MCGR – Masters Techniques

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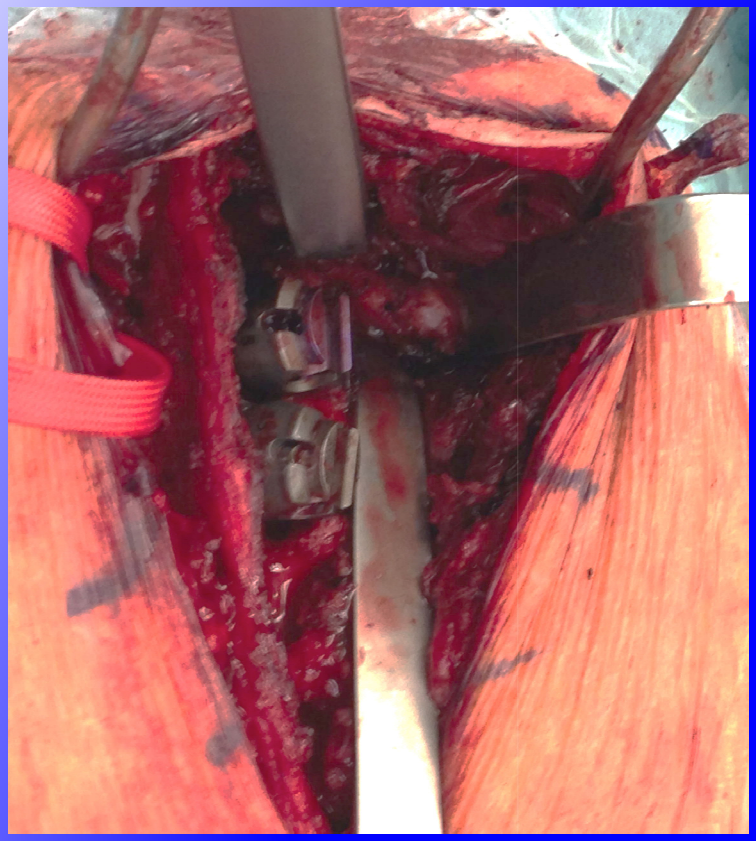
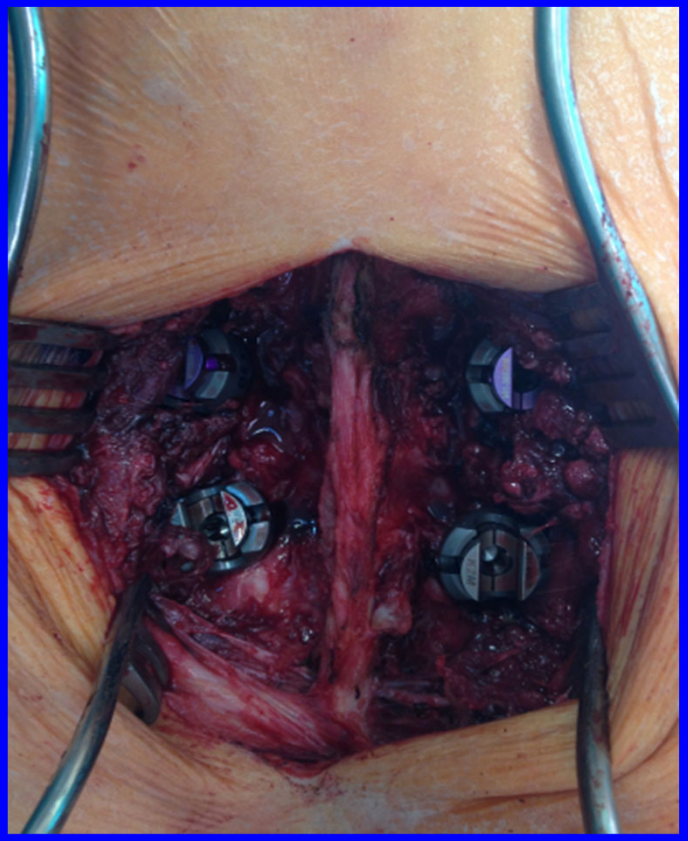
Surgical technique



prox. foundation:
monosegmental
highthoracic fusion +
bands around the ribs



distal foundation:
monosegmental lumbar
fusion

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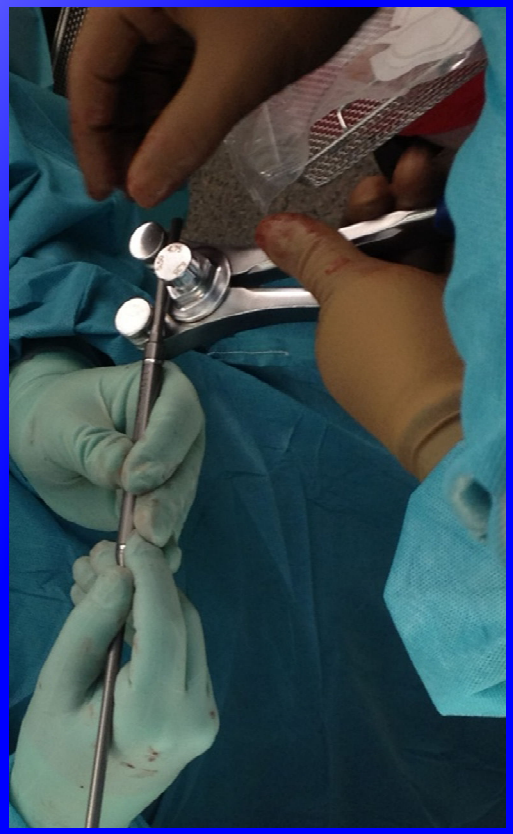
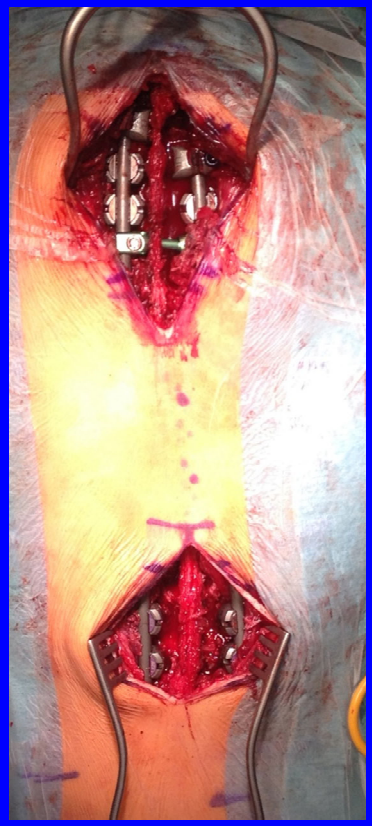
Surgical technique

2 incisions



contouring

testing



subfascial positioning
cross linking

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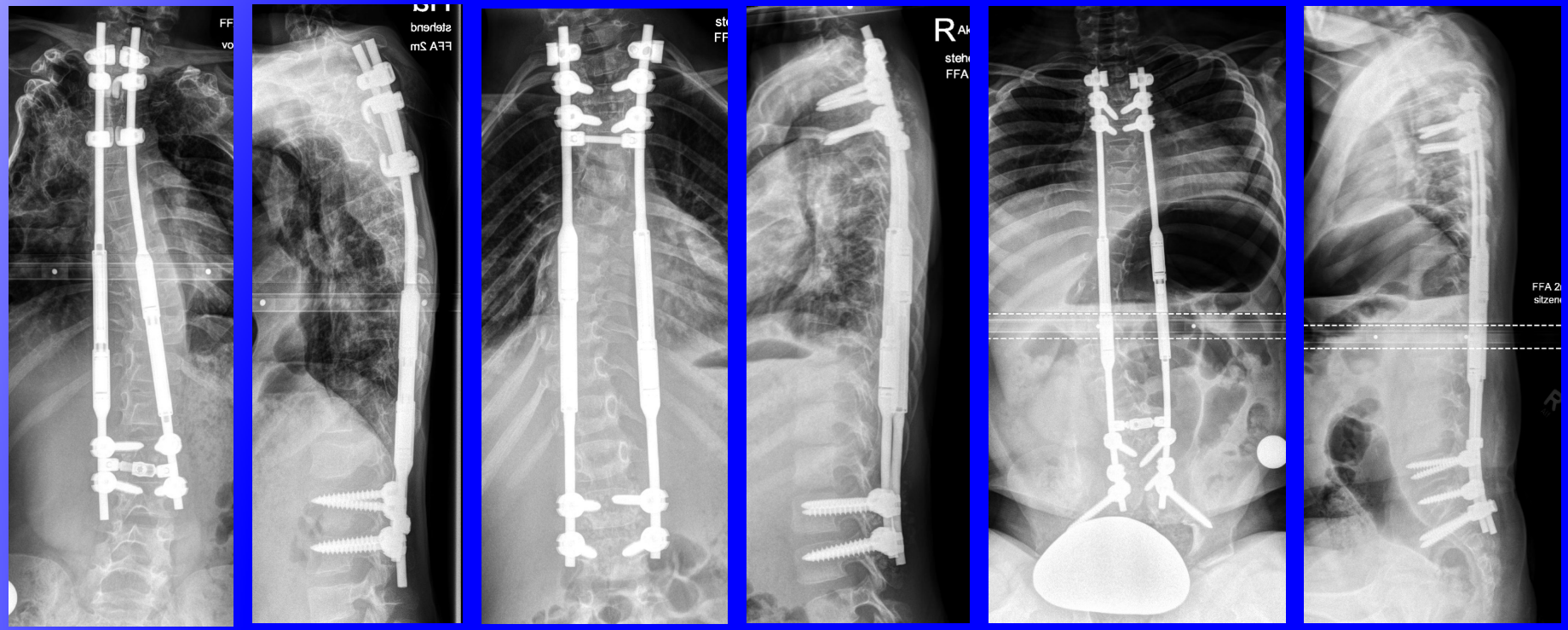
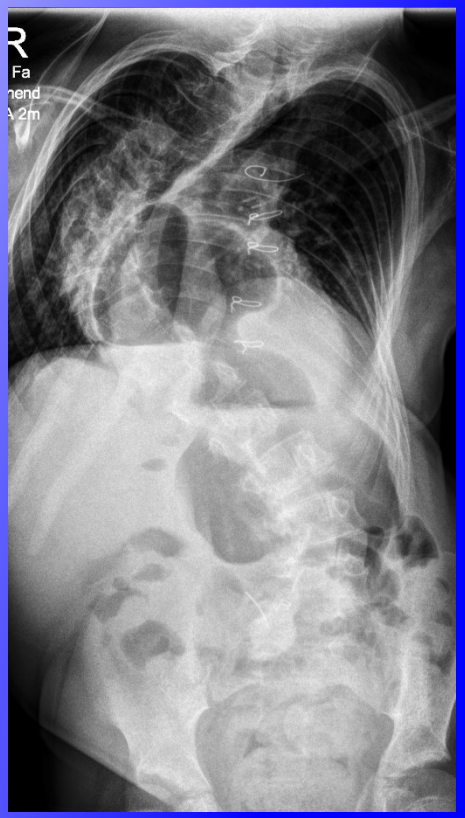
Fixation techniques

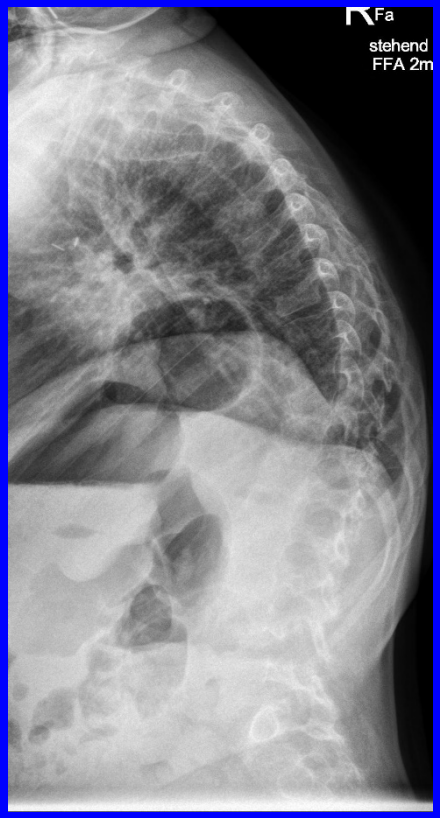
- Pedicle screws
- Hooks
- Sublaminar clamps currently around the ribs

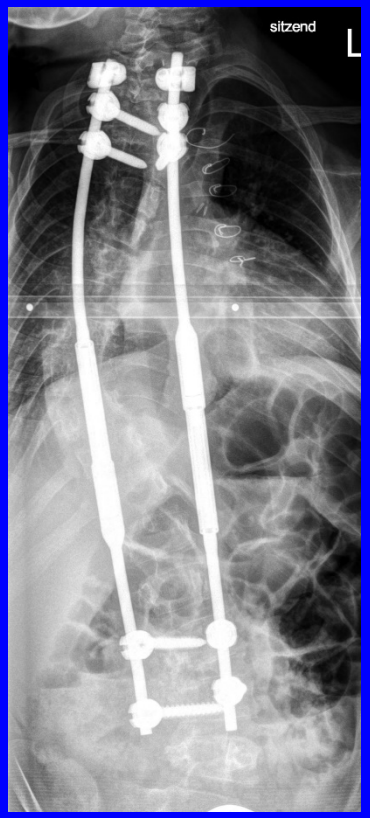


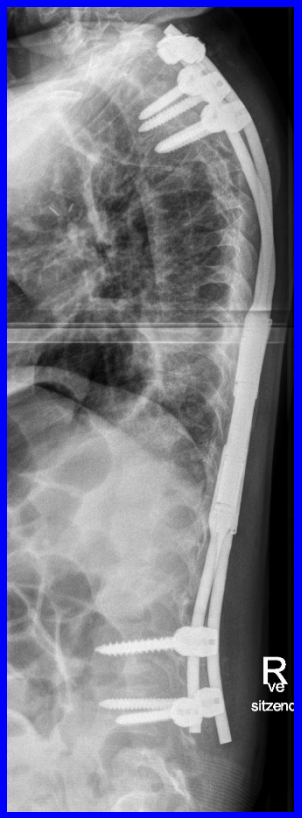
Increased kyphosis > 50°

- Upper Instrumented Vertebra (UIV) go to T2 - T1
- Bending enough kyphosis into the rod
- In case of hypokyphosis may end at T3 or T4







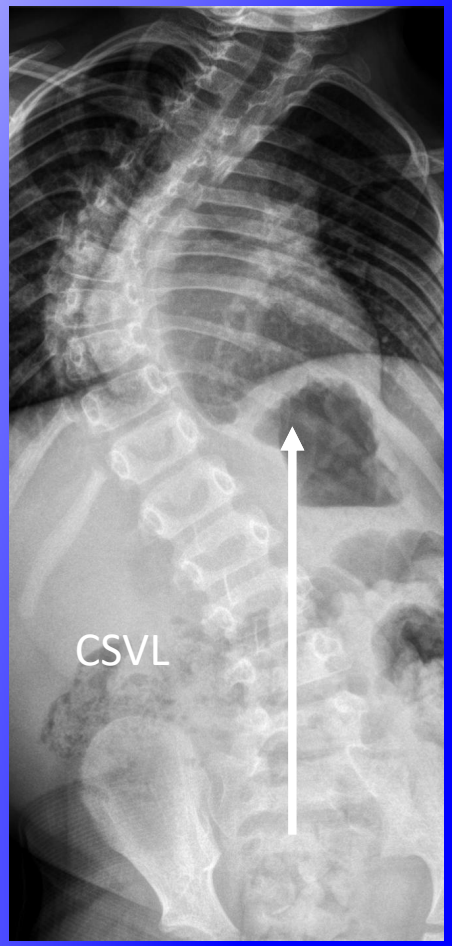


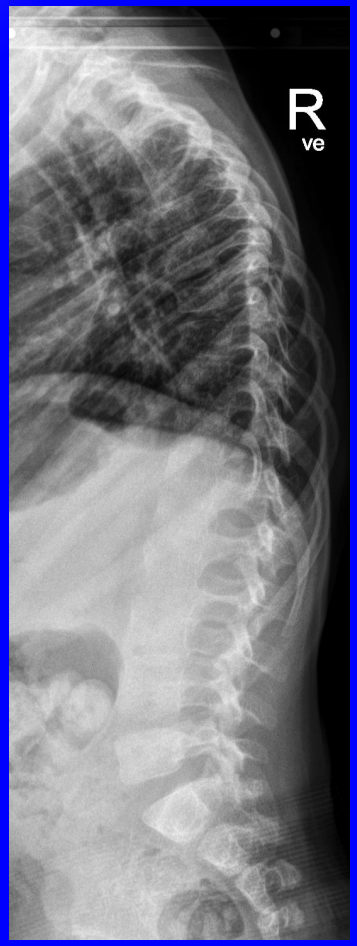
Last Instrumented vertebra (LIV)

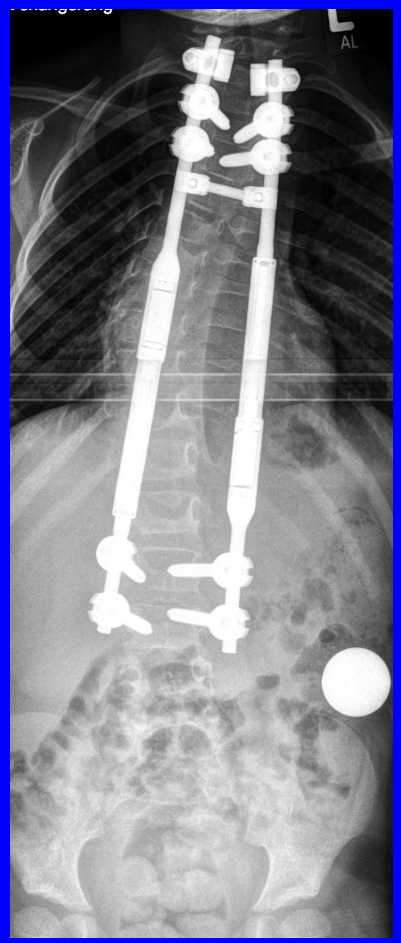
Choose stable vertebra

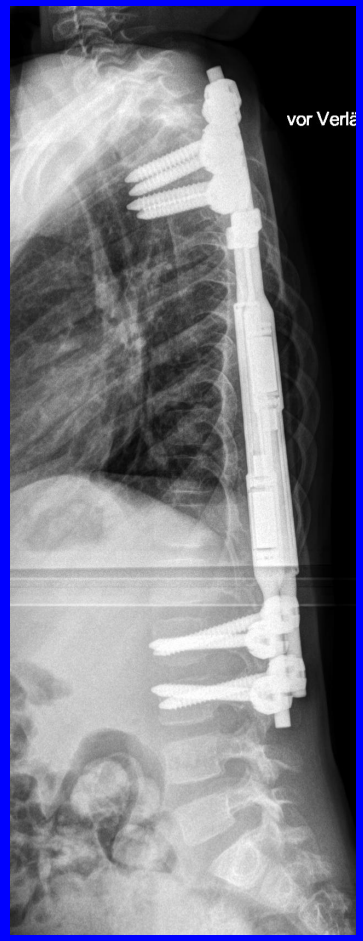
- Always choose stable vertebra with severe trunk shift

Choose LTV (Last touching vertebra) if disk below is stable



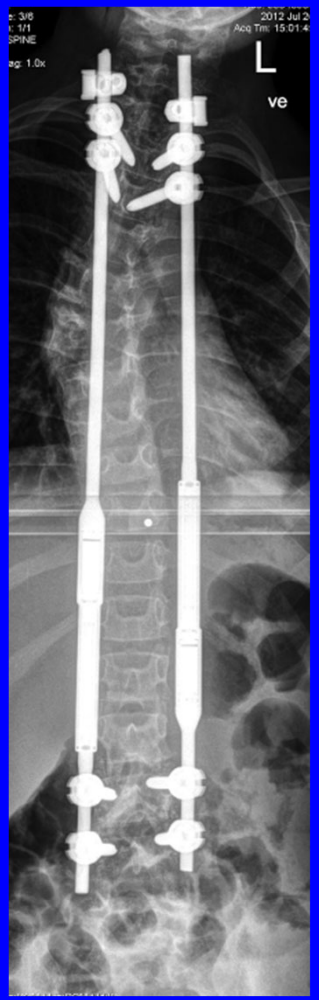






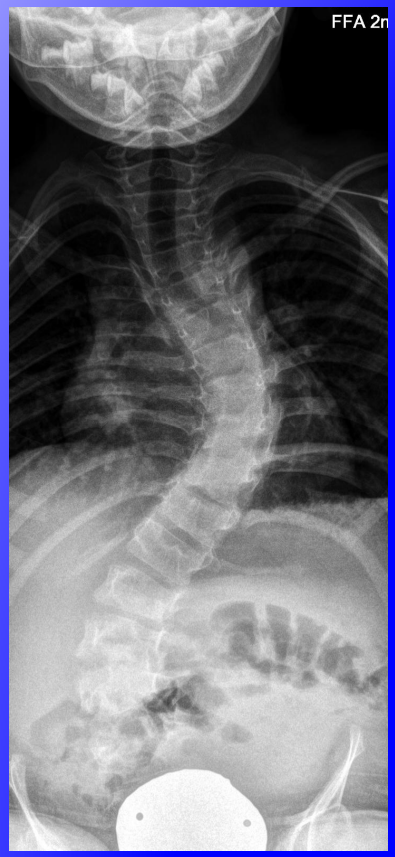
Actuator Positioning

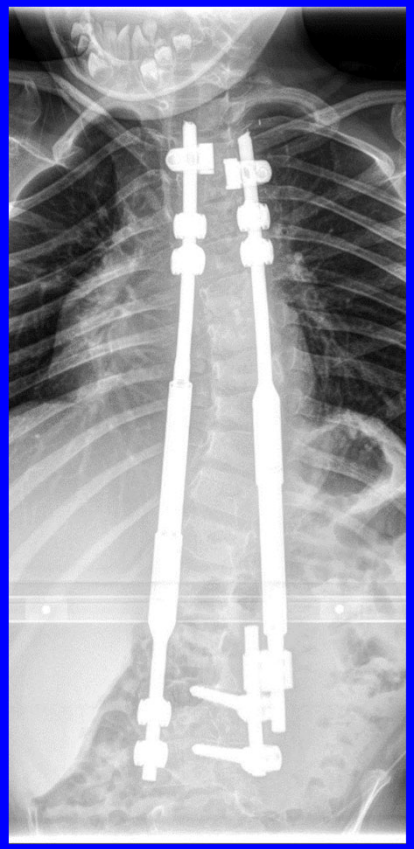
- Best around TH10 and L2 (physiologically straight spine)
- Avoid positioning of actuator above T8 to allow for sufficient kyphosis

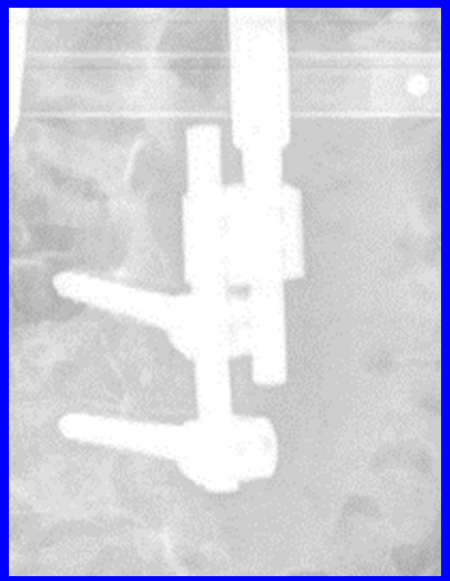


Offset Rod

- avoid crossing spine, if necessary we use an offset rod







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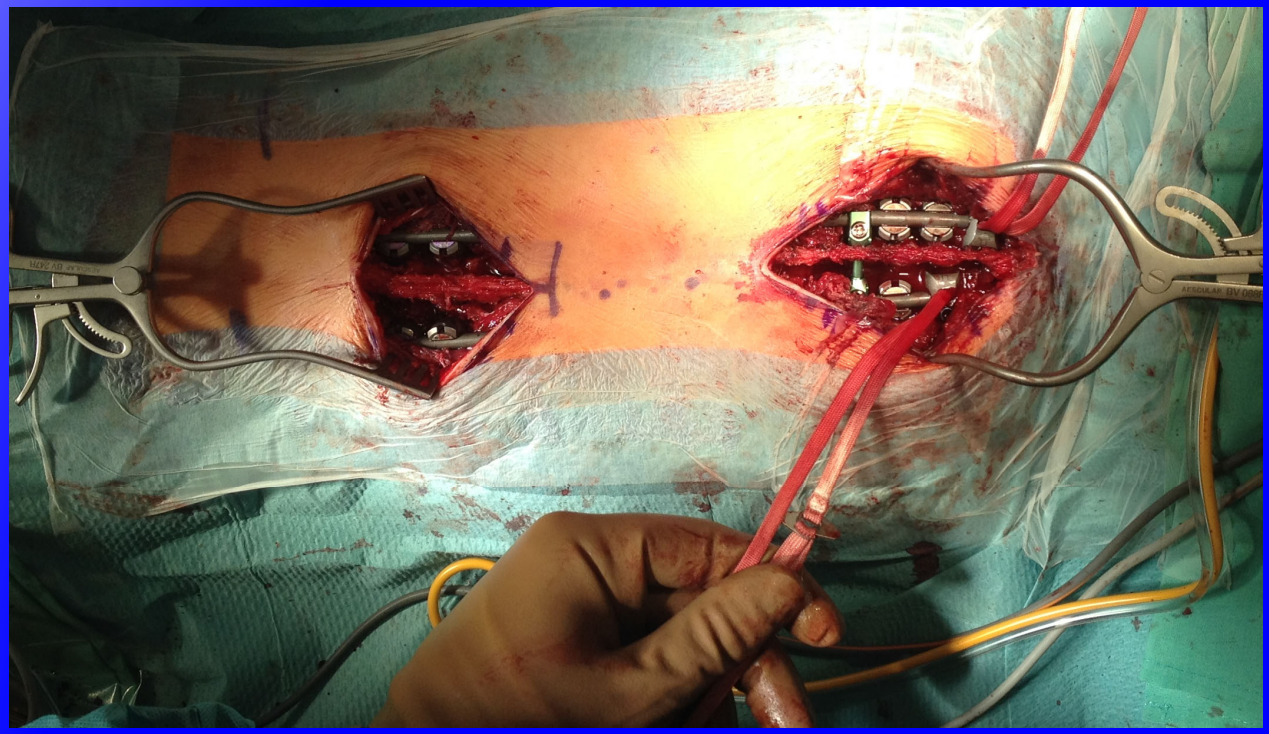
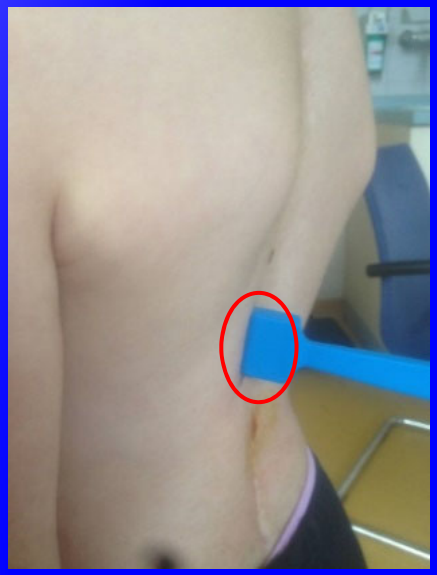
Push prone technique

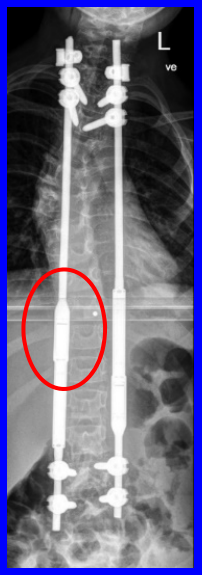
- before fixation of the rod to the 2 foundations we push the apex of the curve to gain maximum correction



Distraction – protocoll

- Outpatient procedure
- Use of Diméglio data
- X-rays pre and post lengthenings
- Ultrasonography for lengthening/distraction control
- Prone position across pillow
- If applicable additional longitudinally traction, ibuprofen

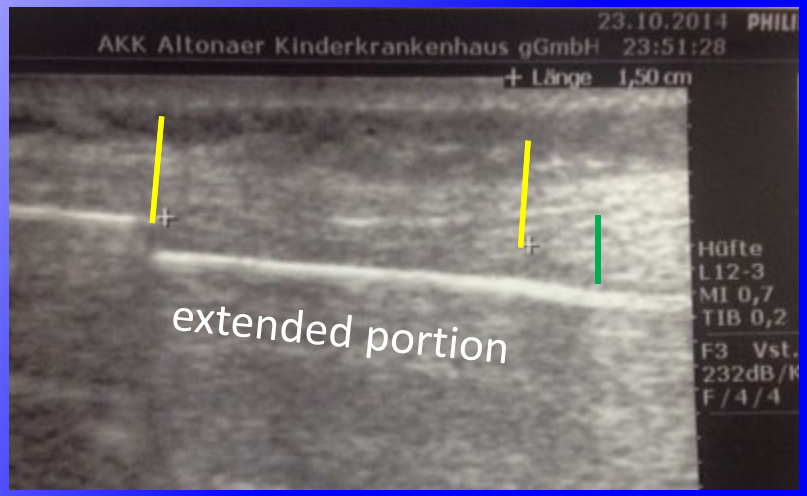




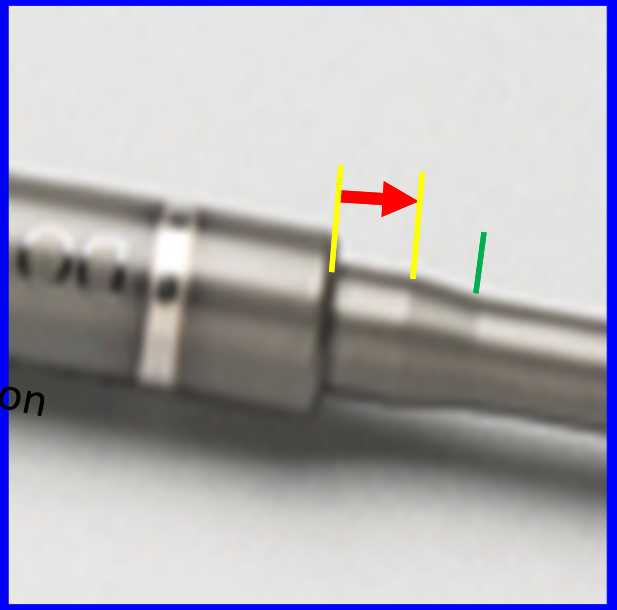
Diméglio A. Growth of the spine before age 5 years. *J Pediatr Orthop B* 1992; 1: 102–07

Distraction procedure

Ultrasound for distraction control



reduce of radiation



Thank you