

Debate: Standard-Standard vs ~~Standard-Offset~~

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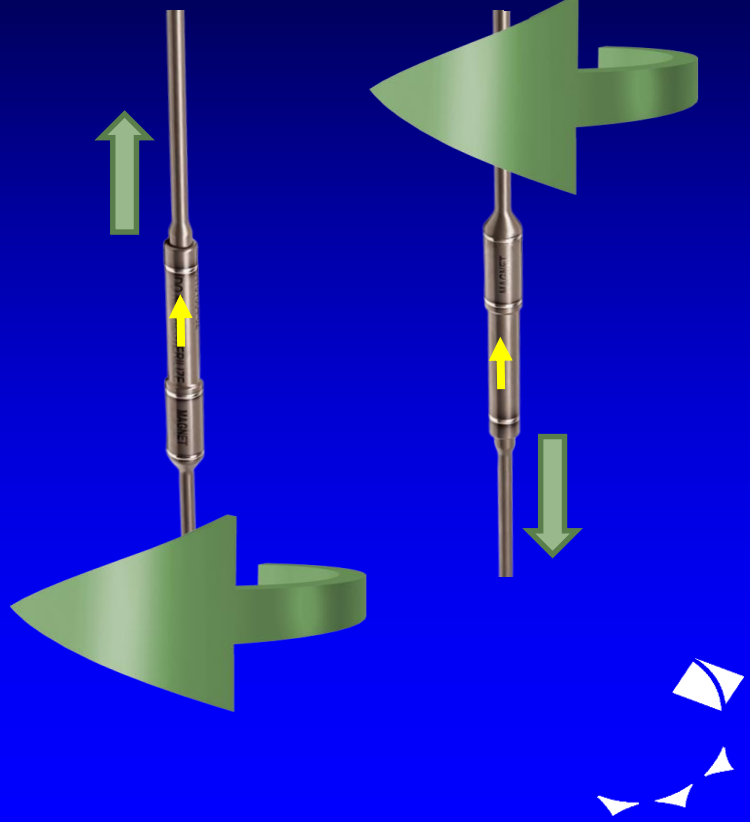


The MAGEC® System – *Device Magnets*



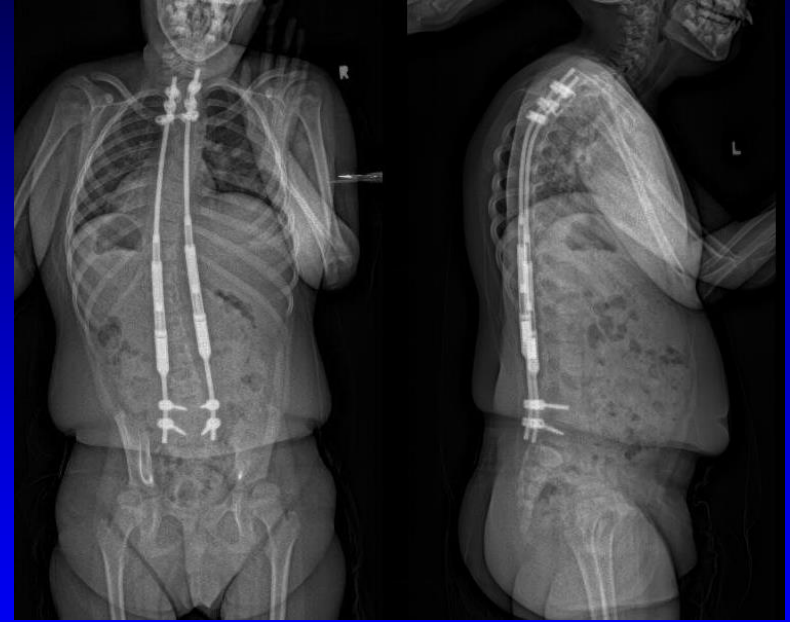
Standard Rod

Offset Rod



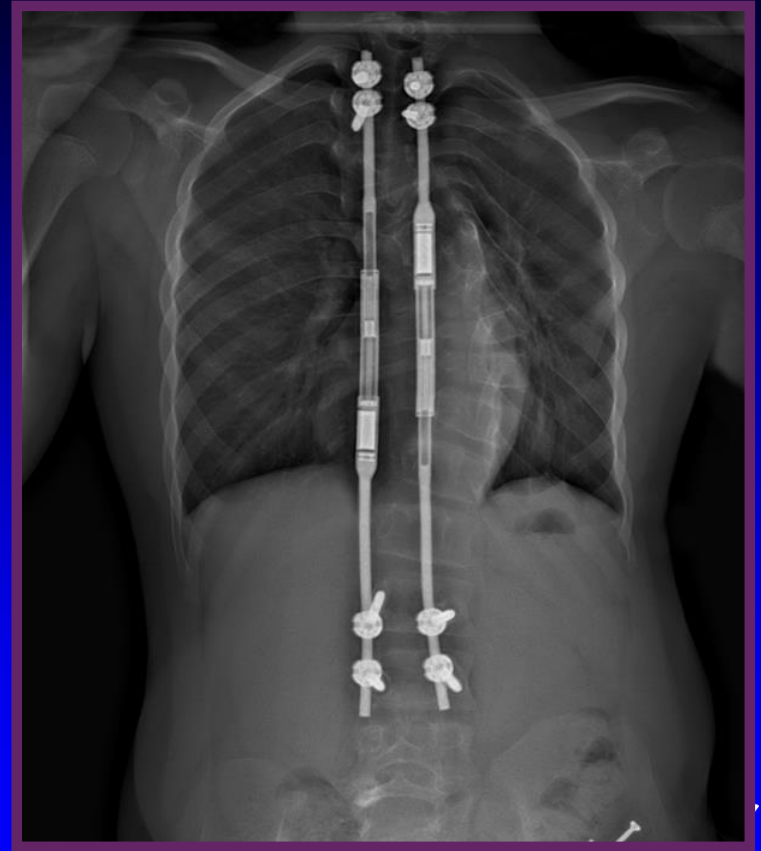
Standard

- Rods Adjust Simultaneously
- Allows cross-talk



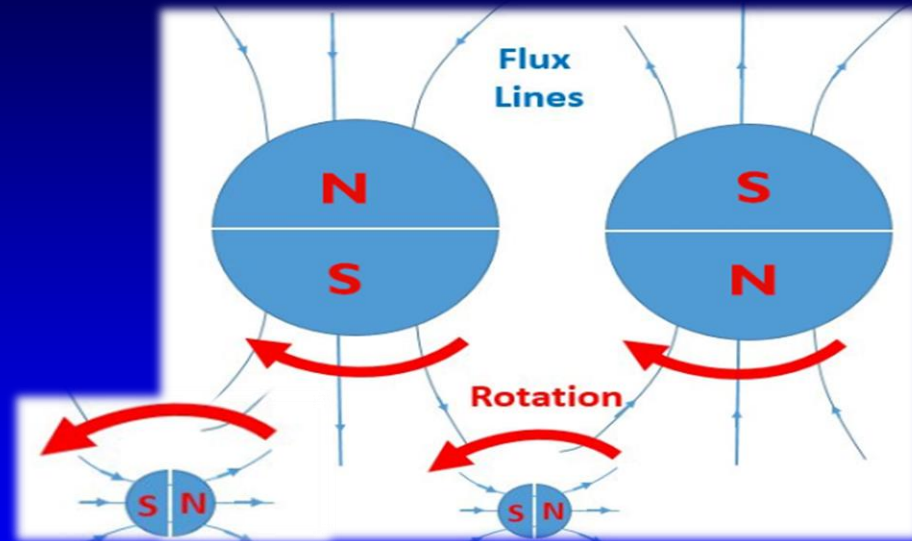
Offset

- Independent Rod Control
- Incremental lengthening
- More precise magnet localization
- Minimizes cross-talk



“Cross Talk”

- “Cross talk”: Getting MORE distraction than you targeted
- When independently trying to control each rod the ERC may continue to “talk” to one side when you are distraction the other side (if within ~3 cm)

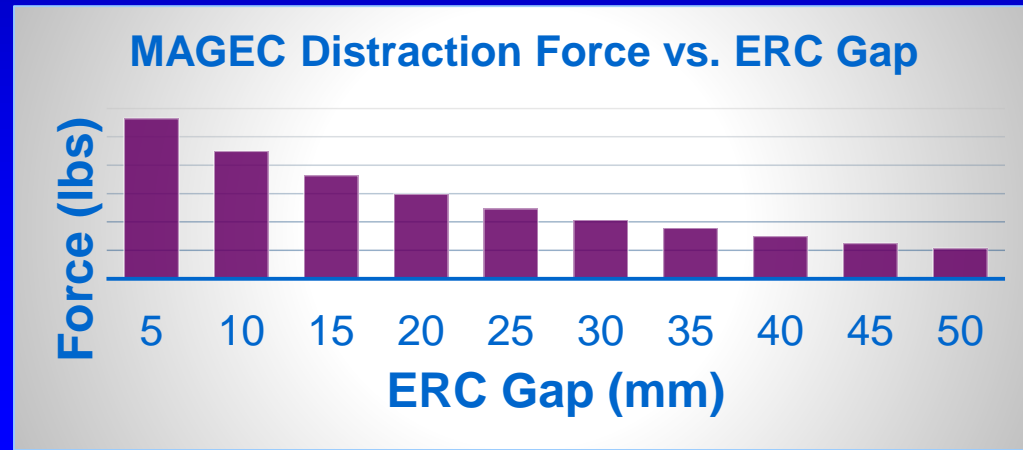


Cross Talk



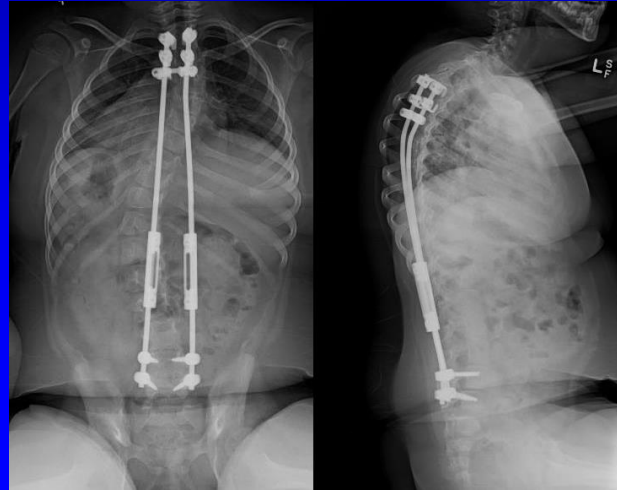
Why Standard Configuration

- Minimizing error → I don't want to misplace rod
- I like “cross-talk” → both rods lengthen simultaneously
- “Cross-talk” rod → less force



Why Standard Configuration

- TGR lengthening → unlocked both rods during lengthening
 - I didn't lengthen one rod while other rod locked



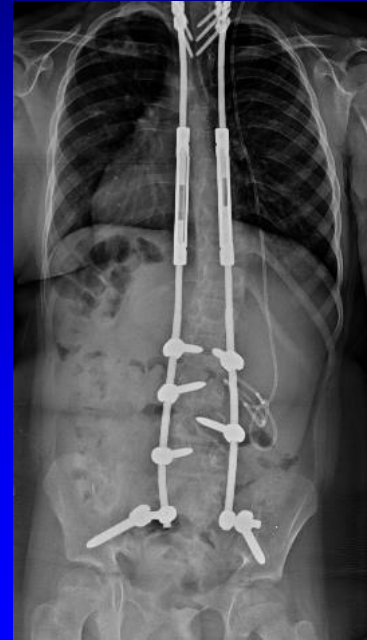
Why Standard Configuration

- When concerned about enough force generation in a stiffening spine, why would you run each motor separately



Why Standard Offset Doesn't Make Sense!!

- Restoring coronal balance by differential lengthening



How to obtain coronal or shoulder balance

Whether AIS or EOS

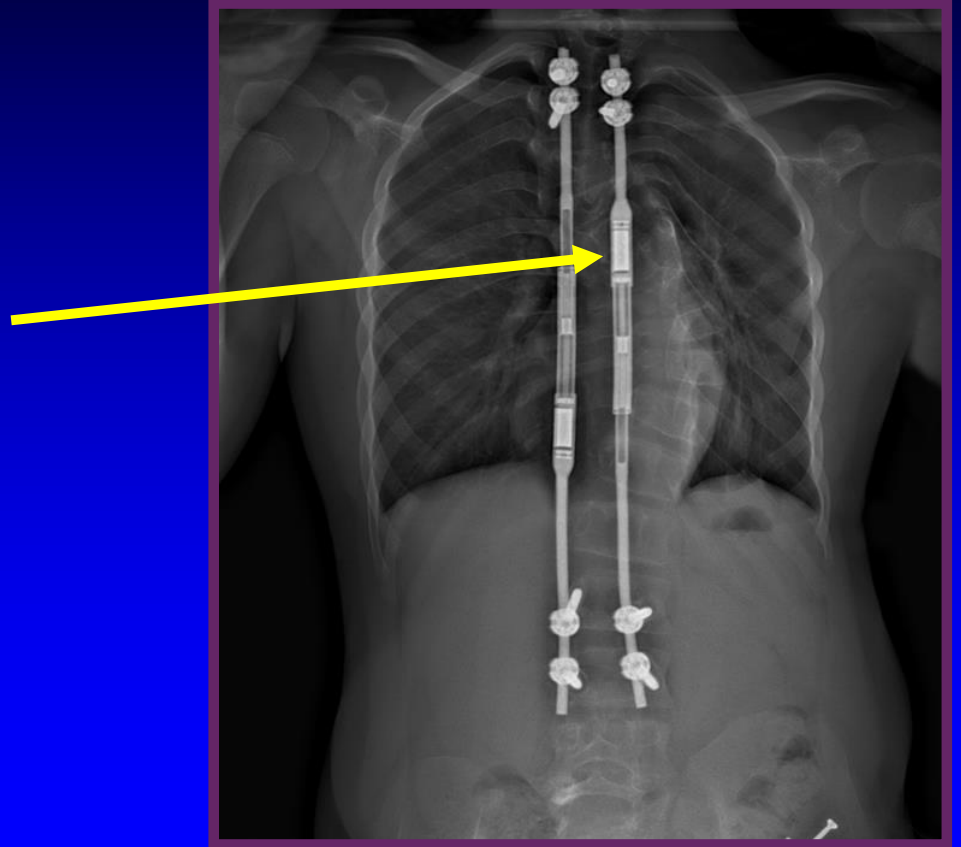
- Proper level selection
- Proper surgical technique
- Not prevented with a few millimeter of compression or distraction on a rod

**Luckily you still have another operation
(Final Fusion) to get it right**



Location, Location, Location!!!

- Why would you place the thickest part of the actuator in the thoracic spine and then push it more into the thoracic spine



Conclusion

Standard-Standard is better

1. Minimizing putting in rod wrong direction
2. Allows cross-talk to improve distraction forces
3. Minimizing second rod from preventing first rod lengthening
4. Minimizes the perception that coronal or shoulder balance can be fixed with differential rod lengthening of spine based construct
5. TGR taught us to place actuator in TL not thoracic region

