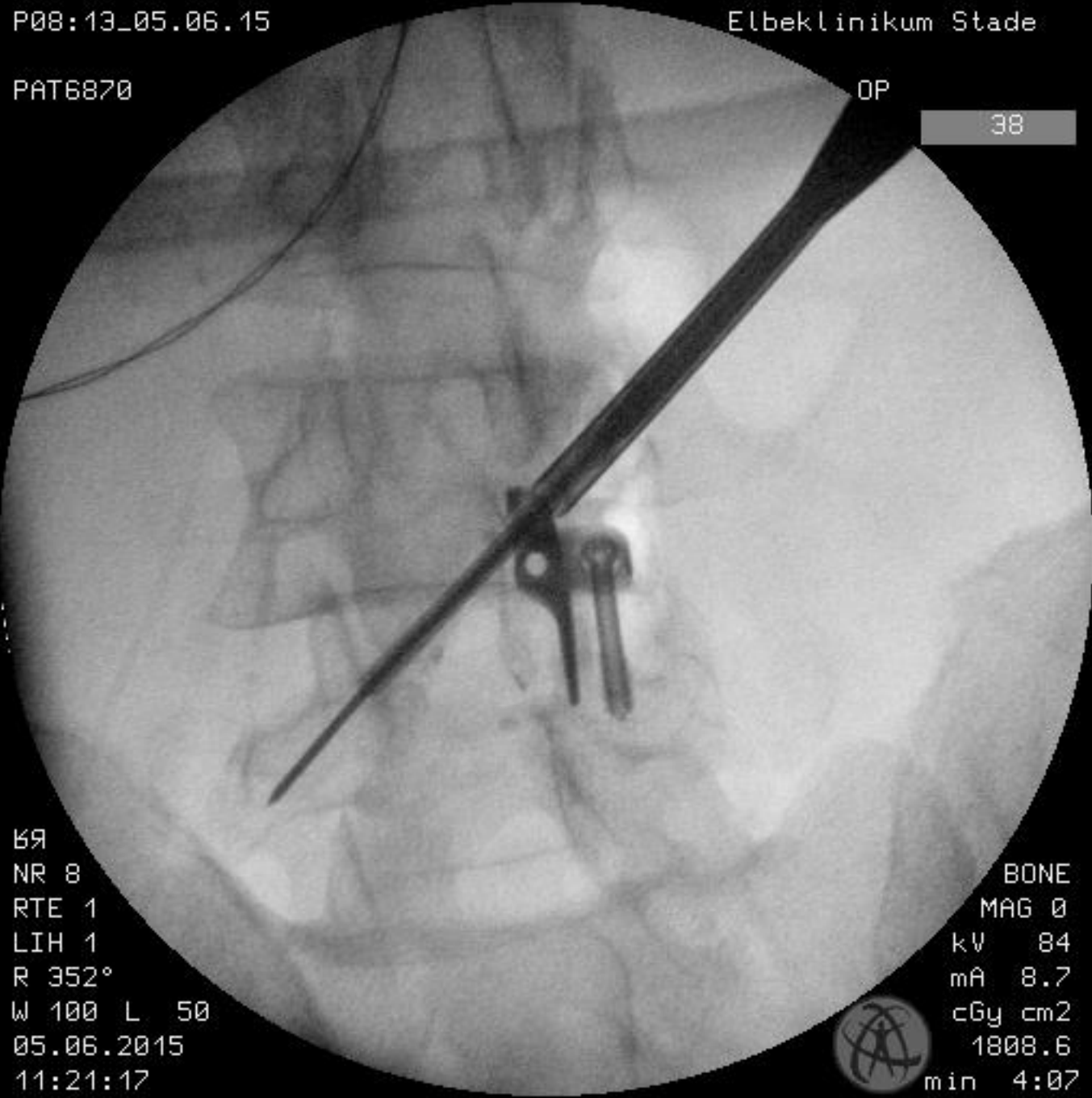
P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

38



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:21:17

BONE  
MAG 0  
kV 84  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:1:

PAT6870

OP

39

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:21:55

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07

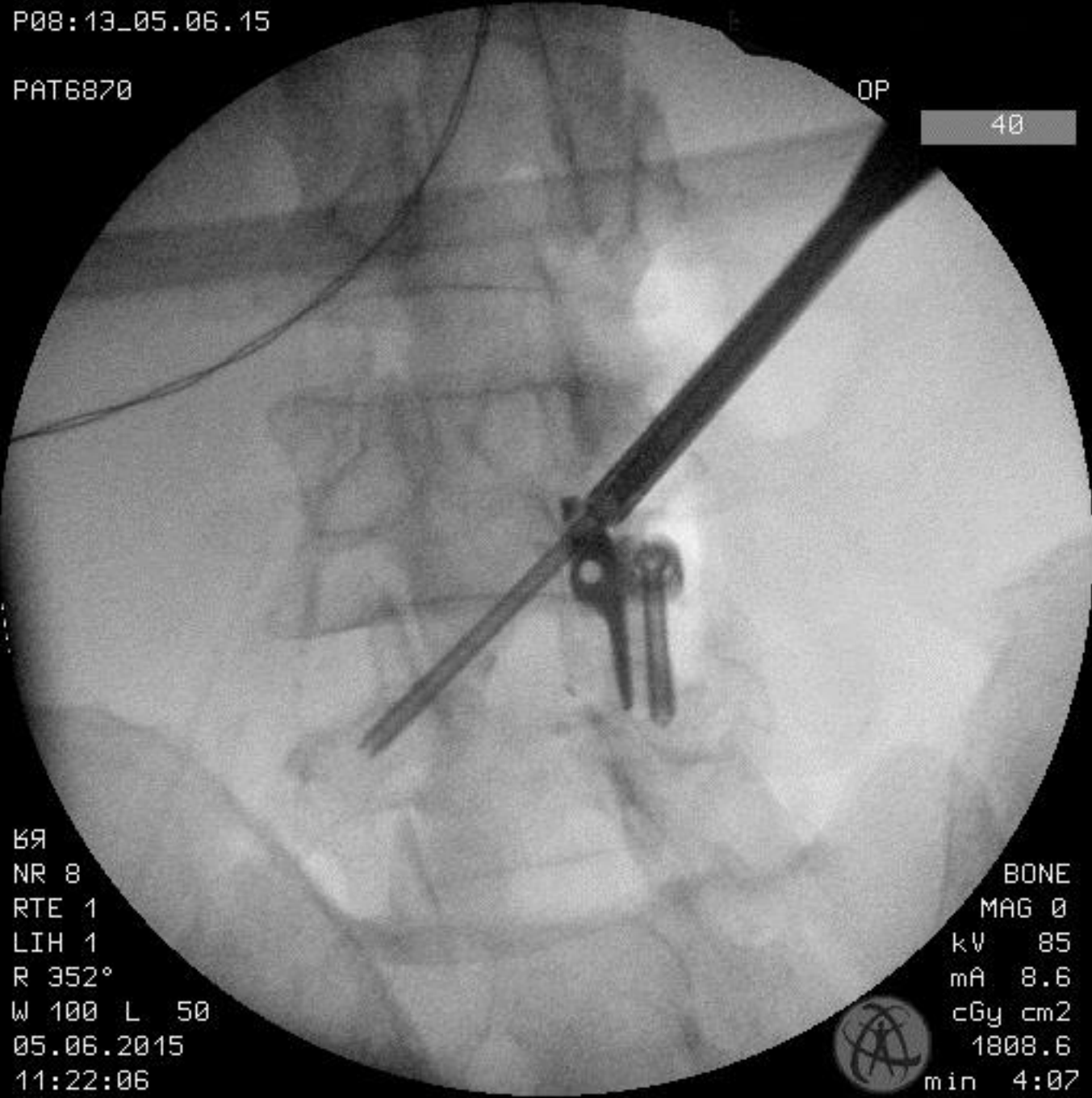


P08:13\_05.06.15

PAT6870

OP

40



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:22:06

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07





P08:13\_05.06.15

PAT6870

OP

41

BR

NR 8

RTE 1

LIH 1

R 352°

W 100 L 50

05.06.2015

11:22:10

BONE

MAG 0

kV 85

mA 8.6

cGy cm2

1808.6

min 4:07



P08:13\_05.06.15

PAT6870

OP

42

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:22:17

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

43



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:23:17

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

44

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:24:39

BONE  
MAG 0  
kV 82  
mA 8.8  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

45

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:24:44

BONE  
MAG 0  
kV 84  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

46

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:24:57

BONE  
MAG 0  
kV 81  
mA 8.9  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

48

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
12:06:31

BONE  
MAG 0  
kV 84  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

49

K9  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
12:07:05

BONE  
MAG 0  
kV 110  
mA 7.2  
cGy cm2  
1808.6  
min 4:07





# Joint Compression

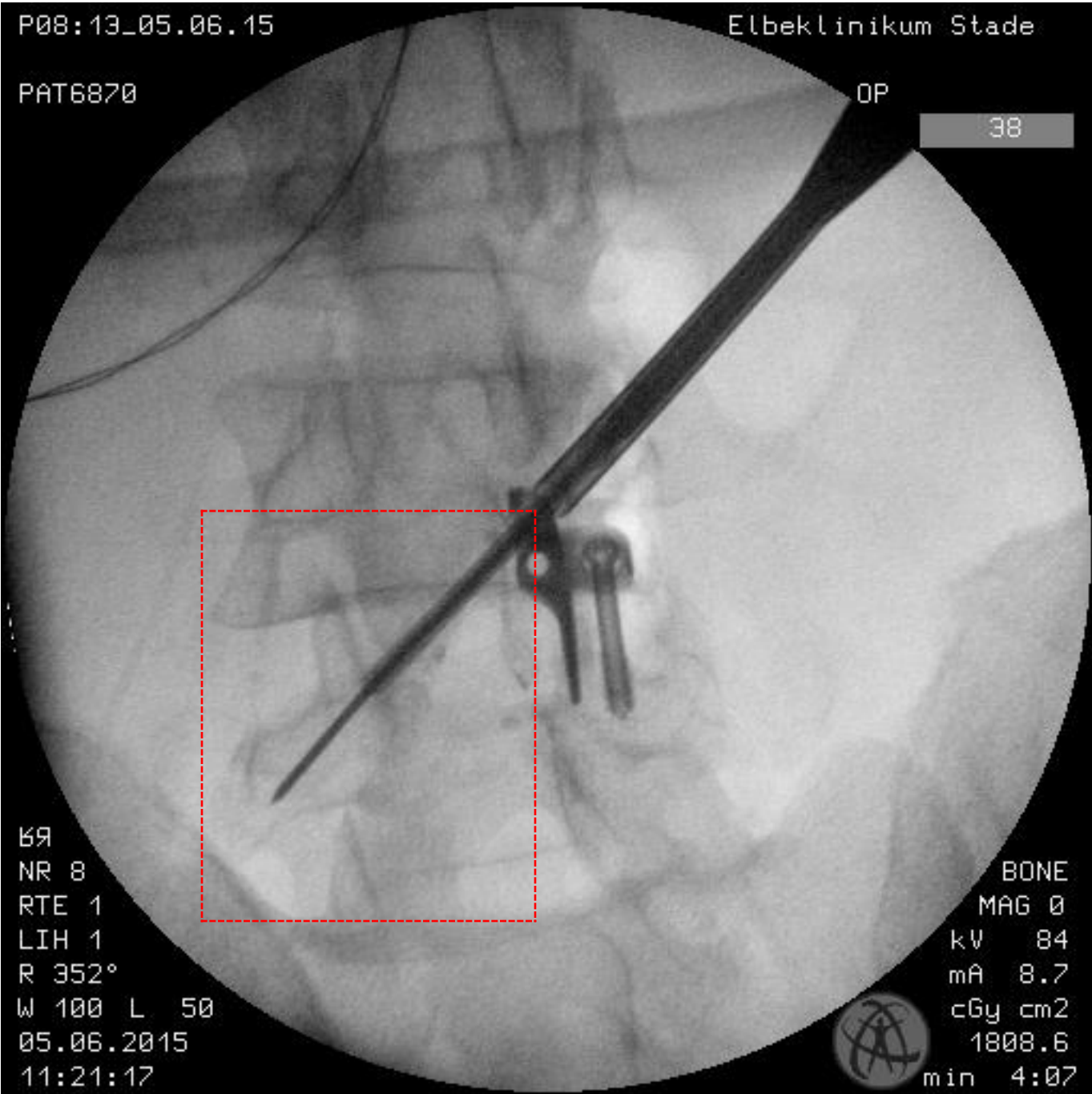
P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

38



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:21:17

BONE  
MAG 0  
kV 84  
mA 8.7  
cGy cm2  
1808.6  
min 4:07



P08:1:

PAT6870

OP

39

BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:21:55

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07

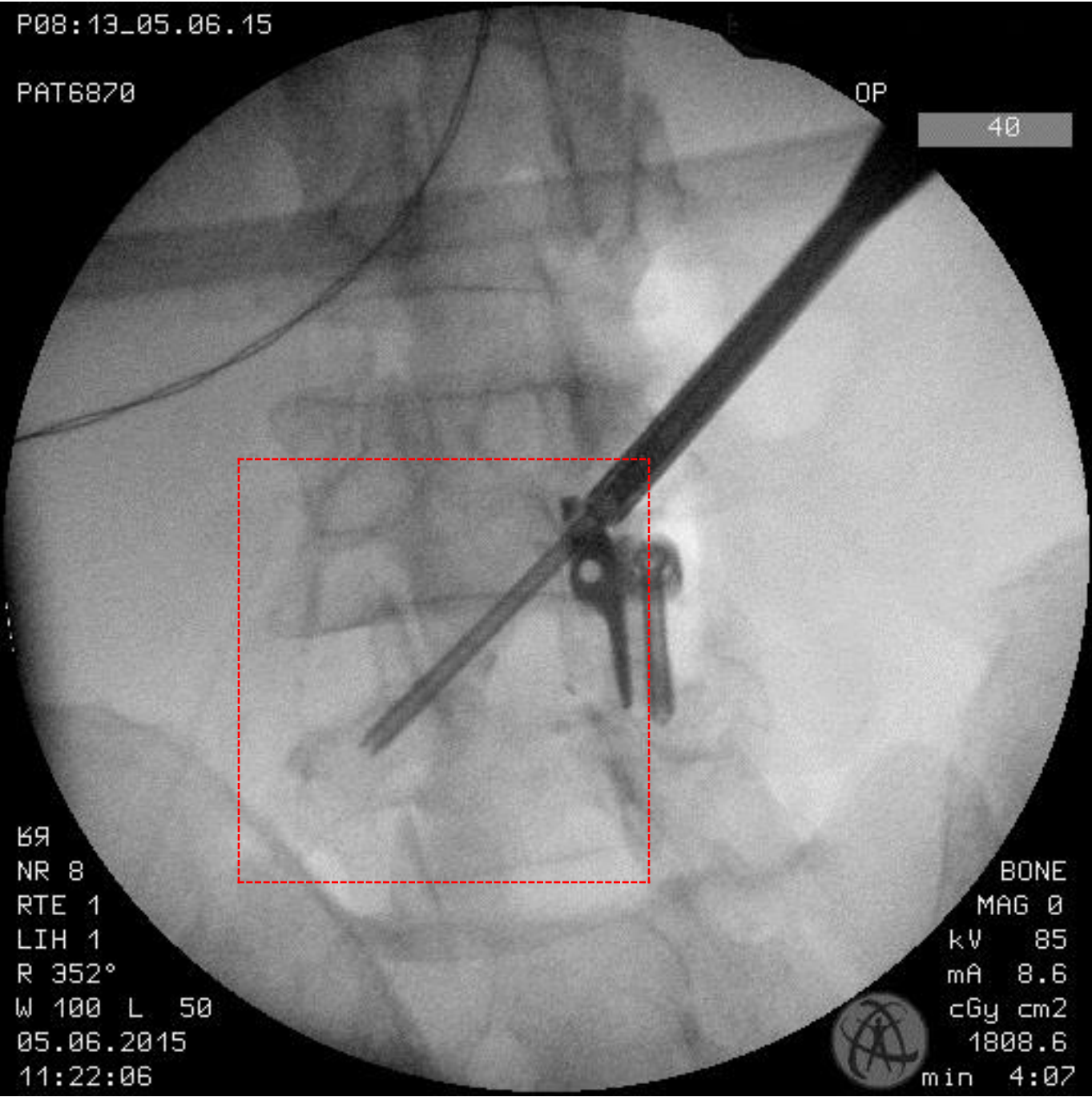


P08:13\_05.06.15

PAT6870

OP

40



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:22:06

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07

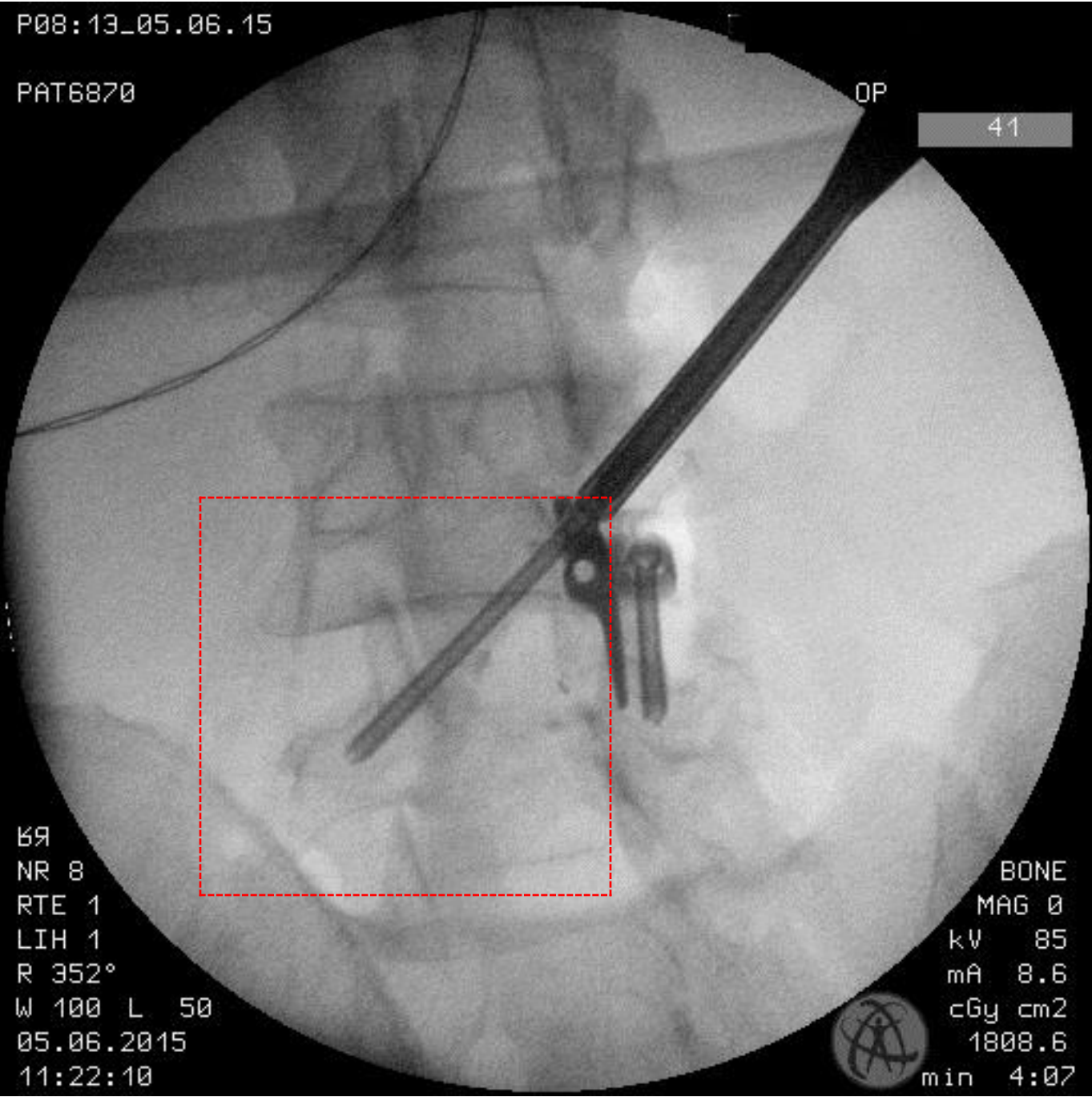


P08:13\_05.06.15

PAT6870

OP

41



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:22:10

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07

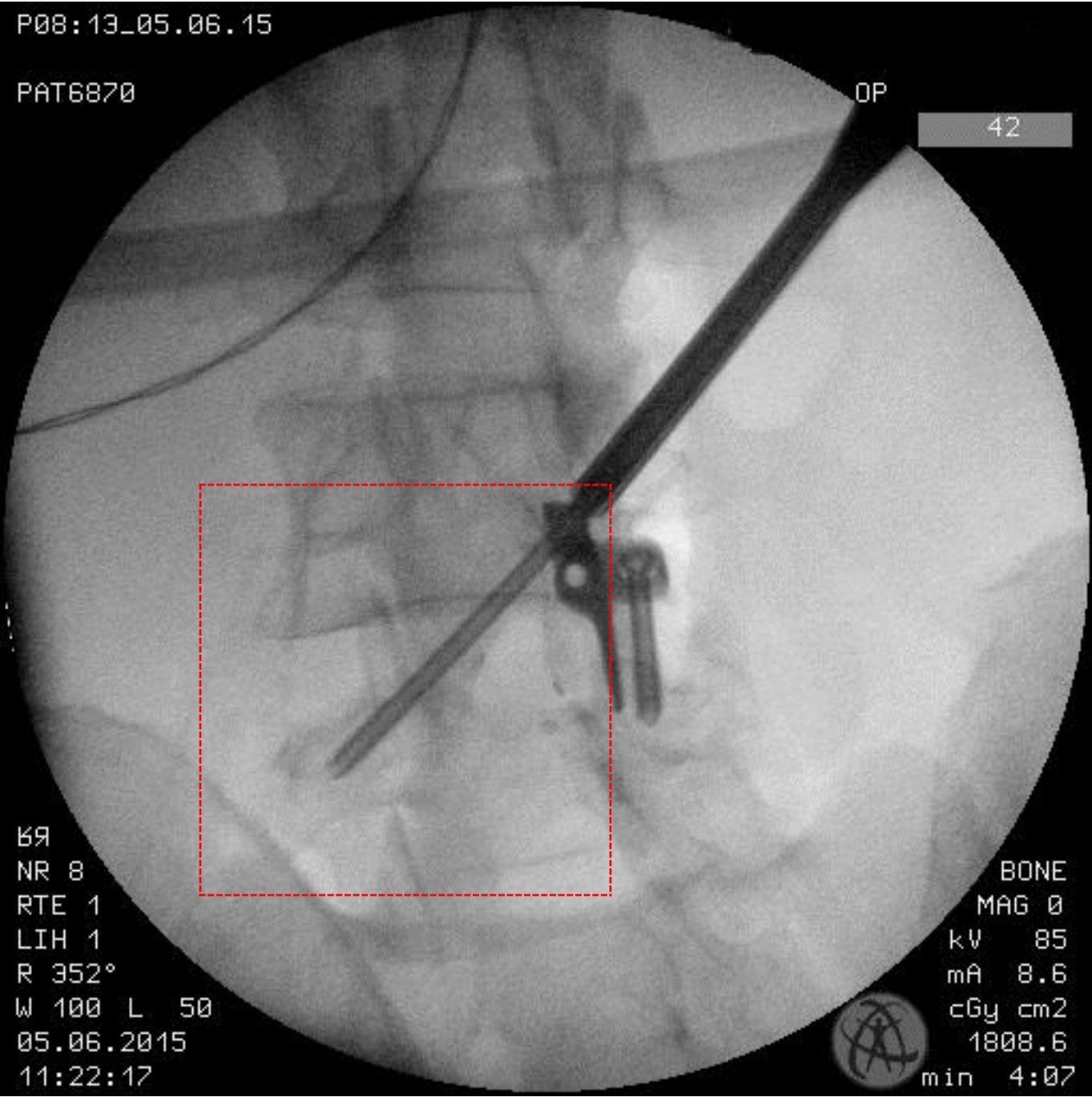


P08:13\_05.06.15

PAT6870

OP

42



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:22:17

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07



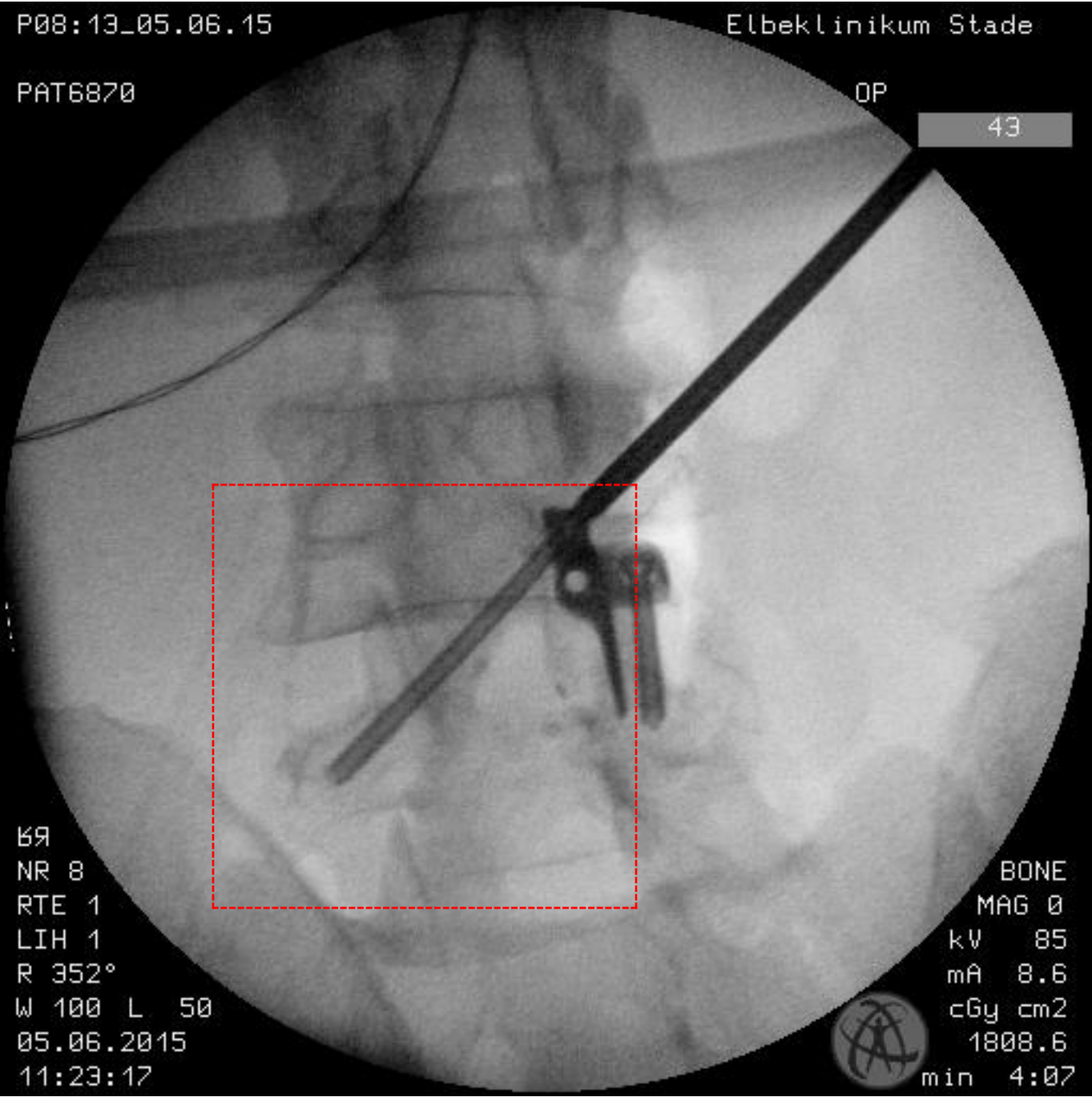
P08:13\_05.06.15

Elbeklinikum Stade

PAT6870

OP

43



BR  
NR 8  
RTE 1  
LIH 1  
R 352°  
W 100 L 50  
05.06.2015  
11:23:17

BONE  
MAG 0  
kV 85  
mA 8.6  
cGy cm2  
1808.6  
min 4:07



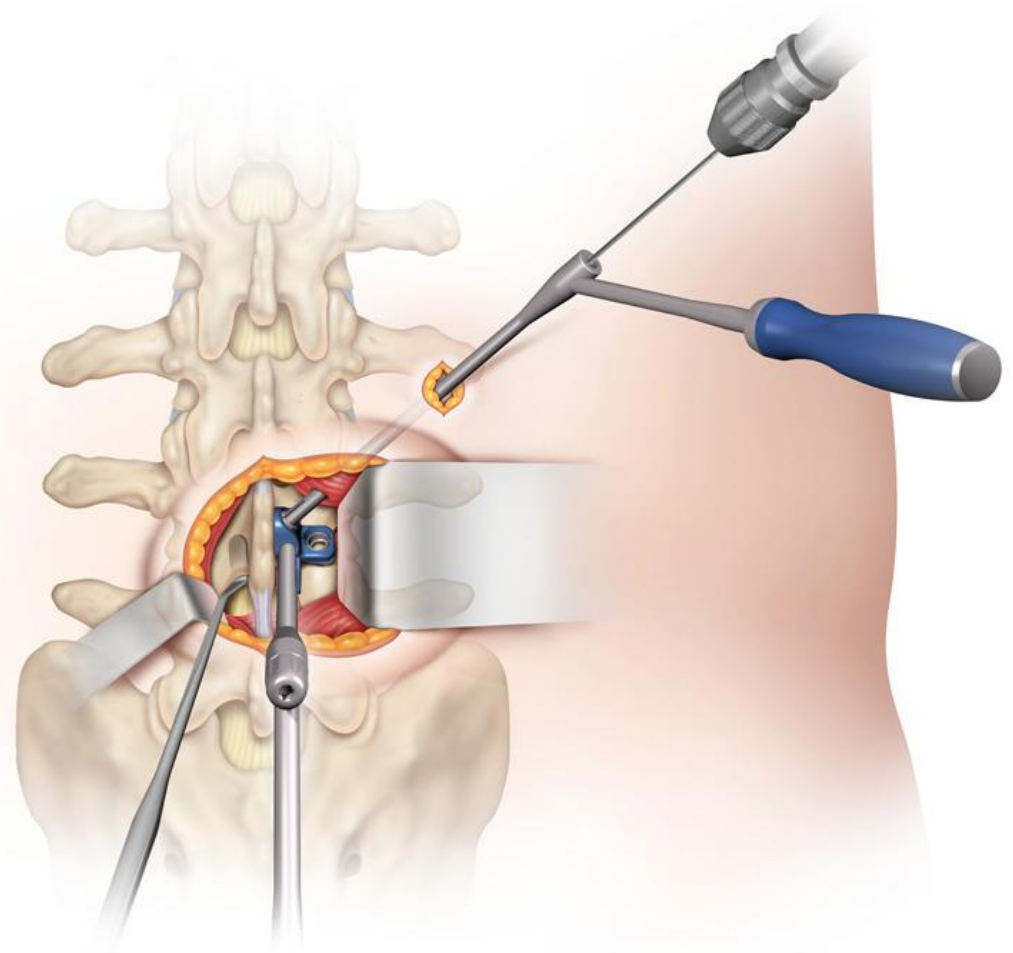
# Facet+LINK HEMI

## Step Nine

### Trajectory Orientation, Contralateral Screw – *Direct Vision Option*

#### **Please Note:**

During placement of the laminar screw, exposure of the contralateral hemilamina can facilitate targeting of the K-wire and allows for direct dural protection with a Woodson elevator placed under the surface of the lamina. This can minimize dependence on flouroscopy for screw placement. The surface area for the fusion bed is also significantly increased by this small additional exposure.





# Facet+LINK HEMI

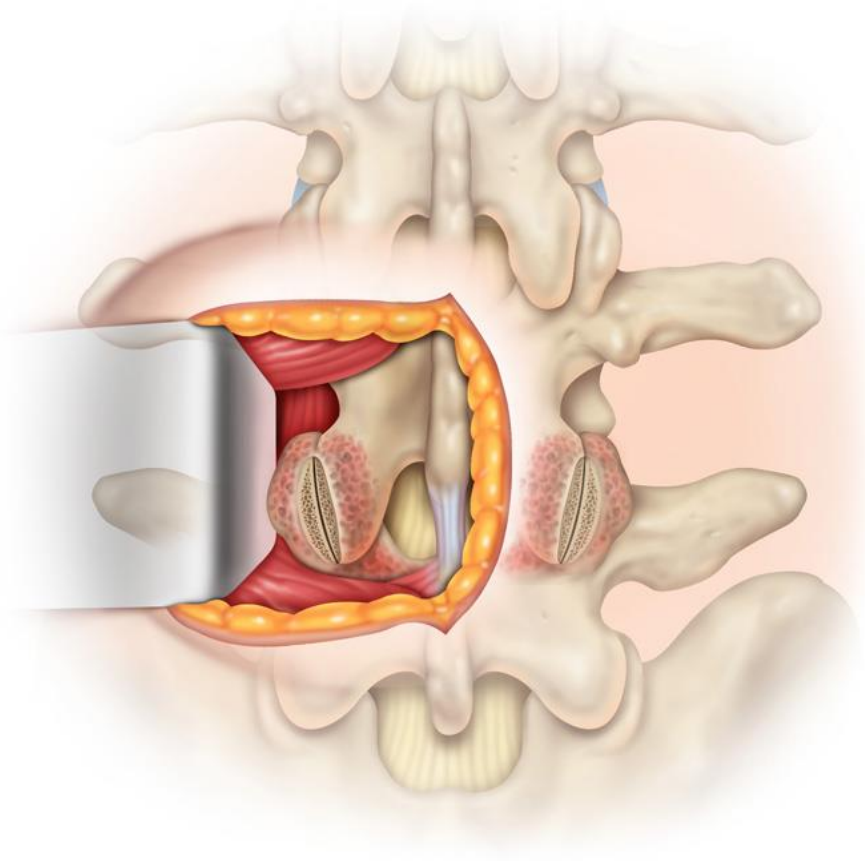
## Direct Vision Option

### Additional Benefits

#### **Please Note:**

Opening the contralateral side offers the ability to:

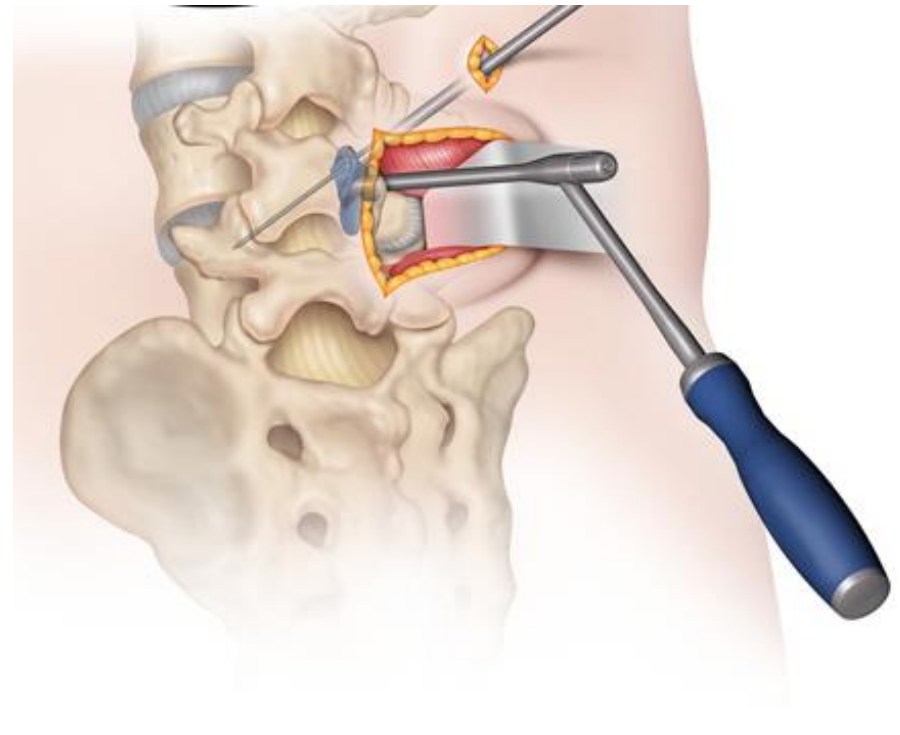
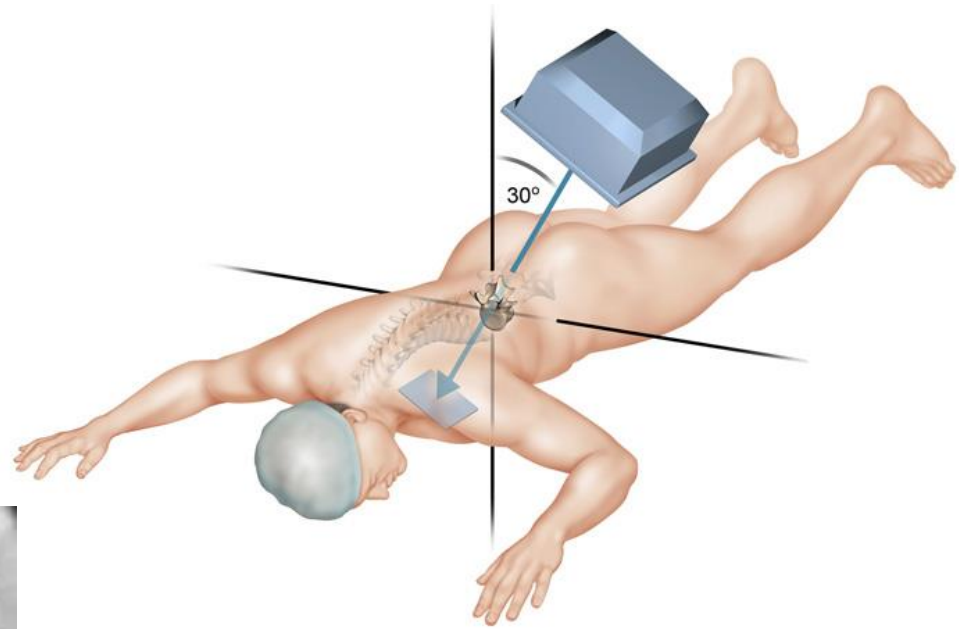
- 1.) Reduce fluoro through direct vision of the contralateral joint complex,
- 2.) Prepare the fusion on the contralateral side



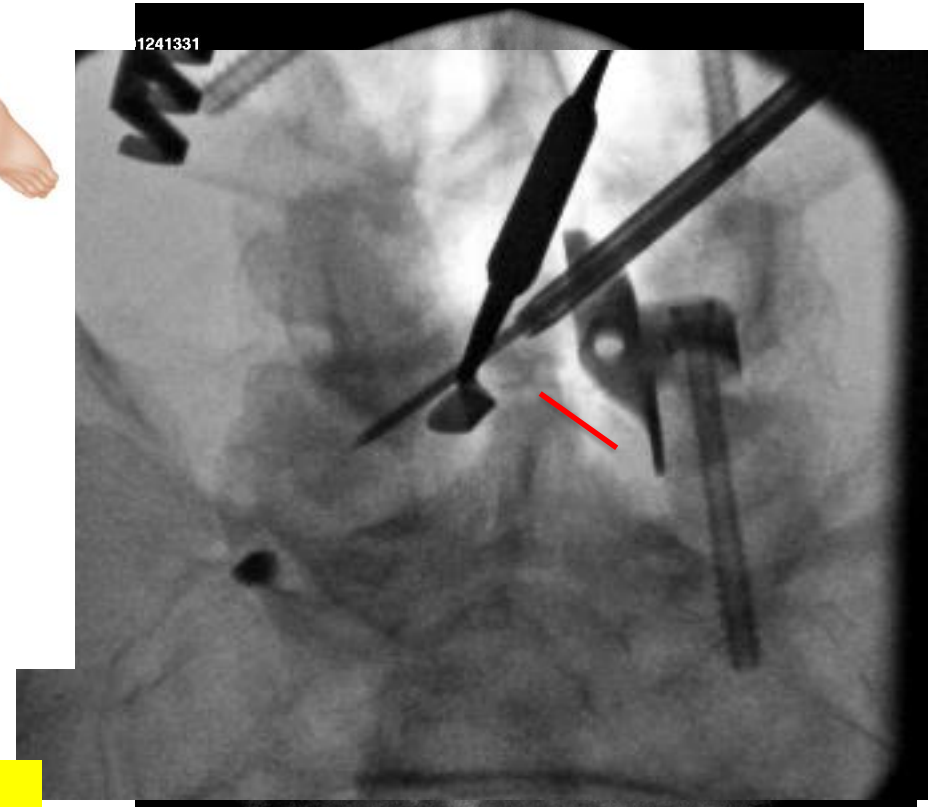
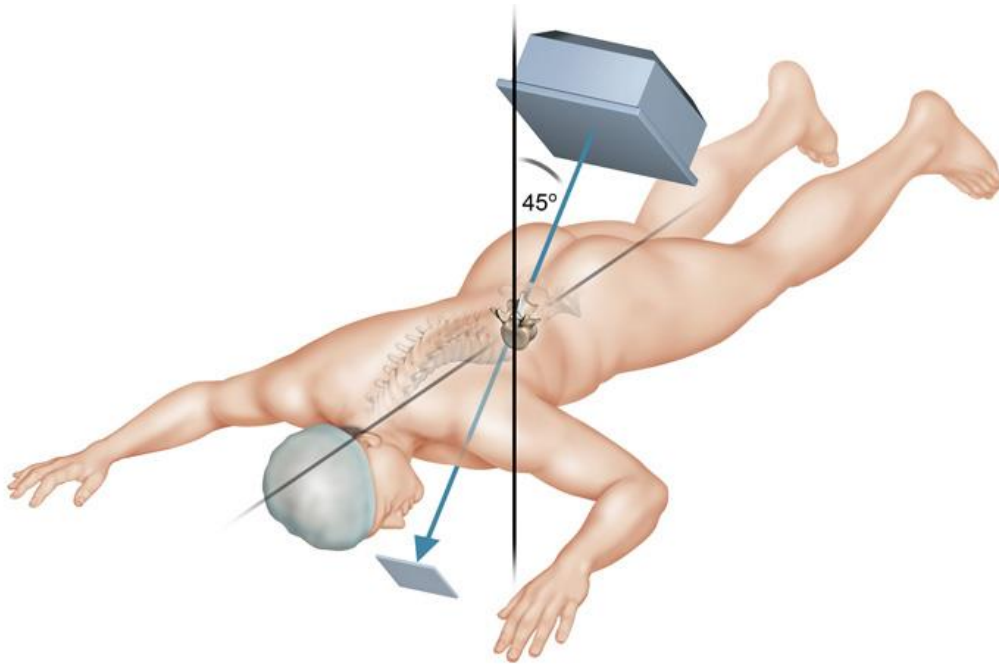
# Facet+LINK HEMI

## Oblique or “Scotty-Dog” View

- Allows a clear view of screw orientation relative to the facet joint



# Spinal Outlet View

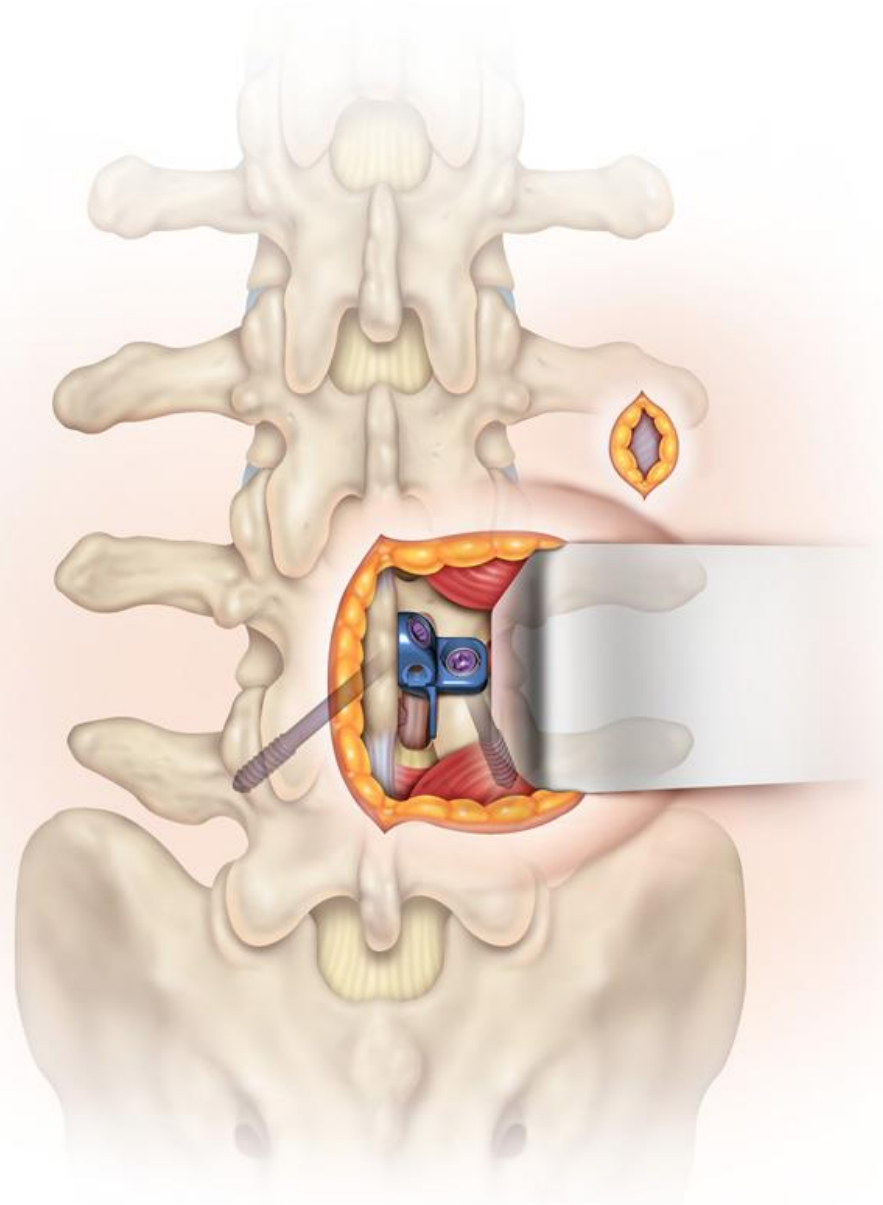


- Allows visualization of the laminar table
- Useful view to prevent ventral breach

- Dural shield can be used under lamina as an aid during targeting

# Facet+LINK HEMI

Final Construct



# Facet+LINK HEMI

Final Images

