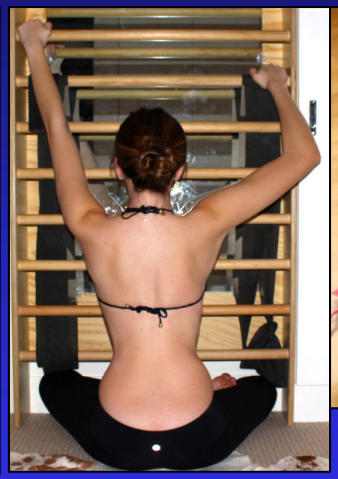
Scoliosis Specific Exercises in Early Onset Scoliosis





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Disclosures

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Travel Support: CWSDSG, FoxPSDSG

Other: CSSG - BOD

POSNA – BOD

IPOS- Chairman

Columbia Orthopedics

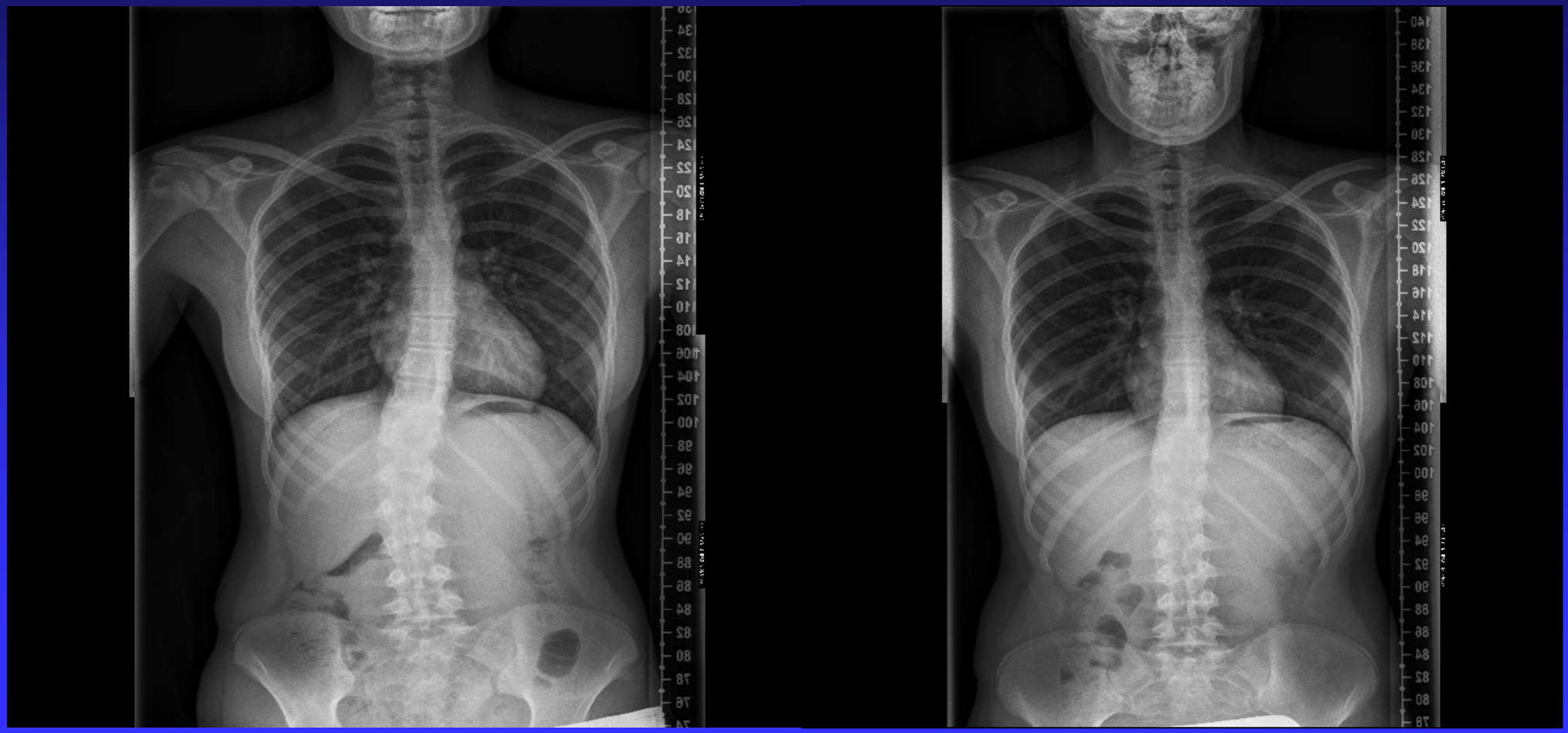
Conservative Treatment

Resurgence of Interest in "Aggressive Bracing" and Scoliosis-Specifc PT

- Center for Conservative Treatment of Scoliosis
  - Scoliosis Specific PT
  - RSC Smart Bracing

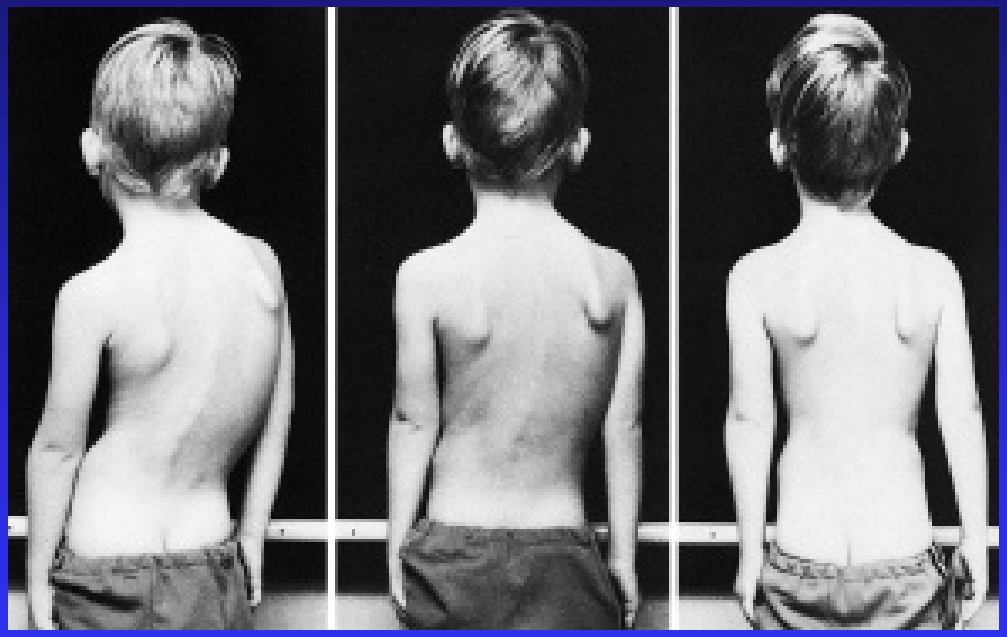
Empiricism via a Case Report

8 y/o after 6 months of Schroth NO Brace



Rationale for SSE

- Emerging Evidence
- Patient Demand
- Relationship Build
- Prehab and Post op Rehab



5 year old patient compliant with Schroth Exercises

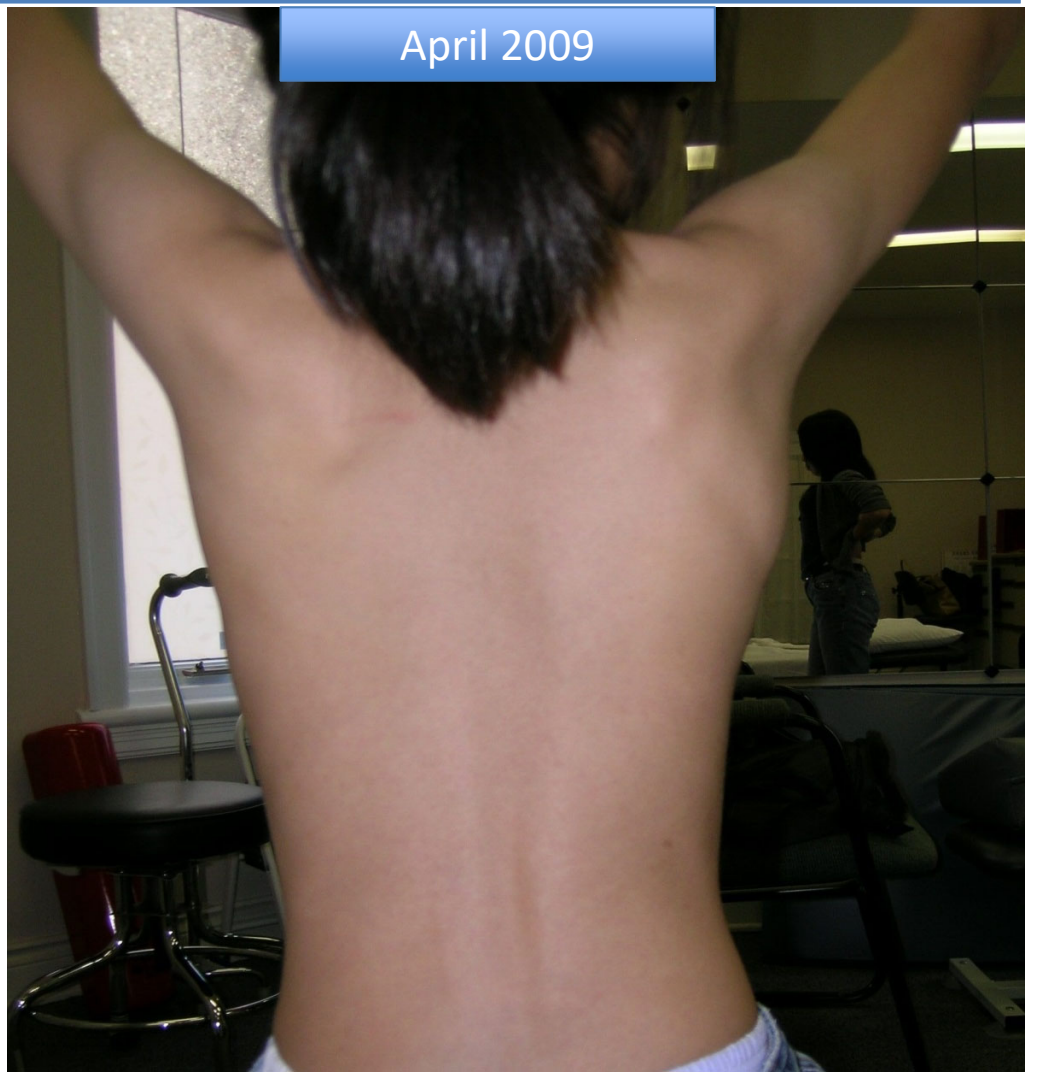
Day 1 | Week 1 | Week 8



Postural Control at 8 weeks

Febr 2009

April 2009

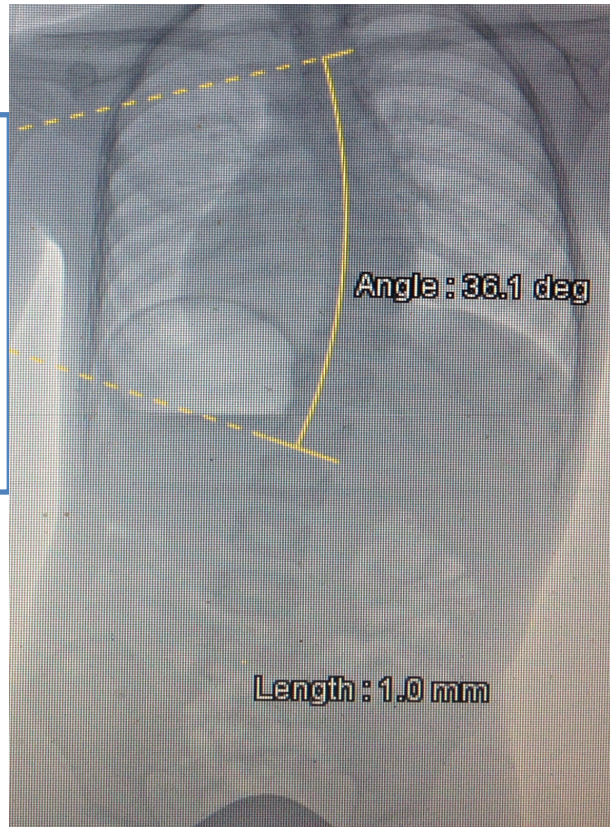


X ray at 8 Weeks
Improvement of Cobb angle: 16°

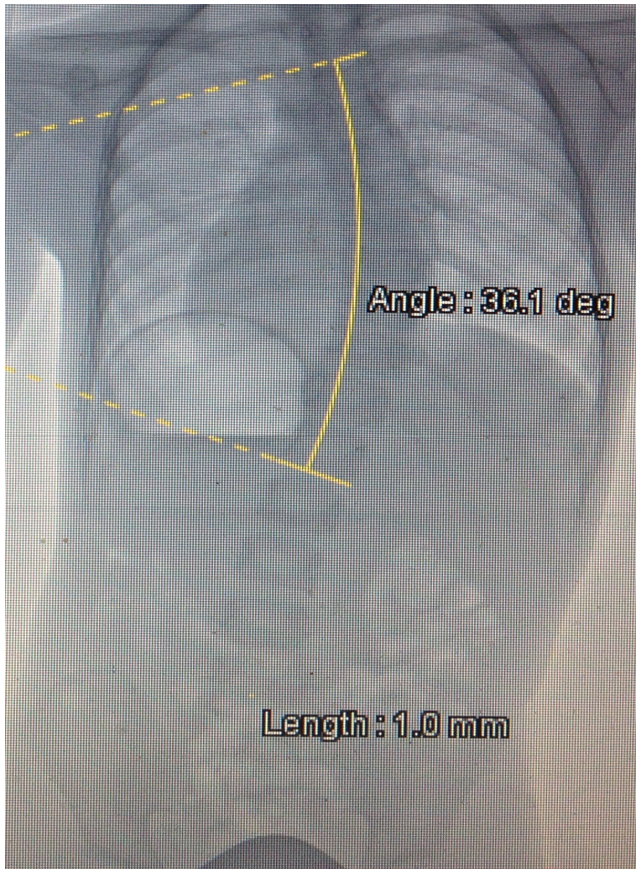
Initial X-ray 52° Cobb	X-ray before bracing 36°Cobb

First X-ray
October 2008
CHEO

Second X-ray April
2009
CHOP

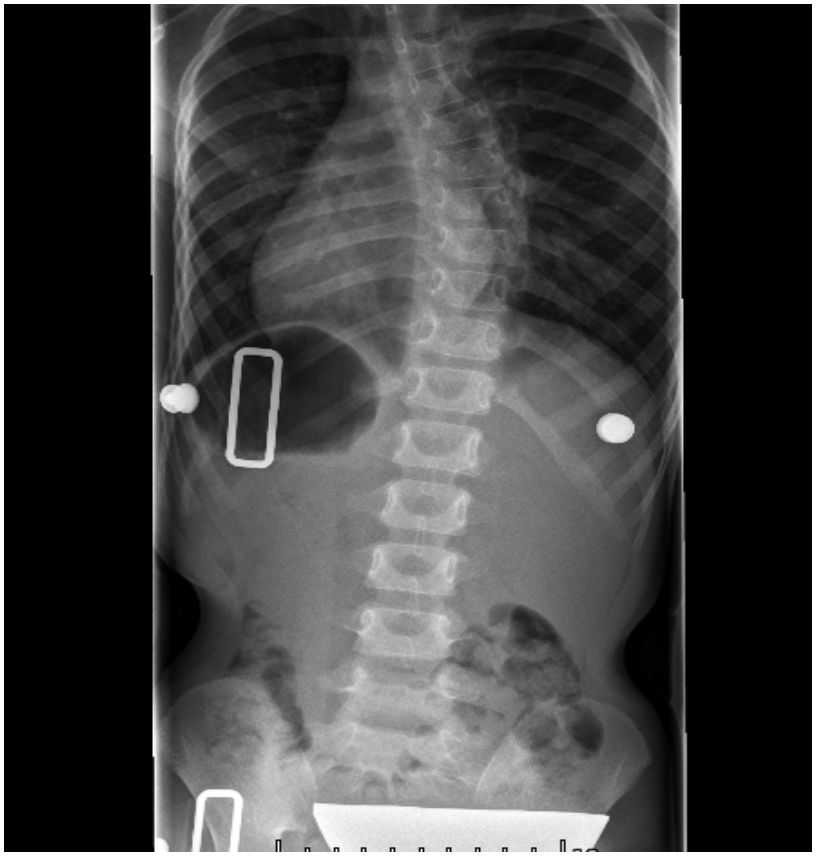


Before bracing: 36°



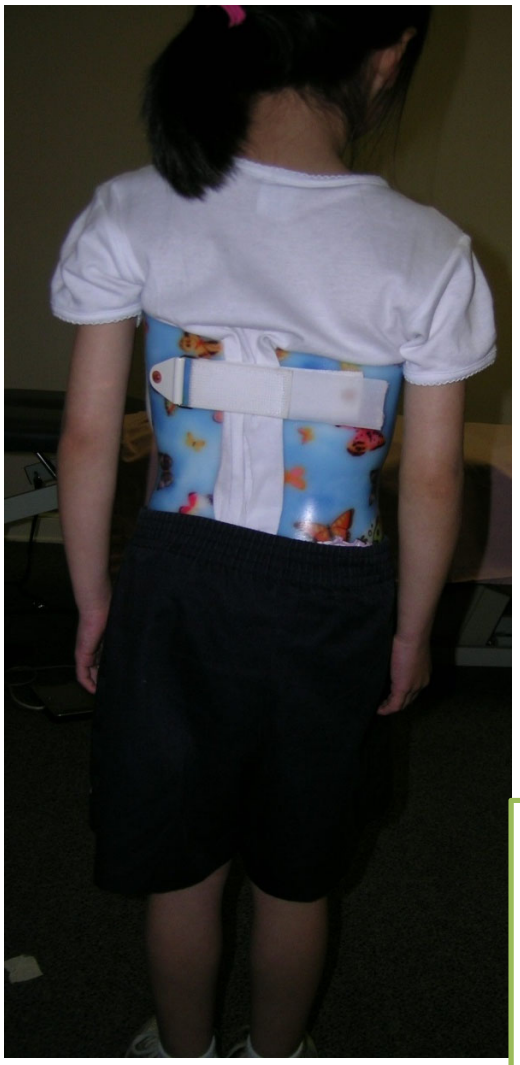
April 2009

In Boston Brace: 32°

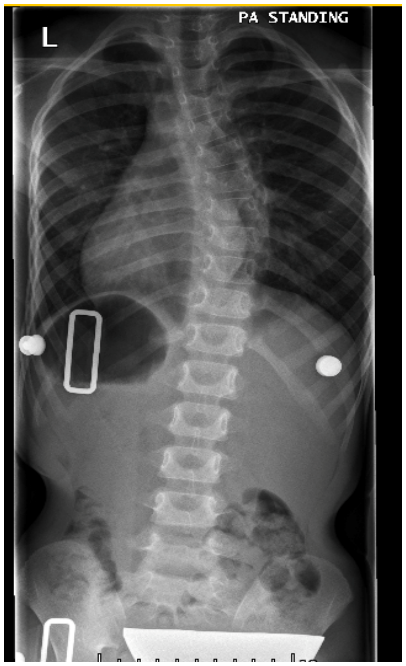


June 2009

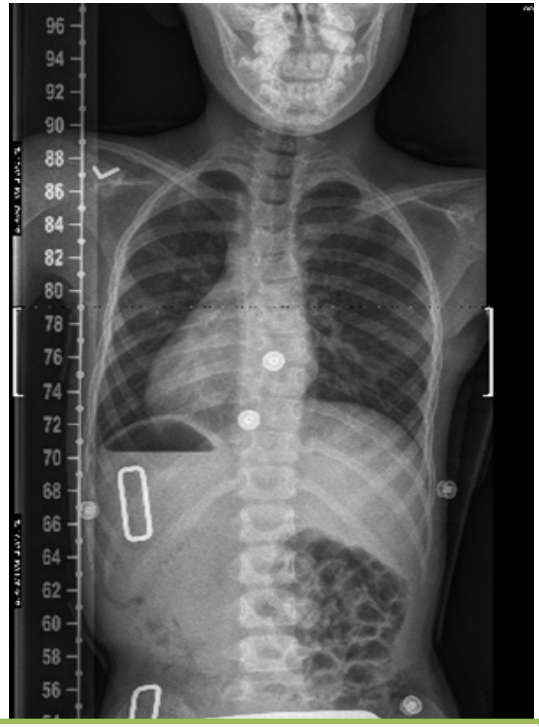
In Brace Correction: Boston Brace - 32°
Change to Rigo-Cheneau - 8°



In brace X-ray
June 2009

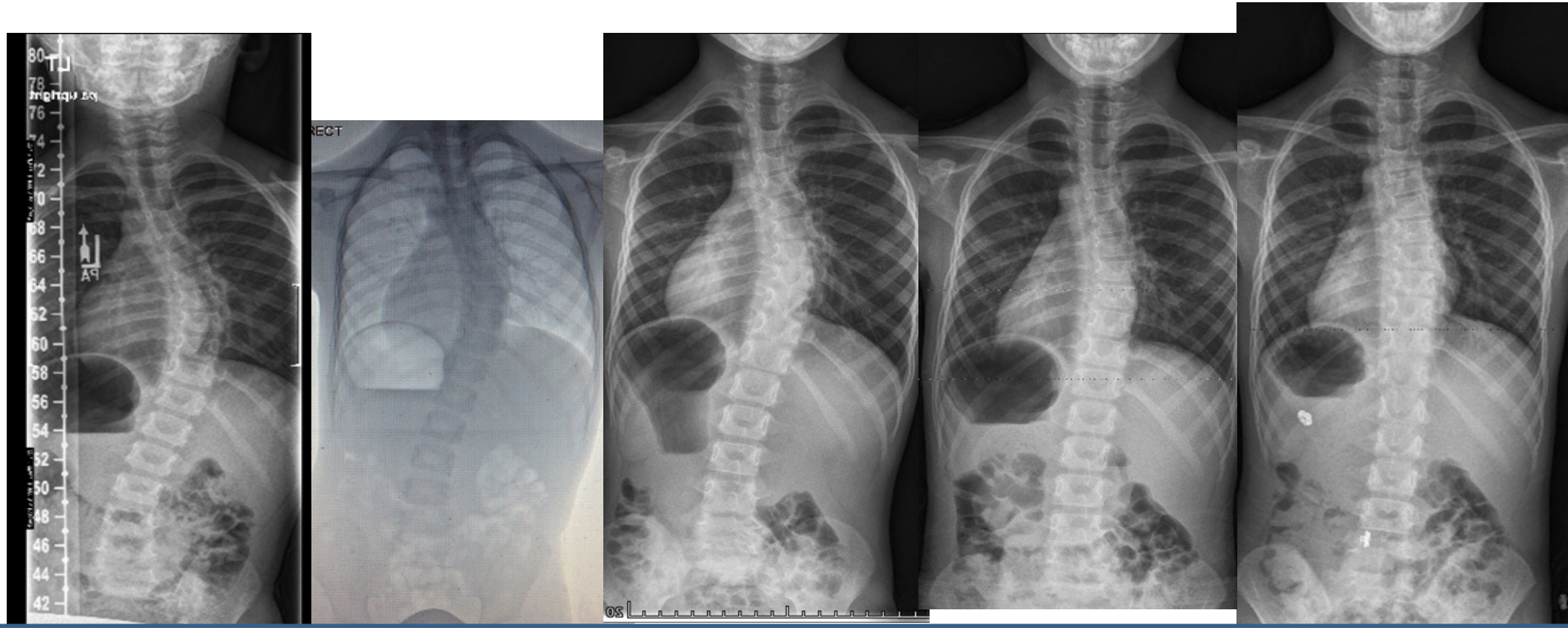


In brace X-ray Feb 2010



Radiographic Follow up over Time

52 ° **36 °** **34 °** **20°** **16°**



2008/10/22 2009/03/34 2010/07/22, 2011/09/01, 2012/09/20

Evidence Supporting Schroth for AIS
4 RCT

Monticone et.al. 2013 - RCT

Study: To evaluate the effect of active self elongation and task-oriented exercises on spinal deformities and quality of life

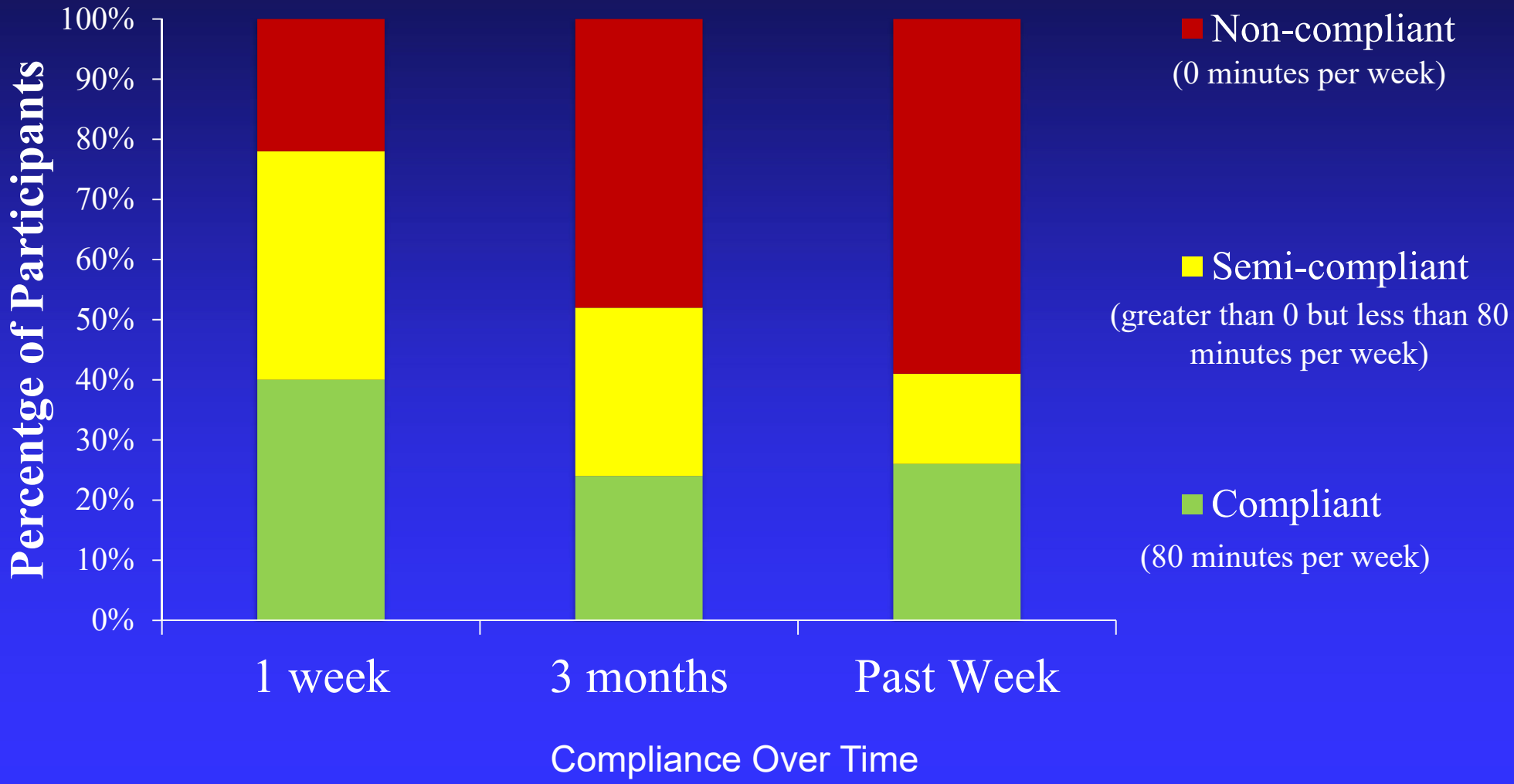
- Experimental (SSE) and control (traditional spinal exercises
- N = 55 each group
- Cobb
- Quality of life (SRS 22)
- Angle of Trunk Rotation (ATR)
- Analysis at skeletal maturity and 1 year after

Monticone M et al. Active Self-Correction and Task-Oriented Exercises Rduce Spinal Deformity and Improve Quality of Life in Subjects with Mild Adolescent Idiopathic Scoliosis. Results of a Randomised Controlled Trail. *Eur Spine*. 2013.

	Group	pre-training	Post-training	1 year follow-up
Cobb (degrees)	Experimental	19.3	14.0	14.3
	Control	19.2	20.9	22.0
ATR (degrees	Experimental	7.1	3.6	3.3
	Control	6.9	6.6	6.5

Monticone M et al. Active Self-Correction and Task-Oriented Exercises Rduce Spinal Deformity and Improve Quality of Life in Subjects with Mild Adolescent Idiopathic Scoliosis. Results of a Randomised Controlled Trail. *Eur Spine*. 2013.

Compliance with Schroth is a Challenge and Opportunity



Conclusions

- Conservative therapy for AIS includes observation, bracing and/or physical therapy
- Schroth has emerging high-quality evidence to recommend it for primary treatment of AIS, maybe select cases of JIS/EOS
- Need compliant patient and family
- Potential benefit in patient-based outcomes

Thank You

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