

# Lessons Learned

## Something I Wouldn't do Again



JOHNS HOPKINS  
MEDICINE

Paul Sponseller MD  
November 18, 2016  
2:33-2:36



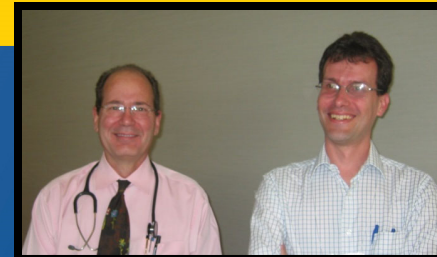
# Disclosures



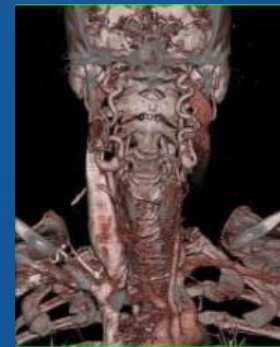
- Medical Education Reviews
- JBJS
- Depuy Synthes Spine: Research, royalties
- Globus: Royalties

# Loeys-Dietz Syndrome Scoliosis with:

- TGF beta receptor abnormality
- Fragile aneurysms
- Ligamentous laxity
- Foot deformities
- Midline gaps:
- Hypertelorism
- -cleft palate
- Bifid uvula

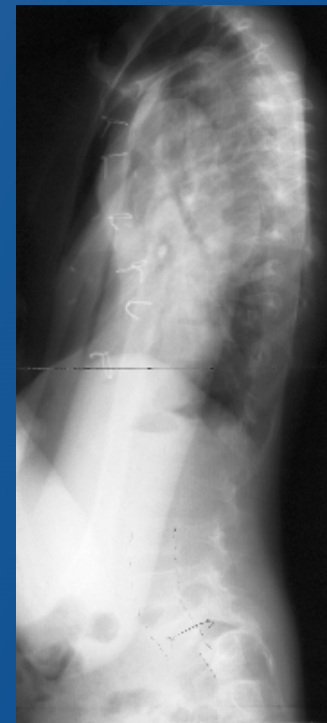


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MEDICINE



# 6 yr F. with Loeys-Dietz Syndrome JOHNS HOPKINS MEDICINE

- Mild pain
- Neuro normal
- Rx?



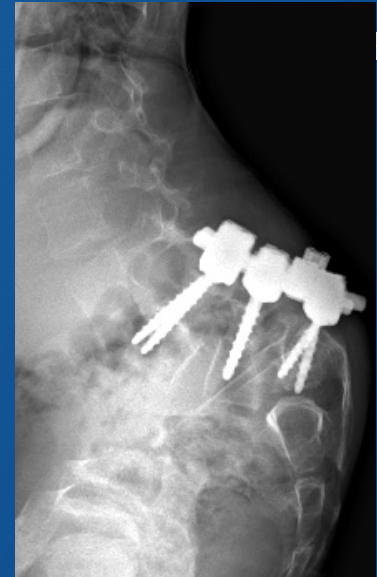
# 6 y F w. LDS

- 1 yr later
- Coned lat
- Treatment?



# Loeys-Dietz Syndrome

- PSF L4-S1
- Lumbar screws plowed
- Lesson #1:
- Get symmetrical fixation above and below apex
  - L4-S2
  - Especially in EOS
  - Consider anterior support



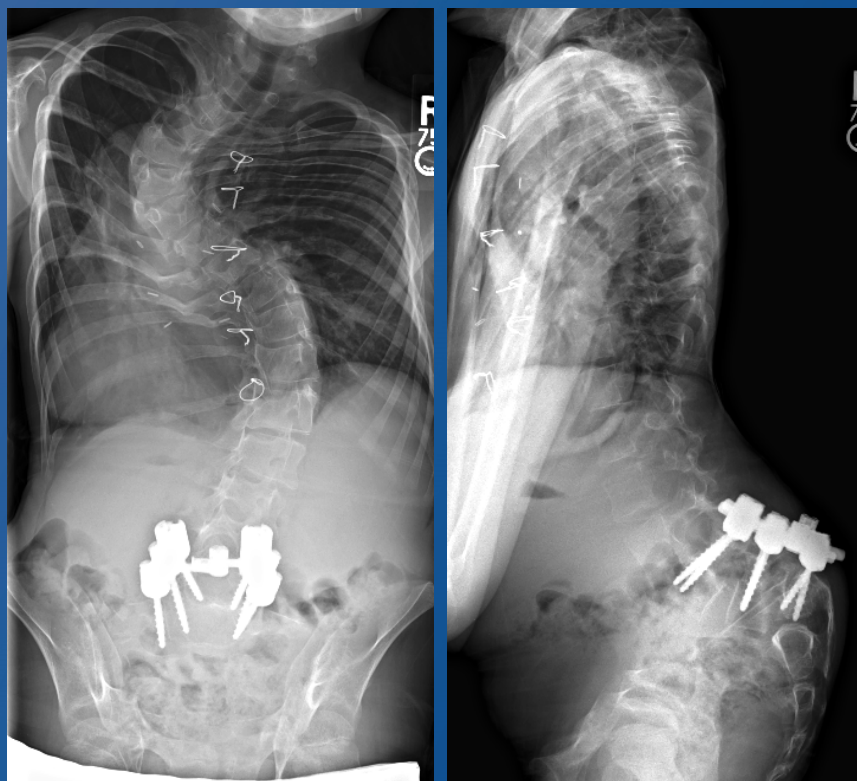
Later LDS patient





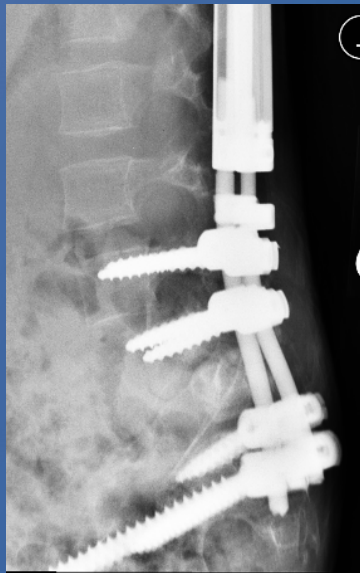
# LDS

- Neuro NI
- Now Rx?



# LDS

- Eggshell + GR





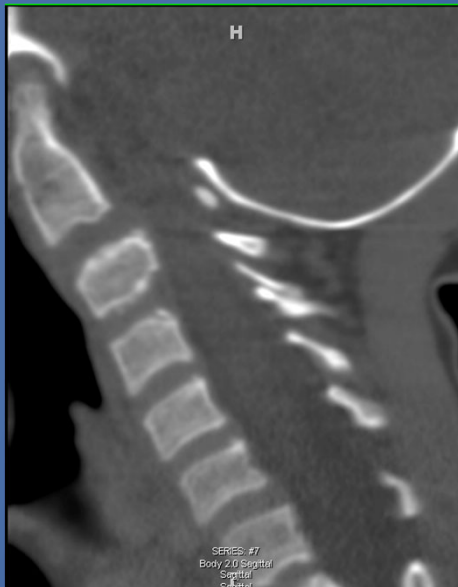
## 4 year Follow up

- No pain in C-T-L Spine
- Some clumsiness with typing
- Baseline finger contractures
- No weakness



# Results

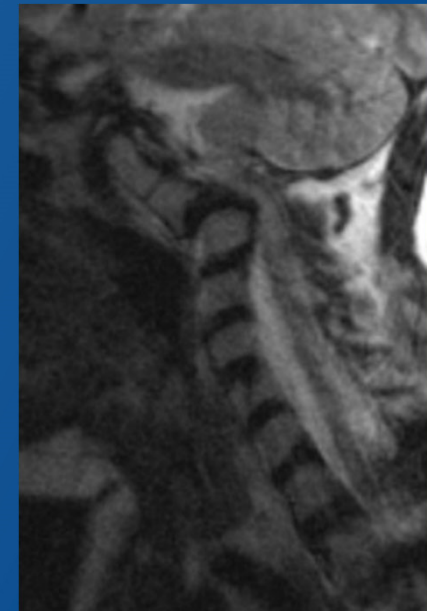
## Cervical Spine



6 yrs old

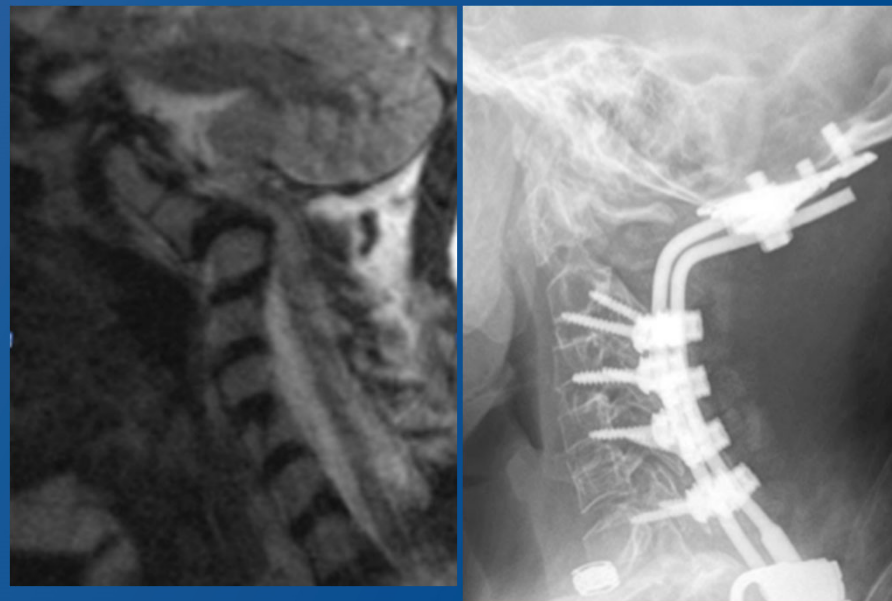


10 yrs old



# Treatment

- Halo traction
- PSF Occiput-Sacrum
- One of 3 with LDS



# Lesson Learned



- Consider whole spine in patients with Syndromes
- Check Cervical spine periodically in LDS
- Be alert for status changes

# Thank you

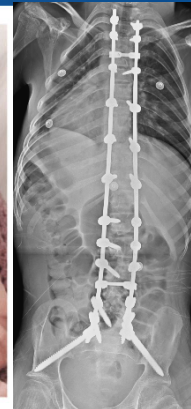
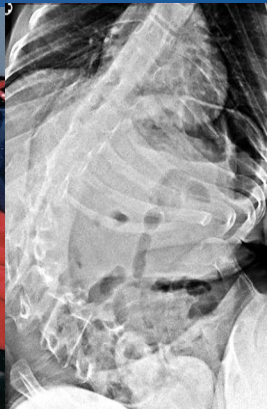
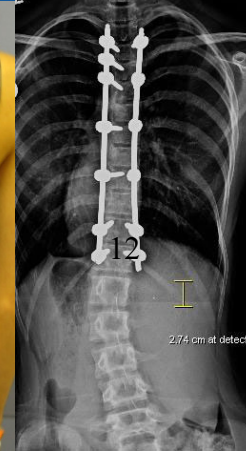




# A tale of two deformities: AIS vs NM

Neuro balance  
Appearance  
Low system risk  
Ceiling effects

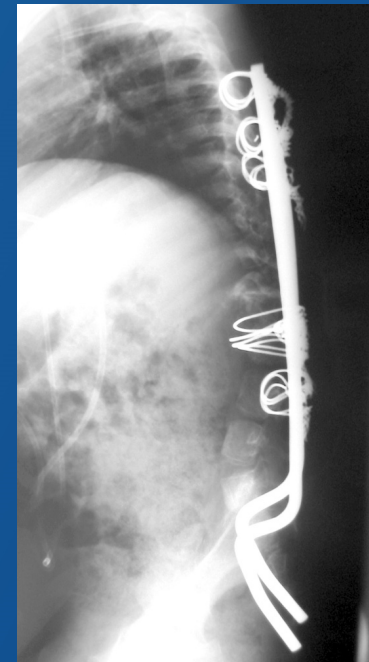
Little balance  
Sitting  
Poor homeostasis  
Hi risk  
Floor effects





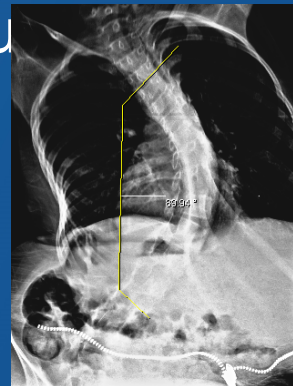
# Kyphectomy

- Before age 10
  - Maximize growth; Fackler/Luque trolley
  - Fuse only at apex
  - Lindseth wiring doesn't work
- VEPTR to pelvis?



# Spinal Muscular Atrophy

- Large curves at young age
- Global weakness
- Cognitively normal
- SMA- 2 most often require surgery
  - T2- pelvis
- Positive pressure ventilation
- Beware torticollis



# Take-Home Points



- Most challenging Pediatric Spine patients
- Increased blood loss
- Infections are primarily gram-negative

# Un-answered Questions

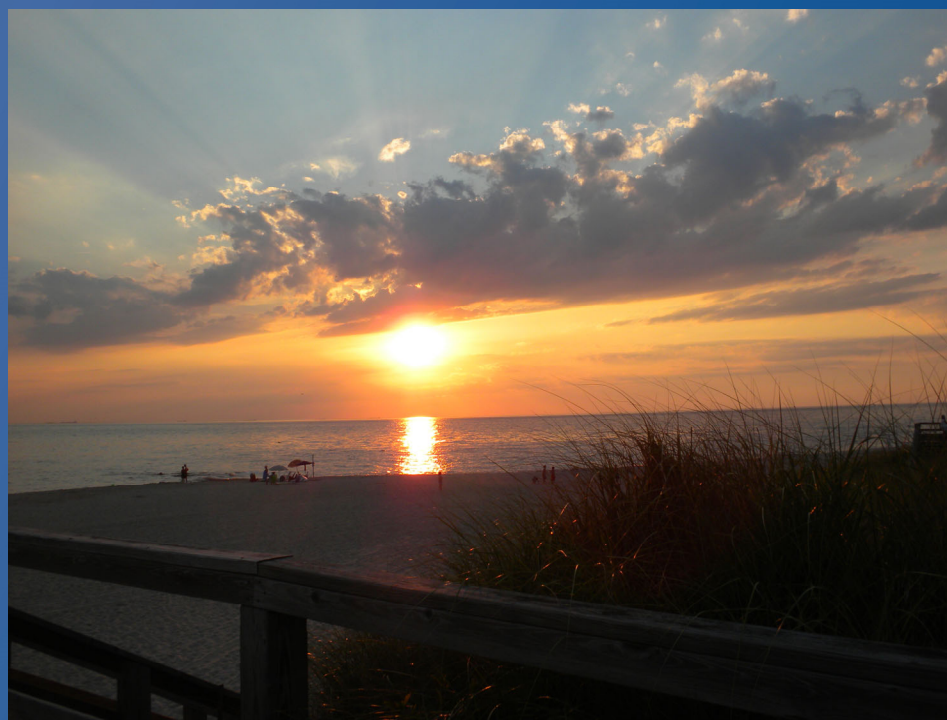
- Why do they bleed more?
- Why the gram –negative infections?
- How to improve patient selection?

# Summary

- Most challenging group of spine patients
- Match procedure, risk to go
  - Balance, pain, progression
- Bleeding, infection key threats
- Rarely fuse short
- Major life change if successful
- Most families choosing surgery measurable satisfaction

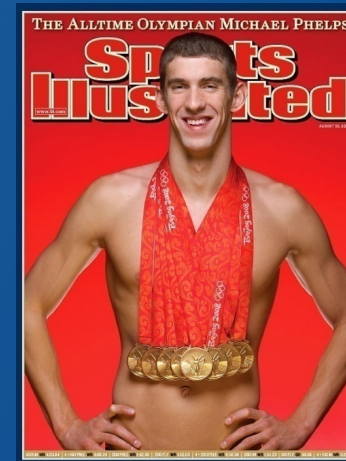
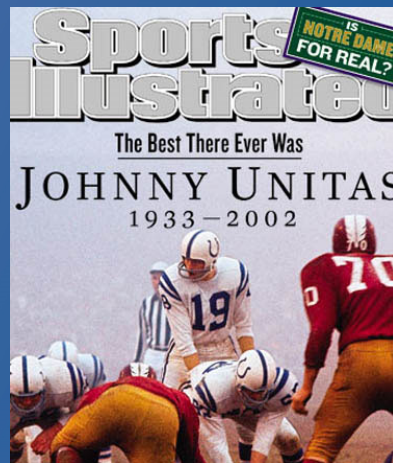
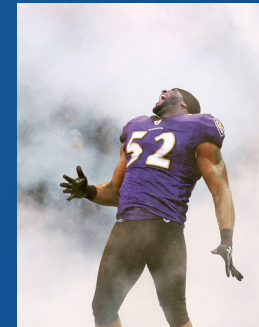


# Thank you

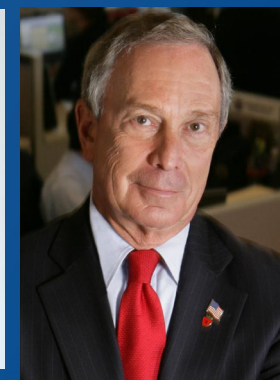
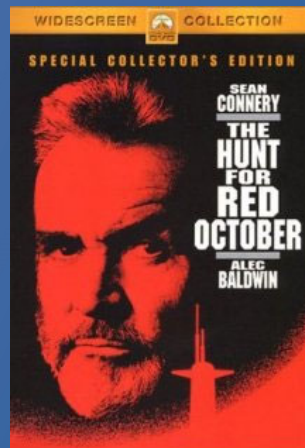




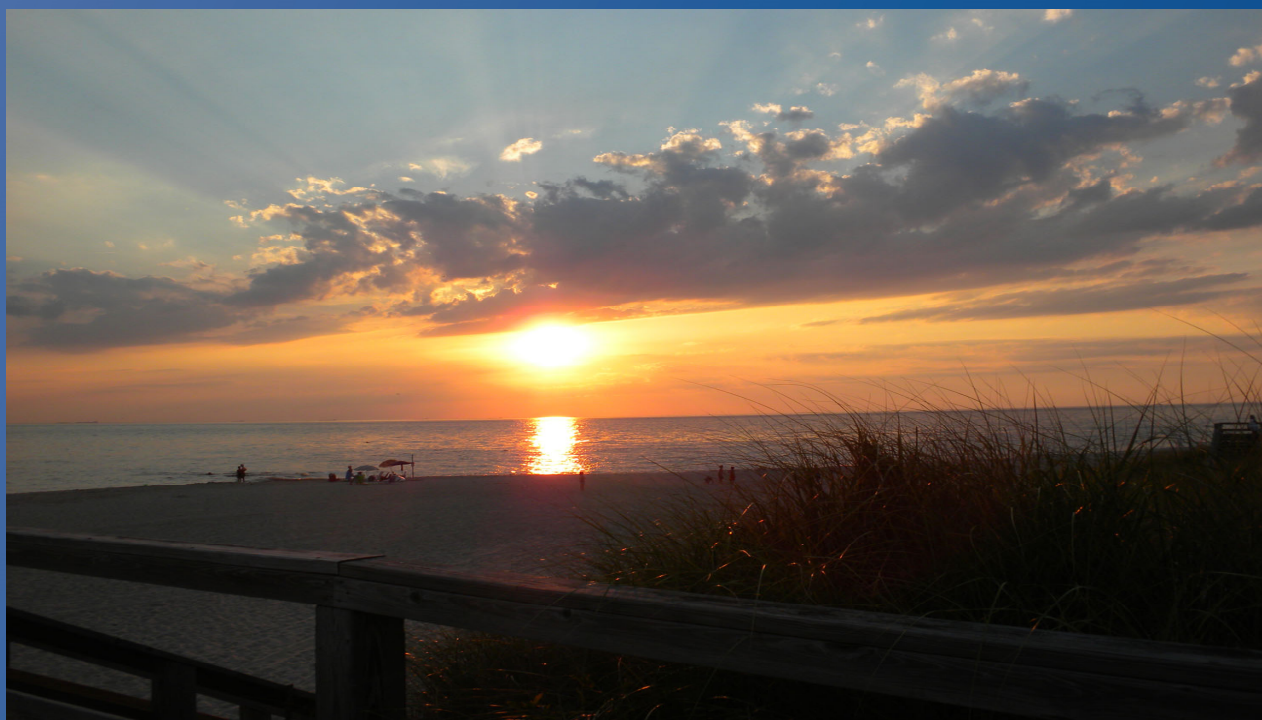
# Baltimore Heroes – sports



# Baltimore Heroes (?)



# Thank you

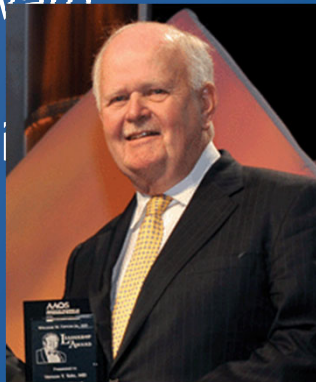
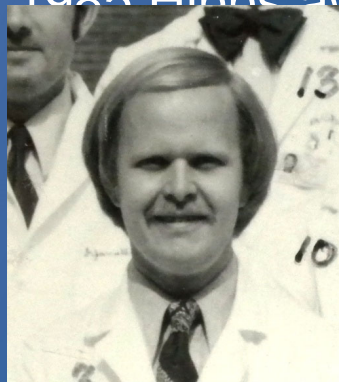


# History

## Vernon T. Tolo, MD



- Introduction to NM deformity
- Importance of Nutrition in NM spine fusion
- 1985 Hibbs award



- President, AAOS 2002
- President, POSNA 1994
- President, SRS 1995
- Editor-In-Chief, JBJS