

## LIV L4/L5

Initial Patients: 372

With Posterior Instrumented Fusion: 348

```
      type    N
1: <NA> 267
2:   L5   39
3:   L4   42
```

Patients who end up instrumented until pelvis

```
revision <- read_excel(xls_path, sheet="Revision surgeries") %>%
  as.data.table()

revision[, 'Posterior Instrumented Fusion: Upper / Lower Levels' %>%
  sapply(. %>% strsplit('-', .)[[1]] %>% .[2]) ->
  post_intr_fusion

reint_iliac <- revision[post_intr_fusion=='Iliac', 'Code of the patient']

data_['Code of the patient' %in% reint_iliac, 'Code of the patient' %>% uniqueN, type]
```

```
      type V1
1:   L5    9
2: <NA> 13
3:   L4    1
```

P-value ASA 1 L4 vs L5

```
      treatment asa_1    N
1:          L5         9 39
2:          L4        17 42
```

```
[1] 0.1504928
```

P-value Prior Spine Surgery Yes L4 vs L5

```
      treatment prior_yes    N
1:          L5         11 39
2:          L4          6 42
```

```
[1] 0.2062036
```

## Demographics

Age - mean

All

[1] 52.38

L4

[1] 45.79

L5

[1] 54.03

L4 vs L5 p-value:[1] 0.02396962

Gender - table

All

variable

Female	Male
274	74

L4

variable

Female	Male
33	9

L5

variable

Female	Male
32	7

Gender - proportion

All

variable

Female	Male
0.7873563	0.2126437

L4

variable

Female	Male
0.7857143	0.2142857

L5

variable

Female	Male
0.8205128	0.1794872

Prior Spine Surgery - table

All

variable

No	Yes
244	104

L4

variable

No	Yes
36	6

L5  
variable  
No Yes  
28 11

Prior Spine Surgery - proportion

All  
variable  
No Yes  
0.7011494 0.2988506

L4  
variable  
No Yes  
0.8571429 0.1428571

L5  
variable  
No Yes  
0.7179487 0.2820513

Height (cm)\_First Visit - mean

All  
[1] 163.01  
L4  
[1] 164.88  
L5  
[1] 161.44

L4 vs L5 p-value:[1] 0.09689435

Weight (kgs)\_First Visit - mean

All  
[1] 65.83  
L4  
[1] 65.76  
L5  
[1] 65.82

L4 vs L5 p-value:[1] 0.9838195

BMI\_First Visit - mean

All  
[1] 24.79  
L4  
[1] 24.26  
L5  
[1] 25.3

L4 vs L5 p-value:[1] 0.3199424

#### ASA classification - table

All

variable

	1	2	3
106	191	51	

L4

variable

	1	2	3
17	22	3	

L5

variable

	1	2	3
9	26	4	

#### ASA classification - proportion

All

variable

	1	2	3
0.3045977	0.5488506	0.1465517	

L4

variable

	1	2	3
0.40476190	0.52380952	0.07142857	

L5

variable

	1	2	3
0.2307692	0.6666667	0.1025641	

#### Tobacco use\_First Visit - table

All

variable

	Current	Ex	Non-User
69	63	216	

L4

variable

	Current	Ex	Non-User
8	9	25	

L5

variable

	Current	Ex	Non-User
8	6	25	

#### Tobacco use\_First Visit - proportion

All

variable

	Current	Ex	Non-User
--	---------	----	----------

0.1982759 0.1810345 0.6206897

L4

variable

Current	Ex	Non-User
0.1904762	0.2142857	0.5952381

L5

variable

Current	Ex	Non-User
0.2051282	0.1538462	0.6410256

ESSG Diagnosis - table

All

variable

	Congenital	Degenerative
	9	122
	Failed-back	Idiopathic
	19	156
	Neuromuscular	Other: Ankylosing spondylitis
	5	1
Other: radiotherapy induced	Other: spondylolisthesis	
	1	1
	Post-traumatic	Scheuermann
	15	15
	Syndromic	
	4	

L4

variable

Degenerative	Failed-back	Idiopathic	Post-traumatic	Syndromic
5	1	31	4	1

L5

variable

Congenital	Degenerative	Failed-back	Idiopathic	Post-traumatic
2	12	4	18	1
Scheuermann	Syndromic			
1	1			

ESSG Diagnosis - proportion

All

variable

	Congenital	Degenerative
	0.025862069	0.350574713
	Failed-back	Idiopathic
	0.054597701	0.448275862
	Neuromuscular	Other: Ankylosing spondylitis
	0.014367816	0.002873563
Other: radiotherapy induced	Other: spondylolisthesis	
	0.002873563	0.002873563
	Post-traumatic	Scheuermann
	0.043103448	0.043103448
	Syndromic	
	0.011494253	

L4

variable					
Degenerative	Failed-back	Idiopathic	Post-traumatic	Syndromic	
0.11904762	0.02380952	0.73809524	0.09523810	0.02380952	

L5

variable					
Congenital	Degenerative	Failed-back	Idiopathic	Post-traumatic	
0.05128205	0.30769231	0.10256410	0.46153846	0.02564103	
Scheuermann	Syndromic				
0.02564103	0.02564103				

## Radiology

Static Major curve Cobb angle - mean

All

[1] 42.86

L4

[1] 50.22

L5

[1] 45.55

L4 vs L5 p-value:[1] 0.3827009

6W. Static Major curve Cobb angle - mean

All

[1] 22.29

L4

[1] 25.12

L5

[1] 25.29

L4 vs L5 p-value:[1] 0.9662744

6M. Static Major curve Cobb angle - mean

All

[1] 22.12

L4

[1] 25.03

L5

[1] 26.74

L4 vs L5 p-value:[1] 0.6799513

1Y. Static Major curve Cobb angle - mean

All

[1] 20.31  
L4  
[1] 23.35  
L5  
[1] 24.5

L4 vs L5 p-value:[1] 0.7742008

2Y. Static Major curve Cobb angle - mean  
All  
[1] 21.63  
L4  
[1] 24.8  
L5  
[1] 26.43

L4 vs L5 p-value:[1] 0.7054688

5Y. Static Major curve Cobb angle - mean  
All  
[1] 24.84  
L4  
[1] 31.17  
L5  
[1] 31.12

L4 vs L5 p-value:[1] 0.9920431

Static Major curve Cobb angle tests all  
Preop vs 6w p-value  
2.612939e-39

Preop vs 2y p-value  
5.814775e-39

Preop vs 5y p-value  
3.548346e-20

6w vs 2y p-value  
0.6091221

2y vs 5y p-value  
0.05985225

6w vs 5y p-value

0.122996

Static Major curve Cobb angle tests L4

Preop vs 6w p-value

2.586475e-07

Preop vs 2y p-value

1.466771e-07

Preop vs 5y p-value

0.0003711541

6w vs 2y p-value

0.9293153

2y vs 5y p-value

0.1491365

6w vs 5y p-value

0.1770632

Static Major curve Cobb angle tests L5

Preop vs 6w p-value

0.0001275796

Preop vs 2y p-value

0.0006094734

Preop vs 5y p-value

0.0195258

6w vs 2y p-value

0.8049483

2y vs 5y p-value

0.4143113

6w vs 5y p-value

0.2849302

Coronal Balance (C7PL to CSVL) - mean

All

[1] 22.94

L4

[1] 19.05

L5

[1] 19.71

L4 vs L5 p-value:[1] 0.8284834

6W. Coronal Balance (C7PL to CSVL) - mean



All  
[1] 20.31  
L4  
[1] 23.2  
L5  
[1] 22.58

L4 vs L5 p-value:[1] 0.8802018

6M. Coronal Balance (C7PL to CSVL) - mean  
All  
[1] 18.82  
L4  
[1] 14.84  
L5  
[1] 21.69

L4 vs L5 p-value:[1] 0.07179218

1Y. Coronal Balance (C7PL to CSVL) - mean  
All  
[1] 18.23  
L4  
[1] 13.36  
L5  
[1] 20.29

L4 vs L5 p-value:[1] 0.02164315

2Y. Coronal Balance (C7PL to CSVL) - mean  
All  
[1] 18.25  
L4  
[1] 14.86  
L5  
[1] 17.51

L4 vs L5 p-value:[1] 0.410834

5Y. Coronal Balance (C7PL to CSVL) - mean  
All  
[1] 20.91

L4

[1] 16.56

L5

[1] 17.13

L4 vs L5 p-value:[1] 0.8667627

Coronal Balance (C7PL to CSVL) tests all

Preop vs 6w p-value

0.06260439

Preop vs 2y p-value

0.001521409

Preop vs 5y p-value

0.2725863

6w vs 2y p-value

0.1232651

2y vs 5y p-value

0.1386677

6w vs 5y p-value

0.7298518

Coronal Balance (C7PL to CSVL) tests L4

Preop vs 6w p-value

0.2085735

Preop vs 2y p-value

0.1168046

Preop vs 5y p-value

0.3993367

6w vs 2y p-value

0.01337701

2y vs 5y p-value

0.5658197

6w vs 5y p-value

0.06388229

Coronal Balance (C7PL to CSVL) tests L5

Preop vs 6w p-value

0.472363

Preop vs 2y p-value

0.5356145

Preop vs 5y p-value  
0.4672372

6w vs 2y p-value  
0.2174933

2y vs 5y p-value  
0.9186928

6w vs 5y p-value  
0.1847344

Sagittal Balance - mean

All

[1] 42.78

L4

[1] 13.12

L5

[1] 29.43

L4 vs L5 p-value:[1] 0.1287651

6W. Sagittal Balance - mean

All

[1] 19.26

L4

[1] 8.55

L5

[1] 32.4

L4 vs L5 p-value:[1] 0.007714831

6M. Sagittal Balance - mean

All

[1] 15.98

L4

[1] 3.06

L5

[1] 21.68

L4 vs L5 p-value:[1] 0.04552114

1Y. Sagittal Balance - mean

All

[1] 19.33  
L4  
[1] -2.35  
L5  
[1] 19.16

L4 vs L5 p-value:[1] 0.02727914

2Y. Sagittal Balance - mean

All

[1] 24.45

L4

[1] -0.56

L5

[1] 28.34

L4 vs L5 p-value:[1] 0.004820746

5Y. Sagittal Balance - mean

All

[1] 33.34

L4

[1] 1.48

L5

[1] 40.86

L4 vs L5 p-value:[1] 0.002170761

Sagittal Balance tests all

Preop vs 6w p-value

1.206885e-08

Preop vs 2y p-value

8.029604e-05

Preop vs 5y p-value

0.07912822

6w vs 2y p-value

0.1718073

2y vs 5y p-value

0.08522743

6w vs 5y p-value

0.002833183

Sagittal Balance tests L4

Preop vs 6w p-value

0.6117932

Preop vs 2y p-value

0.1555144

Preop vs 5y p-value

0.2839043

6w vs 2y p-value

0.2615273

2y vs 5y p-value

0.8395493

6w vs 5y p-value

0.4590759

Sagittal Balance tests L5

Preop vs 6w p-value

0.7748762

Preop vs 2y p-value

0.9203671

Preop vs 5y p-value

0.3401732

6w vs 2y p-value

0.6948255

2y vs 5y p-value

0.2952987

6w vs 5y p-value

0.4607481

Sagittal T2-T5 - mean

All

[1] 10.92

L4

[1] 8.68

L5

[1] 10.23

L4 vs L5 p-value:[1] 0.4031292

6W. Sagittal T2-T5 - mean

```
All
[1] 13.59
L4
[1] 11.61
L5
[1] 12.49

L4 vs L5 p-value:[1] 0.5942622
```

```
6M. Sagittal T2-T5 - mean
All
[1] 14.17
L4
[1] 13.66
L5
[1] 13.57

L4 vs L5 p-value:[1] 0.9741784
```

```
1Y. Sagittal T2-T5 - mean
All
[1] 13.76
L4
[1] 12.9
L5
[1] 11.41

L4 vs L5 p-value:[1] 0.5449708
```

```
2Y. Sagittal T2-T5 - mean
All
[1] 14.44
L4
[1] 14.1
L5
[1] 11.59

L4 vs L5 p-value:[1] 0.2986884
```

```
5Y. Sagittal T2-T5 - mean
All
[1] 15.85
```

L4  
[1] 16.41  
L5  
[1] 7.98  
  
L4 vs L5 p-value:[1] 0.006230627

Sagittal T2-T5 tests all  
Preop vs 6w p-value  
0.0002083196

Preop vs 2y p-value  
1.647942e-05

Preop vs 5y p-value  
1.882643e-05

6w vs 2y p-value  
0.2700206

2y vs 5y p-value  
0.2288968

6w vs 5y p-value  
0.04128382

Sagittal T2-T5 tests L4  
Preop vs 6w p-value  
0.1285903

Preop vs 2y p-value  
0.02006606

Preop vs 5y p-value  
0.01275474

6w vs 2y p-value  
0.2640278

2y vs 5y p-value  
0.4650428

6w vs 5y p-value  
0.1055092

Sagittal T2-T5 tests L5  
Preop vs 6w p-value  
0.1502634

Preop vs 2y p-value  
0.4955256

Preop vs 5y p-value  
0.1955455

6w vs 2y p-value  
0.6357217

2y vs 5y p-value  
0.07933627

6w vs 5y p-value  
0.00684447

Sagittal T5-T12 - mean

All

[1] 32.71

L4

[1] 35.44

L5

[1] 30.14

L4 vs L5 p-value:[1] 0.2415302

6W. Sagittal T5-T12 - mean

All

[1] 33.63

L4

[1] 33.34

L5

[1] 32.31

L4 vs L5 p-value:[1] 0.7505943

6M. Sagittal T5-T12 - mean

All

[1] 34.74

L4

[1] 32.99

L5

[1] 30.47

L4 vs L5 p-value:[1] 0.4670917

1Y. Sagittal T5-T12 - mean

All



[1] 35.4  
L4  
[1] 34.86  
L5  
[1] 33.34

L4 vs L5 p-value:[1] 0.6606636

2Y. Sagittal T5-T12 - mean

All  
[1] 36.12  
L4  
[1] 34.98  
L5  
[1] 33.21

L4 vs L5 p-value:[1] 0.6714107

5Y. Sagittal T5-T12 - mean

All  
[1] 39.98  
L4  
[1] 34.42  
L5  
[1] 38.97

L4 vs L5 p-value:[1] 0.370834

Sagittal T5-T12 tests all

Preop vs 6w p-value  
0.4847253

Preop vs 2y p-value  
0.01664519

Preop vs 5y p-value  
2.460794e-05

6w vs 2y p-value  
0.04836636

2y vs 5y p-value  
0.02077773

6w vs 5y p-value

6.718749e-05

Sagittal T5-T12 tests L4

Preop vs 6w p-value

0.6117047

Preop vs 2y p-value

0.9133731

Preop vs 5y p-value

0.8334733

6w vs 2y p-value

0.6403459

2y vs 5y p-value

0.8980827

6w vs 5y p-value

0.7956657

Sagittal T5-T12 tests L5

Preop vs 6w p-value

0.5589206

Preop vs 2y p-value

0.4854693

Preop vs 5y p-value

0.06741964

6w vs 2y p-value

0.8204658

2y vs 5y p-value

0.2458942

6w vs 5y p-value

0.1308473

Sagittal T2-T12 - mean

All

[1] 39.66

L4

[1] 39.44

L5

[1] 37.59

L4 vs L5 p-value:[1] 0.6830684

6W. Sagittal T2-T12 - mean

```
All
[1] 42.95
L4
[1] 40.42
L5
[1] 41.59

L4 vs L5 p-value:[1] 0.7283135
```

```
6M. Sagittal T2-T12 - mean
All
[1] 44.9
L4
[1] 41.4
L5
[1] 37.9

L4 vs L5 p-value:[1] 0.3164742
```

```
1Y. Sagittal T2-T12 - mean
All
[1] 44.72
L4
[1] 41.8
L5
[1] 39.68

L4 vs L5 p-value:[1] 0.5951255
```

```
2Y. Sagittal T2-T12 - mean
All
[1] 45.67
L4
[1] 43.71
L5
[1] 39.99

L4 vs L5 p-value:[1] 0.3569212
```

```
5Y. Sagittal T2-T12 - mean
All
[1] 49.57
```

L4  
[1] 44.99  
L5  
[1] 41.33  
  
L4 vs L5 p-value:[1] 0.4891298

Sagittal T2-T12 tests all  
Preop vs 6w p-value  
0.01835384

Preop vs 2y p-value  
3.481336e-05

Preop vs 5y p-value  
5.620083e-08

6w vs 2y p-value  
0.03750999

2y vs 5y p-value  
0.02322655

6w vs 5y p-value  
9.599658e-05

Sagittal T2-T12 tests L4  
Preop vs 6w p-value  
0.8184996

Preop vs 2y p-value  
0.3649725

Preop vs 5y p-value  
0.2962936

6w vs 2y p-value  
0.3925143

2y vs 5y p-value  
0.7959928

6w vs 5y p-value  
0.3178374

Sagittal T2-T12 tests L5  
Preop vs 6w p-value  
0.2855313

Preop vs 2y p-value  
0.5301449

Preop vs 5y p-value  
0.4097321

6w vs 2y p-value  
0.6560589

2y vs 5y p-value  
0.7612263

6w vs 5y p-value  
0.9524485

Lordosis (top of L1-S1) - mean  
All  
[1] -43.5  
L4  
[1] -47.52  
L5  
[1] -41.38

L4 vs L5 p-value:[1] 0.12683

6W. Lordosis (top of L1-S1) - mean  
All  
[1] -51.24  
L4  
[1] -49  
L5  
[1] -45.14

L4 vs L5 p-value:[1] 0.1983333

6M. Lordosis (top of L1-S1) - mean  
All  
[1] -50.93  
L4  
[1] -49.88  
L5  
[1] -44.72

L4 vs L5 p-value:[1] 0.0843069

1Y. Lordosis (top of L1-S1) - mean  
All

[1] -51  
L4  
[1] -50.41  
L5  
[1] -47.47

L4 vs L5 p-value:[1] 0.3247297

2Y. Lordosis (top of L1-S1) - mean  
All  
[1] -51.49  
L4  
[1] -52.71  
L5  
[1] -49.11

L4 vs L5 p-value:[1] 0.3273227

5Y. Lordosis (top of L1-S1) - mean  
All  
[1] -50.79  
L4  
[1] -48.35  
L5  
[1] -45.54

L4 vs L5 p-value:[1] 0.5608513

Lordosis (top of L1-S1) tests all  
Preop vs 6w p-value  
2.126727e-08

Preop vs 2y p-value  
3.707571e-08

Preop vs 5y p-value  
3.070916e-05

6w vs 2y p-value  
0.8388887

2y vs 5y p-value  
0.6632412

6w vs 5y p-value

0.7685465

Lordosis (top of L1-S1) tests L4

Preop vs 6w p-value

0.6915798

Preop vs 2y p-value

0.1928245

Preop vs 5y p-value

0.8599529

6w vs 2y p-value

0.296182

2y vs 5y p-value

0.3403641

6w vs 5y p-value

0.8806502

Lordosis (top of L1-S1) tests L5

Preop vs 6w p-value

0.2553332

Preop vs 2y p-value

0.03915649

Preop vs 5y p-value

0.3167956

6w vs 2y p-value

0.2089853

2y vs 5y p-value

0.3747529

6w vs 5y p-value

0.9138651

Pelvic Incidence - mean

All

[1] 53.94

L4

[1] 48.92

L5

[1] 52.54

L4 vs L5 p-value:[1] 0.157949

6W. Pelvic Incidence - mean

All  
[1] 54.07  
L4  
[1] 48.22  
L5  
[1] 52.59  
  
L4 vs L5 p-value:[1] 0.1014558

6M. Pelvic Incidence - mean  
All  
[1] 53.87  
L4  
[1] 47.78  
L5  
[1] 51.51  
  
L4 vs L5 p-value:[1] 0.1498352

1Y. Pelvic Incidence - mean  
All  
[1] 53.59  
L4  
[1] 47.95  
L5  
[1] 52.65  
  
L4 vs L5 p-value:[1] 0.06155034

2Y. Pelvic Incidence - mean  
All  
[1] 53.74  
L4  
[1] 47.66  
L5  
[1] 53.41  
  
L4 vs L5 p-value:[1] 0.05246645

5Y. Pelvic Incidence - mean  
All  
[1] 54.78



L4

[1] 47.26

L5

[1] 54.88

L4 vs L5 p-value:[1] 0.05373662

Pelvic Incidence tests all

Preop vs 6w p-value

0.9010697

Preop vs 2y p-value

0.8429863

Preop vs 5y p-value

0.5073785

6w vs 2y p-value

0.7511546

2y vs 5y p-value

0.4181801

6w vs 5y p-value

0.5754863

Pelvic Incidence tests L4

Preop vs 6w p-value

0.7851161

Preop vs 2y p-value

0.6566142

Preop vs 5y p-value

0.6268108

6w vs 2y p-value

0.846688

2y vs 5y p-value

0.9137755

6w vs 5y p-value

0.7820696

Pelvic Incidence tests L5

Preop vs 6w p-value

0.9855682

Preop vs 2y p-value

0.7438247

Preop vs 5y p-value  
0.4595302

6w vs 2y p-value  
0.7594724

2y vs 5y p-value  
0.6457166

6w vs 5y p-value  
0.4714235

Pelvic Tilt - mean

All

[1] 21.87

L4

[1] 17.06

L5

[1] 21.66

L4 vs L5 p-value:[1] 0.0149214

6W. Pelvic Tilt - mean

All

[1] 18

L4

[1] 14.51

L5

[1] 20.88

L4 vs L5 p-value:[1] 0.001285324

6M. Pelvic Tilt - mean

All

[1] 19.46

L4

[1] 14.35

L5

[1] 21.23

L4 vs L5 p-value:[1] 0.0003621315

1Y. Pelvic Tilt - mean

All

[1] 19.39  
L4  
[1] 15.79  
L5  
[1] 21.01

L4 vs L5 p-value:[1] 0.007487864

2Y. Pelvic Tilt - mean

All

[1] 19.28

L4

[1] 14.12

L5

[1] 21.49

L4 vs L5 p-value:[1] 0.0002880703

5Y. Pelvic Tilt - mean

All

[1] 21.77

L4

[1] 16.33

L5

[1] 24.74

L4 vs L5 p-value:[1] 0.002866542

Pelvic Tilt tests all

Preop vs 6w p-value

1.187258e-06

Preop vs 2y p-value

0.001479425

Preop vs 5y p-value

0.916233

6w vs 2y p-value

0.09717174

2y vs 5y p-value

0.01212081

6w vs 5y p-value

0.0001245306

Pelvic Tilt tests L4

Preop vs 6w p-value

0.1615846

Preop vs 2y p-value

0.117574

Preop vs 5y p-value

0.7667899

6w vs 2y p-value

0.8393235

2y vs 5y p-value

0.3912525

6w vs 5y p-value

0.4735358

Pelvic Tilt tests L5

Preop vs 6w p-value

0.6892586

Preop vs 2y p-value

0.9329098

Preop vs 5y p-value

0.1410062

6w vs 2y p-value

0.7461256

2y vs 5y p-value

0.1156544

6w vs 5y p-value

0.06580587

Sacral Slope - mean

All

[1] 32.5

L4

[1] 31.71

L5

[1] 31.57

L4 vs L5 p-value:[1] 0.9493803

6W. Sacral Slope - mean

```
All
[1] 36.02
L4
[1] 33.65
L5
[1] 31.66

L4 vs L5 p-value:[1] 0.3513935
```

```
6M. Sacral Slope - mean
All
[1] 34.38
L4
[1] 33.31
L5
[1] 30.09

L4 vs L5 p-value:[1] 0.1211204
```

```
1Y. Sacral Slope - mean
All
[1] 34.24
L4
[1] 32.18
L5
[1] 31.59

L4 vs L5 p-value:[1] 0.7688873
```

```
2Y. Sacral Slope - mean
All
[1] 34.55
L4
[1] 33.54
L5
[1] 31.89

L4 vs L5 p-value:[1] 0.4866861
```

```
5Y. Sacral Slope - mean
All
[1] 33.02
```

L4  
[1] 30.93  
L5  
[1] 30.14  
  
L4 vs L5 p-value:[1] 0.8072471

Sacral Slope tests all  
Preop vs 6w p-value  
2.495369e-05

Preop vs 2y p-value  
0.01868629

Preop vs 5y p-value  
0.632141

6w vs 2y p-value  
0.08166943

2y vs 5y p-value  
0.1639381

6w vs 5y p-value  
0.00523052

Sacral Slope tests L4  
Preop vs 6w p-value  
0.3833419

Preop vs 2y p-value  
0.4407815

Preop vs 5y p-value  
0.7957267

6w vs 2y p-value  
0.9617974

2y vs 5y p-value  
0.4070707

6w vs 5y p-value  
0.3709415

Sacral Slope tests L5  
Preop vs 6w p-value  
0.9648205

Preop vs 2y p-value  
0.8844373

Preop vs 5y p-value  
0.5755429

6w vs 2y p-value  
0.9137375

2y vs 5y p-value  
0.4930107

6w vs 5y p-value  
0.5372656

RLL - mean

All

[1] -19

L4

[1] -11.81

L5

[1] -20.19

L4 vs L5 p-value:[1] 0.01887427

6W. RLL - mean

All

[1] -11.18

L4

[1] -9.89

L5

[1] -16.47

L4 vs L5 p-value:[1] 0.01238277

6M. RLL - mean

All

[1] -11.42

L4

[1] -8.75

L5

[1] -15.94

L4 vs L5 p-value:[1] 0.007415021

1Y. RLL - mean

All

[1] -11.34  
L4  
[1] -8.2  
L5  
[1] -14.17

L4 vs L5 p-value:[1] 0.02978466

2Y. RLL - mean  
All  
[1] -10.63  
L4  
[1] -5.75  
L5  
[1] -13.01

L4 vs L5 p-value:[1] 0.0270933

5Y. RLL - mean  
All  
[1] -12.17  
L4  
[1] -9.96  
L5  
[1] -17.49

L4 vs L5 p-value:[1] 0.07973966

RLL tests all  
Preop vs 6w p-value  
4.717714e-09

Preop vs 2y p-value  
2.628085e-09

Preop vs 5y p-value  
2.446303e-05

6w vs 2y p-value  
0.6209054

2y vs 5y p-value  
0.2805146

6w vs 5y p-value



0.4643248

RLL tests L4

Preop vs 6w p-value

0.5367176

Preop vs 2y p-value

0.06984195

Preop vs 5y p-value

0.6413212

6w vs 2y p-value

0.1374585

2y vs 5y p-value

0.2630089

6w vs 5y p-value

0.9856025

RLL tests L5

Preop vs 6w p-value

0.2245042

Preop vs 2y p-value

0.03904527

Preop vs 5y p-value

0.4763129

6w vs 2y p-value

0.2606083

2y vs 5y p-value

0.2397934

6w vs 5y p-value

0.7664089

Global Tilt - mean

All

[1] 26.35

L4

[1] 17.64

L5

[1] 24.2

L4 vs L5 p-value:[1] 0.02809123

6W. Global Tilt - mean

```
All
[1] 18.64
L4
[1] 13.85
L5
[1] 23.4

L4 vs L5 p-value:[1] 0.0005703284
```

```
6M. Global Tilt - mean
All
[1] 20.27
L4
[1] 13.33
L5
[1] 21.96

L4 vs L5 p-value:[1] 0.002285445
```

```
1Y. Global Tilt - mean
All
[1] 20.78
L4
[1] 13.13
L5
[1] 22.32

L4 vs L5 p-value:[1] 0.0002698268
```

```
2Y. Global Tilt - mean
All
[1] 20.92
L4
[1] 12.2
L5
[1] 22.95

L4 vs L5 p-value:[1] 0.0001167054
```

```
5Y. Global Tilt - mean
All
[1] 24.64
```

L4

[1] 15.12

L5

[1] 28.79

L4 vs L5 p-value:[1] 0.0005289438

Global Tilt tests all

Preop vs 6w p-value

2.128835e-10

Preop vs 2y p-value

3.027628e-05

Preop vs 5y p-value

0.276022

6w vs 2y p-value

0.03846796

2y vs 5y p-value

0.01361396

6w vs 5y p-value

3.122083e-05

Global Tilt tests L4

Preop vs 6w p-value

0.1305389

Preop vs 2y p-value

0.04140948

Preop vs 5y p-value

0.4596082

6w vs 2y p-value

0.4954686

2y vs 5y p-value

0.384842

6w vs 5y p-value

0.694201

Global Tilt tests L5

Preop vs 6w p-value

0.796135

Preop vs 2y p-value

0.6721474

Preop vs 5y p-value  
0.1565911

6w vs 2y p-value  
0.8742746

2y vs 5y p-value  
0.0563147

6w vs 5y p-value  
0.08965174

T1 Sagittal Tilt - mean  
All  
[1] -1.73  
L4  
[1] -4.47  
L5  
[1] -2.36

L4 vs L5 p-value:[1] 0.07816866

6W. T1 Sagittal Tilt - mean  
All  
[1] -3.54  
L4  
[1] -4  
L5  
[1] -1.83

L4 vs L5 p-value:[1] 0.01879112

6M. T1 Sagittal Tilt - mean  
All  
[1] -4.21  
L4  
[1] -4.84  
L5  
[1] -3.8

L4 vs L5 p-value:[1] 0.196341

1Y. T1 Sagittal Tilt - mean  
All

[1] -3.86  
L4  
[1] -5  
L5  
[1] -4.24

L4 vs L5 p-value:[1] 0.4966102

2Y. T1 Sagittal Tilt - mean  
All  
[1] -3.64  
L4  
[1] -5.16  
L5  
[1] -3.13

L4 vs L5 p-value:[1] 0.01624378

5Y. T1 Sagittal Tilt - mean  
All  
[1] -2.81  
L4  
[1] -5.11  
L5  
[1] -2.46

L4 vs L5 p-value:[1] 0.009462915

T1 Sagittal Tilt tests all  
Preop vs 6w p-value  
2.950444e-05

Preop vs 2y p-value  
2.561922e-05

Preop vs 5y p-value  
0.04732429

6w vs 2y p-value  
0.7813274

2y vs 5y p-value  
0.09785102

6w vs 5y p-value

0.1322135

T1 Sagittal Tilt tests L4

Preop vs 6w p-value

0.5723161

Preop vs 2y p-value

0.3950976

Preop vs 5y p-value

0.4607995

6w vs 2y p-value

0.1568297

2y vs 5y p-value

0.9538986

6w vs 5y p-value

0.2052346

T1 Sagittal Tilt tests L5

Preop vs 6w p-value

0.6672455

Preop vs 2y p-value

0.5177708

Preop vs 5y p-value

0.932823

6w vs 2y p-value

0.156091

2y vs 5y p-value

0.4890376

6w vs 5y p-value

0.527774

Thoracolumbar L2-T10 - mean

All

[1] 10.15

L4

[1] 24.82

L5

[1] 11.15

L4 vs L5 p-value:[1] 0.004158729

6W. Thoracolumbar L2-T10 - mean

All  
[1] 4.75  
L4  
[1] 1.5  
L5  
[1] 3.38

L4 vs L5 p-value:[1] 0.534681

6M. Thoracolumbar L2-T10 - mean  
All  
[1] 4.95  
L4  
[1] 3.24  
L5  
[1] 5.31

L4 vs L5 p-value:[1] 0.4708201

1Y. Thoracolumbar L2-T10 - mean  
All  
[1] 5.37  
L4  
[1] 4.33  
L5  
[1] 6.91

L4 vs L5 p-value:[1] 0.4209241

2Y. Thoracolumbar L2-T10 - mean  
All  
[1] 5.79  
L4  
[1] 4.02  
L5  
[1] 7.7

L4 vs L5 p-value:[1] 0.2159588

5Y. Thoracolumbar L2-T10 - mean  
All  
[1] 6.98

L4

[1] 5.65

L5

[1] 9.37

L4 vs L5 p-value:[1] 0.3128641

Thoracolumbar L2-T10 tests all

Preop vs 6w p-value

5.465972e-05

Preop vs 2y p-value

0.001546628

Preop vs 5y p-value

0.05238359

6w vs 2y p-value

0.3165752

2y vs 5y p-value

0.3984091

6w vs 5y p-value

0.1027737

Thoracolumbar L2-T10 tests L4

Preop vs 6w p-value

9.798708e-08

Preop vs 2y p-value

2.345396e-07

Preop vs 5y p-value

1.110709e-05

6w vs 2y p-value

0.4177206

2y vs 5y p-value

0.6064043

6w vs 5y p-value

0.2446928

Thoracolumbar L2-T10 tests L5

Preop vs 6w p-value

0.04948556

Preop vs 2y p-value

0.4054651



Preop vs 5y p-value  
0.6810473

6w vs 2y p-value  
0.1378671

2y vs 5y p-value  
0.6315653

6w vs 5y p-value  
0.06436168

RSA - mean

All

[1] 15.35

L4

[1] 9.16

L5

[1] 13.83

L4 vs L5 p-value:[1] 0.07113172

6W. RSA - mean

All

[1] 7.57

L4

[1] 5.67

L5

[1] 13.1

L4 vs L5 p-value:[1] 0.001320824

6M. RSA - mean

All

[1] 9.33

L4

[1] 5.33

L5

[1] 12.52

L4 vs L5 p-value:[1] 0.0009051997

1Y. RSA - mean

All

```
[1] 9.85
L4
[1] 5.17
L5
[1] 11.99
```

```
L4 vs L5 p-value:[1] 0.0005692798
```

```
2Y. RSA - mean
```

```
All
```

```
[1] 10.09
```

```
L4
```

```
[1] 4.16
```

```
L5
```

```
[1] 12.57
```

```
L4 vs L5 p-value:[1] 0.0002771497
```

```
5Y. RSA - mean
```

```
All
```

```
[1] 13.34
```

```
L4
```

```
[1] 7.43
```

```
L5
```

```
[1] 17.45
```

```
L4 vs L5 p-value:[1] 0.003816685
```

```
RSA tests all
```

```
Preop vs 6w p-value
```

```
4.959458e-14
```

```
Preop vs 2y p-value
```

```
2.441125e-06
```

```
Preop vs 5y p-value
```

```
0.1393535
```

```
6w vs 2y p-value
```

```
0.005318745
```

```
2y vs 5y p-value
```

```
0.01148679
```

```
6w vs 5y p-value
```

2.49948e-06

RSA tests L4

Preop vs 6w p-value  
0.1314663

Preop vs 2y p-value  
0.04077405

Preop vs 5y p-value  
0.5912976

6w vs 2y p-value  
0.4903931

2y vs 5y p-value  
0.2999071

6w vs 5y p-value  
0.5642791

RSA tests L5

Preop vs 6w p-value  
0.7694667

Preop vs 2y p-value  
0.5937744

Preop vs 5y p-value  
0.1704213

6w vs 2y p-value  
0.8130623

2y vs 5y p-value  
0.04350424

6w vs 5y p-value  
0.08640004

RPV - mean

All

[1] -8.4

L4

[1] -6.15

L5

[1] -8.53

L4 vs L5 p-value:[1] 0.1099413

6W. RPV - mean

```
All
[1] -4.86
L4
[1] -3.79
L5
[1] -8.37

L4 vs L5 p-value:[1] 0.0036263
```

```
6M. RPV - mean
All
[1] -6.4
L4
[1] -3.88
L5
[1] -9.31

L4 vs L5 p-value:[1] 0.0004057546
```

```
1Y. RPV - mean
All
[1] -6.41
L4
[1] -5.11
L5
[1] -8.47

L4 vs L5 p-value:[1] 0.02849249
```

```
2Y. RPV - mean
All
[1] -6.17
L4
[1] -3.58
L5
[1] -8.63

L4 vs L5 p-value:[1] 0.001881745
```

```
5Y. RPV - mean
All
[1] -8.3
```

L4  
[1] -5.95  
L5  
[1] -11.24  
  
L4 vs L5 p-value:[1] 0.02152269

RPV tests all  
Preop vs 6w p-value  
5.931477e-08

Preop vs 2y p-value  
0.0009951724

Preop vs 5y p-value  
0.9094059

6w vs 2y p-value  
0.03599535

2y vs 5y p-value  
0.009801427

6w vs 5y p-value  
2.251031e-05

RPV tests L4  
Preop vs 6w p-value  
0.131529

Preop vs 2y p-value  
0.1038785

Preop vs 5y p-value  
0.9246635

6w vs 2y p-value  
0.8939752

2y vs 5y p-value  
0.2780007

6w vs 5y p-value  
0.3206989

RPV tests L5  
Preop vs 6w p-value  
0.9094009

Preop vs 2y p-value  
0.9493303

Preop vs 5y p-value  
0.09522309

6w vs 2y p-value  
0.8614437

2y vs 5y p-value  
0.1128968

6w vs 5y p-value  
0.07880649

### Quality of Life

ODI - Score (%) - mean

All

[1] 37.48

L4

[1] 29.22

L5

[1] 40.79

L4 vs L5 p-value:[1] 0.004970222

6M. ODI - Score (%) - mean

All

[1] 28.64

L4

[1] 26.24

L5

[1] 28.3

L4 vs L5 p-value:[1] 0.5870559

1Y. ODI - Score (%) - mean

All

[1] 25.89

L4

[1] 18.9

L5

[1] 29.66

L4 vs L5 p-value:[1] 0.006735415

2Y. ODI - Score (%) - mean

All

[1] 27.66

L4

[1] 21.02

L5

[1] 27.68

L4 vs L5 p-value:[1] 0.1289585

5Y. ODI - Score (%) - mean

All

[1] 28.82

L4

[1] 23.66

L5

[1] 29.47

L4 vs L5 p-value:[1] 0.1752142

ODI - Score (%) tests all

Preop vs 6m p-value

4.234456e-09

Preop vs 2y p-value

1.669532e-09

Preop vs 5y p-value

1.3154e-06

6m vs 2y p-value

0.531449

2y vs 5y p-value

0.5283208

6w vs 5y p-value

3.523138e-53

ODI - Score (%) tests L4

Preop vs 6m p-value

0.4333096

Preop vs 2y p-value

0.03972036

Preop vs 5y p-value

0.1763392

6m vs 2y p-value  
0.1739929

2y vs 5y p-value  
0.5212302

6w vs 5y p-value  
7.902646e-13

ODI - Score (%) tests L5  
Preop vs 6m p-value  
0.0003512974

Preop vs 2y p-value  
0.004010115

Preop vs 5y p-value  
0.00842788

6m vs 2y p-value  
0.7324842

2y vs 5y p-value  
0.6920722

6w vs 5y p-value  
4.821621e-14

SRS22 - Function / Activity - mean  
All  
[1] 3.09  
L4  
[1] 3.28  
L5  
[1] 2.87

L4 vs L5 p-value:[1] 0.02683056

6M. SRS22 - Function / Activity - mean  
All  
[1] 3.24  
L4  
[1] 3.22  
L5  
[1] 3.07

L4 vs L5 p-value:[1] 0.4605215



```
1Y. SRS22 - Function / Activity - mean
All
[1] 3.39
L4
[1] 3.67
L5
[1] 3.11
```

```
L4 vs L5 p-value:[1] 0.009749303
```

```
2Y. SRS22 - Function / Activity - mean
All
[1] 3.47
L4
[1] 3.71
L5
[1] 3.39
```

```
L4 vs L5 p-value:[1] 0.1080432
```

```
5Y. SRS22 - Function / Activity - mean
All
[1] 3.48
L4
[1] 3.58
L5
[1] 3.38
```

```
L4 vs L5 p-value:[1] 0.3105073
```

```
SRS22 - Function / Activity tests all
Preop vs 6m p-value
0.02173791
```

```
Preop vs 2y p-value
7.667214e-08
```

```
Preop vs 5y p-value
3.075026e-07
```

```
6m vs 2y p-value
0.0008535996
```

2y vs 5y p-value  
0.9164978

6w vs 5y p-value  
8.598641e-14

SRS22 - Function / Activity tests L4  
Preop vs 6m p-value  
0.7656171

Preop vs 2y p-value  
0.02926171

Preop vs 5y p-value  
0.1403798

6m vs 2y p-value  
0.01448075

2y vs 5y p-value  
0.5472829

6w vs 5y p-value  
5.237228e-14

SRS22 - Function / Activity tests L5  
Preop vs 6m p-value  
0.05918874

Preop vs 2y p-value  
0.005170153

Preop vs 5y p-value  
0.004423053

6m vs 2y p-value  
0.3791198

2y vs 5y p-value  
0.9502907

6w vs 5y p-value  
9.494831e-14

SRS22 - Pain - mean  
All  
[1] 2.6  
L4  
[1] 2.83  
L5  
[1] 2.35

L4 vs L5 p-value:[1] 0.02800391

6M. SRS22 - Pain - mean

All

[1] 3.42

L4

[1] 3.42

L5

[1] 3.37

L4 vs L5 p-value:[1] 0.8011964

1Y. SRS22 - Pain - mean

All

[1] 3.56

L4

[1] 3.85

L5

[1] 3.4

L4 vs L5 p-value:[1] 0.05004134

2Y. SRS22 - Pain - mean

All

[1] 3.49

L4

[1] 3.78

L5

[1] 3.31

L4 vs L5 p-value:[1] 0.04307255

5Y. SRS22 - Pain - mean

All

[1] 3.34

L4

[1] 3.47

L5

[1] 3.08

L4 vs L5 p-value:[1] 0.1354012

SRS22 - Pain tests all  
Preop vs 6m p-value  
8.395163e-27

Preop vs 2y p-value  
6.671258e-26

Preop vs 5y p-value  
1.989905e-15

6m vs 2y p-value  
0.3762109

2y vs 5y p-value  
0.1167575

6w vs 5y p-value  
1.179657e-13

SRS22 - Pain tests L4  
Preop vs 6m p-value  
0.005996365

Preop vs 2y p-value  
4.344815e-05

Preop vs 5y p-value  
0.008788428

6m vs 2y p-value  
0.08866341

2y vs 5y p-value  
0.1923711

6w vs 5y p-value  
6.33769e-14

SRS22 - Pain tests L5  
Preop vs 6m p-value  
9.020891e-07

Preop vs 2y p-value  
4.950859e-05

Preop vs 5y p-value  
0.002440434

6m vs 2y p-value  
0.6089766

2y vs 5y p-value  
0.3669379

6w vs 5y p-value  
1.699573e-13

SRS22 - Self image / Appearance - mean  
All  
[1] 2.38  
L4  
[1] 2.59  
L5  
[1] 2.34

L4 vs L5 p-value:[1] 0.1548127

6M. SRS22 - Self image / Appearance - mean  
All  
[1] 3.49  
L4  
[1] 3.7  
L5  
[1] 3.5

L4 vs L5 p-value:[1] 0.2922336

1Y. SRS22 - Self image / Appearance - mean  
All  
[1] 3.53  
L4  
[1] 3.82  
L5  
[1] 3.44

L4 vs L5 p-value:[1] 0.05463313

2Y. SRS22 - Self image / Appearance - mean  
All  
[1] 3.43  
L4  
[1] 3.76  
L5  
[1] 3.46

L4 vs L5 p-value:[1] 0.1454374

```
5Y. SRS22 - Self image / Appearance - mean
All
[1] 3.36
L4
[1] 3.6
L5
[1] 3.27

L4 vs L5 p-value:[1] 0.1483662
```

```
SRS22 - Self image / Appearance tests all
Preop vs 6m p-value
1.036098e-57
```

```
Preop vs 2y p-value
5.696223e-48
```

```
Preop vs 5y p-value
2.671698e-34
```

```
6m vs 2y p-value
0.4441466
```

```
2y vs 5y p-value
0.3449467
```

```
6w vs 5y p-value
1.159136e-13
```

```
SRS22 - Self image / Appearance tests L4
Preop vs 6m p-value
6.275197e-09
```

```
Preop vs 2y p-value
1.439882e-08
```

```
Preop vs 5y p-value
3.704997e-06
```

```
6m vs 2y p-value
0.7320808
```

```
2y vs 5y p-value
0.4365176
```

```
6w vs 5y p-value
4.994366e-14
```

```
SRS22 - Self image / Appearance tests L5
```

Preop vs 6m p-value  
1.377997e-12

Preop vs 2y p-value  
1.651947e-07

Preop vs 5y p-value  
2.457011e-05

6m vs 2y p-value  
0.2092055

2y vs 5y p-value  
0.3972415

6w vs 5y p-value  
1.113874e-13

SRS22 - Mental health - mean

All

[1] 3.15

L4

[1] 3.2

L5

[1] 3.22

L4 vs L5 p-value:[1] 0.9285385

6M. SRS22 - Mental health - mean

All

[1] 3.54

L4

[1] 3.57

L5

[1] 3.56

L4 vs L5 p-value:[1] 0.9320568

1Y. SRS22 - Mental health - mean

All

[1] 3.59

L4

[1] 3.76

L5

[1] 3.51

L4 vs L5 p-value:[1] 0.2197001

```
2Y. SRS22 - Mental health - mean
All
[1] 3.5
L4
[1] 3.63
L5
[1] 3.57
```

```
L4 vs L5 p-value:[1] 0.7500067
```

```
5Y. SRS22 - Mental health - mean
All
[1] 3.53
L4
[1] 3.67
L5
[1] 3.43
```

```
L4 vs L5 p-value:[1] 0.2864843
```

```
SRS22 - Mental health tests all
Preop vs 6m p-value
8.276809e-09
```

```
Preop vs 2y p-value
9.80005e-07
```

```
Preop vs 5y p-value
3.57605e-07
```

```
6m vs 2y p-value
0.5414079
```

```
2y vs 5y p-value
0.6506869
```

```
6w vs 5y p-value
7.566897e-14
```

```
SRS22 - Mental health tests L4
Preop vs 6m p-value
0.04483037
```

```
Preop vs 2y p-value
0.02128555
```



Preop vs 5y p-value  
0.02531553

6m vs 2y p-value  
0.7520899

2y vs 5y p-value  
0.8667876

6w vs 5y p-value  
4.100434e-14

SRS22 - Mental health tests L5  
Preop vs 6m p-value  
0.06643112

Preop vs 2y p-value  
0.07894434

Preop vs 5y p-value  
0.2941027

6m vs 2y p-value  
0.9883327

2y vs 5y p-value  
0.5049983

6w vs 5y p-value  
7.74375e-14

SRS22 - SRS Subtotal score - mean  
All  
[1] 2.81  
L4  
[1] 2.98  
L5  
[1] 2.71

L4 vs L5 p-value:[1] 0.09354685

6M. SRS22 - SRS Subtotal score - mean  
All  
[1] 3.42  
L4  
[1] 3.48  
L5  
[1] 3.37

L4 vs L5 p-value:[1] 0.5144035

```
1Y. SRS22 - SRS Subtotal score - mean
All
[1] 3.52
L4
[1] 3.77
L5
[1] 3.36
```

```
L4 vs L5 p-value:[1] 0.02219664
```

```
2Y. SRS22 - SRS Subtotal score - mean
All
[1] 3.47
L4
[1] 3.72
L5
[1] 3.44
```

```
L4 vs L5 p-value:[1] 0.111672
```

```
5Y. SRS22 - SRS Subtotal score - mean
All
[1] 3.41
L4
[1] 3.58
L5
[1] 3.29
```

```
L4 vs L5 p-value:[1] 0.1461649
```

```
SRS22 - SRS Subtotal score tests all
Preop vs 6m p-value
5.666437e-27
```

```
Preop vs 2y p-value
2.051315e-25
```

```
Preop vs 5y p-value
1.769115e-17
```

```
6m vs 2y p-value
```

0.4145993

2y vs 5y p-value  
0.4257375

6w vs 5y p-value  
1.013087e-13

SRS22 - SRS Subtotal score tests L4  
Preop vs 6m p-value  
0.002451528

Preop vs 2y p-value  
3.60342e-05

Preop vs 5y p-value  
0.001881916

6m vs 2y p-value  
0.1367817

2y vs 5y p-value  
0.4502338

6w vs 5y p-value  
5.440031e-14

SRS22 - SRS Subtotal score tests L5  
Preop vs 6m p-value  
2.169867e-06

Preop vs 2y p-value  
4.559858e-05

Preop vs 5y p-value  
0.001364516

6m vs 2y p-value  
0.7999314

2y vs 5y p-value  
0.4366109

6w vs 5y p-value  
1.159859e-13

SF36 - PCS - mean  
All  
[1] 36.37  
L4  
[1] 40.25  
L5  
[1] 34.85

L4 vs L5 p-value:[1] 0.008001579

6M. SF36 - PCS - mean

All

[1] 40.33

L4

[1] 42.97

L5

[1] 38.69

L4 vs L5 p-value:[1] 0.02049346

1Y. SF36 - PCS - mean

All

[1] 41.91

L4

[1] 46.18

L5

[1] 39.67

L4 vs L5 p-value:[1] 0.005079299

2Y. SF36 - PCS - mean

All

[1] 41.89

L4

[1] 45.34

L5

[1] 41.14

L4 vs L5 p-value:[1] 0.05009991

5Y. SF36 - PCS - mean

All

[1] 41.29

L4

[1] 43.55

L5

[1] 40.62

L4 vs L5 p-value:[1] 0.185434

SF36 - PCS tests all  
Preop vs 6m p-value  
7.448317e-08

Preop vs 2y p-value  
3.406167e-12

Preop vs 5y p-value  
7.205896e-08

6m vs 2y p-value  
0.04488095

2y vs 5y p-value  
0.5181065

6w vs 5y p-value  
2.220629e-54

SF36 - PCS tests L4  
Preop vs 6m p-value  
0.154334

Preop vs 2y p-value  
0.01781341

Preop vs 5y p-value  
0.1206343

6m vs 2y p-value  
0.2403903

2y vs 5y p-value  
0.417447

6w vs 5y p-value  
2.17239e-35

SF36 - PCS tests L5  
Preop vs 6m p-value  
4.836783e-05

Preop vs 2y p-value  
0.002306935

Preop vs 5y p-value  
0.00697263

6m vs 2y p-value  
0.3381004

2y vs 5y p-value  
0.8072016

6w vs 5y p-value  
3.339344e-32

SF36 - MCS - mean  
All  
[1] 42.71  
L4  
[1] 41.89  
L5  
[1] 44.91

L4 vs L5 p-value:[1] 0.2671804

6M. SF36 - MCS - mean  
All  
[1] 46.87  
L4  
[1] 48.24  
L5  
[1] 47.58

L4 vs L5 p-value:[1] 0.8190889

1Y. SF36 - MCS - mean  
All  
[1] 47.37  
L4  
[1] 50.8  
L5  
[1] 47

L4 vs L5 p-value:[1] 0.1710523

2Y. SF36 - MCS - mean  
All  
[1] 47.01  
L4  
[1] 49.38  
L5  
[1] 49.08

L4 vs L5 p-value:[1] 0.905938

```
5Y. SF36 - MCS - mean
All
[1] 47.46
L4
[1] 50.28
L5
[1] 47.63

L4 vs L5 p-value:[1] 0.3406633
```

```
SF36 - MCS tests all
Preop vs 6m p-value
1.116871e-05
```

```
Preop vs 2y p-value
5.388458e-06
```

```
Preop vs 5y p-value
1.783548e-06
```

```
6m vs 2y p-value
0.8787294
```

```
2y vs 5y p-value
0.6565847
```

```
6w vs 5y p-value
1.791352e-58
```

```
SF36 - MCS tests L4
Preop vs 6m p-value
0.0188427
```

```
Preop vs 2y p-value
0.003017321
```

```
Preop vs 5y p-value
0.001627255
```

```
6m vs 2y p-value
0.646381
```

```
2y vs 5y p-value
0.7112284
```

```
6w vs 5y p-value
5.544388e-34
```

SF36 - MCS tests L5  
Preop vs 6m p-value  
0.229428

Preop vs 2y p-value  
0.1391076

Preop vs 5y p-value  
0.3491436

6m vs 2y p-value  
0.757567

2y vs 5y p-value  
0.6157796

6w vs 5y p-value  
2.171426e-26

## Surgery

Total Operative Blood Loss st1+st2+st3 - mean

All

[1] 1541.9

L4

[1] 1102.82

L5

[1] 1356.53

L4 vs L5 p-value:[1] 0.2336043

Total surgical time st1+st2+st3 - mean

All

[1] 321.94

L4

[1] 268.21

L5

[1] 352.08

L4 vs L5 p-value:[1] 0.03805626

Number of Posterior Instrumented Levels - mean

All

[1] 9.72

L4

[1] 9.33



L5  
 [1] 8.62

L4 vs L5 p-value:[1] 0.4527274

Pelvic fixation - table

All
variable
No Yes
214 134
L4
variable
No
42
L5
variable
No
39

Pelvic fixation - proportion

All
variable
No Yes
0.6149425 0.3850575
L4
variable
No
1
L5
variable
No
1

Surgical Approach - table

All
variable
Anterior-Posterior
4
Posterior-Anterior
11
Posterior-Posterior-Anterior
1
L4
variable
Posterior
42
L5
variable
Anterior-Posterior
Posterior Posterior-Posterior

1

37

1

Surgical Approach - proportion

All

variable

Anterior-Posterior

0.011494253

Posterior

0.945402299

Posterior-Anterior

0.031609195

Posterior-Posterior

0.008620690

Posterior-Posterior-Anterior

0.002873563

L4

variable

Posterior

1

L5

variable

Anterior-Posterior

0.02564103

Posterior Posterior-Posterior

0.94871795

0.02564103

Number of Interbody Fusions - mean

All

[1] 0.85

L4

[1] 0.31

L5

[1] 1.03

L4 vs L5 p-value:[1] 0.004462937

Decompression - table

All

variable

No Yes

261 87

L4

variable

No Yes

33 9

L5

variable

No Yes

26 13

Decompression - proportion

All

variable

No Yes

0.75 0.25

L4  
variable  
No Yes  
0.7857143 0.2142857  
L5  
variable  
No Yes  
0.6666667 0.3333333

#### Interbody Fusion - table

All  
variable  
No Yes  
193 155  
L4  
variable  
No Yes  
32 10  
L5  
variable  
No Yes  
19 20

#### Interbody Fusion - proportion

All  
variable  
No Yes  
0.5545977 0.4454023  
L4  
variable  
No Yes  
0.7619048 0.2380952  
L5  
variable  
No Yes  
0.4871795 0.5128205

#### Osteotomy - table

All  
variable  
No Yes  
178 170  
L4  
variable  
No Yes  
23 19  
L5  
variable  
No Yes  
25 14

Osteotomy - proportion

All

variable

No	Yes
----	-----

0.5114943	0.4885057
-----------	-----------

L4

variable

No	Yes
----	-----

0.547619	0.452381
----------	----------

L5

variable

No	Yes
----	-----

0.6410256	0.3589744
-----------	-----------

3C0 - table

All

variable

No	Yes
----	-----

295	53
-----	----

L4

variable

No	Yes
----	-----

37	5
----	---

L5

variable

No	Yes
----	-----

33	6
----	---

3C0 - proportion

All

variable

No	Yes
----	-----

0.8477011	0.1522989
-----------	-----------

L4

variable

No	Yes
----	-----

0.8809524	0.1190476
-----------	-----------

L5

variable

No	Yes
----	-----

0.8461538	0.1538462
-----------	-----------

## Reinterventions

	group	reiqs	patients	total
1:	all	280	105	348
2:	L4	9	7	42
3:	L5	40	12	39

p_val_1_total	p_val_2_total	p_val_1_2
---------------	---------------	-----------

1 7.097821e-71 1.68688e-45 9.263546e-06

## Impacts

	Complication	Impact	all_num	all_patients	L4_num	L4_patients	L5_num
1:			0	1	1	0	0
2:	Adverse Event		9	7	0	0	2
3:	Major Complication		329	116	14	7	49
4:	Minor Complication		287	169	21	15	28

  

	L5_patients	total_all	L4	L5	p_val_1_total	p_val_2_total	p_val_1_2
1:	0	348	42	39	1.000000e+00	1.000000e+00	1.00000000
2:	1	348	42	39	1.562500e-02	7.031250e-02	1.00000000
3:	14	348	42	39	1.420009e-26	3.643734e-21	0.1892471
4:	19	348	42	39	3.568593e-34	2.976574e-31	0.6075914

## Categories

	Category of the complication	all_num	all_patients	L4_num	L4_patients
1:	Central neurologic complications	2	2	0	0
2:	Iatrogenic	75	64	10	8
3:	Infectious complications	39	30	3	3
4:	Mechanical complications	284	133	11	7
5:	Other complications	145	87	9	5
6:	Pain	22	21	0	0
7:	Peripheral neurologic complications	59	47	2	2

  

	L5_num	L5_patients	total_all	L4	L5	p_val_1_total	p_val_2_total	p_val_1_2
1:	0	0	348	42	39	5.000000e-01	5.000000e-01	1.00000000
2:	13	11	348	42	39	5.765519e-12	3.108522e-10	0.64760590
3:	11	7	348	42	39	1.401175e-06	1.910764e-04	0.34375000
4:	28	13	348	42	39	2.717864e-31	3.147209e-26	0.26317596
5:	17	14	348	42	39	2.104348e-20	4.798717e-14	0.06356812
6:	4	3	348	42	39	9.536743e-07	2.771616e-04	0.25000000
7:	6	5	348	42	39	4.355627e-12	1.284823e-09	0.45312500

## Categories Major Complications

	Category of the complication	all_num	all_patients	L4_num	L4_patients
1:	Central neurologic complications	2	2	0	0
2:	Iatrogenic	27	25	3	3
3:	Infectious complications	33	25	2	2
4:	Mechanical complications	178	78	2	2
5:	Other complications	50	32	6	2
6:	Pain	15	14	0	0
7:	Peripheral neurologic complications	24	18	1	1

  

	L5_num	L5_patients	total_all	L4	L5	p_val_1_total	p_val_2_total	p_val_1_2
1:	0	0	348	42	39	5.000000e-01	5.000000e-01	1.00000000
2:	5	4	348	42	39	2.744049e-05	1.037158e-04	1.00000000
3:	10	6	348	42	39	5.647540e-06	8.779103e-04	0.28906250
4:	20	10	348	42	39	5.361785e-21	3.332134e-14	0.03857422

5:	5	5	348 42 39	6.938353e-08	7.427530e-06	0.45312500
6:	4	3	348 42 39	1.220703e-04	1.272583e-02	0.25000000
7:	5	4	348 42 39	7.629395e-05	4.343510e-03	0.37500000