

Analysis of the Scoliosis Research Society (SRS) 22 Questionnaire in the Assessment of Growing Rods in Scoliosis

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Introduction

- Early onset scoliosis may require challenging surgery associated with significant morbidity
- Prior to growing rods, there were few options available for treatment of scoliosis in the growing child
- Evaluation of outcome following surgery can be achieved using quality of life questionnaires.

Quality of life scoring

- Scoliosis research society
- 22 questions
- Domains
 - Pain, Function, Self Image, Mental health, Satisfaction
- Validated
 - Asher M, Lai SM, Burton D, Manna B. The reliability and concurrent validity of the SRS-22 patient questionnaire for idiopathic scoliosis. *Spine* 2003;28: 63-9.
 - Asher M, Lai SM, Burton D, Manna B. Scoliosis Research Society-22 patient questionnaire responsiveness to change associated with surgical treatment. *Spine* 2003;28:70-3

Methods

- Single surgeon series 2007-2012
- Prospective study of 31 patients undergoing treatment with growing rod Insertion for scoliosis
 - All early onset
 - Age 3-15 years at 1st surgery
 - Early onset idiopathic, neuromuscular, congenital
- Scoliosis Research Society 22 (SRS 22) Questionnaire
- Statistical Analysis by SPS 16.0 (IBM)

Scoliosis Research Society 22 (SRS 22) Questionnaire

SRS-22r Patient Questionnaire

(Note, this is a sample with responses from an imaginary patient circled and the value of each response listed in bold, which they are not on the questionnaire as administered to the patient.)

Patient Name: _____ (_____)
First MI Last (Maiden, if applicable)

Today's Date: _____ Date of Birth: _____ Age: _____ + _____
Mo Day Year Mo Day Year Yrs Mos

Medical Record #: _____

INSTRUCTIONS: We are carefully evaluating the condition of your back and it is **IMPORTANT THAT YOU ANSWER EACH OF THESE QUESTIONS YOURSELF.** Please **CIRCLE THE ONE BEST ANSWER TO EACH QUESTION.**

1. Which one of the following best describes the amount of pain you have experienced during the past 6 months?

- 5 None
- 4 Mild
- 3 Moderate
- 2 **Moderate to severe**
- 1 Severe

2. Which one of the following best describes the amount of pain you have experienced over the last month?

- 5 None
- 4 **Mild**
- 3 Moderate
- 2 Moderate to severe
- 1 Severe

3. During the past 6 months have you been a very nervous person?

- 5 None of the time
- 4 **A little of the time**
- 3 Some of the time
- 2 Most of the time
- 1 All of the time

(CONTINUED ON NEXT PAGE)

4. If you had to spend the rest of your life with your back shape as it is right now, how would you feel about it?

- 5 Very happy
- 4 Somewhat happy
- 3 **Neither happy nor unhappy**
- 2 Somewhat unhappy
- 1 Very unhappy

5. What is your current level of activity?

- 1 Bedridden
- 2 Primarily no activity
- 3 **Light labor and light sports**
- 4 Moderate labor and moderate sports
- 5 Full activities without restriction

6. How do you look in clothes?

- 5 Very good
- 4 Good
- 3 **Fair**
- 2 Bad
- 1 Very bad

7. In the past 6 months have you felt so down in the dumps that nothing could cheer you up?

- 1 Very often
- 2 Often
- 3 Sometimes
- 4 **Rarely**
- 5 Never

8. Do you experience back pain when at rest?

- 1 Very often
- 2 Often
- 3 Sometimes
- 4 **Rarely**
- 5 Never

9. What is your current level of work/school activity?

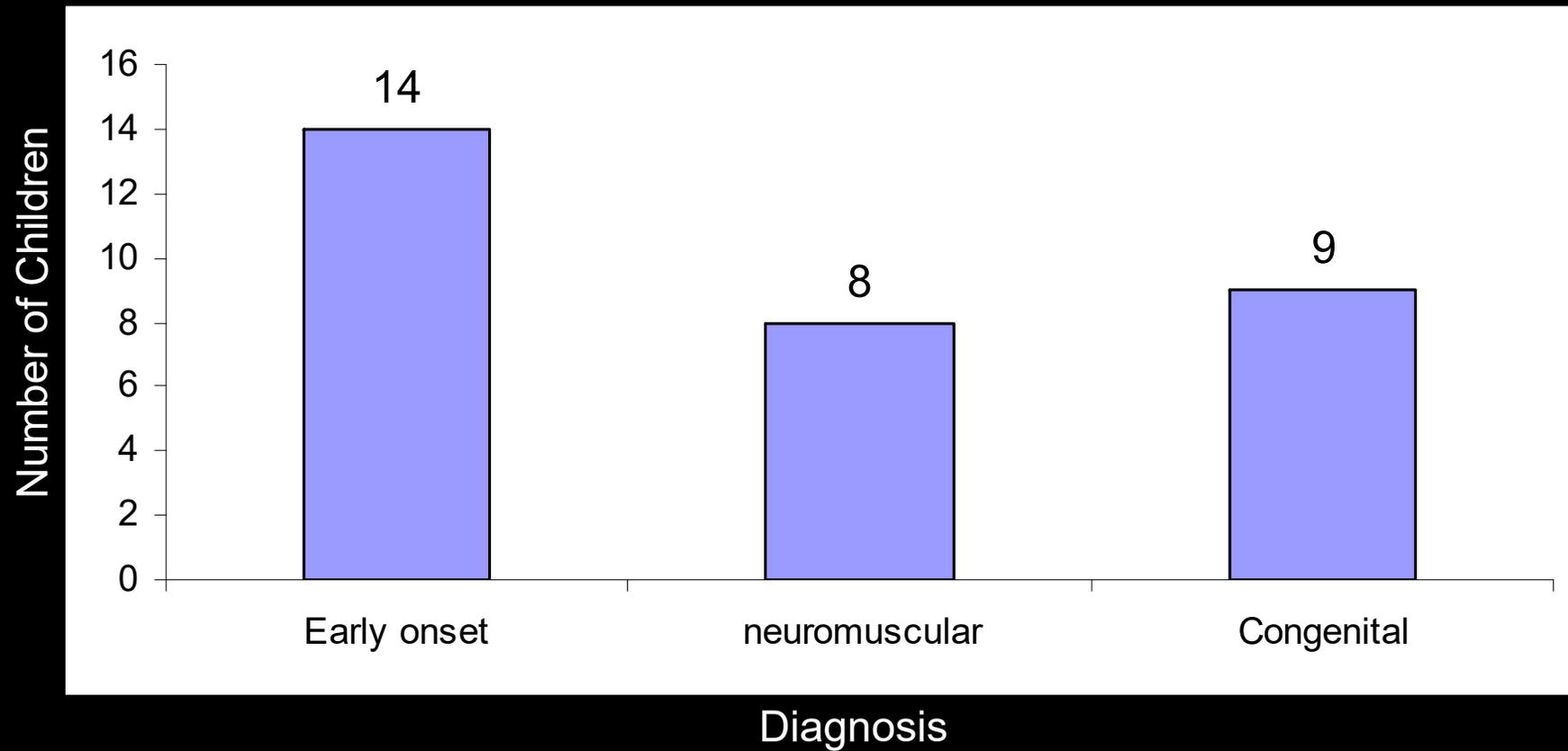
- 5 100% normal
- 4 **75% normal**
- 3 50% normal
- 2 25% normal
- 1 0% normal

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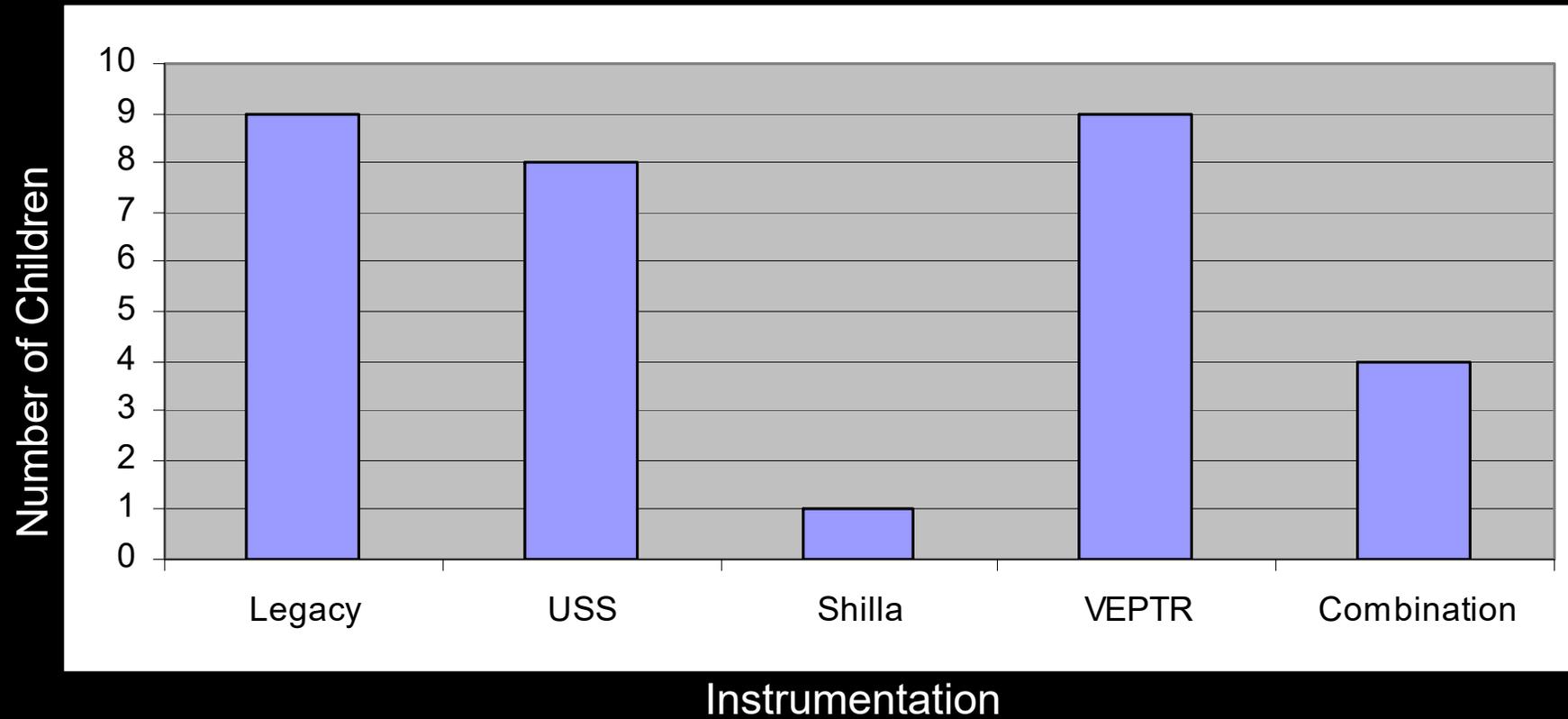
Results

- 70.9% SRS complete data (22 of 31)
- Age at 1st surgery 8.5y (range 3-15y)
- 9 Male and 22 Female

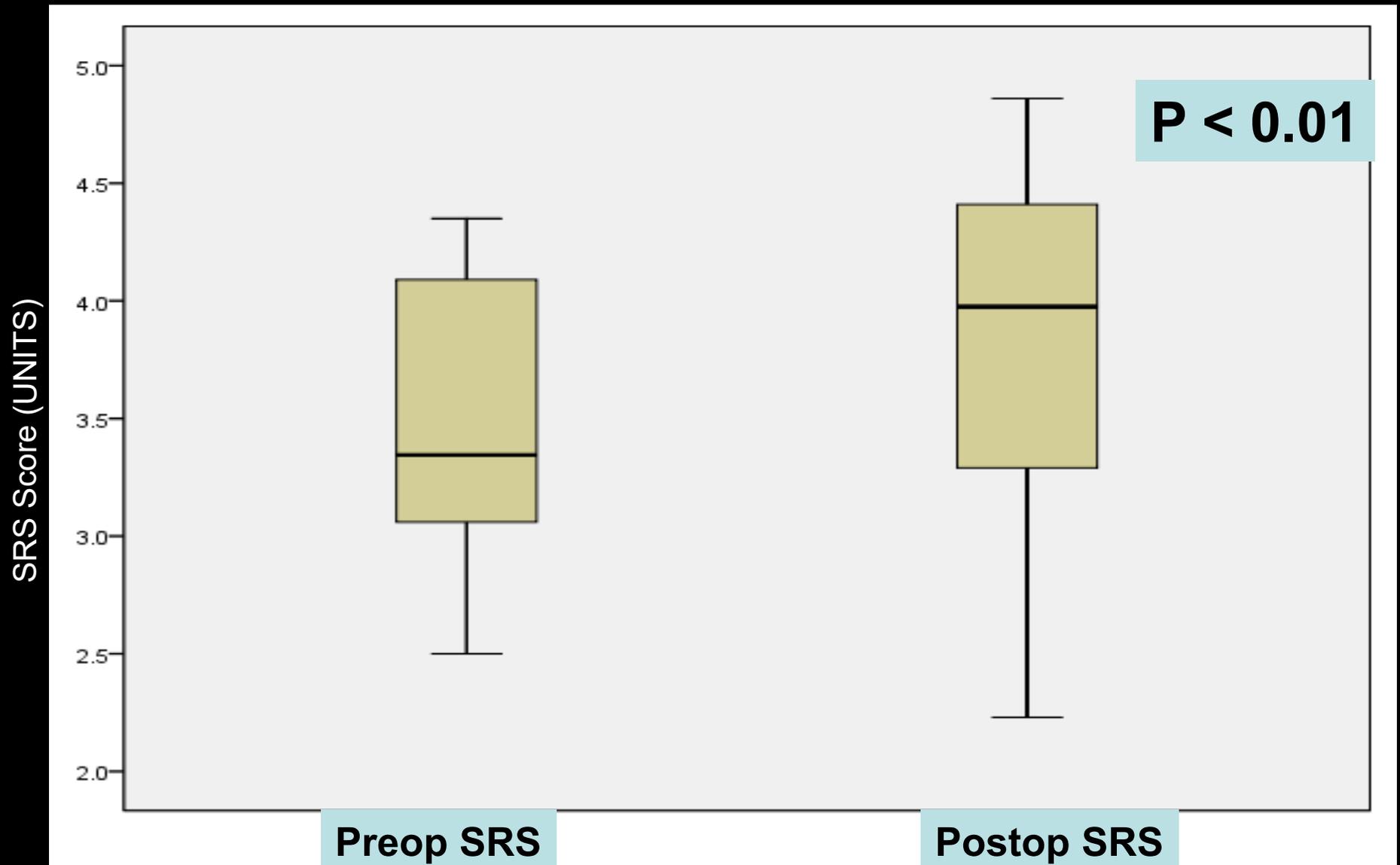
Aetiology



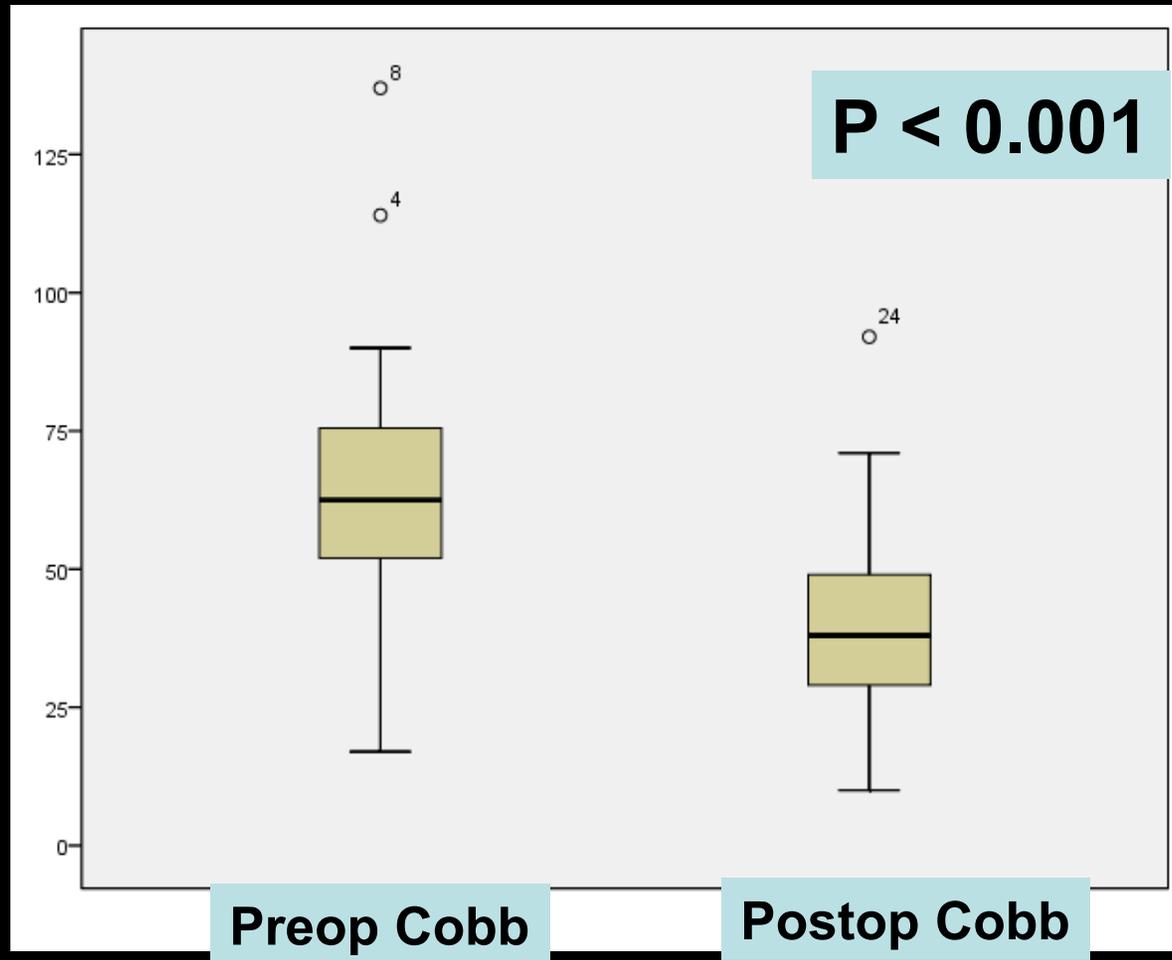
Instrumentation



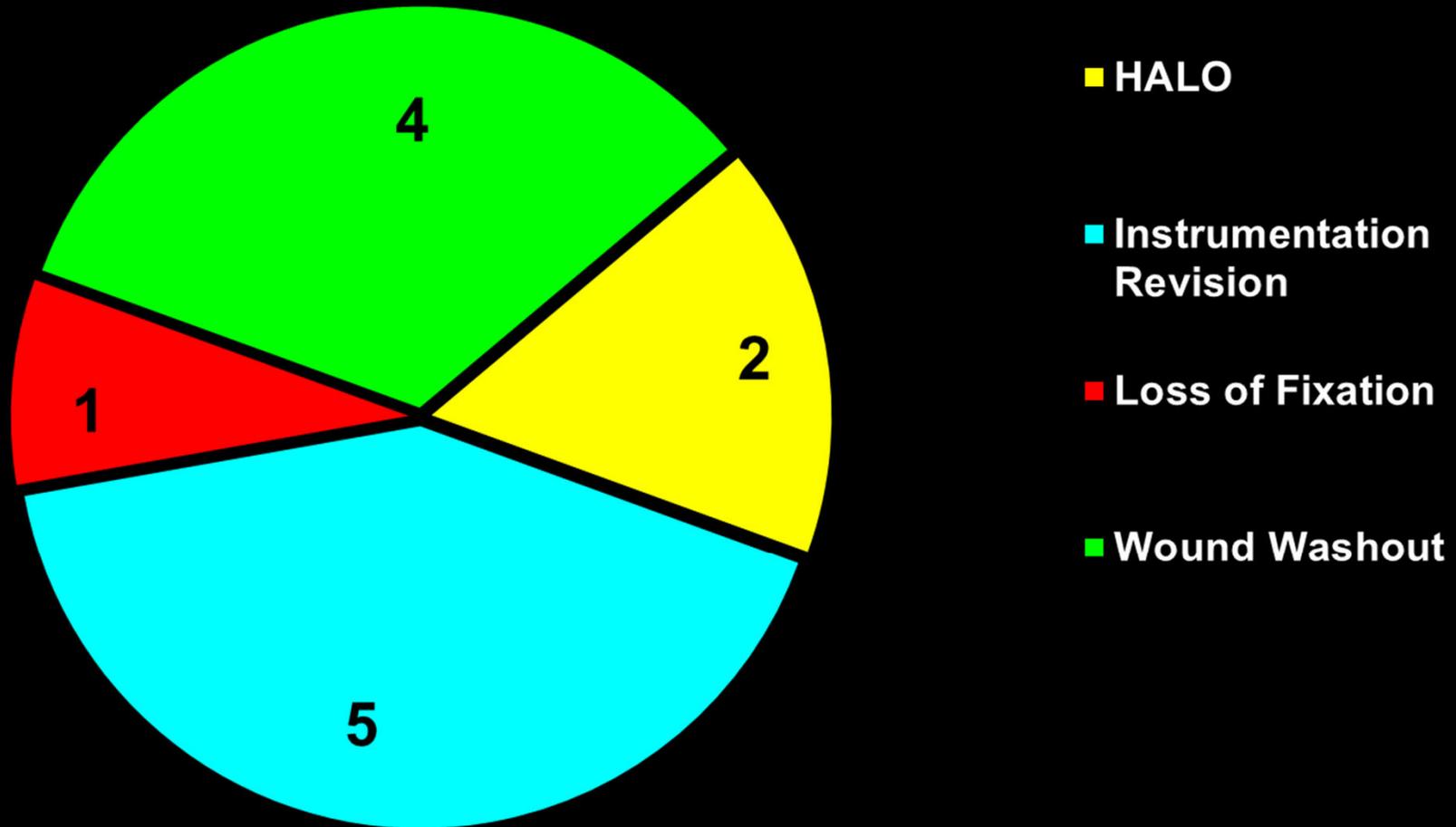
SRS 22 Questionnaire



Statistical Analysis of Cobb Angles



Complications of Growing Rod Insertion



Conclusions

- SRS 22 questionnaires (validated questionnaire in scoliosis)
- Demonstrated a 10.5% significant improvement in the quality of life for children with growing rod insertion for scoliosis
- Growing rod insertion is a relatively safe procedure (38% morbidity)