



# Managing Repeat Surgery for Young Patients and Families

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**Disclosures:**  
**K2M: consultant, BSA**  
**Stryker: speaker's bureau**

I have no potential conflicts  
with this presentation.

# The Problem:



- Most current treatment for severe curves requires repeated surgical interventions (even guided growth)

# Common Challenges in EOS systems (i.e., things that might make you say uncle)

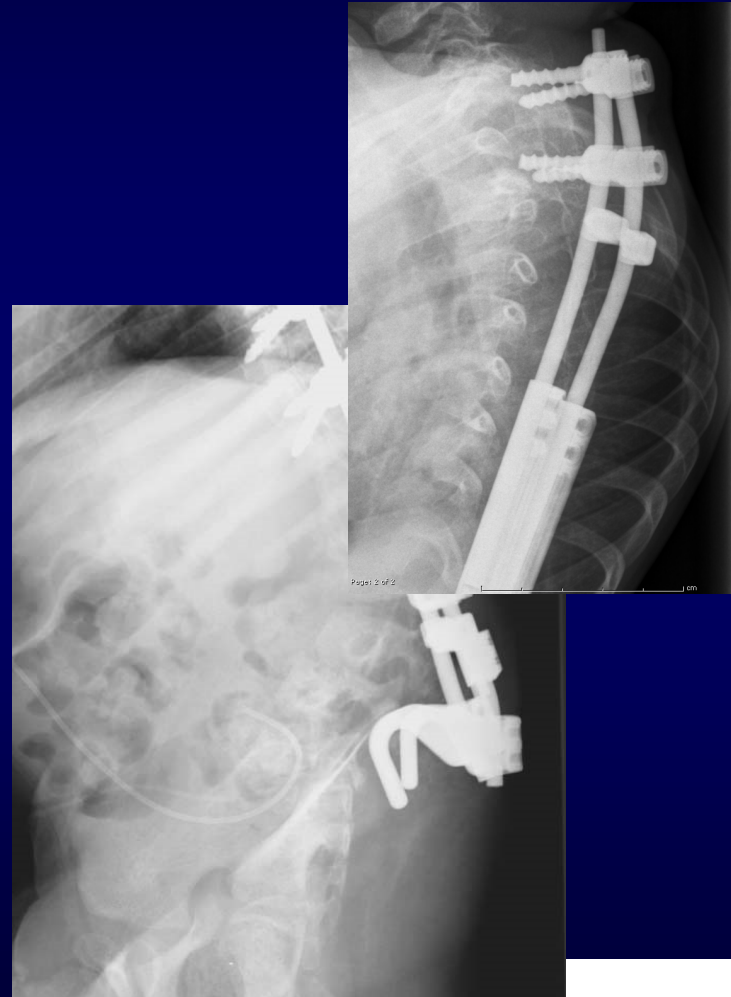
- Profile of implants, skin breakdown and infection
- Loss of fixation
- Kyphosis



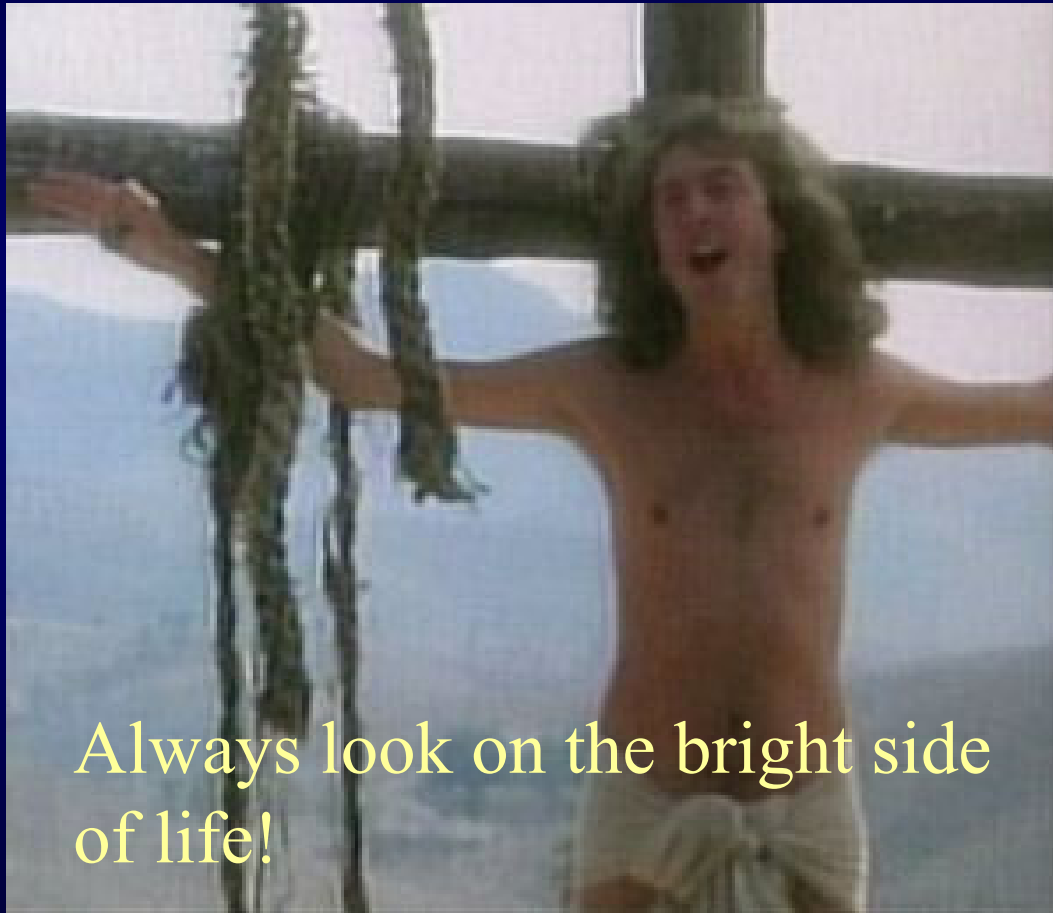


# Loss of Fixation

- Poor bone quality
- Small, short pedicles
- Thin lamina
- Distraction force
- Active kids
- Insensate kids



# Recurrent Rod Breakage



Always look on the bright side  
of life!

# THREE PRINCIPLES

- GOOD PATIENT SELECTION
- BEST PREPARATION POSSIBLE
- MAKE A PACT

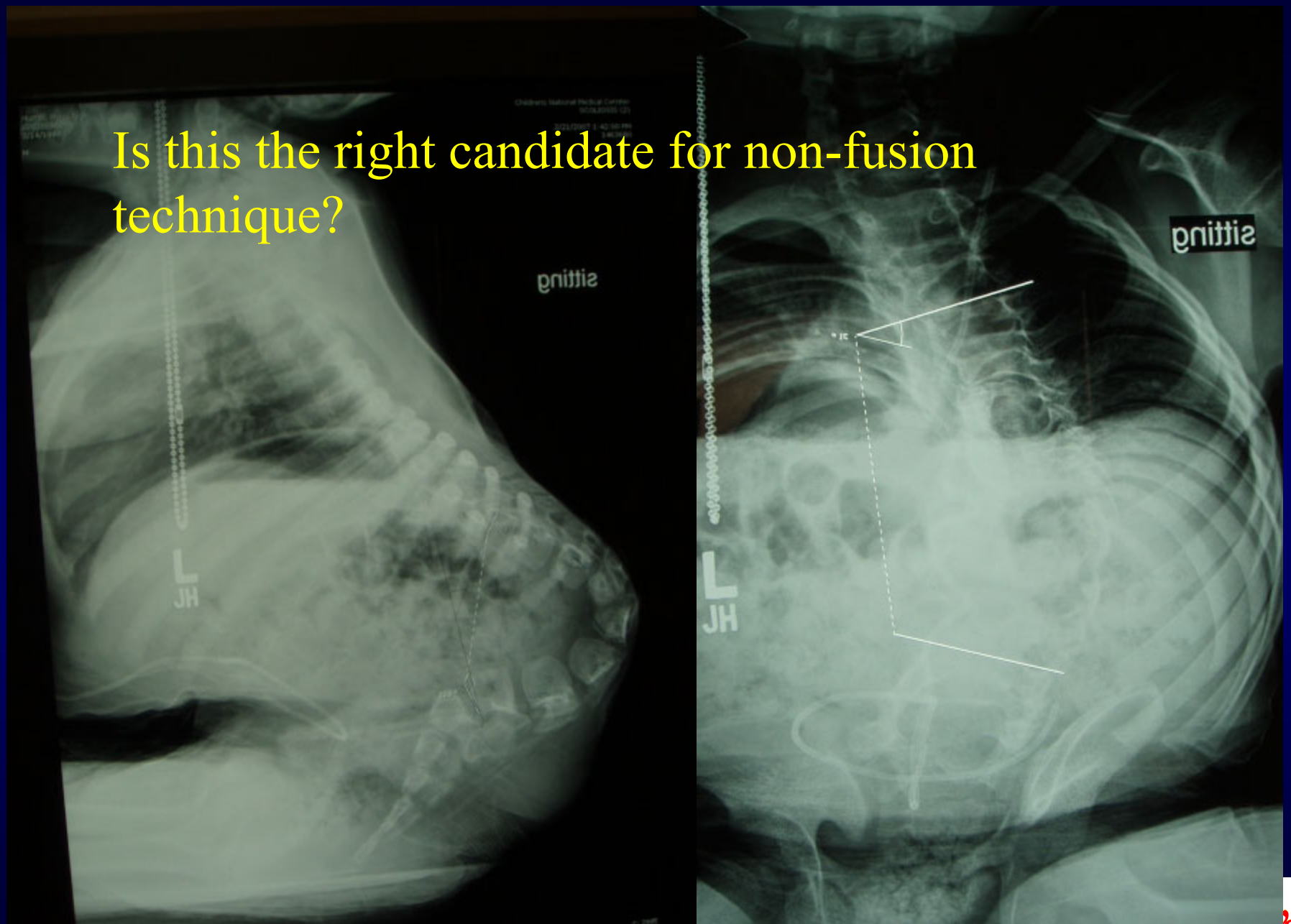


# Example #1-Patient selection

- 8 yo non-ambulatory M with thoracic myelo
- Progressive gibbus



Is this the right candidate for non-fusion technique?



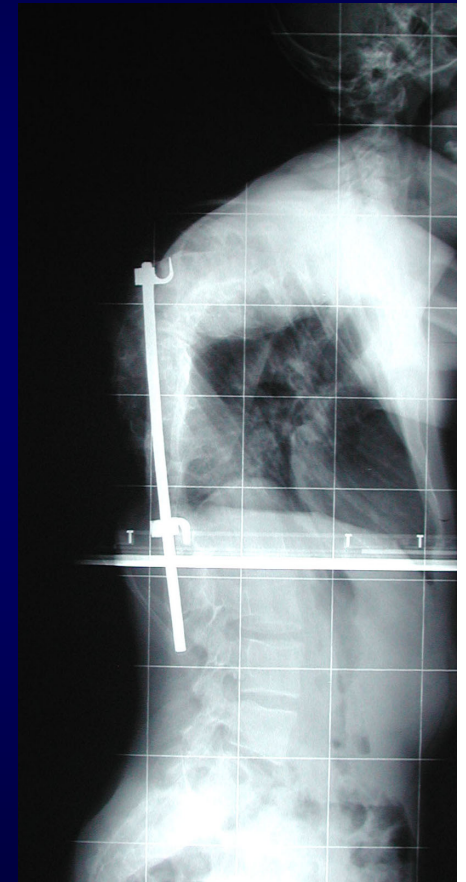
# Example #1- the Wrong Patient

SM rod inserted age 11

Patient never returned to primary  
surgeon

Presented age 14 for lengthening

**WRONG OPERATION, WRONG  
PATIENT**





# BE PREPARED



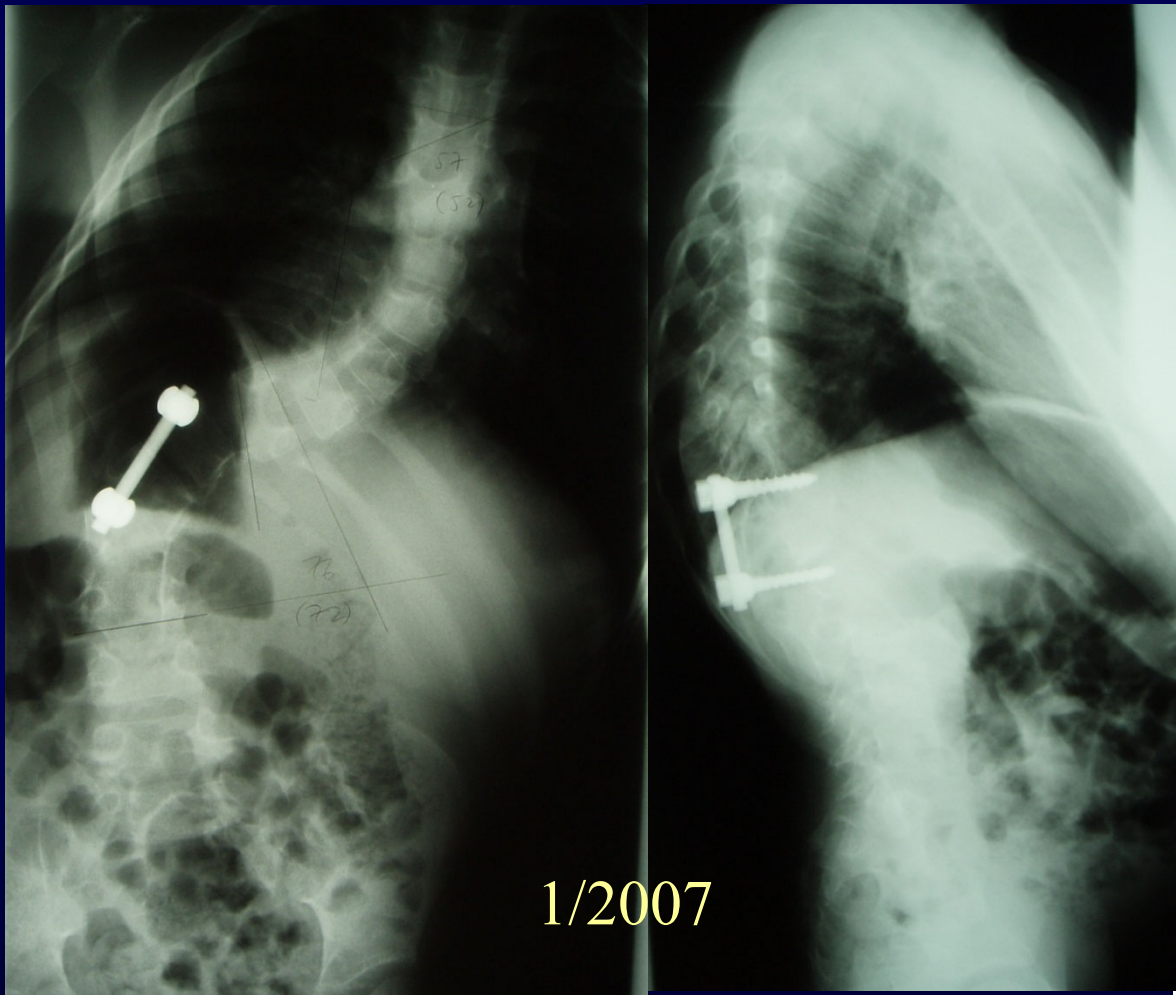


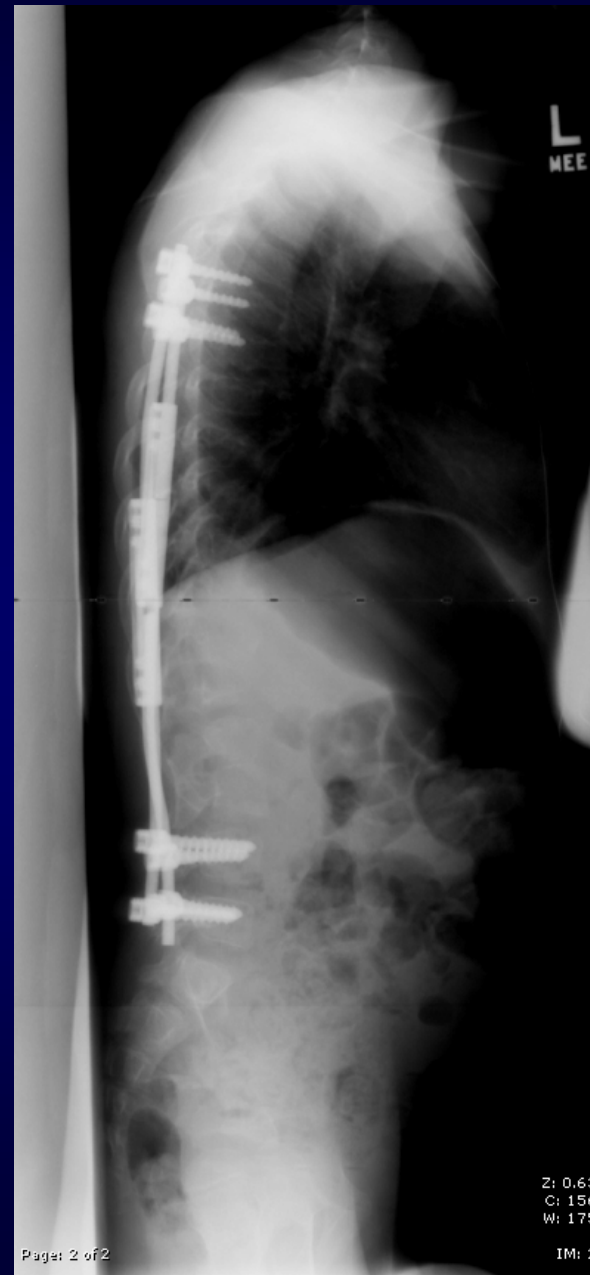
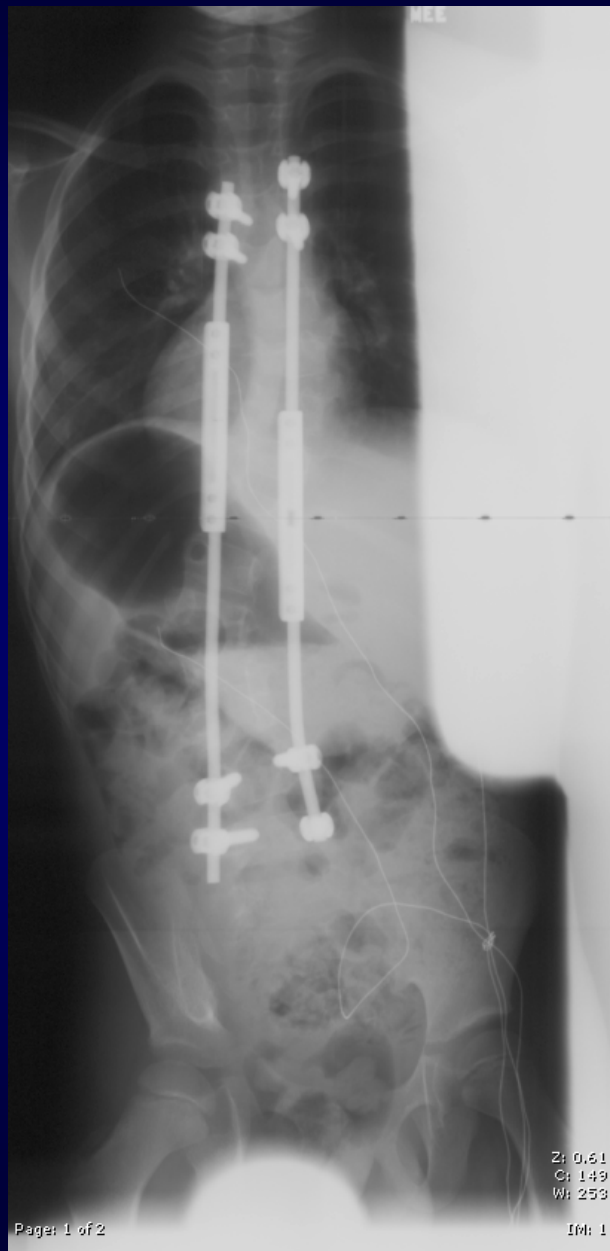
# Preop Meeting

- Emphasize *expected* complications
- Outline time frame
- Elucidate end points
- Family needs to buy in

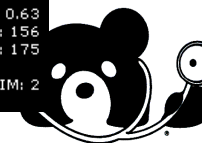


## Example #2: family not ready to stop



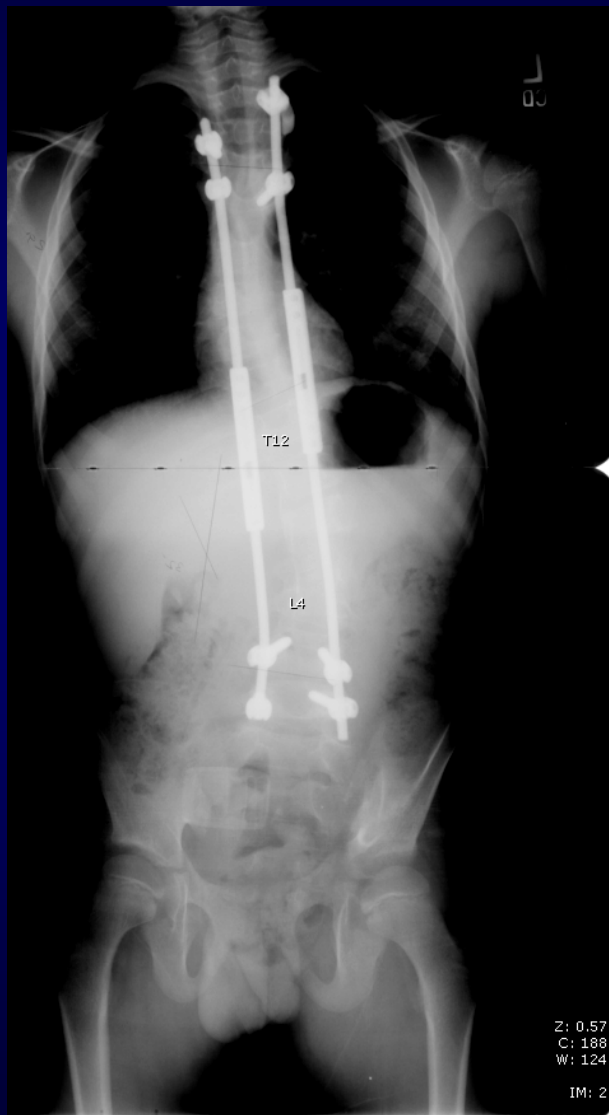


Z: 0.63  
C: 156  
W: 175  
IM: 2

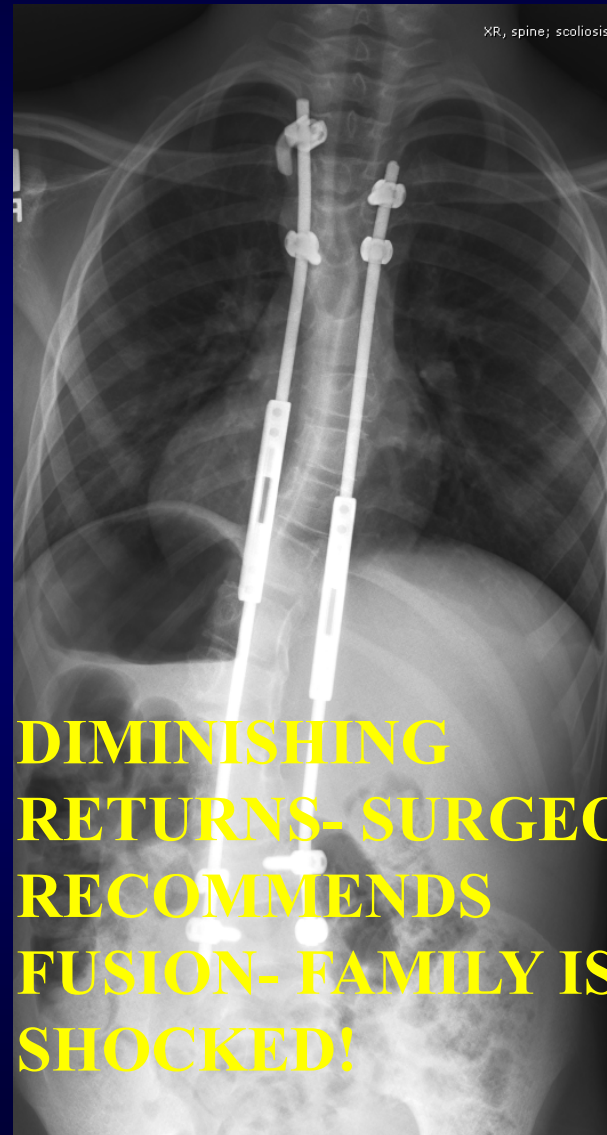


**Children's**  
National Medical Center.

2007→



2011



**DIMINISHING  
RETURNS- SURGEON  
RECOMMENDS  
FUSION- FAMILY IS  
SHOCKED!**



# MAKE A PACT



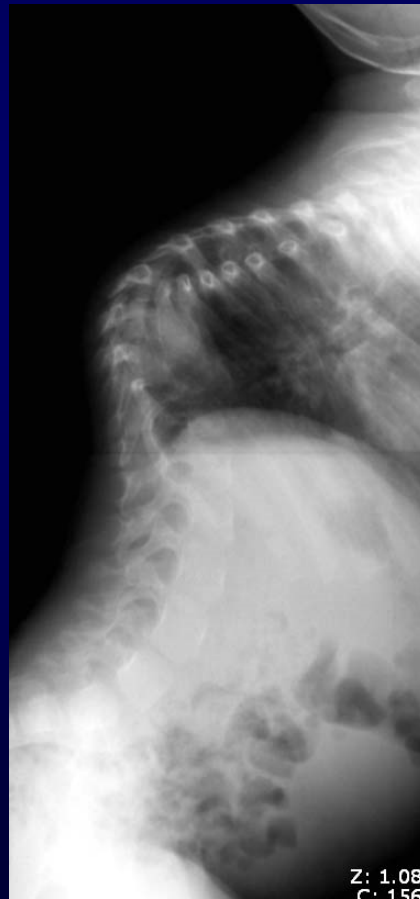
WE'RE IN IT FOR THE LONG  
HAUL



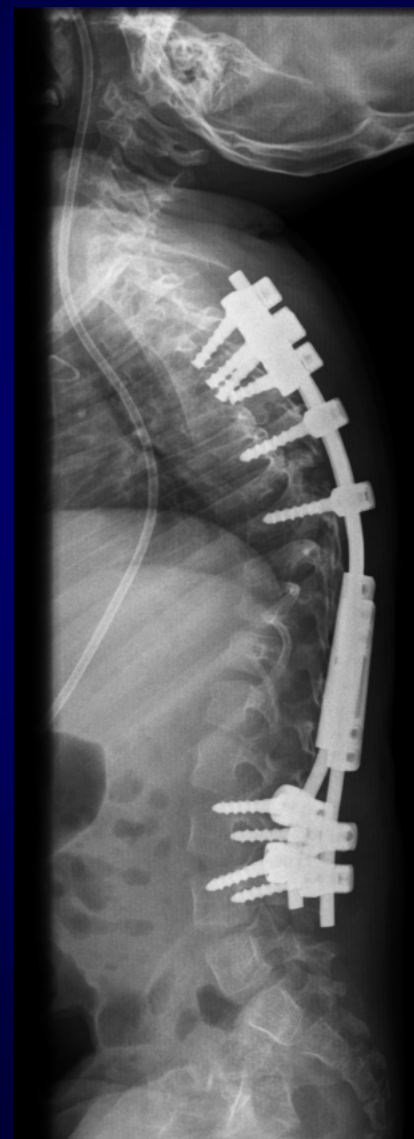
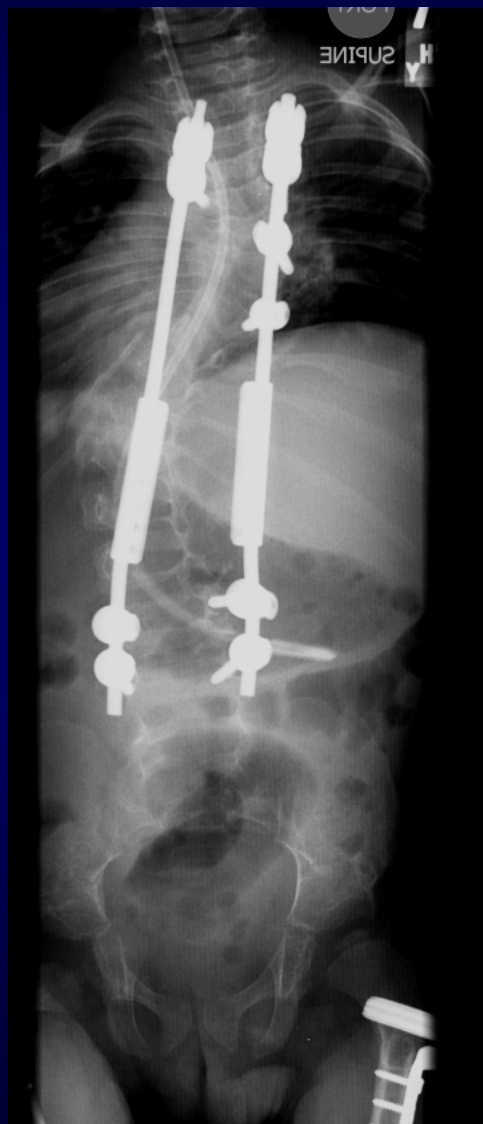
# Example #3: Everybody ready to stop



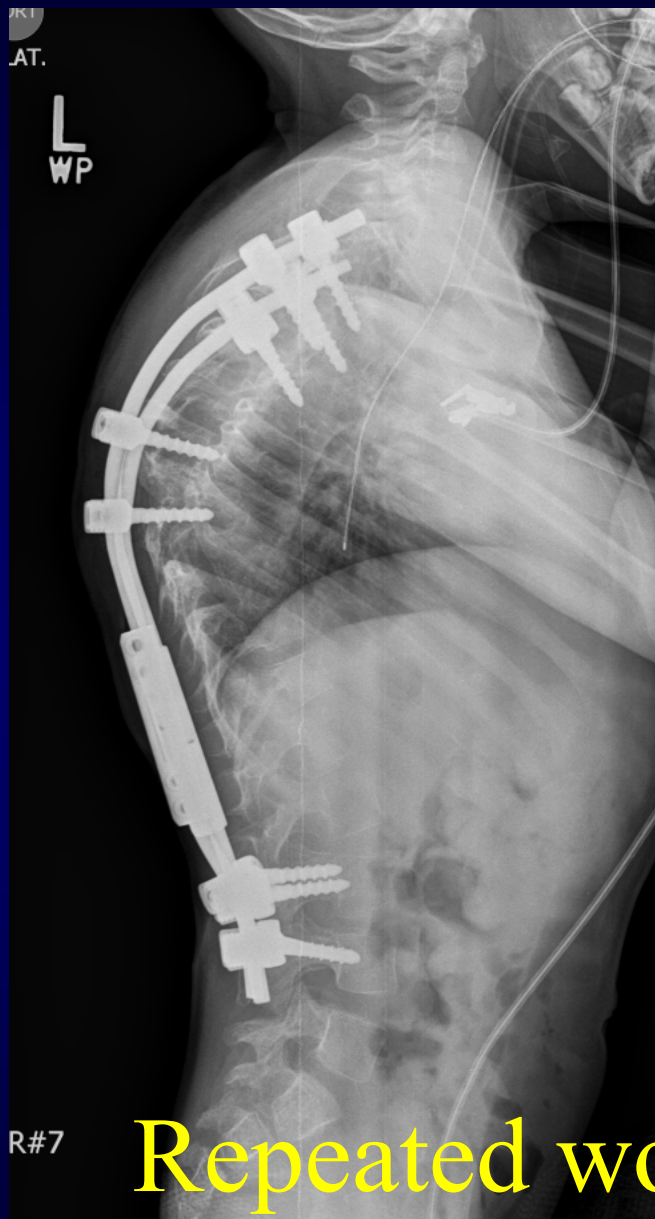
18 MO male  
unclassified  
syndrome-  
hips out, CVT



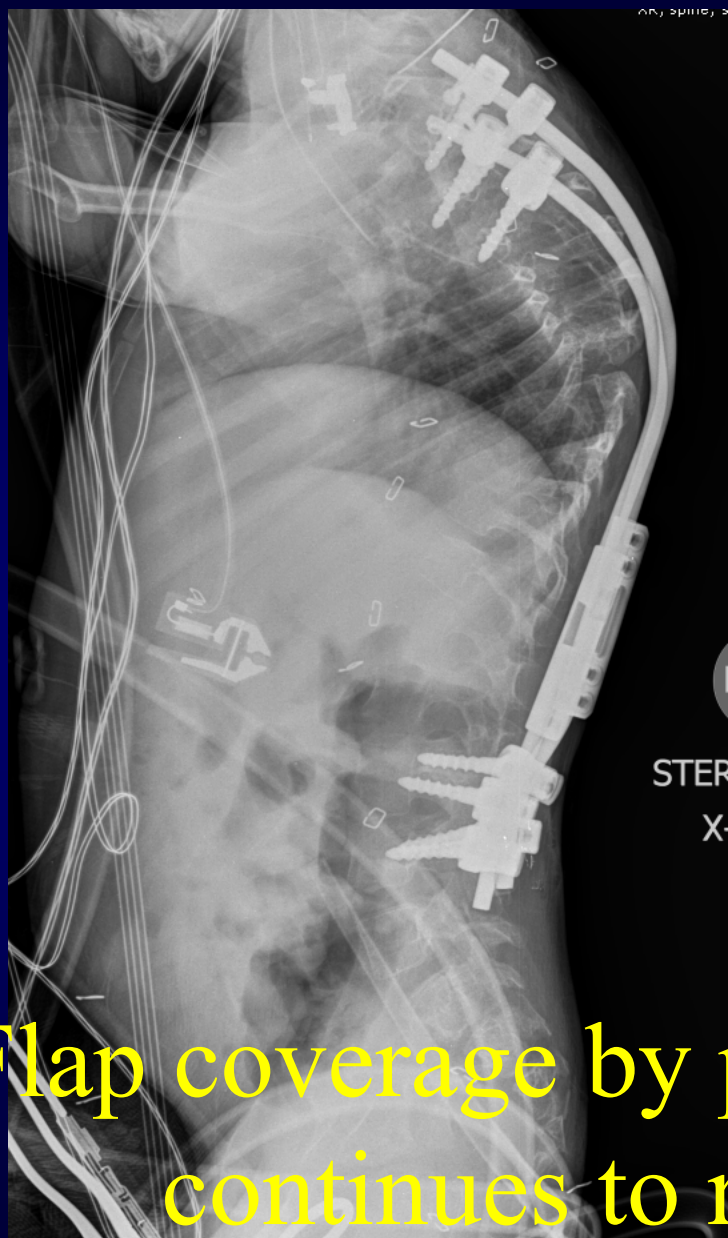
# s/p VCR, SM rod insertion







Repeated wound infections



Flap coverage by plastics fails (mom continues to refuse G-tube)

XR, spine; scoliosis

ANT

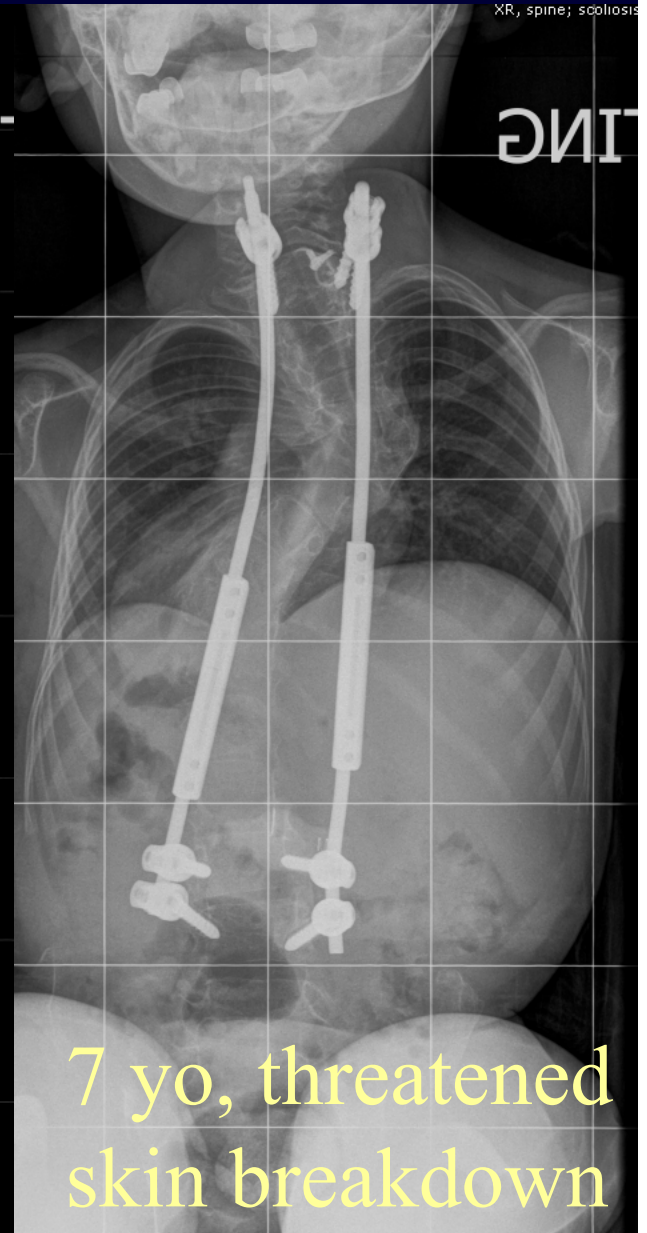
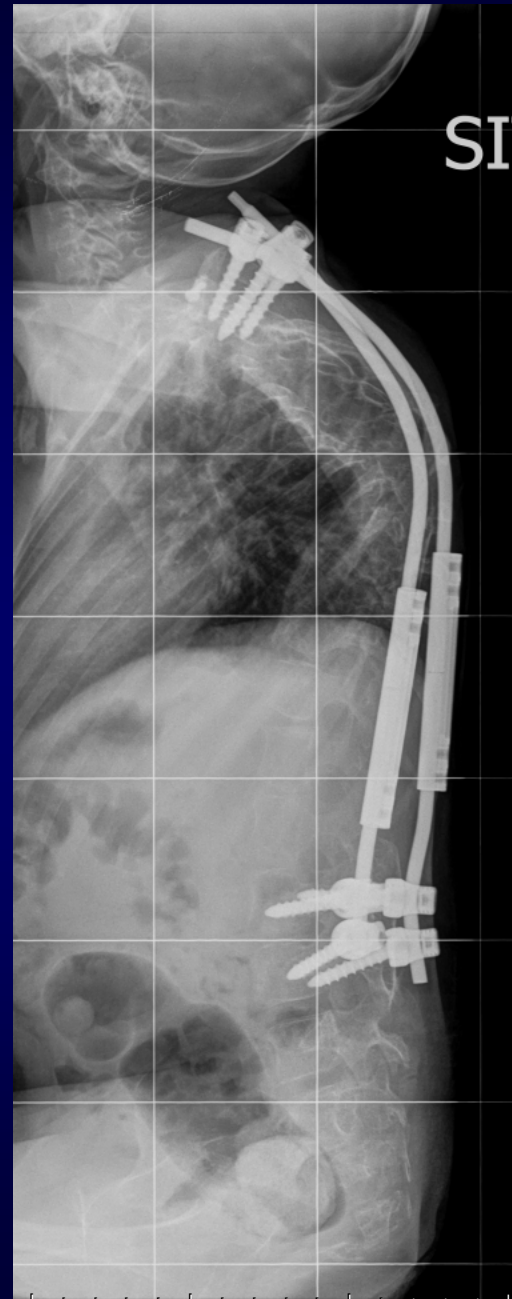
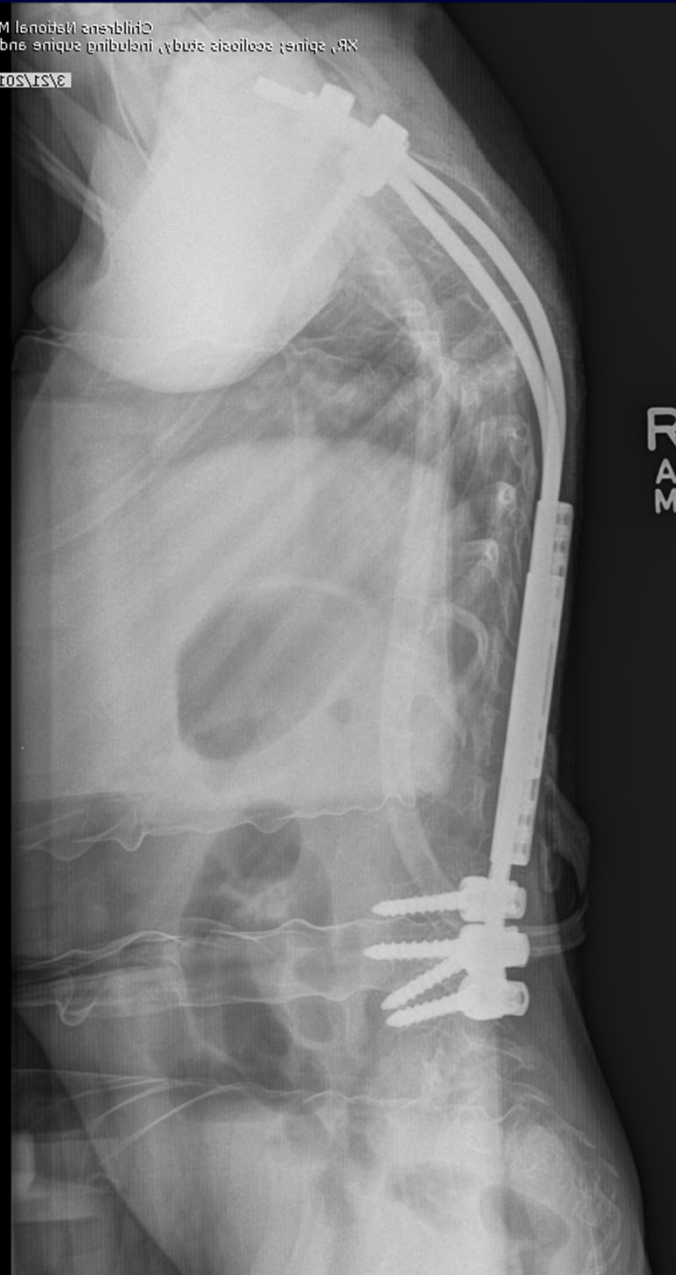
SI

R  
A  
M

7 yo, threatened  
skin breakdown

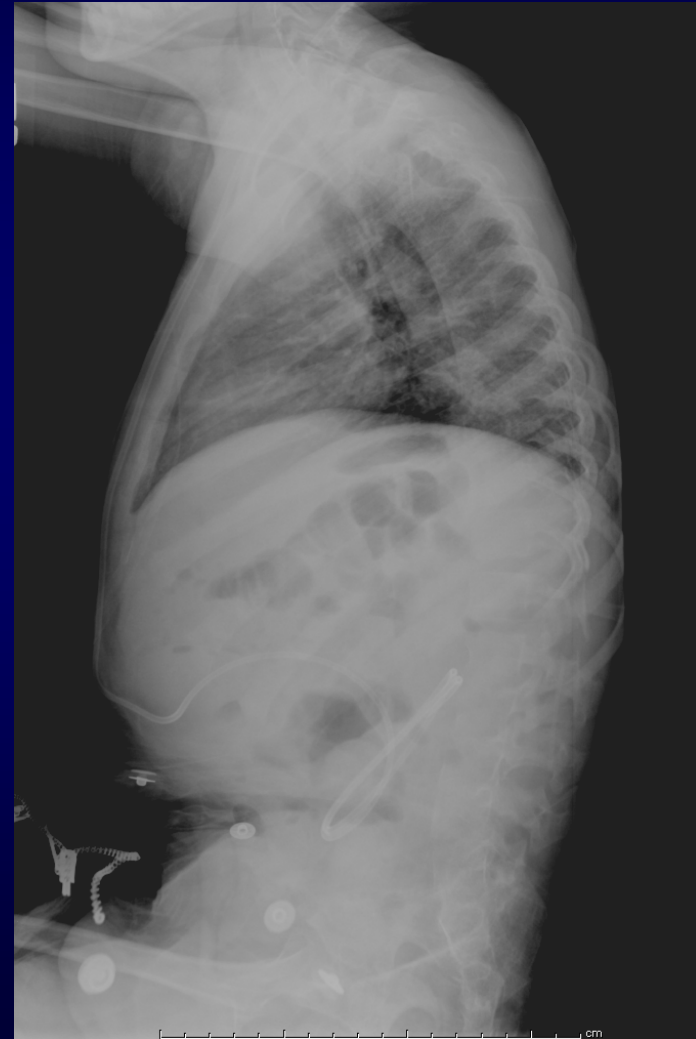
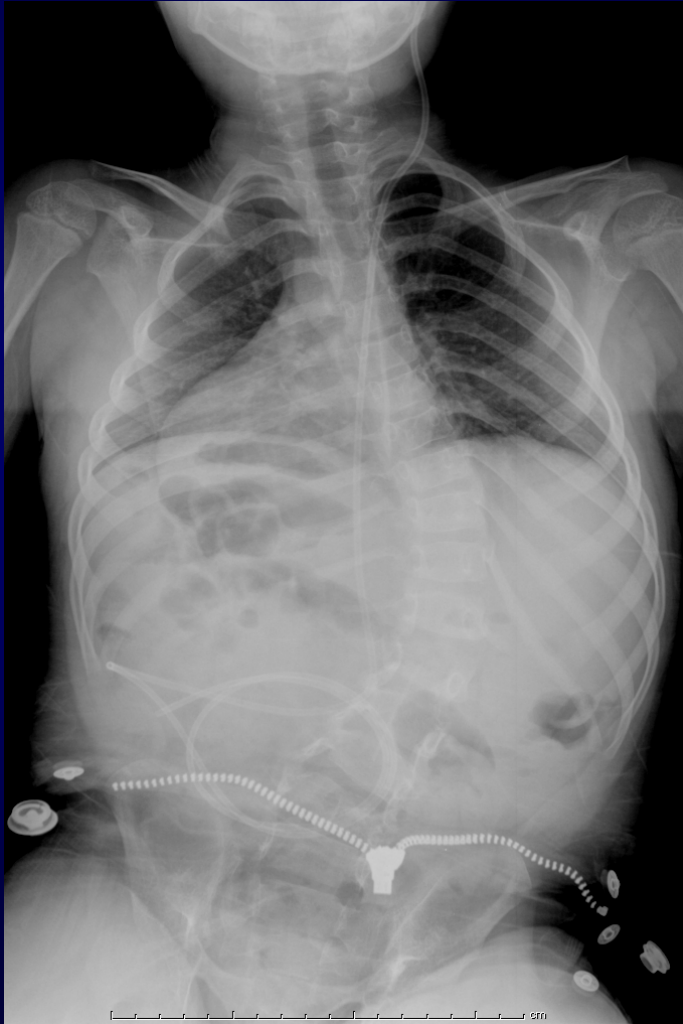
XR spine; scoliosis  
Cribbing and  
M lenodetl ane blit

1051501

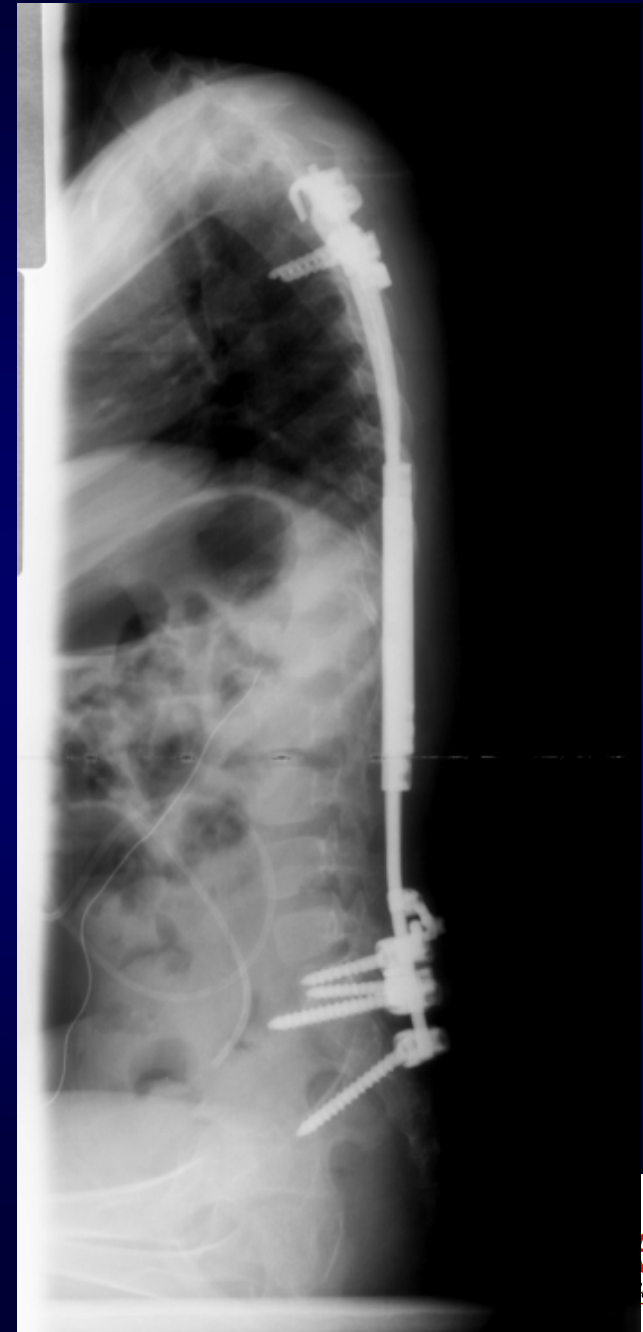
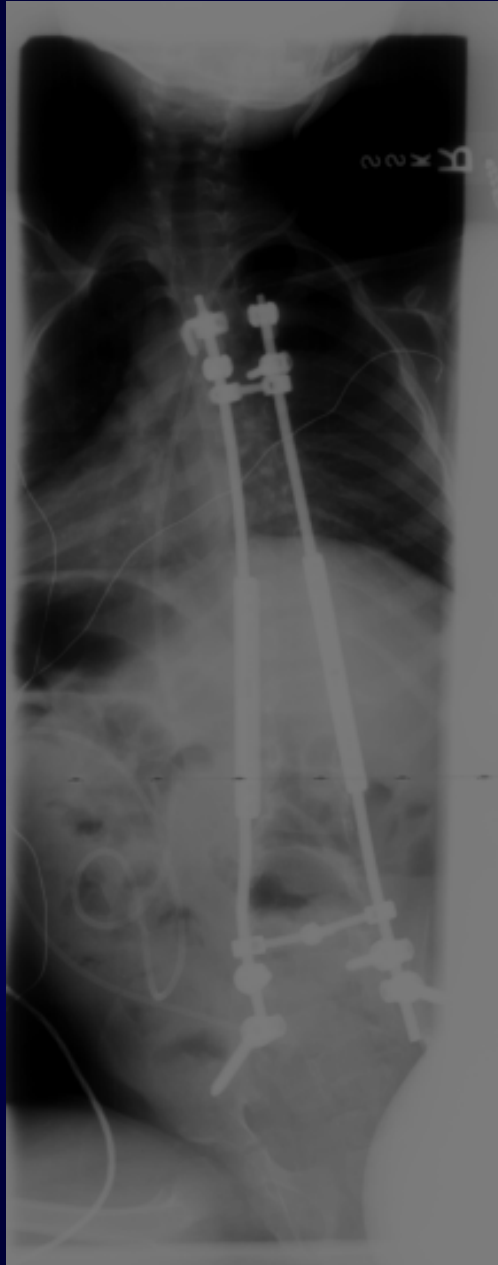




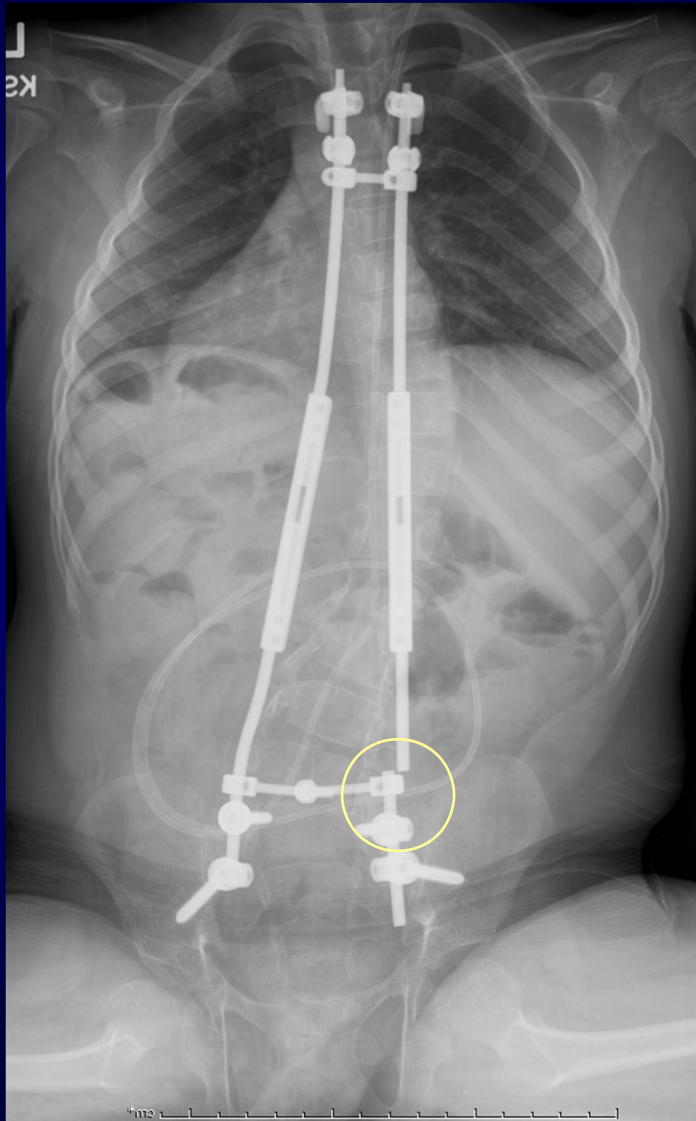
# Example #4: The enduring partnership: 7 yo myelodysplasia



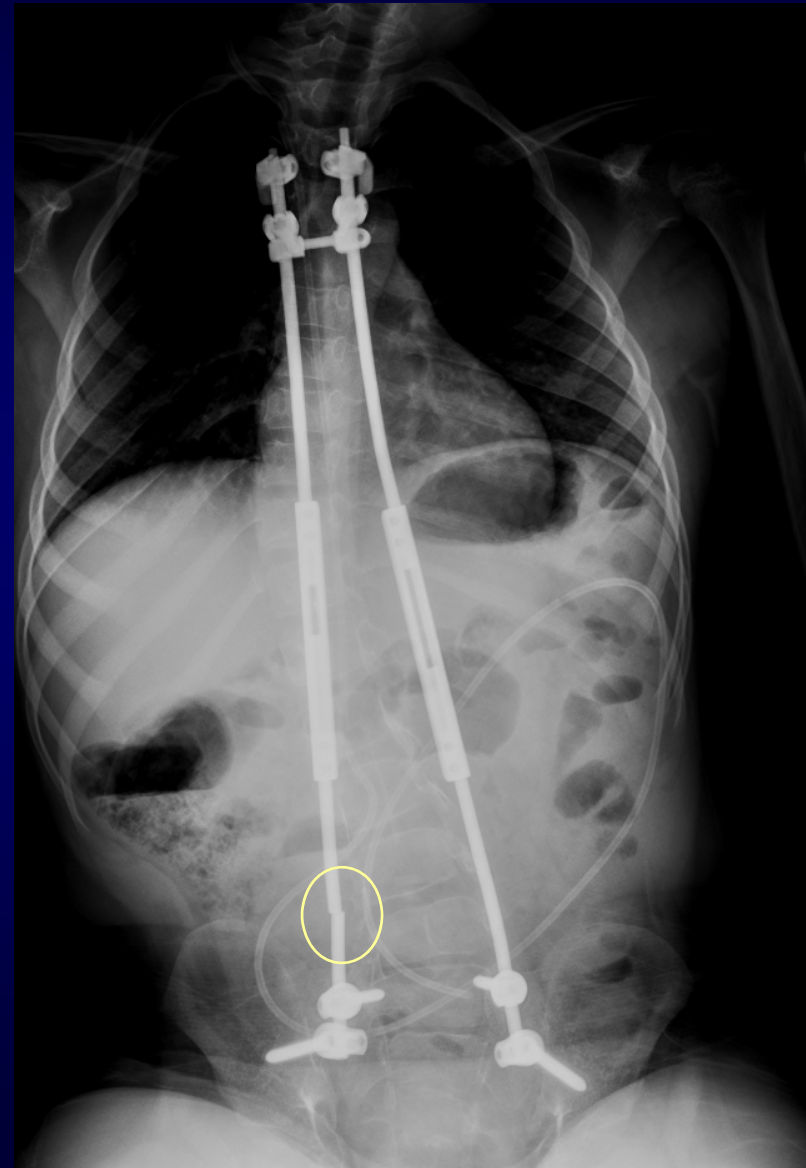
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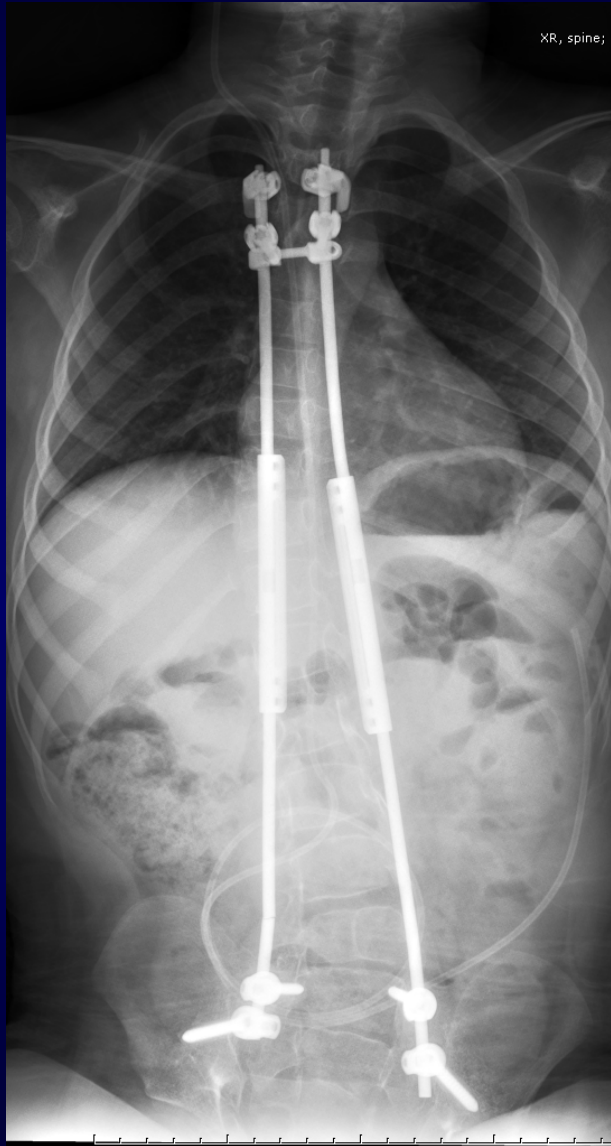
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6/10



3/11

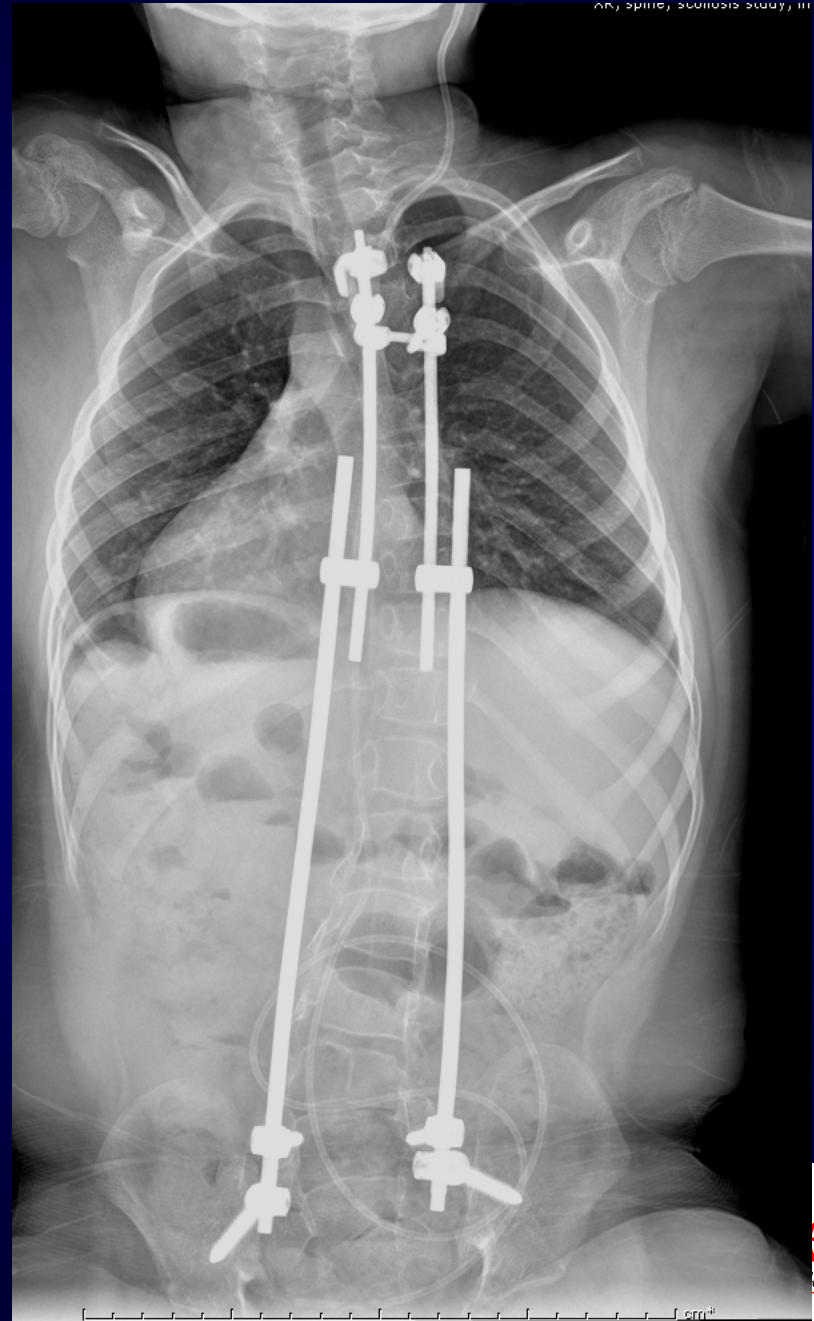




XR, spine; scoliosis study,



XR, spine; scoliosis study, in

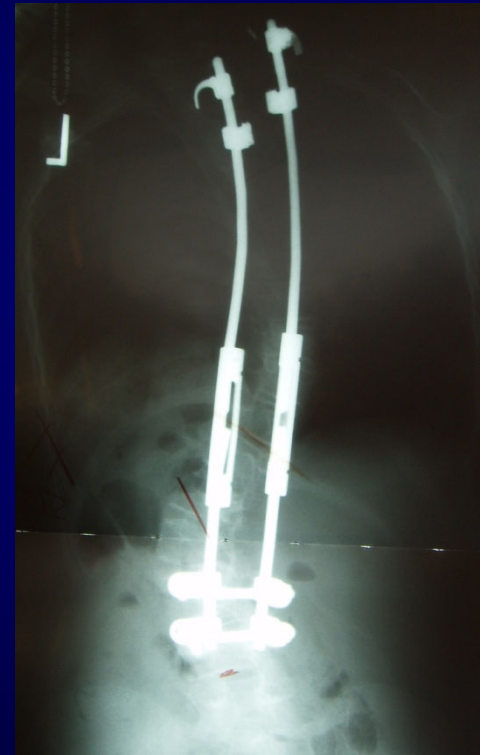




# Current Practice: When to fuse:

- “Skeletal maturity”
- PHV achieved
- No further lengthening achieved (diminishing returns)
- Failure of technique:
  - infection
  - inability to maintain fixation
- Curve progression despite lengthenings

Typically age 10 minimum



# Lessons I've learned:

- Preparedness

- You can never over prepare a family

- Patience

- Families hear what they want to hear
  - Curves don't behave

- Perseverance

- The patients and families will stay the course with you despite adversity





Thank you.

never  
never  
never  
give  
up

(winston churchill)



Walt Disney

*"The way to get started is to  
quit talking and begin doing."*

- Read his story -

Walt Disney - Founder of Walt Disney Co.

