## Appendix

The Likert scale is an ordered, 1D dimensional scale from which respondents choose 1 option that best aligns with their view. There are typically between 4 and 7 options with 5 being the most common. For example, the 5-point traditional Likert scale includes the following choices: 1) strongly agree, 2) tend to agree, 3) neither agree or disagree, 4) tend to disagree, and 5) strongly disagree. By dropping number 3 (neither agree or disagree), the 4-point Likert scale becomes a forced choice.[37]

The Roland-Morris disability questionnaire is a widely used health status measure for low back pain. References regarding this scale are included.
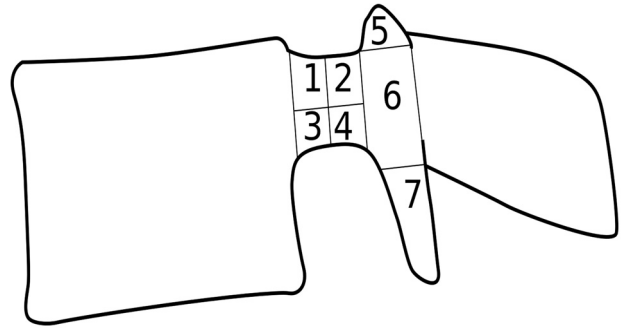
Roland Morris Disability Questionnaire

Scoring: **Instructions for Roland-Morris :**

- The patient is instructed to put a mark next to each appropriate statement.
- The total number of marked statements are added by the clinician. Unlike the authors of the Oswestry Disability Questionnaire, Roland and Morris did not provide descriptions of the varying degrees of disability (*e.g.* 40%-60% is severe disability).
- Clinical improvements over time can be graded based on the analysis of serial questionnaire scores. If, for example, at the beginning of treatment, a patient's score was 12 and, at the conclusion of treatment, her score was 2 (10 points of improvement), we would calculate an 83% 910/12 x 100) improvement.

References

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RDQ

Name: _____ Date: _____

Age: _____ Score: _____

When your back hurts, you may find if difficult to do some of the things you normally do.

Mark only the sentences that describe you lately….

1. [ ] I stay at home most of the time because of my back.

2. [ ] I walk more slowly than usual because of my back.

3. [ ] Because of my back, I am not doing any jobs that I usually do around the house.

4. [ ] Because of my back, I use a handrail to get upstairs.

5. [ ] Because of my back, I lie down to rest more often.

6. [ ] Because of my back, I have to hold onto something to get out of an easy chair.

7. [ ] Because of my back, I try to get other people to do things for me.

8. [ ] I get dressed more slowly than usual because of my back.

9. [ ] I stand up only for short periods of time because of my back.

10. [ ] Because of my back, I try not to bend or kneel down.

11. [ ] I find it difficult to get out of a chair because of my back.

12. [ ] My back or leg is painful almost all of the time.

13. [ ] I find it difficult to turn over in bed because of my back.

14. [ ] I have trouble putting on my socks (or stockings) because of pain in my back.

15. [ ] I sleep less well because of my back.

16. [ ] I avoid heavy jobs around the house because of my back.

17. [ ] Because of back pain, I am more irritable and bad tempered with people than usual.

18. [ ] Because of my back, I go upstairs more slowly than usual.

On-line Table 1: Summary of pedicle marrow signal changes, clinical course, posterior paraspinal soft tissue changes, and type 1 to type 2 marrow changes in 30 patients

Patient No.	Patient Age (yr)	Diagnosis	Signal Changes	Symptoms[a]	Follow-Up Duration	Soft Tissue Changes[b]	Marrow Conversion Type 1 to 2[b]
17 Patients: signal resolution							
1	55	DFC	Revolved	0			
3	14	Pars	Revolved	+		X	X
6	64	Ped	Revolved	+			
7	16	Pars	Revolved	+		X	X
9	55	DFC	Revolved	0		X	
13	65	DFC	Revolved	+			
15	16	Ped	Revolved	+			X
16	62	DFC	Revolved	0			
18	11	DFC	Revolved	+			
19	20	Pars	Revolved	+			X
20	62	DFC	Revolved	0			
21	14	Pars	Revolved	+			
22	70	DFC	Revolved	+			
24	18	Pars	Revolved	0		X	X
25	17	Ped	Revolved	0			X
27	23	Ped	Revolved	+			
29	59	DFC	Revolved	0			
5 Patients: no signal resolution followed for >18 mo							
4	49	DFC	Improved	+	21		
11	16	Pars	0	+	18	X	
14	56	DFC	0	+	18	X	
23	73	DFC	Improved	0	18		
30	13	Pars	Improved	+	18	X	
8 Patients: no signal resolution followed <18 mo							
2	50	Pars	0	+			
5	18	Pars	Improved	+		X	
8	66	DFC	Improved	+			
10	56	DFC	Worse	−			
12	54	Pars	Improved	−			
17	42	DFC	0	+		X	
26	50	DFC	0	0			
28	15	Pars	Improved	+			

[a] 0, no change; +, clinical symptoms improved; −, clinical symptoms worsened.
[b] X, present.