

# Pseudarthrosis Management

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Deer Valley Meeting  
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# Acknowledgements

- Innovasis - Consultant.
- Integrity - Consultant
- K2M – Consultant, Research Aid
- Stryker – Consultant, Research Aid

# Pseudarthrosis

- “Nonunion” of spinal motion segment at 1 year postop
- Symptomatic/Asymptomatic
- Rates vary dependent on location (C/L), pathology, patient, technique
- Treatment: dependent on symptoms, stability, ? infection

# Pseudarthrosis Management

- Observe – reevaluate w/ CT at 2year postop
- Treatment: Infected or Not?
- Revision Fusion
  - Same Approach
  - *Alternative Approach/technique*
  - Biologic
    - BMP
    - ICBG



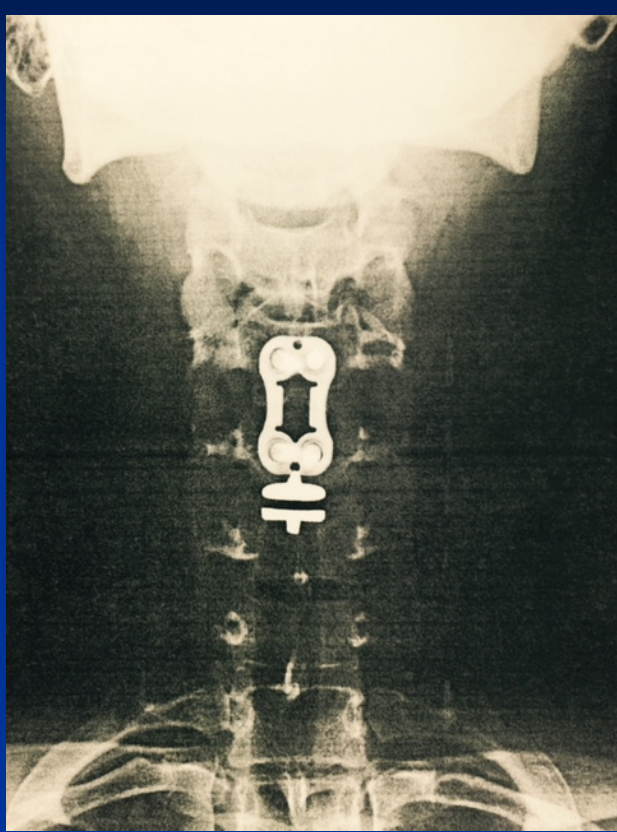
# ACDF Pseudo – Rev ACDF/ICBG

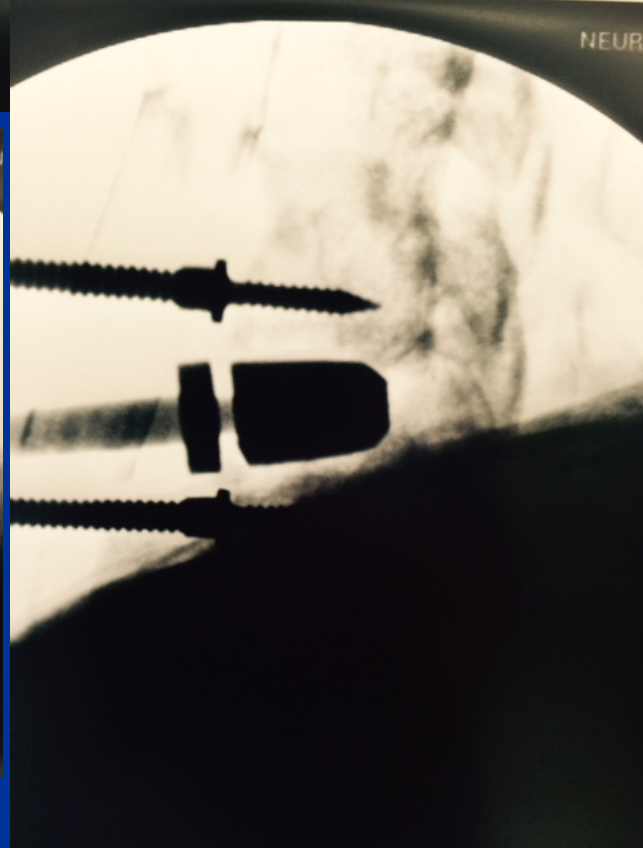
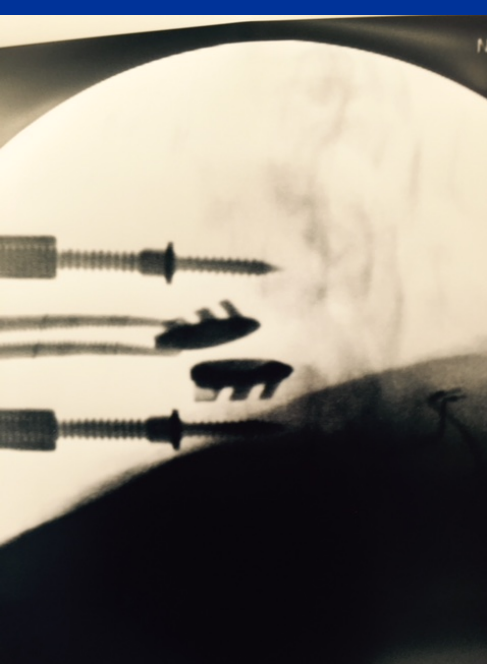
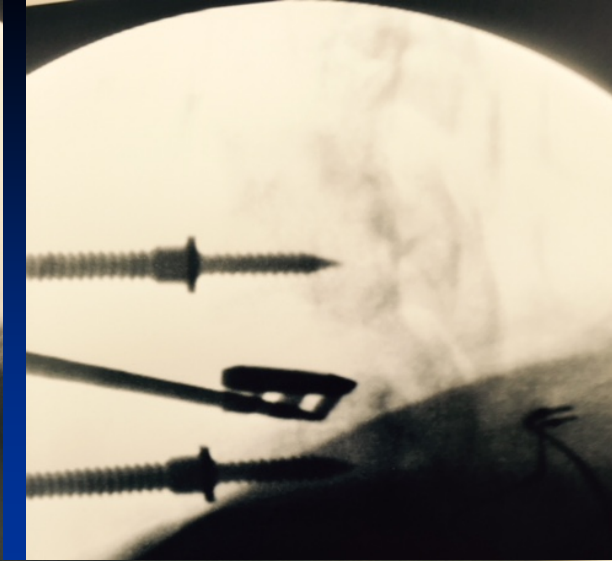
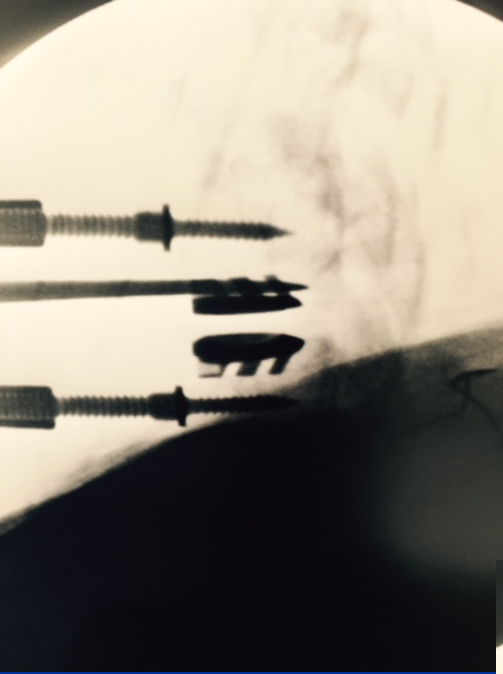


# ACDF Pseudo – Rev ACDF/ICBG+/- PCF



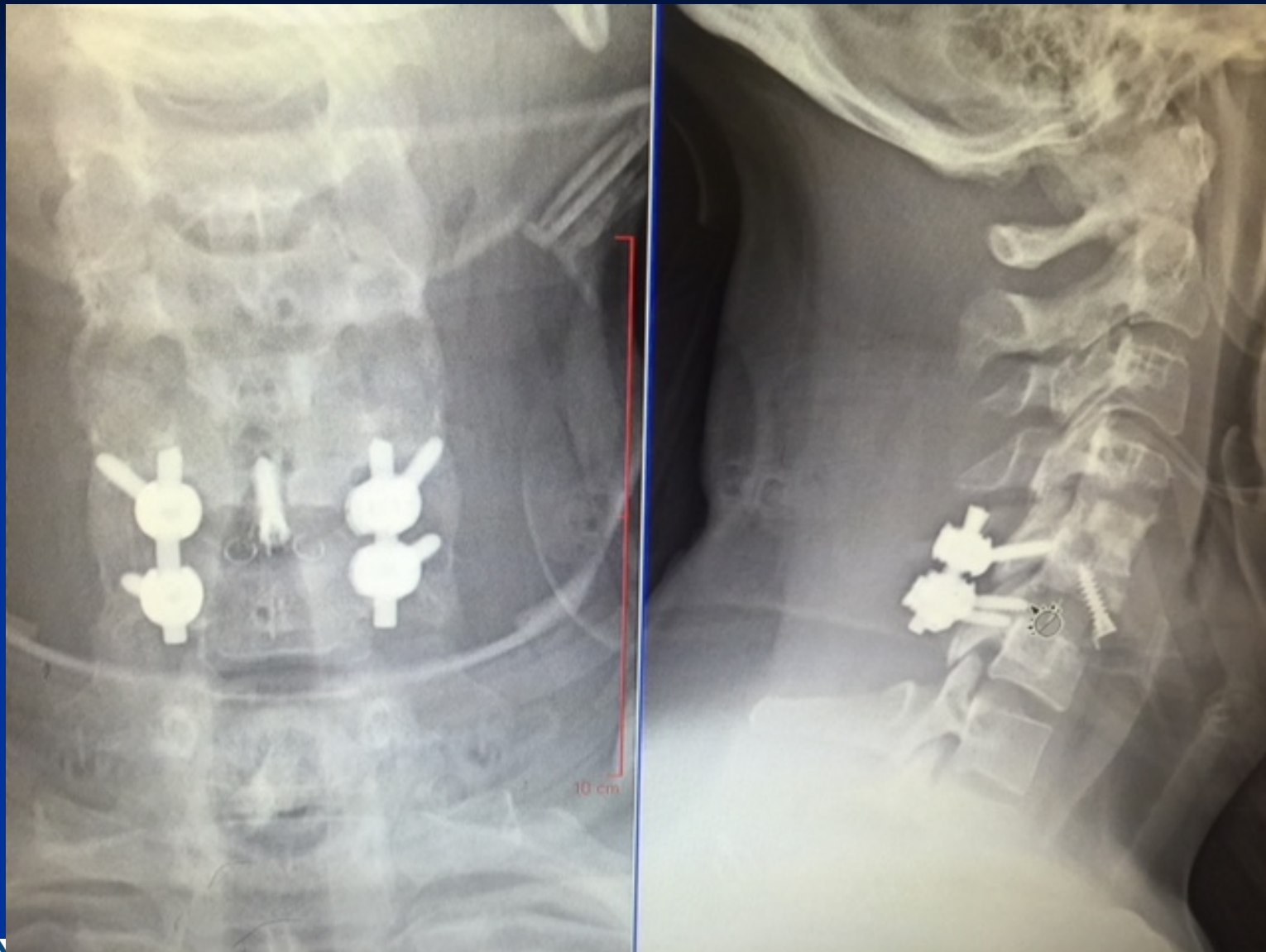
# Similar to Pseudo – Revision cTDR



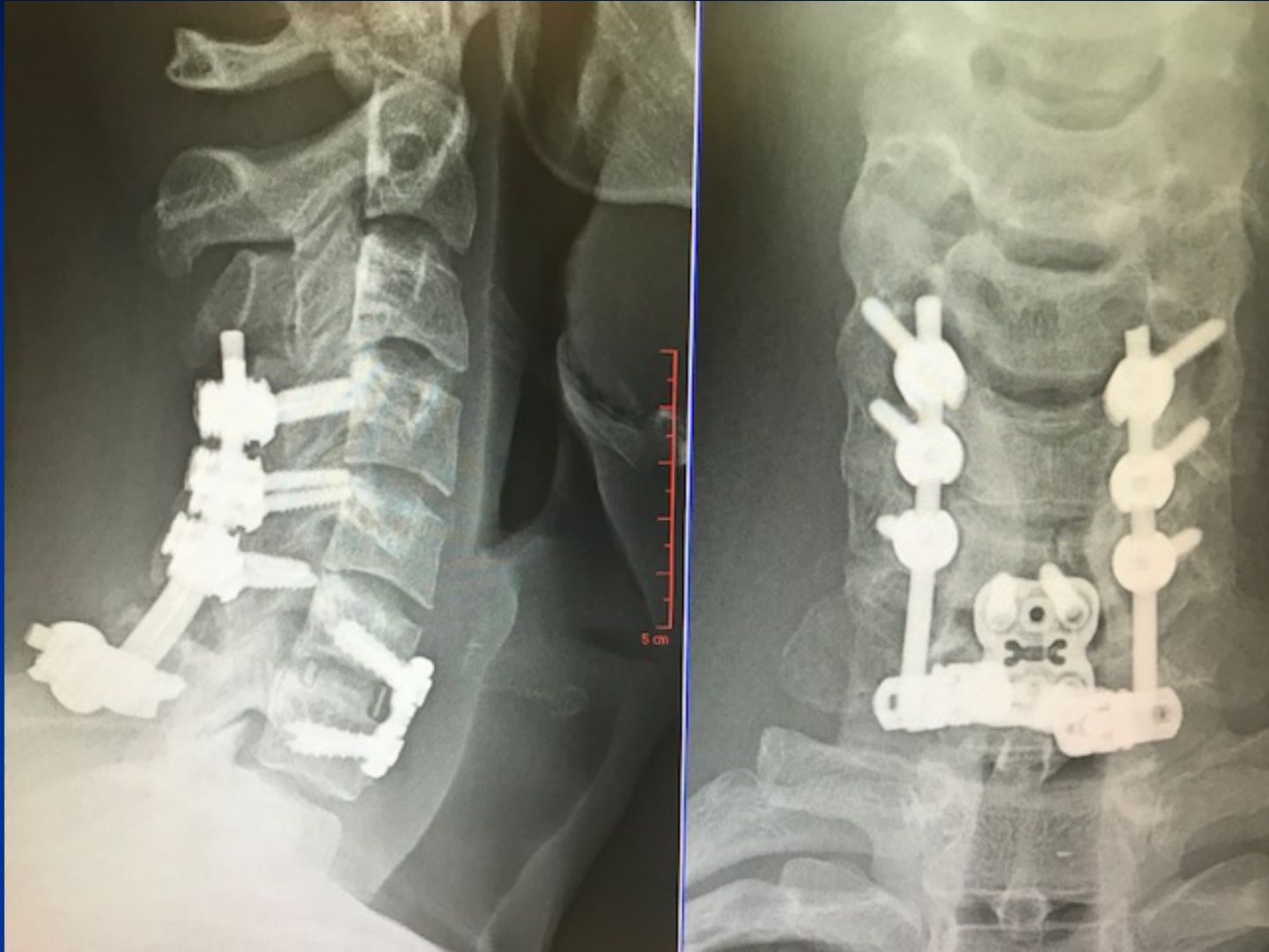




# Rev A-P



# C6/7 Pseudo s/p C4-7 PCF for FDI

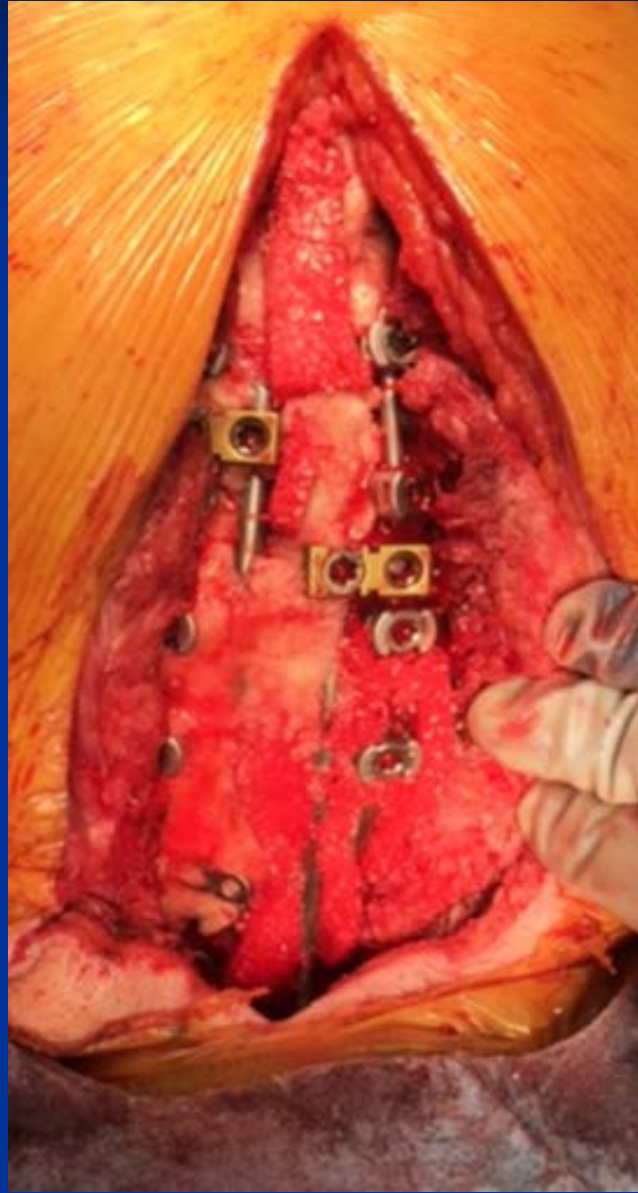


**Fix: C6-7 ACDF**

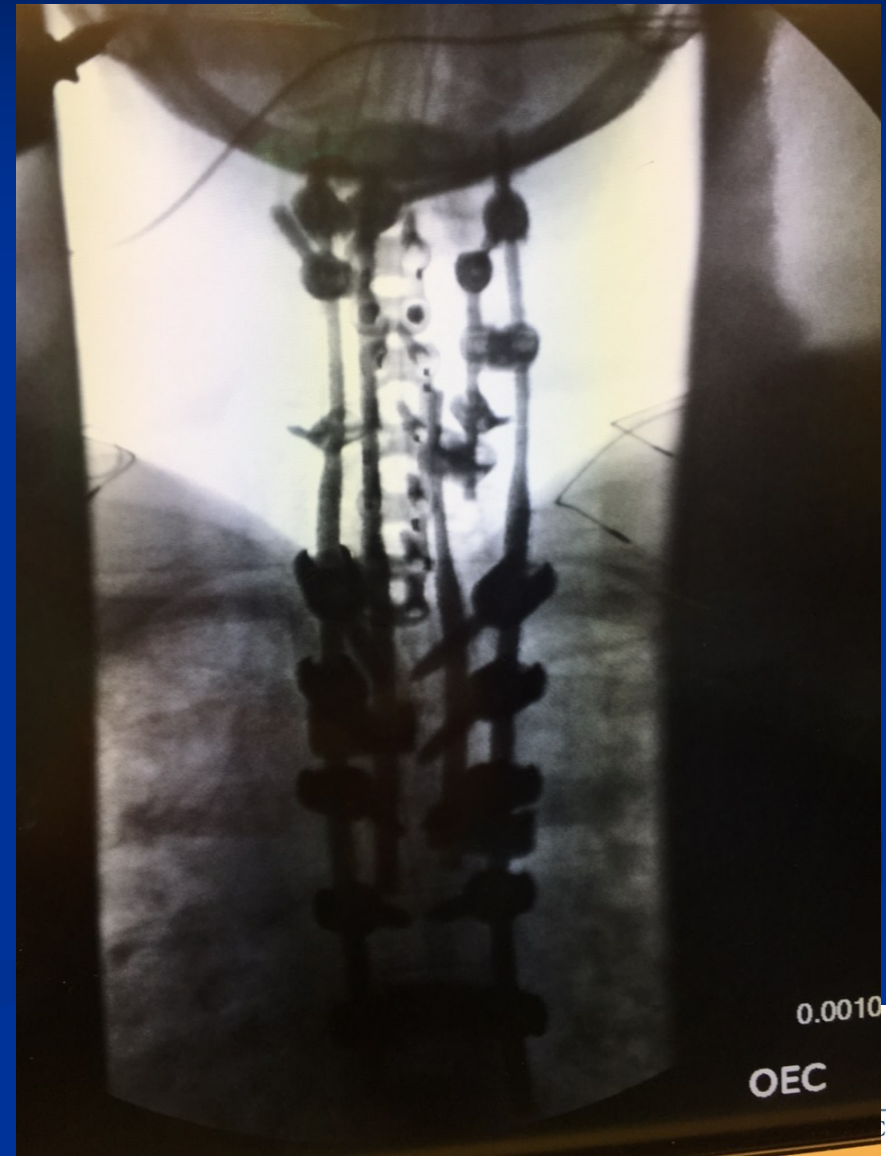
# Hard Cervical ... C7-T1 Pseudo s/p OSH A/P C3-T1 solid 3-7



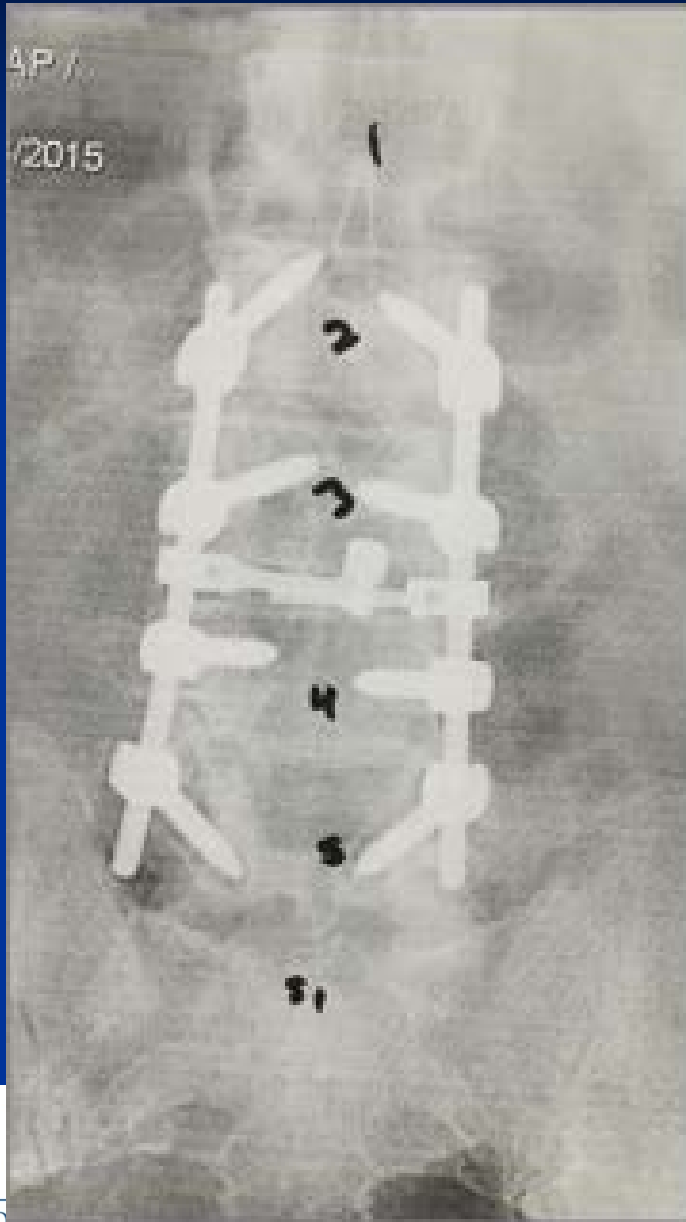
# Planned T1 PSO but corrected with multi SPO



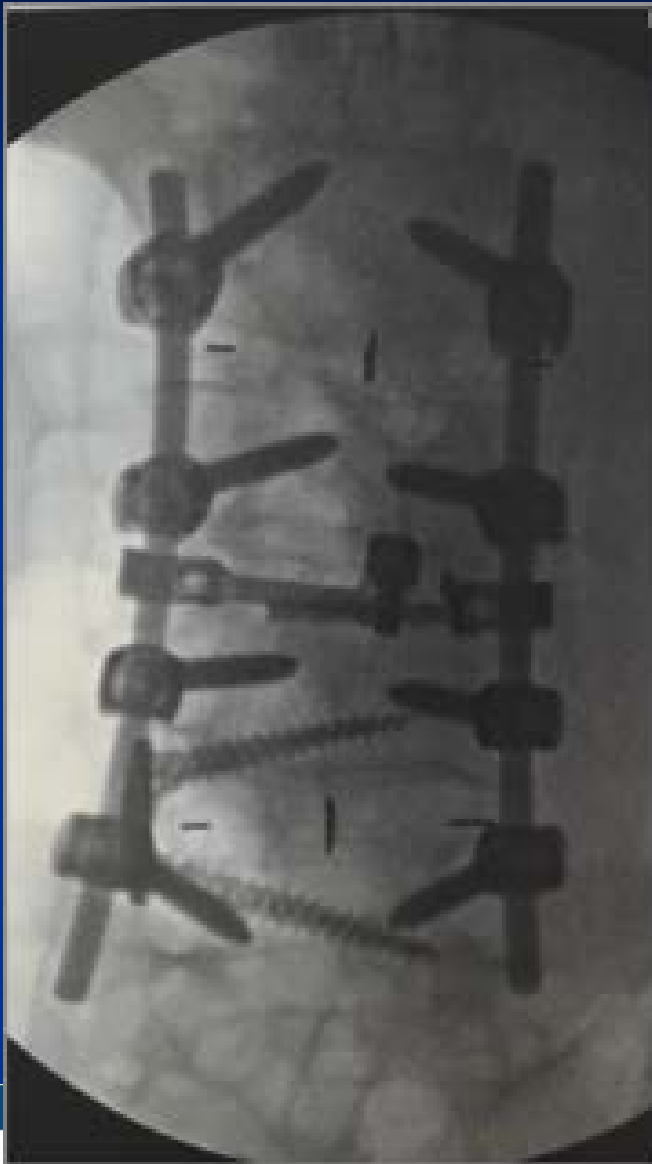
# Planned T1 PSO but corrected with multi SPO



# L4-5 Pseudo s/p PLDF



# LLIF 4-5 with Plate



# 4/5 Pseudo s/p 4-1 TLIF solid 5-1 Rev 4-5 LLIF/PLDF



## Rev 4-5 LLIF/PLDF

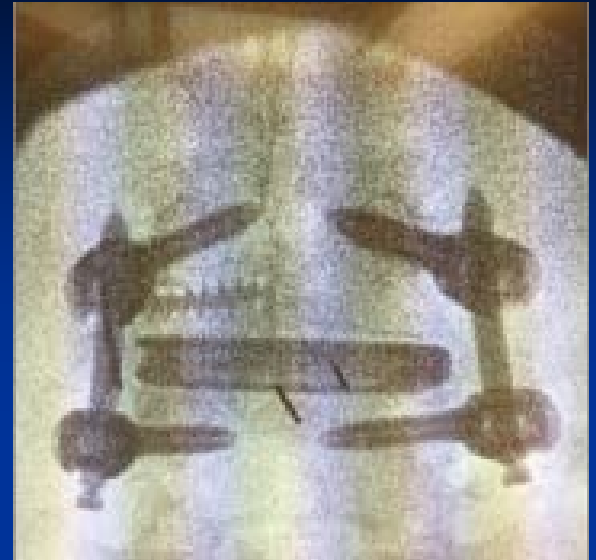




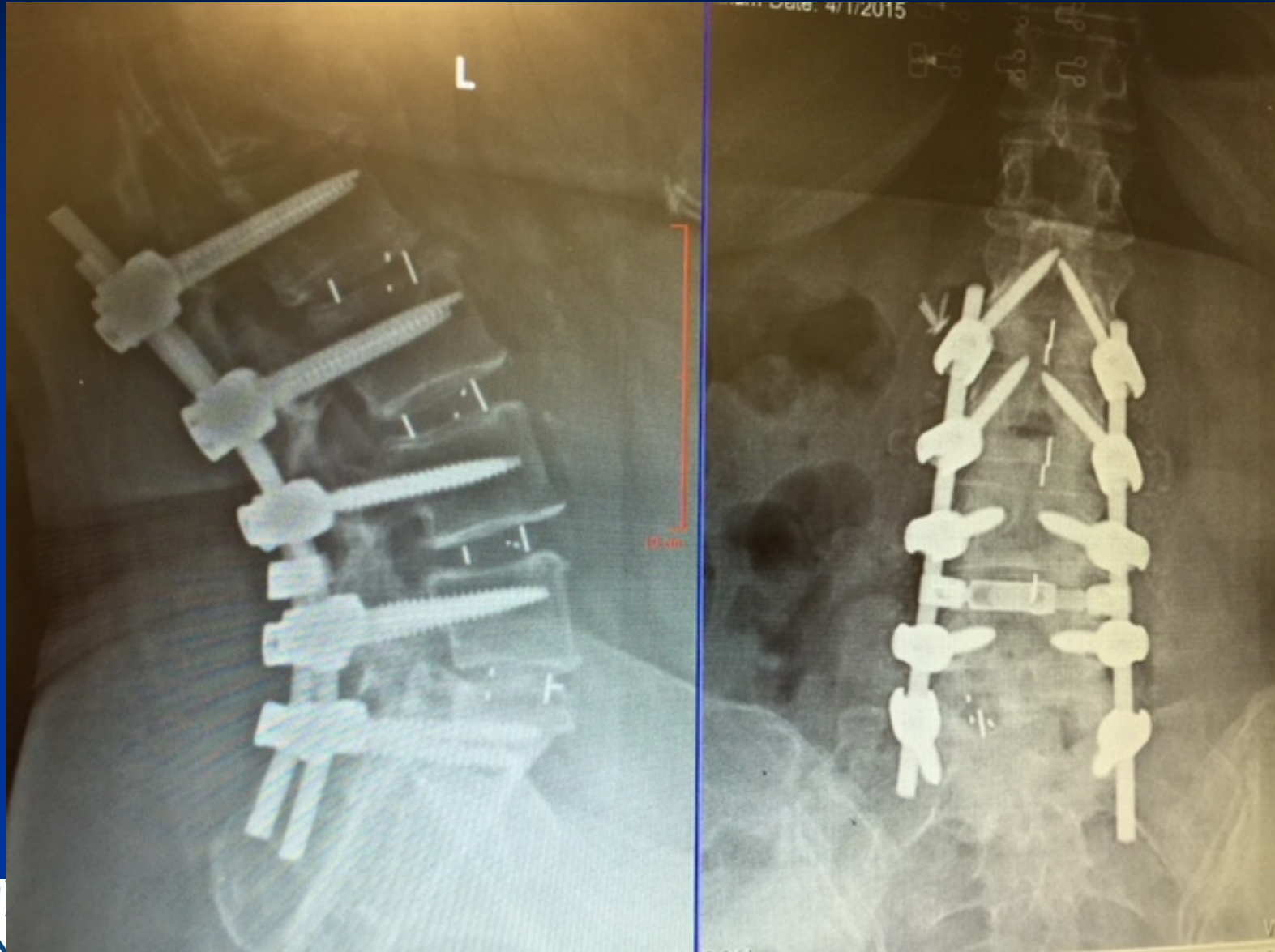
# 4/5 MIS TLIF ... Not done well



# LLIF / MIS Post Revision



# 5/1 Pseudo



# ALIF – Open PLF to Ilium



# 2/3 Pseudo s/p PLIF/SPFix



# 2-3 ALIF/MIS Perc



# Degen Scoli/ASD s/p 4-5 TLIF



# LLIF 2-4 / ALIF 4-5 / MIS 2-5 Perc

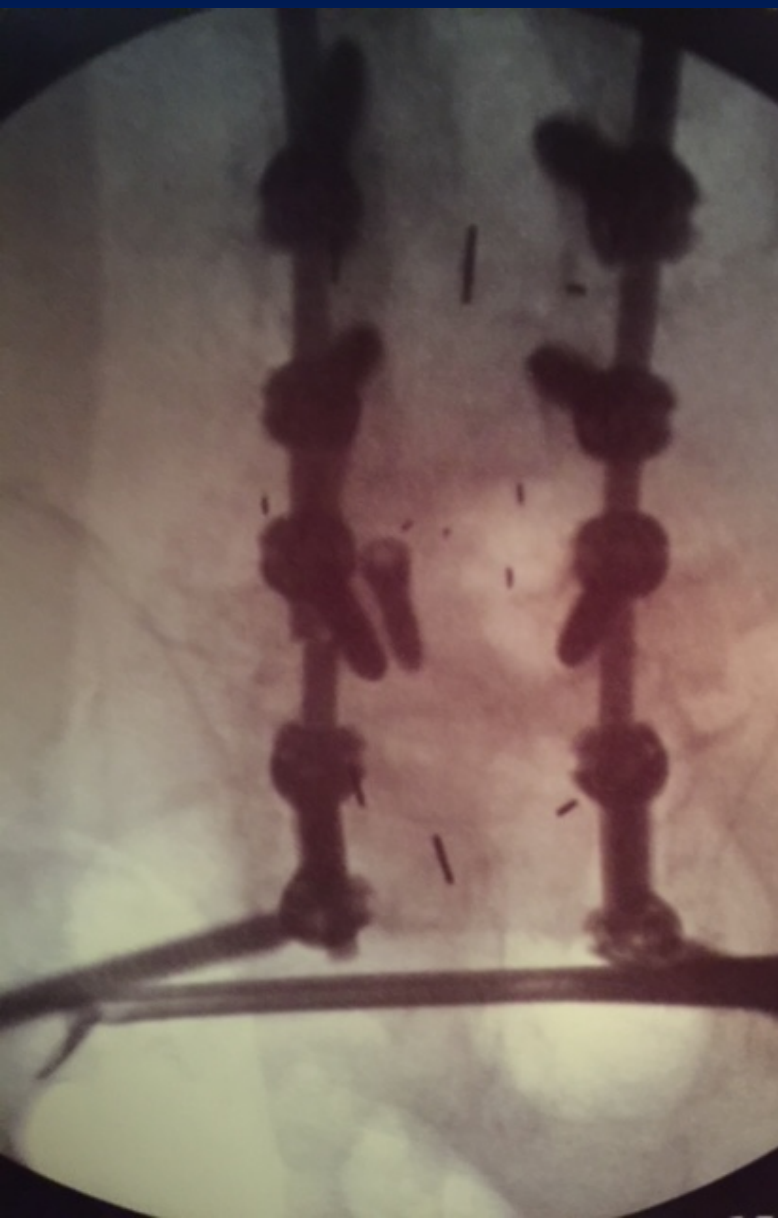




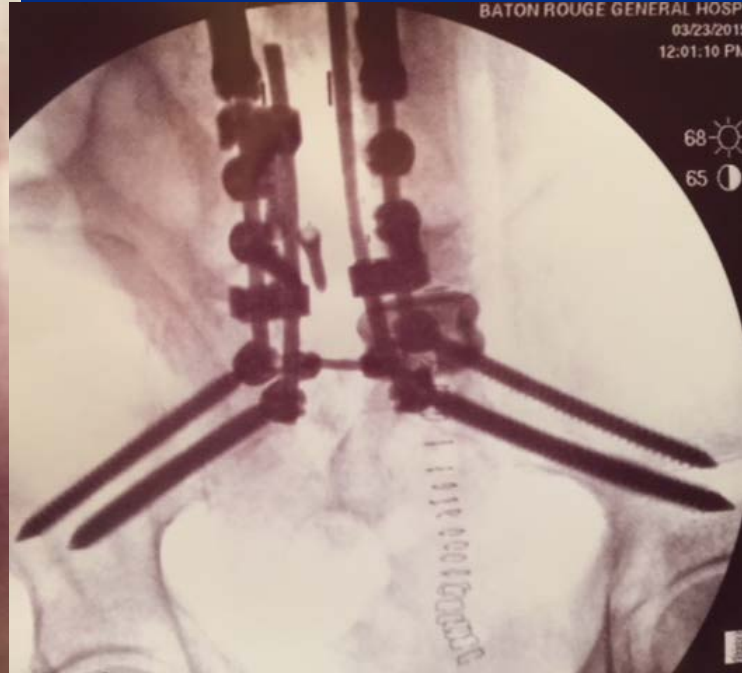
# FINALLY

## The HARD Cases

# 5-1 Osteo-Pseudo s/p T10-Pelvis & prior 4-5 ALIF



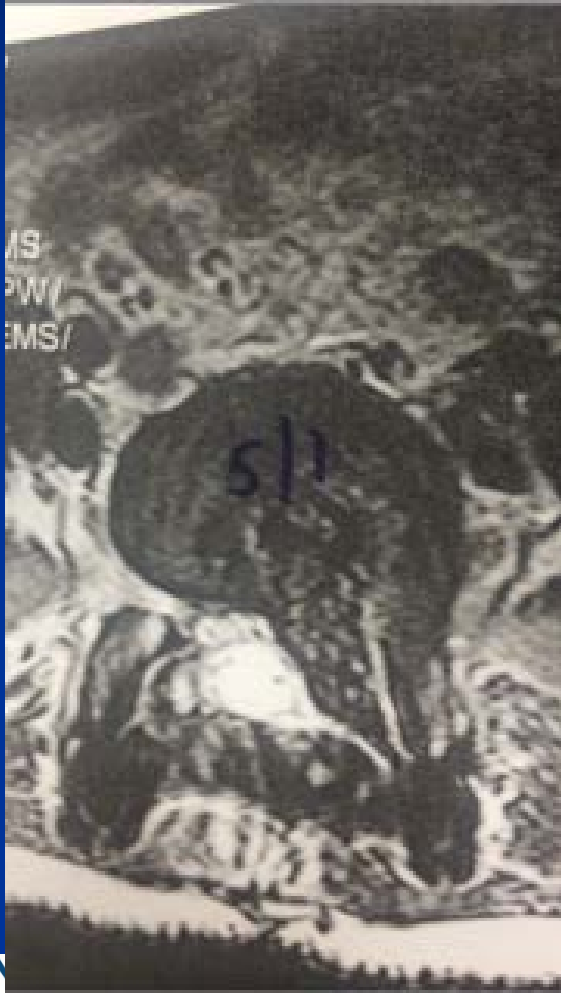
# Initial Post I&Dx2/6wks IV Abx then Rev ALIF-PSF w/ revision Ilium



# 5-1 TLIF (prior solid 4/5)- Pseudo



# BMP 5-1 TLIF (prior solid 4/5)- Pseudo + wicked HO



# 5-1 ALIF – Resection Post HO



# L2-3 Pseudo s/p OSH 2-5 TLIF Flatback ... *"But I want a Laser"*



# Till Now



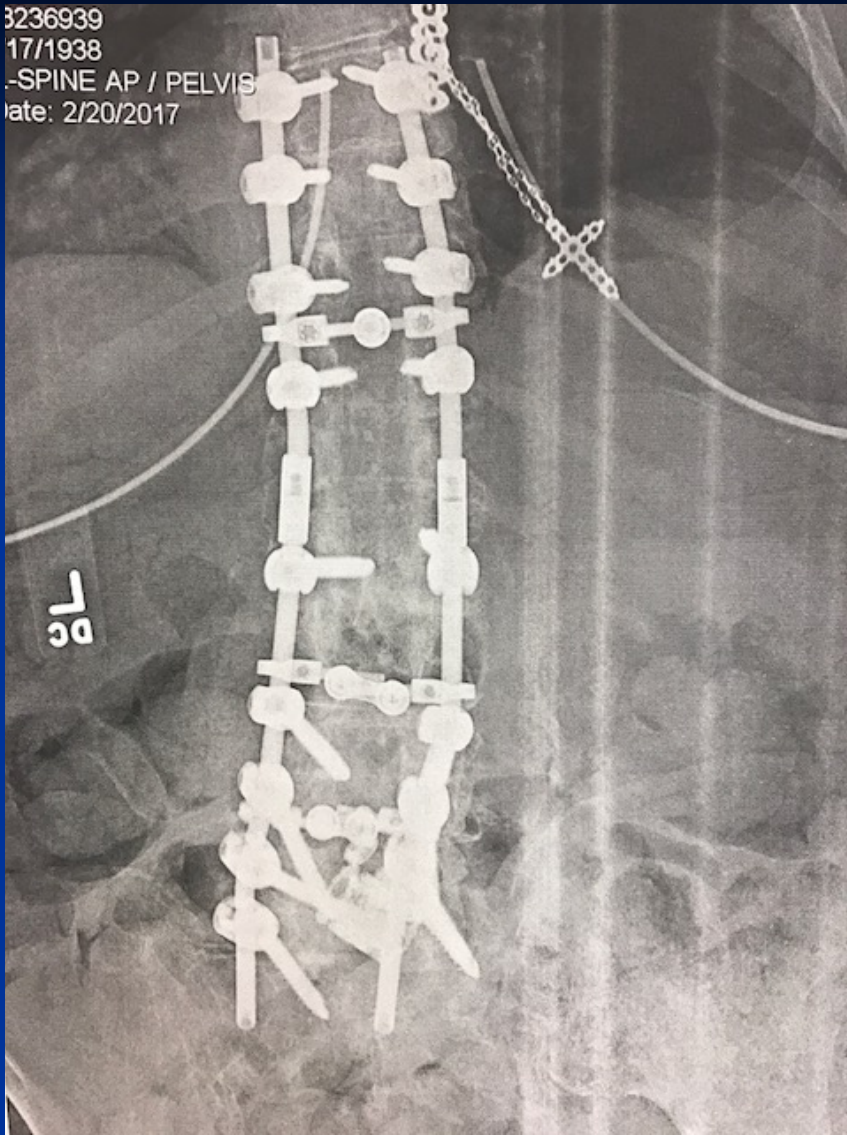


# Extended PSO – T10-P Revision 90 degree correction

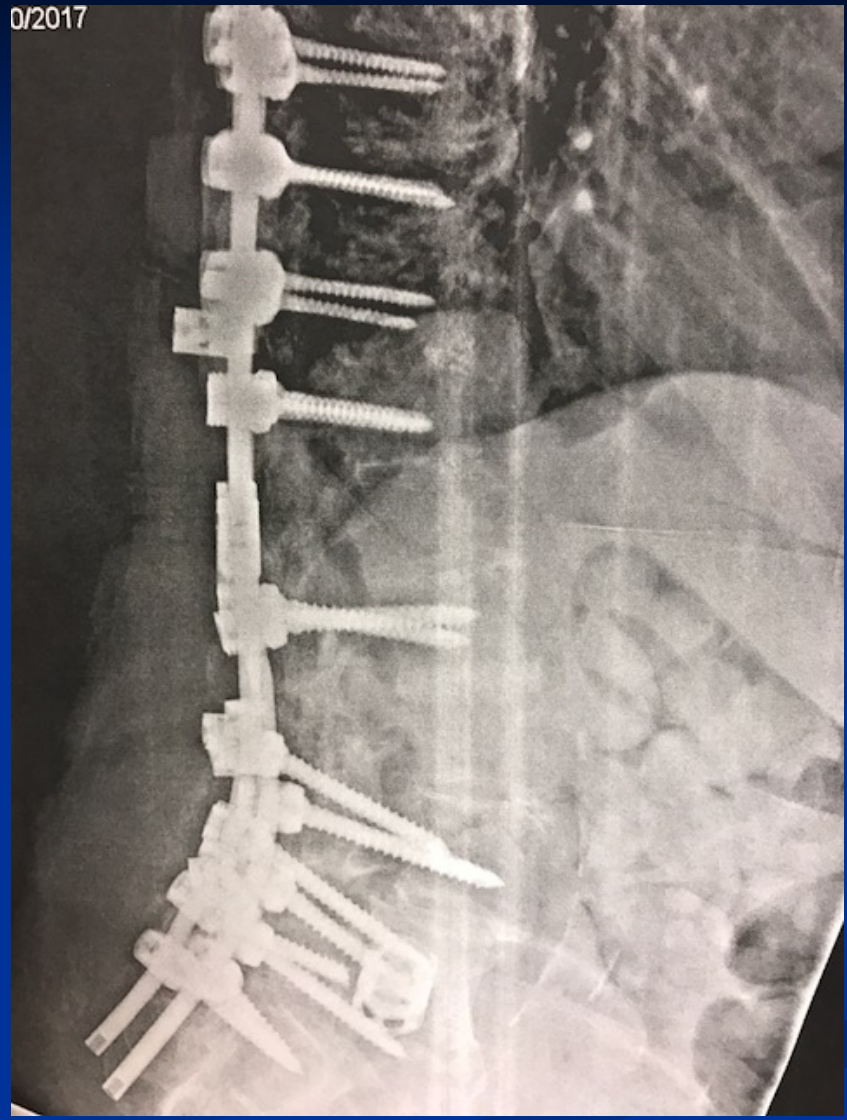


# To Finish – The Worst EVER Infx Pseudo Revision

3236939  
17/1938  
-SPINE AP / PELVIS  
late: 2/20/2017

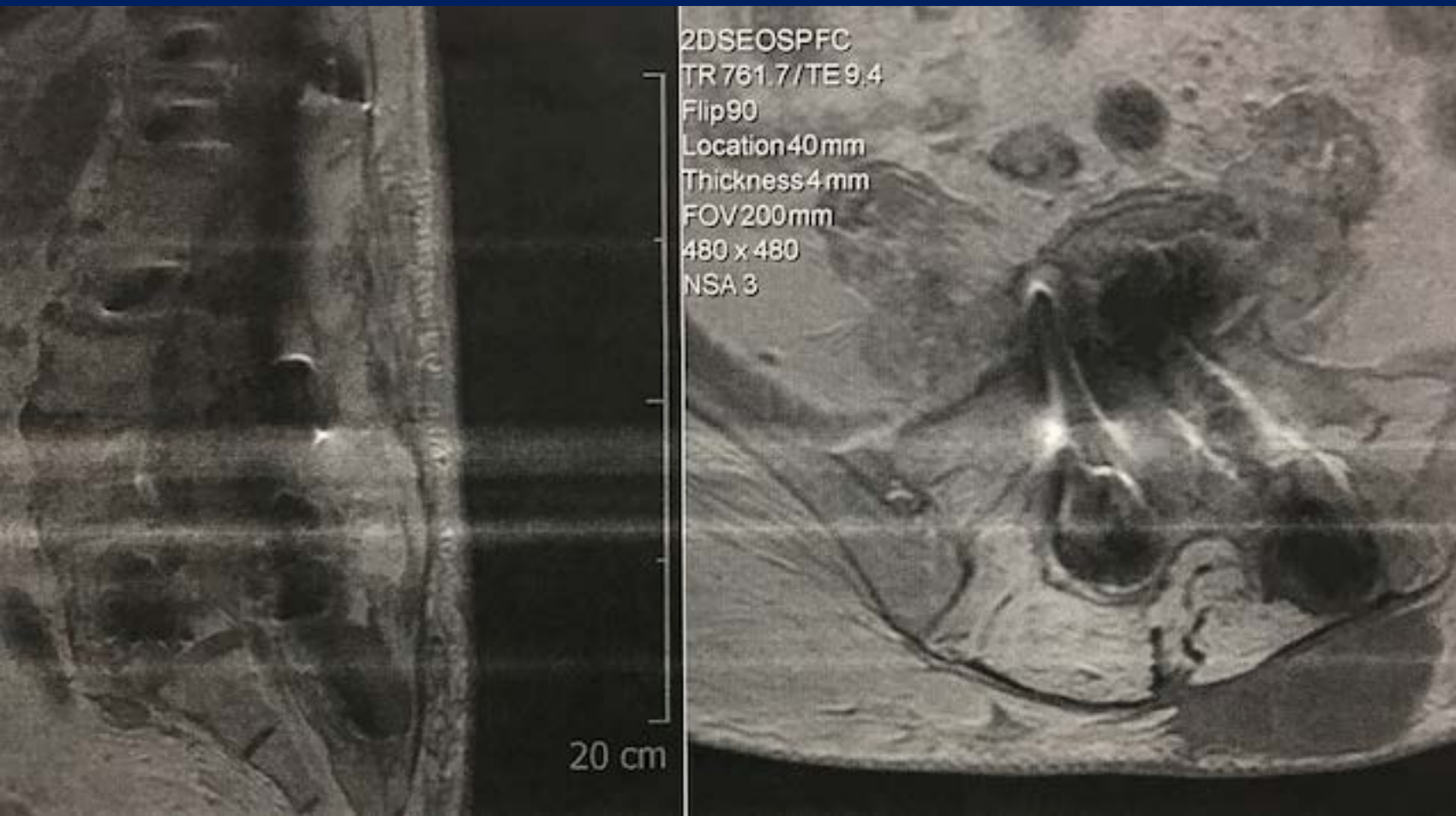


0/2017



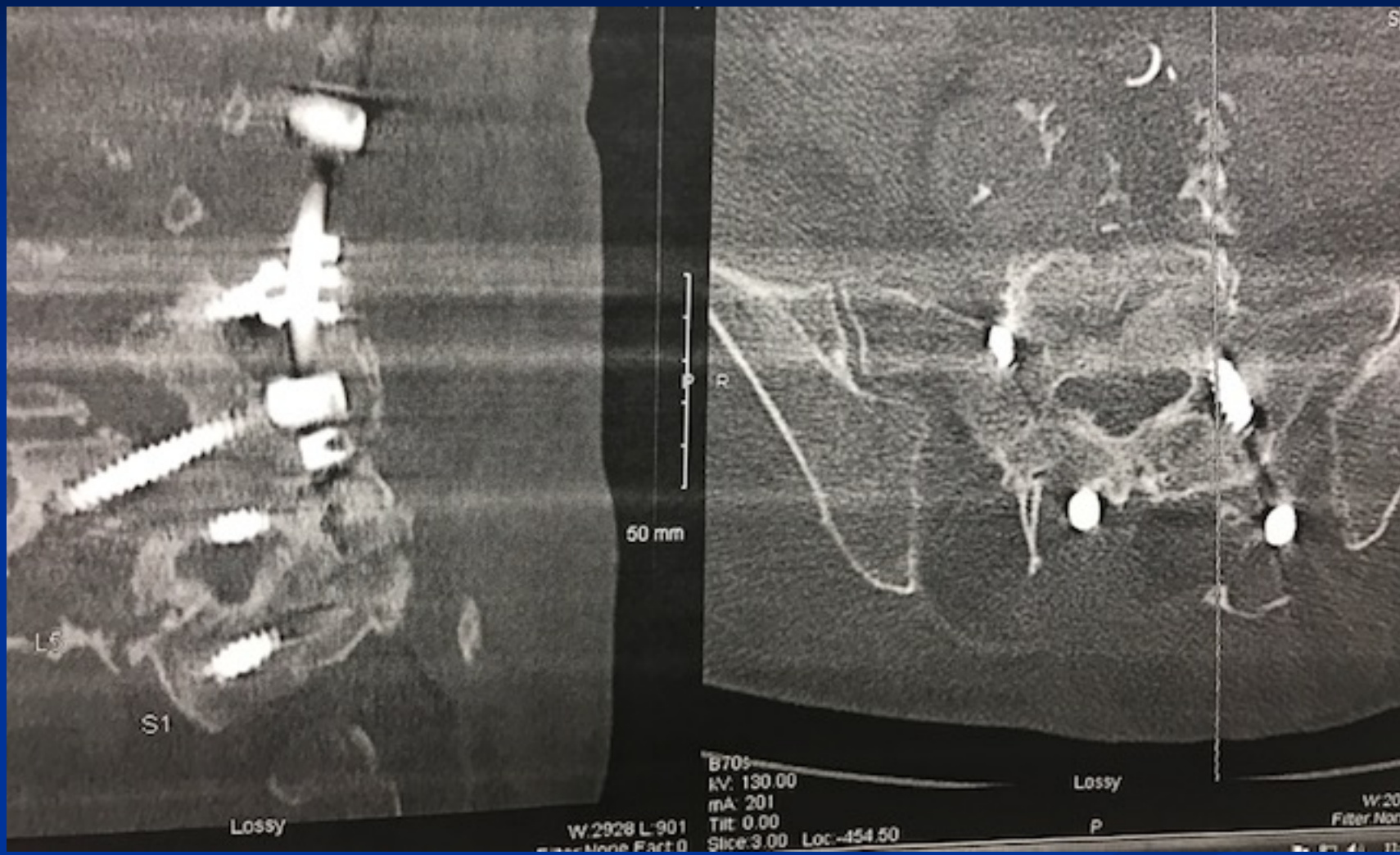
## ?Going on down there?

# Is that an abscess or CSFoma?



## & where is that L S1 going?

# L Parasagittal



# Midsagittal – Cage looks awful

## Osteo/Nonunion 4-1



# R Parasagittal – Uhh on so many levels

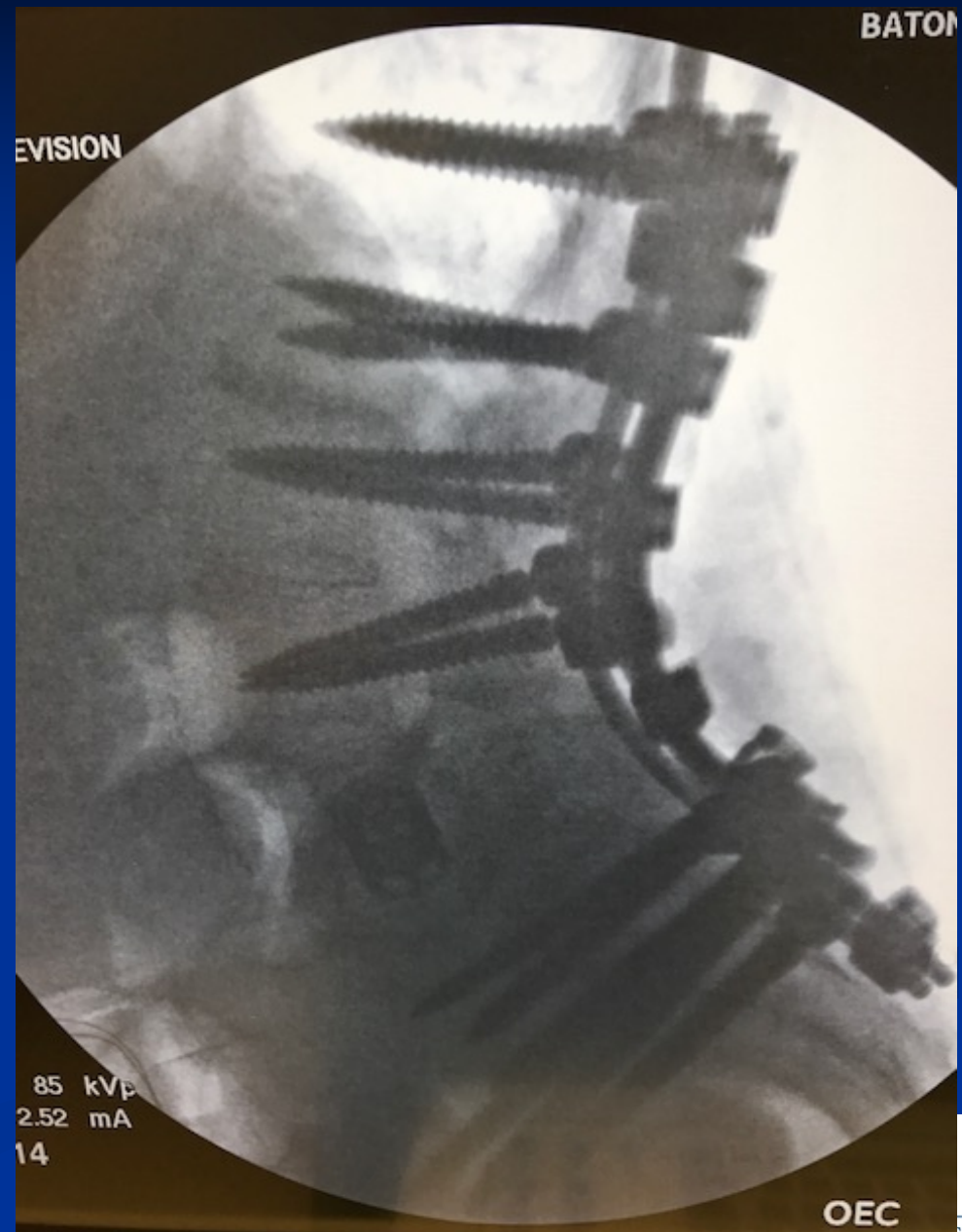
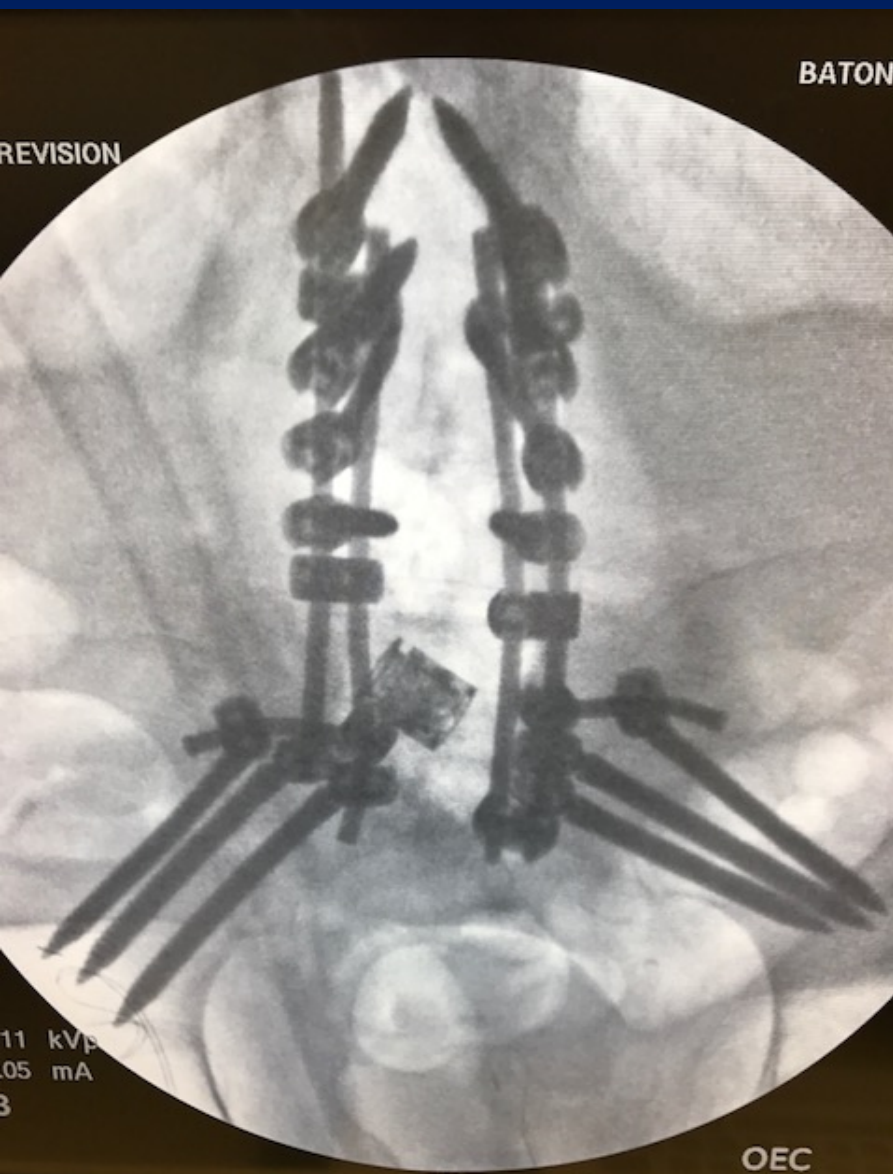


# PLAN? – I&Dx2 w ROH Post / Abx Beads

6 wks



# Explore Post – then T12-Pelvis Revision





# Then my hardest 4-1 revision ALIF – Remove Cage, Debride, BMP





**THANK YOU**