

Pro: Early Surgery

David L. Skaggs, MD

Endowed Chair of Pediatric
Spinal Disorders

Children's Hospital
Los Angeles

University of
Southern California



Brace treatment of congenital scoliosis

- Does not work
- “continued efforts at bracing can cause chest wall deformities in young children with compliant thoracic cavities”

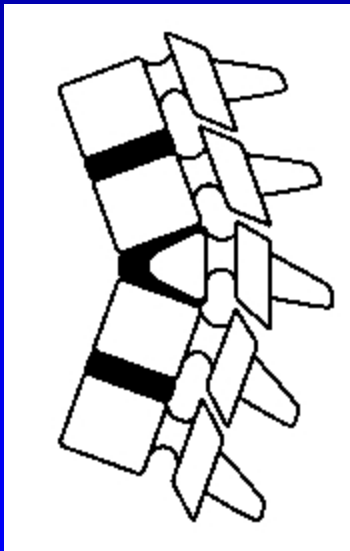
Hedquist & Emans, JAAOS, 2004

Winter RB, Moe JH, *Spine* 1976

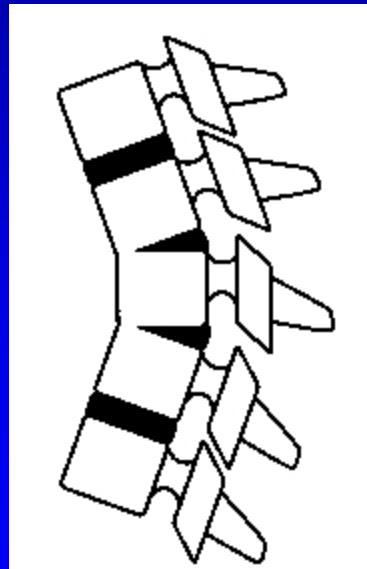
Congenital Kyphosis

- Progression could lead to paralysis
- All pts. Type I or III should have surgery < 5 years <50°

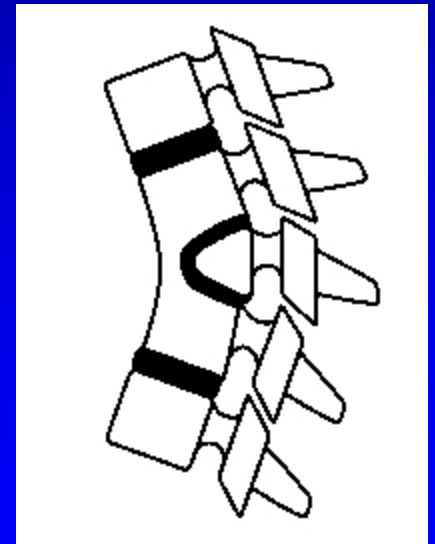
I



II



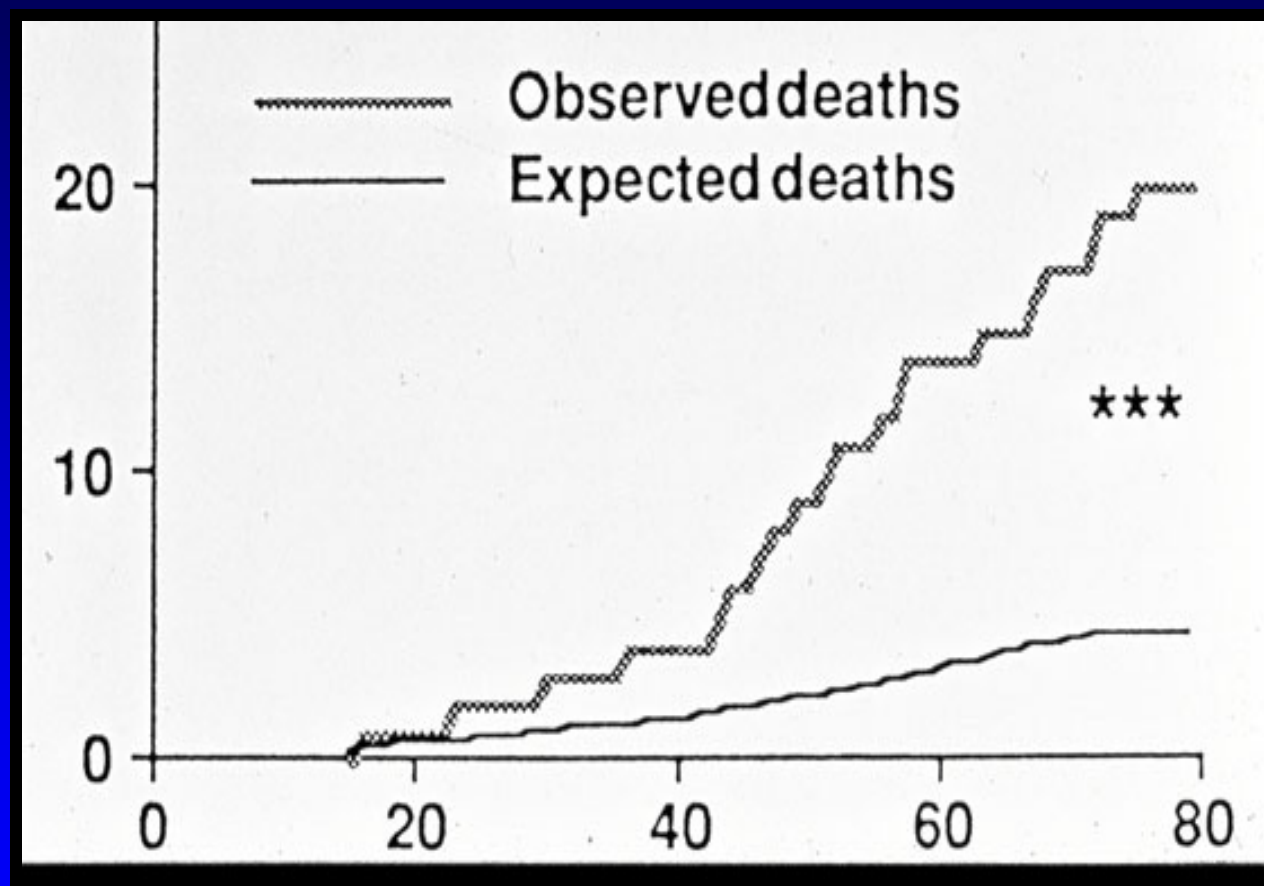
III



McMaseter & Singh, Spine, 2001

Untreated Infantile Idiopathic Scoliosis

of
Deaths



Pehrsson, Larsson, Oden & Nachemson, Spine, 1992

BACK PAIN?

HERNIATED
DISC



SCIATICA

LEG PAIN

NUMBNESS

HAVING SPINE SURGERY?

DO YOU WANT:

CUT OR NO CUT ?

WE OFFER:

- MUSCLE, LIGAMENT, BONE, JOINT: - NOT CUT
- MAJOR BREAKTHROUGH BY A YALE TRAINED SURGEON, THE WORLD LEADER IN NON-TRAUMATIC SPINE SURGERY
- THE MOST MODERN, EFFECTIVE PROCEDURES WITH THE SAFEST, BEST TECHNOLOGY
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Why Surgery?

- Because it works!

Free Papers This Meeting

- 14/16 – benefits of early surgery
- 2 – complications of early surgery

- 0 – benefits of casting
- 0 – benefits of traction



It shouldn't Hurry
to Try

Psychosocial development and corrective footwear use in childhood.

J P O, 1998

Those who wore shoe modifications during childhood showed lower self-esteem than controls ($p < 0.05$).

-In addition, the treated recalled

a decrease in their self-image (41%)

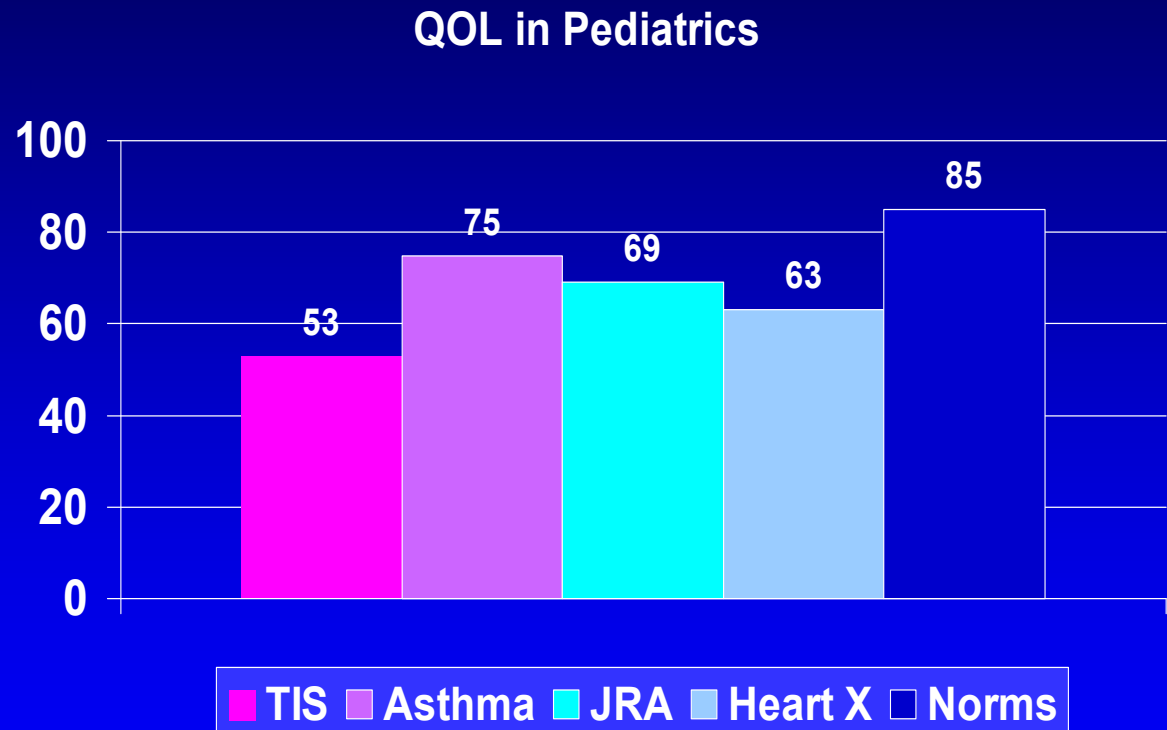
the experience as negative (57%)

being teased about their footwear (47%),

Thoracic Insufficiency Syndrome

Poor Quality of Life

- Among the lowest observed in pediatrics
 - Asthma
 - JRA
 - Heart transplant



Vitale, AAOS, 2007

VEPTR Nutrition

- **Pre-op** - 78% <5 percentile weight for age
- FAILURE TO THRIVE

Population

- poor quality of life
- poor nutrition
- poor respiration

- Lets wrap a cast around them?????

VEPTR Nutrition

- **Pre-op** - 78% <5 percentile for age
- **Post-op** - Mean weight gain 9 percentile in 45 months ($p < 0.002$)
- Of those starting >5 percentile
 - Mean weight gain 17% ($p < 0.002$)
 - Basement effect

Gillingham & Akbarnia, Early Onset Scoliosis, JAAOS, 2006

- discussed casting in 2 sentences
- surgery for 4 pages

Literature Supporting Casting

Mehta, JBJS b, 2005

- Group I
 - mean age 1+7
 - mean Cobb 32°
 - treatment successful
- Group II
 - mean age 2+6
 - mean Cobb 52°
 - all may eventually need surgery

Natural History

- 92% of curves resolved spontaneously in first year of life

Lloyd-Roberts, JBJS(B), 1965

Literature supporting Casting

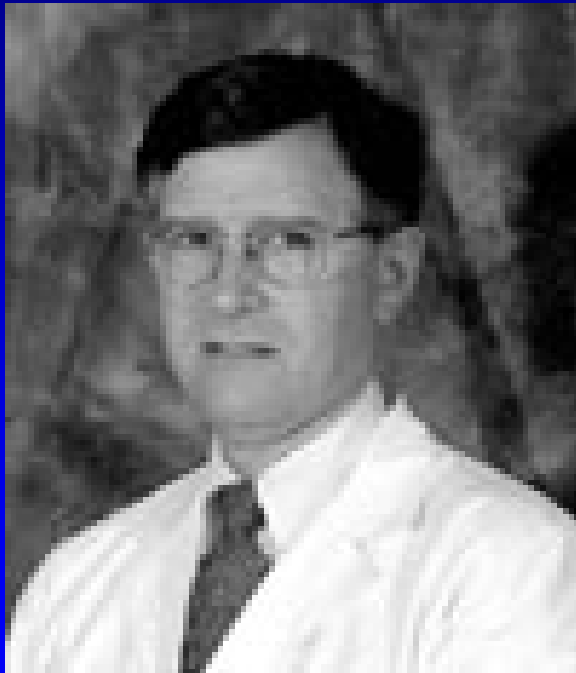
D'Astous & Sanders, Orthop Clinics N Am, 2007

- Technique and case report
- Case report was only to prepare for growing implants

Literature Supporting Casting....

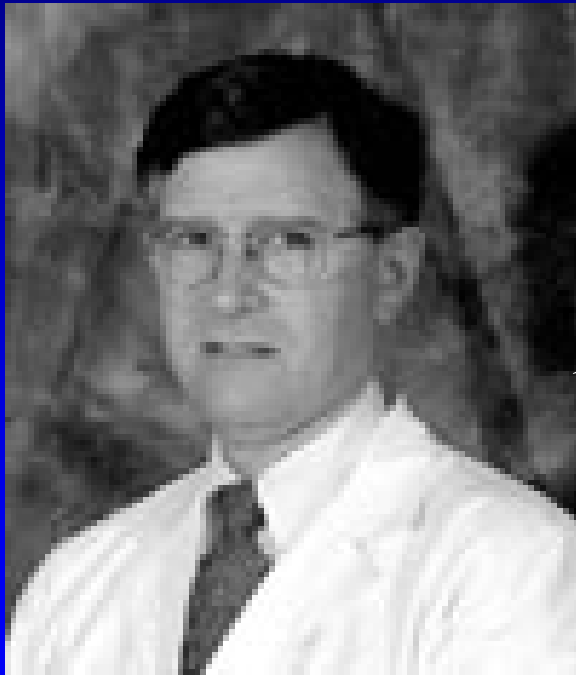
- Spine Cor
- Shoe inserts
- Latril
- Magnets

Upcoming SRS president Rick McCarthy, MD, on casting for early onset scoliosis



GSSG, November 1, 2007

Upcoming SRS president Rick McCarthy, MD, on casting for early onset scoliosis



“such a step backwards
....arcane”

GSSG, November 1, 2007

Traction for Scoliosis

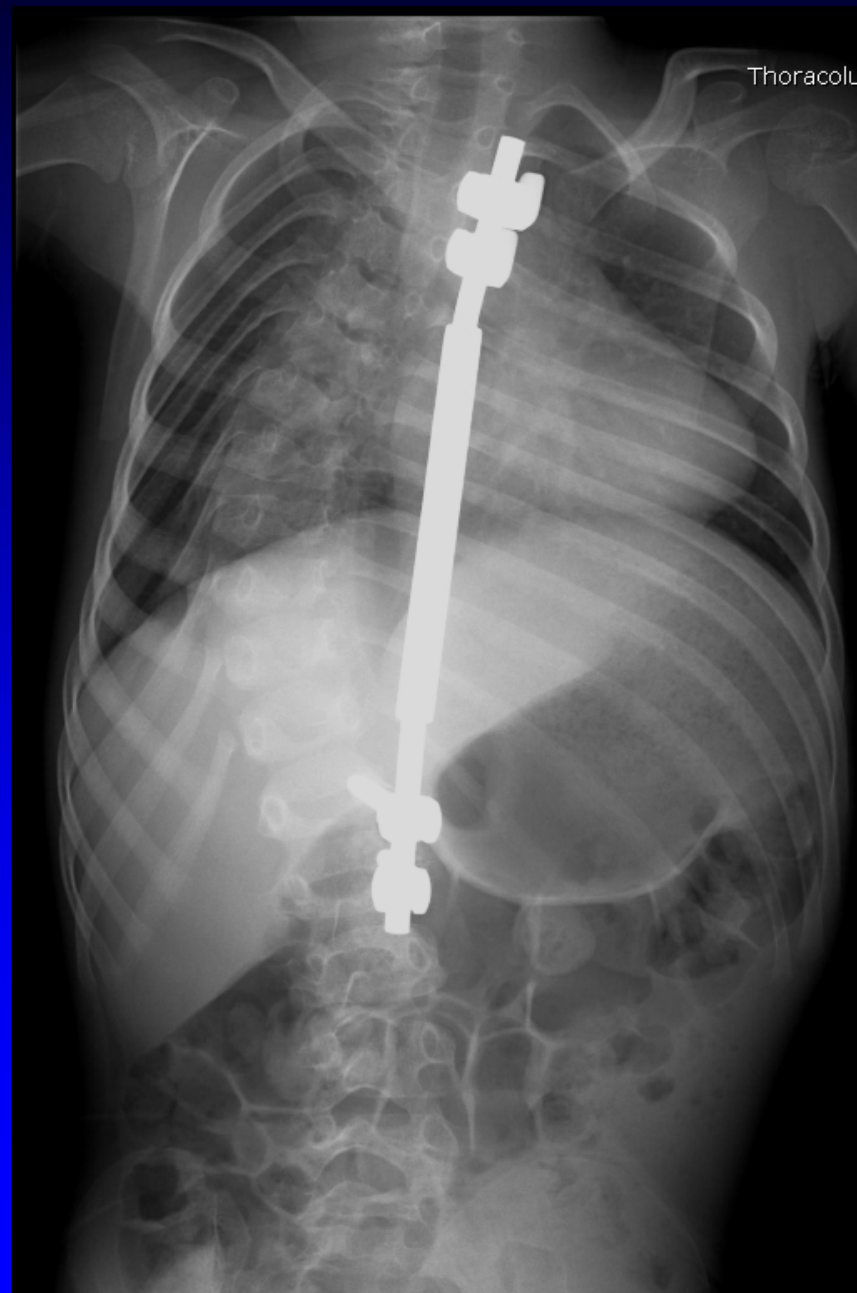
Traction is Effective

- 53% complication rate overall
 - 10% unplanned surgery (pin problems)
- pin site infections 29%
- Traction related Neurologic injuries (31%)
 - all resolved with decrease or removal of weights



Los Angeles Childrens, SRS, 2007

Portable Traction



3 and 5 cm incisions
no thorocotomy



Is Traction needed for Kyphosis?

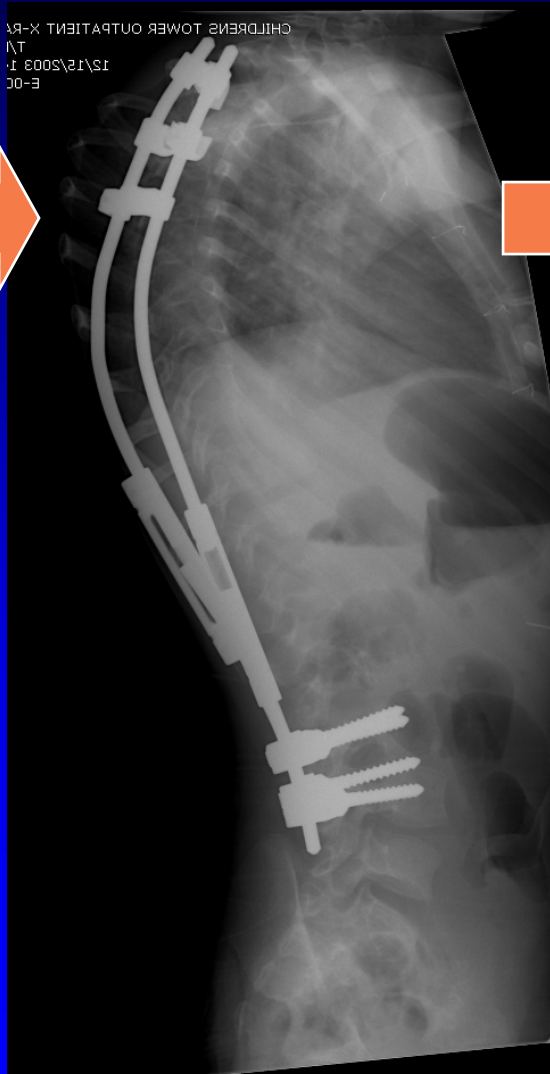
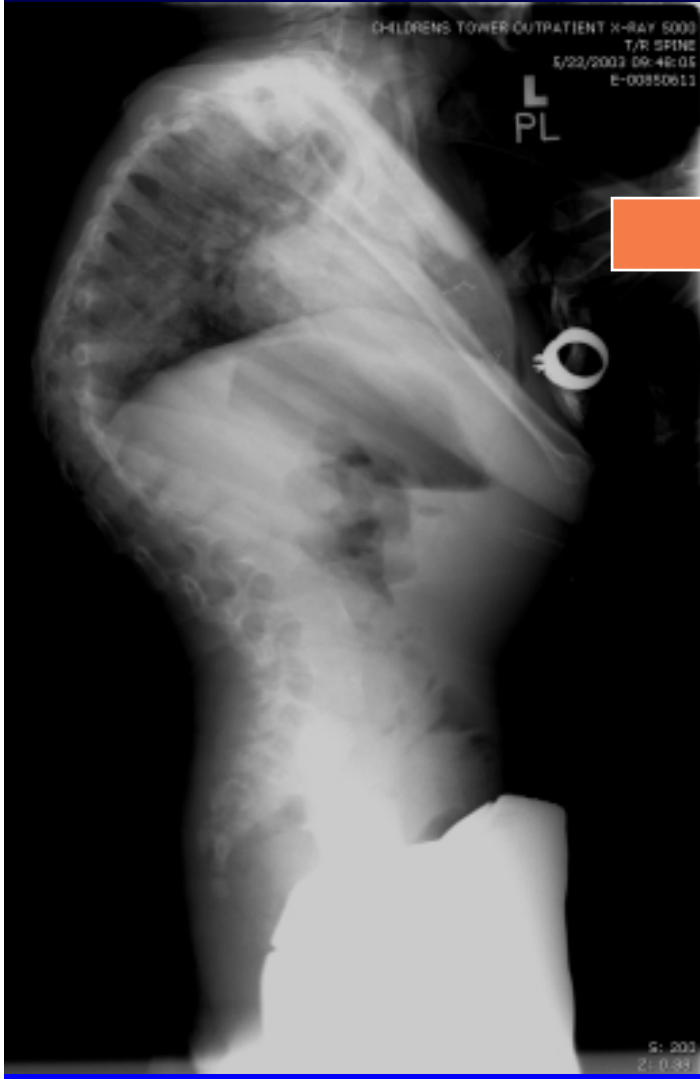
Yes, for cervical, and cervicothoracic curve

Principle: Bend Rods over Time

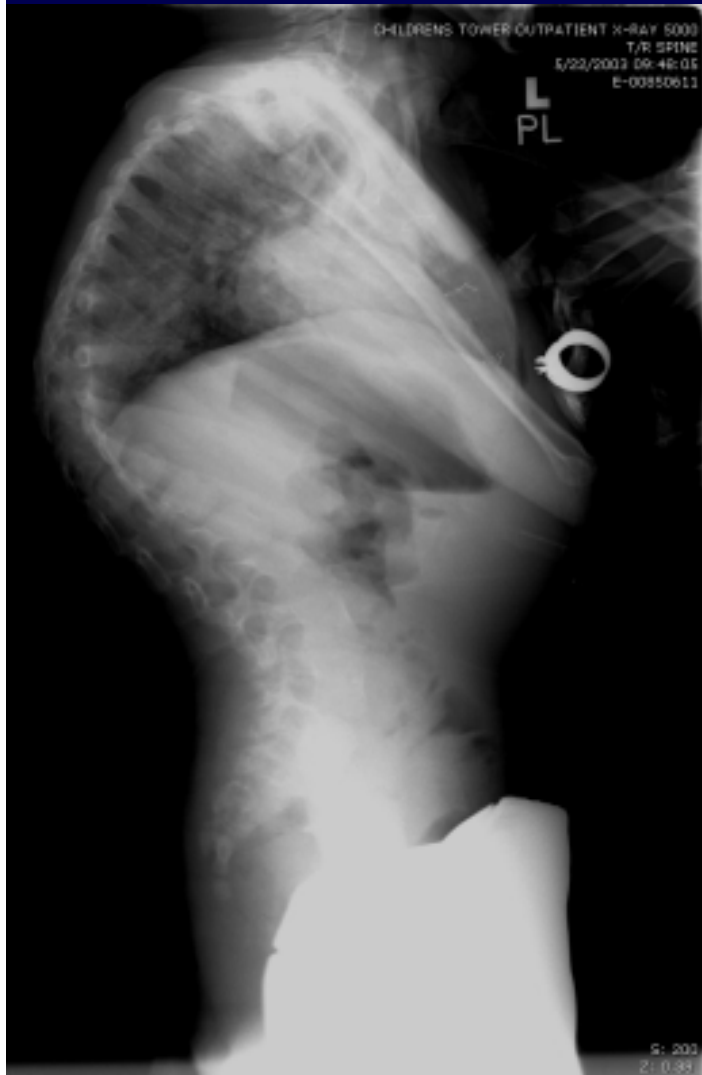
- Prevent excessive force on initial construct
- Improve kyphosis
- Improve scoliosis

NEW

Serial Rod Bending with Lengthening



Pre-op



7 mo post



20 mo post



If casting early onset
scoliosis really beats the
natural history...

why not publish it?

Thank You



Thank
You



Lung and Thoracic growth are linked

