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 intrumented until pelvis

```r
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-valor ASA 1 L4 vs L5

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

```
[1] 0.1504928
```

P-valor 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                         Posterior
                          4                               329
         Posterior-Anterior         Posterior-Posterior
                         11                                 3
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                      Posterior
               0.011494253                    0.945402299
        Posterior-Anterior      Posterior-Posterior
               0.031609195                    0.008620690
Posterior-Posterior-Anterior
               0.002873563
```
L4
variable
Posterior
```
       1
```
L5
variable
```
 Anterior-Posterior              Posterior Posterior-Posterior
        0.02564103             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




3CO - table
All
variable
 No Yes
295  53
L4
variable
 No Yes
 37   5
L5
variable
 No Yes
 33   6

3CO - 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
```

Before 2Y

Reinterventions

```
   group reiqs patients total
1:   all   143      80   348
2:    L4     3       3    42
```

```
3:    L5    19        10    39
```

```
   p_val_1_total p_val_2_total  p_val_1_2
1  1.972164e-20    1.05216e-14 0.09228516
```

Impacts

```
    Complication Impact all_num all_patients L4_num L4_patients L5_num
1:                    0       1            1      0           0      0
2:       Adverse Event       2            2      0           0      1
3:  Major Complication     166           91      4           3     23
4:  Minor Complication     167          117      6           6     18
   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  5.000000e-01  1.000000e+00 1.00000000
3:          12       348 42 39  1.398594e-23  3.461043e-16 0.03515625
4:          14       348 42 39  8.416284e-28  2.037578e-21 0.11531830
```

Categories

```
          Category of the complication all_num all_patients L4_num L4_patients
1:    Central neurologic complications       1            1      0           0
2:                         Iatrogenic      16           16      1           1
3:           Infectious complications      29           25      2           2
4:           Mechanical complications     138           97      3           3
5:                Other complications     101           65      3           3
6:                               Pain      11           10      0           0
7: Peripheral neurologic complications      40           35      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  1.000000e+00  1.000000e+00 1.00000000
2:      3           3       348 42 39  2.746582e-04  4.425049e-03 0.62500000
3:      7           5       348 42 39  5.647540e-06  3.249142e-04 0.45312500
4:     15          11       348 42 39  2.630867e-25  2.391242e-18 0.05737305
5:     11           9       348 42 39  3.555031e-16  1.350994e-11 0.14599609
6:      2           1       348 42 39  1.953125e-03  1.171875e-02 1.00000000
7:      4           4       348 42 39  1.076842e-09  3.353161e-07 0.37500000
```

Categories Major Complications

```
          Category of the complication all_num all_patients L4_num L4_patients
1:    Central neurologic complications       1            1      0           0
2:                         Iatrogenic      13           13      1           1
3:           Infectious complications      24           20      1           1
4:           Mechanical complications      81           57      0           0
5:                Other complications      30           23      1           1
6:                               Pain       6            5      0           0
7: Peripheral neurologic complications      11           11      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  1.000000e+00  1.000000e+00  1.000000
2:      2           2       348 42 39  1.831055e-03  7.385254e-03  1.000000
3:      6           4       348 42 39  2.098083e-05  1.543880e-03  0.375000
```

```
4:        9            7         348 42 39  1.387779e-17  7.638141e-11  0.015625
5:        1            1         348 42 39  2.980232e-06  2.980232e-06  1.000000
6:        2            1         348 42 39  6.250000e-02  2.187500e-01  1.000000
7:        3            3         348 42 39  6.347656e-03  5.737305e-02  0.625000
```

From 2Y - 5Y

Reinterventions

```
   group reiqs patients total
1:   all    55       37   348
2:    L4     3        3    42
3:    L5     8        5    39


  p_val_1_total p_val_2_total p_val_1_2
1  1.946501e-08  4.433705e-07 0.7265625
```

Impacts

```
   Complication Impact all_num all_patients L4_num L4_patients L5_num
1:       Adverse Event       1            1      0           0      0
2:  Major Complication      59           40      3           3      9
3:  Minor Complication      30           29      1           1      1
   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 1.0000000
2:           6       348 42 39  3.021341e-09  3.102804e-07 0.5078125
3:           1       348 42 39  5.774200e-08  5.774200e-08 1.0000000
```

Categories

```
          Category of the complication all_num all_patients L4_num L4_patients
1:                          Iatrogenic       3            3      0           0
2:             Infectious complications       3            2      1           1
3:             Mechanical complications      75           57      3           2
4:                 Other complications       1            1      0           0
5:                                Pain       6            6      0           0
6: Peripheral neurologic complications       2            1      0           0
   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  2.500000e-01  2.500000e-01 1.0000000
2:      2           1       348 42 39  1.000000e+00  1.000000e+00 1.0000000
3:      7           6       348 42 39  6.144391e-15  1.639569e-11 0.2890625
4:      0           0       348 42 39  1.000000e+00  1.000000e+00 1.0000000
5:      1           1       348 42 39  3.125000e-02  1.250000e-01 1.0000000
6:      0           0       348 42 39  1.000000e+00  1.000000e+00 1.0000000
```

Categories Major Complications

```
          Category of the complication all_num all_patients L4_num L4_patients
1:                          Iatrogenic       3            3      0           0
2:             Infectious complications       3            2      1           1
```

```
3:              Mechanical complications       45        32      2              2
4:                Other complications          1         1       0              0
5:                                Pain         5         5       0              0
6: Peripheral neurologic complications         2         1       0              0
   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   2.500000e-01    2.50000e-01  1.000000
2:      2           1       348 42 39   1.000000e+00    1.00000e+00  1.000000
3:      6           5       348 42 39   6.938353e-08    7.42753e-06  0.453125
4:      0           0       348 42 39   1.000000e+00    1.00000e+00  1.000000
5:      1           1       348 42 39   6.250000e-02    2.18750e-01  1.000000
6:      0           0       348 42 39   1.000000e+00    1.00000e+00  1.000000
```