Pelvis UT vs Pelvis LT

Initial Patients: 372

With Posterior Instrumented Fusion: 348

Posterior Instrumental Fusion is Iliac: 134

- Upper Thoracic (UT): T1-T9-Pelvis
- Lower Thoracic (LT): T10-T12- Iliac

```
   thoracic_type  N
1:            LT 66
2:            UT 50
3:          <NA> 18
```

Demographics

```
Age - mean
All
[1] 63.73134
UT
[1] 64.3
LT
[1] 64.33333

UT vs LT p-value:[1] 0.9858047


Age - sd
All
[1] 10.29283
UT
[1] 9.687463
LT
[1] 10.33044



Gender - table
All
variable
Female    Male
   114      20
UT
variable
Female    Male
    47       3
```

```
LT
variable
Female   Male
    53     13

Gender - proportion
All
variable
   Female      Male
0.8507463 0.1492537
UT
variable
Female   Male
  0.94   0.06
LT
variable
   Female      Male
0.8030303 0.1969697




Prior Spine Surgery - table
All
variable
 No Yes
 80  54
UT
variable
 No Yes
 35  15
LT
variable
 No Yes
 39  27

Prior Spine Surgery - proportion
All
variable
       No      Yes
0.5970149 0.4029851
UT
variable
 No Yes
0.7 0.3
LT
variable
       No      Yes
0.5909091 0.4090909




Height (cm)_First Visit - mean
All
[1] 160.7669
```

```
UT
[1] 157.76
LT
[1] 161.5692

UT vs LT p-value:[1] 0.01460318


Height (cm)_First Visit - sd
All
[1] 8.973773
UT
[1] 8.232737
LT
[1] 8.050561


Weight (kgs)_First Visit - mean
All
[1] 66.58647
UT
[1] 62.92
LT
[1] 68.21538

UT vs LT p-value:[1] 0.008777494


Weight (kgs)_First Visit - sd
All
[1] 11.90946
UT
[1] 9.707645
LT
[1] 11.56164


BMI_First Visit - mean
All
[1] 25.74714
UT
[1] 25.399
LT
[1] 26.10554

UT vs LT p-value:[1] 0.3622448


BMI_First Visit - sd
All
[1] 3.972195
UT
```

```
[1] 4.252811
LT
[1] 3.901593




ASA classification - table
All
variable
 1  2  3
23 93 18
UT
variable
 1  2  3
 4 40  6
LT
variable
 1  2  3
14 45  7


ASA classification - proportion
All
variable
        1         2         3
0.1716418 0.6940299 0.1343284
UT
variable
   1    2    3
0.08 0.80 0.12
LT
variable
        1         2         3
0.2121212 0.6818182 0.1060606




Tobacco use_First Visit - table
All
variable
 Current        Ex Non-User
      23        31        80
UT
variable
 Current        Ex Non-User
       6        14        30
LT
variable
 Current        Ex Non-User
      13        12        41


Tobacco use_First Visit - proportion
All
variable
  Current        Ex  Non-User
```

```
0.1716418 0.2313433 0.5970149
UT
variable
 Current      Ex Non-User
    0.12     0.28     0.60
LT
variable
  Current      Ex  Non-User
0.1969697 0.1818182 0.6212121


ESSG Diagnosis - table
All
variable
            Congenital               Degenerative                Failed-back
                    3                         65                         13
             Idiopathic             Neuromuscular Other: spondylolisthesis
                   43                          3                          1
        Post-traumatic                Scheuermann                  Syndromic
                    4                          1                          1
UT
variable
  Degenerative    Failed-back    Idiopathic Post-traumatic    Scheuermann
           20              1            25              2              1
     Syndromic
            1
LT
variable
            Congenital               Degenerative                Failed-back
                    3                         37                          9
             Idiopathic             Neuromuscular Other: spondylolisthesis
                   12                          2                          1
        Post-traumatic
                    2

ESSG Diagnosis - proportion
All
variable
            Congenital               Degenerative                Failed-back
           0.022388060                0.485074627                0.097014925
             Idiopathic             Neuromuscular Other: spondylolisthesis
           0.320895522                0.022388060                0.007462687
        Post-traumatic                Scheuermann                  Syndromic
           0.029850746                0.007462687                0.007462687
UT
variable
  Degenerative    Failed-back    Idiopathic Post-traumatic    Scheuermann
         0.40              0.02         0.50              0.04           0.02
     Syndromic
         0.02
LT
variable
            Congenital               Degenerative                Failed-back
```

5

```
             0.04545455                  0.56060606                  0.13636364
              Idiopathic          Neuromuscular Other: spondylolisthesis
             0.18181818                  0.03030303                  0.01515152
          Post-traumatic
             0.03030303
```

Radiology

```
Static Major curve Cobb angle - mean
All
[1] 39.32677
UT
[1] 46.5724
LT
[1] 35.25213

UT vs LT p-value:[1] 0.004583437


Static Major curve Cobb angle - sd
All
[1] 21.39411
UT
[1] 21.02163
LT
[1] 19.77347




6W. Static Major curve Cobb angle - mean
All
[1] 21.54085
UT
[1] 23.21255
LT
[1] 19.38211

UT vs LT p-value:[1] 0.1672764


6W. Static Major curve Cobb angle - sd
All
[1] 15.24844
UT
[1] 12.71703
LT
[1] 15.36723




6M. Static Major curve Cobb angle - mean
All
[1] 20.20621
```

```
UT
[1] 22.22523
LT
[1] 18.53902

UT vs LT p-value:[1] 0.1926667


6M. Static Major curve Cobb angle - sd
All
[1] 15.84264
UT
[1] 11.82459
LT
[1] 16.97595



1Y. Static Major curve Cobb angle - mean
All
[1] 18.71733
UT
[1] 21.00087
LT
[1] 16.1623

UT vs LT p-value:[1] 0.06523393


1Y. Static Major curve Cobb angle - sd
All
[1] 15.05361
UT
[1] 12.54507
LT
[1] 14.22949



2Y. Static Major curve Cobb angle - mean
All
[1] 18.52983
UT
[1] 20.56574
LT
[1] 15.61818

UT vs LT p-value:[1] 0.04107005


2Y. Static Major curve Cobb angle - sd
All
[1] 14.08187
UT
```

```
[1] 12.46909
LT
[1] 11.48519
```

5Y. Static Major curve Cobb angle - mean
```
All
[1] 20.99522
UT
[1] 23.33226
LT
[1] 19.35063
```

UT vs LT p-value:[1] 0.286008

5Y. Static Major curve Cobb angle - sd
```
All
[1] 14.65905
UT
[1] 13.92865
LT
[1] 15.41381
```

Static Major curve Cobb angle tests all
Preop vs 6w p-value
1.151766e-12

Preop vs 2y p-value
8.671057e-17

Preop vs 5y p-value
4.326229e-11

6w vs 2y p-value
0.1171427

2y vs 5y p-value
0.2674977

6w vs 5y p-value
0.8108428

Static Major curve Cobb angle tests UT
Preop vs 6w p-value
2.893485e-09

Preop vs 2y p-value
8.78215e-11

Preop vs 5y p-value

6.188105e-08

6w vs 2y p-value
0.3109539

2y vs 5y p-value
0.3746937

6w vs 5y p-value
0.9694669

Static Major curve Cobb angle tests LT
Preop vs 6w p-value
3.452511e-06

Preop vs 2y p-value
1.965953e-09

Preop vs 5y p-value
5.373204e-05

6w vs 2y p-value
0.144145

2y vs 5y p-value
0.2391875

6w vs 5y p-value
0.9926437

Coronal Balance (C7PL to CSVL) - mean
All
[1] 28.49481
UT
[1] 31.79604
LT
[1] 28.31692

UT vs LT p-value:[1] 0.4714836

Coronal Balance (C7PL to CSVL) - sd
All
[1] 24.46328
UT
[1] 26.24335
LT
[1] 23.93327

6W. Coronal Balance (C7PL to CSVL) - mean
All
[1] 20.85951

```
UT
[1] 22.69553
LT
[1] 20.62733

UT vs LT p-value:[1] 0.5112421


6W. Coronal Balance (C7PL to CSVL) - sd
All
[1] 15.35383
UT
[1] 17.5614
LT
[1] 14.00469


6M. Coronal Balance (C7PL to CSVL) - mean
All
[1] 22.33781
UT
[1] 22.75364
LT
[1] 23.62383

UT vs LT p-value:[1] 0.8004424


6M. Coronal Balance (C7PL to CSVL) - sd
All
[1] 16.88819
UT
[1] 17.67534
LT
[1] 16.75894


1Y. Coronal Balance (C7PL to CSVL) - mean
All
[1] 20.9818
UT
[1] 22.09419
LT
[1] 21.6814

UT vs LT p-value:[1] 0.9024385


1Y. Coronal Balance (C7PL to CSVL) - sd
All
[1] 16.0745
UT
```

```
[1] 16.72558
LT
[1] 16.48898
```

2Y. Coronal Balance (C7PL to CSVL) - mean
```
All
[1] 21.74561
UT
[1] 22.76773
LT
[1] 21.59125
```

UT vs LT p-value:[1] 0.7503399

2Y. Coronal Balance (C7PL to CSVL) - sd
```
All
[1] 18.22865
UT
[1] 18.74791
LT
[1] 17.70702
```

5Y. Coronal Balance (C7PL to CSVL) - mean
```
All
[1] 25.42418
UT
[1] 22.426
LT
[1] 29.50545
```

UT vs LT p-value:[1] 0.1772125

5Y. Coronal Balance (C7PL to CSVL) - sd
```
All
[1] 20.45071
UT
[1] 19.05233
LT
[1] 22.09284
```

Coronal Balance (C7PL to CSVL) tests all
Preop vs 6w p-value
0.003060812

Preop vs 2y p-value
0.01432238

Preop vs 5y p-value
0.3517997

6w vs 2y p-value
0.6877176

2y vs 5y p-value
0.2263993

6w vs 5y p-value
0.1133042

Coronal Balance (C7PL to CSVL) tests UT
Preop vs 6w p-value
0.04989489

Preop vs 2y p-value
0.05946465

Preop vs 5y p-value
0.072487

6w vs 2y p-value
0.9849426

2y vs 5y p-value
0.9394706

6w vs 5y p-value
0.9504635

Coronal Balance (C7PL to CSVL) tests LT
Preop vs 6w p-value
0.02911719

Preop vs 2y p-value
0.07906326

Preop vs 5y p-value
0.8074594

6w vs 2y p-value
0.7468165

2y vs 5y p-value
0.08511729

6w vs 5y p-value
0.0421976

Sagittal Balance - mean
All
[1] 80.41574

```
UT
[1] 79.89936
LT
[1] 79.91672

UT vs LT p-value:[1] 0.9988718


Sagittal Balance - sd
All
[1] 62.85756
UT
[1] 61.39535
LT
[1] 66.81294


6W. Sagittal Balance - mean
All
[1] 26.1777
UT
[1] 20.60783
LT
[1] 28.04017

UT vs LT p-value:[1] 0.2775311


6W. Sagittal Balance - sd
All
[1] 34.1803
UT
[1] 31.62051
LT
[1] 38.43379


6M. Sagittal Balance - mean
All
[1] 22.60868
UT
[1] 13.33822
LT
[1] 31.83797

UT vs LT p-value:[1] 0.01835329


6M. Sagittal Balance - sd
All
[1] 41.28151
UT
```

```
[1] 36.46192
LT
[1] 42.06556




1Y. Sagittal Balance - mean
All
[1] 31.69496
UT
[1] 23.412
LT
[1] 38.41729

UT vs LT p-value:[1] 0.1277416


1Y. Sagittal Balance - sd
All
[1] 48.10853
UT
[1] 49.84074
LT
[1] 48.66941




2Y. Sagittal Balance - mean
All
[1] 41.76593
UT
[1] 35.19311
LT
[1] 46.50222

UT vs LT p-value:[1] 0.2329367


2Y. Sagittal Balance - sd
All
[1] 47.28969
UT
[1] 44.50432
LT
[1] 49.15602




5Y. Sagittal Balance - mean
All
[1] 47.76544
UT
[1] 35.30065
LT
```

```
[1] 62.14788

UT vs LT p-value:[1] 0.04389935


5Y. Sagittal Balance - sd
All
[1] 53.06602
UT
[1] 45.48742
LT
[1] 58.40339



Sagittal Balance tests all
Preop vs 6w p-value
3.105499e-15

Preop vs 2y p-value
1.315205e-07

Preop vs 5y p-value
0.0001733978

6w vs 2y p-value
0.004450738

2y vs 5y p-value
0.4445516

6w vs 5y p-value
0.003187024

Sagittal Balance tests UT
Preop vs 6w p-value
1.357398e-07

Preop vs 2y p-value
0.0001305205

Preop vs 5y p-value
0.0004383962

6w vs 2y p-value
0.07586664

2y vs 5y p-value
0.9918795

6w vs 5y p-value
0.1246944

Sagittal Balance tests LT
```

```
Preop vs 6w p-value
5.674249e-07

Preop vs 2y p-value
0.002271294

Preop vs 5y p-value
0.1810322

6w vs 2y p-value
0.02890587

2y vs 5y p-value
0.2036065

6w vs 5y p-value
0.004113597

Sagittal T2-T5 - mean
All
[1] 9.880159
UT
[1] 9.787917
LT
[1] 9.940667

UT vs LT p-value:[1] 0.9301138


Sagittal T2-T5 - sd
All
[1] 8.484775
UT
[1] 10.0321
LT
[1] 7.424478



6W. Sagittal T2-T5 - mean
All
[1] 13.72075
UT
[1] 15.21761
LT
[1] 12.65661

UT vs LT p-value:[1] 0.1592035


6W. Sagittal T2-T5 - sd
All
[1] 8.724172
UT
```

```
[1] 9.838987
LT
[1] 8.232766




6M. Sagittal T2-T5 - mean
All
[1] 13.06254
UT
[1] 15.28978
LT
[1] 11.65651

UT vs LT p-value:[1] 0.06342868


6M. Sagittal T2-T5 - sd
All
[1] 9.501831
UT
[1] 10.33338
LT
[1] 9.265847




1Y. Sagittal T2-T5 - mean
All
[1] 13.16741
UT
[1] 15.97522
LT
[1] 10.98644

UT vs LT p-value:[1] 0.02091048


1Y. Sagittal T2-T5 - sd
All
[1] 10.21013
UT
[1] 12.39753
LT
[1] 8.154028




2Y. Sagittal T2-T5 - mean
All
[1] 13.68737
UT
[1] 17.21818
LT
```

```
[1] 11.29564

UT vs LT p-value:[1] 0.006804271


2Y. Sagittal T2-T5 - sd
All
[1] 10.25786
UT
[1] 11.85805
LT
[1] 8.568763



5Y. Sagittal T2-T5 - mean
All
[1] 16.70471
UT
[1] 20.10871
LT
[1] 13.51212

UT vs LT p-value:[1] 0.04539882


5Y. Sagittal T2-T5 - sd
All
[1] 12.7823
UT
[1] 14.60059
LT
[1] 10.7519



Sagittal T2-T5 tests all
Preop vs 6w p-value
0.0005578936

Preop vs 2y p-value
0.002088157

Preop vs 5y p-value
0.0001421992

6w vs 2y p-value
0.9786831

2y vs 5y p-value
0.1006742

6w vs 5y p-value
0.08985838
```

Sagittal T2-T5 tests UT
Preop vs 6w p-value
0.009501355

Preop vs 2y p-value
0.00176467

Preop vs 5y p-value
0.001190687

6w vs 2y p-value
0.3873482

2y vs 5y p-value
0.3663238

6w vs 5y p-value
0.1091853

Sagittal T2-T5 tests LT
Preop vs 6w p-value
0.06142316

Preop vs 2y p-value
0.368773

Preop vs 5y p-value
0.09575251

6w vs 2y p-value
0.3896955

2y vs 5y p-value
0.3179222

6w vs 5y p-value
0.6932087

Sagittal T5-T12 - mean
All
[1] 29.14908
UT
[1] 34.62184
LT
[1] 27.37172

UT vs LT p-value:[1] 0.0356883

Sagittal T5-T12 - sd
All
[1] 17.76927
UT

```
[1] 20.17371
LT
[1] 14.36257




6W. Sagittal T5-T12 - mean
All
[1] 35.2077
UT
[1] 35.78146
LT
[1] 36.94194

UT vs LT p-value:[1] 0.6356924


6W. Sagittal T5-T12 - sd
All
[1] 13.84089
UT
[1] 11.68403
LT
[1] 13.91396




6M. Sagittal T5-T12 - mean
All
[1] 37.69412
UT
[1] 37.08156
LT
[1] 40.13683

UT vs LT p-value:[1] 0.2410361


6M. Sagittal T5-T12 - sd
All
[1] 13.71477
UT
[1] 13.14751
LT
[1] 13.43799




1Y. Sagittal T5-T12 - mean
All
[1] 37.88812
UT
[1] 38.22913
LT
```

```
[1] 41.09133

UT vs LT p-value:[1] 0.2449936


1Y. Sagittal T5-T12 - sd
All
[1] 13.60215
UT
[1] 12.26746
LT
[1] 12.76919



2Y. Sagittal T5-T12 - mean
All
[1] 38.81209
UT
[1] 40.10978
LT
[1] 41.18291

UT vs LT p-value:[1] 0.6912301


2Y. Sagittal T5-T12 - sd
All
[1] 14.24226
UT
[1] 13.18073
LT
[1] 13.66471



5Y. Sagittal T5-T12 - mean
All
[1] 42.88353
UT
[1] 40.70613
LT
[1] 46.69758

UT vs LT p-value:[1] 0.1257993


5Y. Sagittal T5-T12 - sd
All
[1] 16.14944
UT
[1] 15.57681
LT
[1] 15.28228
```

Sagittal T5-T12 tests all
Preop vs 6w p-value
0.002492656

Preop vs 2y p-value
3.822721e-06

Preop vs 5y p-value
1.665164e-07

6w vs 2y p-value
0.04786855

2y vs 5y p-value
0.08775496

6w vs 5y p-value
0.001204054

Sagittal T5-T12 tests UT
Preop vs 6w p-value
0.7293233

Preop vs 2y p-value
0.1194235

Preop vs 5y p-value
0.134036

6w vs 2y p-value
0.09816026

2y vs 5y p-value
0.8621364

6w vs 5y p-value
0.1377875

Sagittal T5-T12 tests LT
Preop vs 6w p-value
0.0002263382

Preop vs 2y p-value
4.139887e-07

Preop vs 5y p-value
1.057887e-07

6w vs 2y p-value
0.09942463

```
2y vs 5y p-value
0.09339375


6w vs 5y p-value
0.003352377


Sagittal T2-T12 - mean
All
[1] 35.22197
UT
[1] 39.90673
LT
[1] 33.38262

UT vs LT p-value:[1] 0.06231162


Sagittal T2-T12 - sd
All
[1] 18.04679
UT
[1] 19.54847
LT
[1] 16.43948



6W. Sagittal T2-T12 - mean
All
[1] 44.7676
UT
[1] 46.19531
LT
[1] 45.58333

UT vs LT p-value:[1] 0.8157152


6W. Sagittal T2-T12 - sd
All
[1] 14.43577
UT
[1] 14.09788
LT
[1] 12.96642



6M. Sagittal T2-T12 - mean
All
[1] 48.38246
UT
[1] 50.68533
LT
```

```
[1] 49.04603

UT vs LT p-value:[1] 0.5754632



6M. Sagittal T2-T12 - sd
All
[1] 15.2538
UT
[1] 15.36393
LT
[1] 14.33354



1Y. Sagittal T2-T12 - mean
All
[1] 47.82461
UT
[1] 51.14109
LT
[1] 48.73241

UT vs LT p-value:[1] 0.3992509



1Y. Sagittal T2-T12 - sd
All
[1] 15.17845
UT
[1] 14.47056
LT
[1] 14.32949



2Y. Sagittal T2-T12 - mean
All
[1] 47.66922
UT
[1] 51.56333
LT
[1] 47.92786

UT vs LT p-value:[1] 0.2483952



2Y. Sagittal T2-T12 - sd
All
[1] 16.29913
UT
[1] 16.39816
LT
[1] 14.6167
```

```
5Y. Sagittal T2-T12 - mean
All
[1] 53.26824
UT
[1] 54.60097
LT
[1] 53.48636

UT vs LT p-value:[1] 0.7919418


5Y. Sagittal T2-T12 - sd
All
[1] 16.96503
UT
[1] 17.38702
LT
[1] 16.19265



Sagittal T2-T12 tests all
Preop vs 6w p-value
4.422467e-06

Preop vs 2y p-value
3.302942e-08

Preop vs 5y p-value
1.063313e-10

6w vs 2y p-value
0.146034

2y vs 5y p-value
0.03006078

6w vs 5y p-value
0.0006541637

Sagittal T2-T12 tests UT
Preop vs 6w p-value
0.07120428

Preop vs 2y p-value
0.002271363

Preop vs 5y p-value
0.0007978842

6w vs 2y p-value
```

0.09367552

2y vs 5y p-value
0.4466002

6w vs 5y p-value
0.0277195

Sagittal T2-T12 tests LT
Preop vs 6w p-value
9.532226e-06

Preop vs 2y p-value
1.039873e-06

Preop vs 5y p-value
2.28897e-07

6w vs 2y p-value
0.3640691

2y vs 5y p-value
0.1101406

6w vs 5y p-value
0.01930236

Lordosis (top of L1-S1) - mean
All
[1] -33.33932
UT
[1] -37.13388
LT
[1] -31.99803

UT vs LT p-value:[1] 0.1324747

Lordosis (top of L1-S1) - sd
All
[1] 18.4722
UT
[1] 17.60483
LT
[1] 18.43757

6W. Lordosis (top of L1-S1) - mean
All
[1] -53.19291
UT
[1] -55.41
LT

```
[1] -53.40968

UT vs LT p-value:[1] 0.4437531


6W. Lordosis (top of L1-S1) - sd
All
[1] 13.74339
UT
[1] 13.96687
LT
[1] 13.04767



6M. Lordosis (top of L1-S1) - mean
All
[1] -51.80355
UT
[1] -53.70267
LT
[1] -52.64109

UT vs LT p-value:[1] 0.6575971


6M. Lordosis (top of L1-S1) - sd
All
[1] 13.26392
UT
[1] 12.64692
LT
[1] 11.71408



1Y. Lordosis (top of L1-S1) - mean
All
[1] -50.21151
UT
[1] -51.8013
LT
[1] -50.94733

UT vs LT p-value:[1] 0.7403


1Y. Lordosis (top of L1-S1) - sd
All
[1] 13.39463
UT
[1] 14.17277
LT
[1] 11.56299
```

```
2Y. Lordosis (top of L1-S1) - mean
All
[1] -49.81788
UT
[1] -52.11152
LT
[1] -50.35281

UT vs LT p-value:[1] 0.4893299


2Y. Lordosis (top of L1-S1) - sd
All
[1] 13.71632
UT
[1] 13.17019
LT
[1] 12.28808



5Y. Lordosis (top of L1-S1) - mean
All
[1] -50.31058
UT
[1] -51.16323
LT
[1] -50.78412

UT vs LT p-value:[1] 0.9092628


5Y. Lordosis (top of L1-S1) - sd
All
[1] 13.42462
UT
[1] 14.61839
LT
[1] 11.77053



Lordosis (top of L1-S1) tests all
Preop vs 6w p-value
1.606492e-19

Preop vs 2y p-value
3.105112e-14

Preop vs 5y p-value
3.672314e-12
```

6w vs 2y p-value
0.05570628

2y vs 5y p-value
0.8104892

6w vs 5y p-value
0.1567381

Lordosis (top of L1-S1) tests UT
Preop vs 6w p-value
1.663928e-07

Preop vs 2y p-value
8.971258e-06

Preop vs 5y p-value
0.0002454054

6w vs 2y p-value
0.2416684

2y vs 5y p-value
0.7725226

6w vs 5y p-value
0.2042885

Lordosis (top of L1-S1) tests LT
Preop vs 6w p-value
6.464052e-12

Preop vs 2y p-value
1.548947e-09

Preop vs 5y p-value
1.626072e-08

6w vs 2y p-value
0.1889154

2y vs 5y p-value
0.8683615

6w vs 5y p-value
0.3164753

Pelvic Incidence - mean
All
[1] 57.32962
UT
[1] 58.04776
LT

```
[1] 57.08727

UT vs LT p-value:[1] 0.7048287


Pelvic Incidence - sd
All
[1] 12.92752
UT
[1] 13.92194
LT
[1] 12.6795



6W. Pelvic Incidence - mean
All
[1] 57.50635
UT
[1] 57.34813
LT
[1] 57.68935

UT vs LT p-value:[1] 0.8933454


6W. Pelvic Incidence - sd
All
[1] 12.72999
UT
[1] 13.79345
LT
[1] 12.39857



6M. Pelvic Incidence - mean
All
[1] 57.43876
UT
[1] 57.69844
LT
[1] 57.5775

UT vs LT p-value:[1] 0.9627459


6M. Pelvic Incidence - sd
All
[1] 12.77058
UT
[1] 13.99149
LT
[1] 12.17404
```

```
1Y. Pelvic Incidence - mean
All
[1] 56.98151
UT
[1] 57.1213
LT
[1] 57.02533

UT vs LT p-value:[1] 0.969961


1Y. Pelvic Incidence - sd
All
[1] 12.63303
UT
[1] 13.32586
LT
[1] 12.49009



2Y. Pelvic Incidence - mean
All
[1] 56.86807
UT
[1] 56.78174
LT
[1] 57.12017

UT vs LT p-value:[1] 0.8961766


2Y. Pelvic Incidence - sd
All
[1] 12.64936
UT
[1] 13.6459
LT
[1] 12.37675



5Y. Pelvic Incidence - mean
All
[1] 57.14551
UT
[1] 57.83129
LT
[1] 57.29265

UT vs LT p-value:[1] 0.8634318
```

```
5Y. Pelvic Incidence - sd
All
[1] 12.37284
UT
[1] 13.09987
LT
[1] 11.93297




Pelvic Incidence tests all
Preop vs 6w p-value
0.9118388

Preop vs 2y p-value
0.7749771

Preop vs 5y p-value
0.9214629

6w vs 2y p-value
0.6942759

2y vs 5y p-value
0.8833555

6w vs 5y p-value
0.8474302

Pelvic Incidence tests UT
Preop vs 6w p-value
0.8041958

Preop vs 2y p-value
0.6555537

Preop vs 5y p-value
0.9441941

6w vs 2y p-value
0.8418443

2y vs 5y p-value
0.7356601

6w vs 5y p-value
0.8759052

Pelvic Incidence tests LT
Preop vs 6w p-value
0.786399
```

```
Preop vs 2y p-value
0.9883745

Preop vs 5y p-value
0.9366251

6w vs 2y p-value
0.8018419

2y vs 5y p-value
0.947563

6w vs 5y p-value
0.8783383

Pelvic Tilt - mean
All
[1] 28.13797
UT
[1] 29.38327
LT
[1] 27.26227

UT vs LT p-value:[1] 0.2271137


Pelvic Tilt - sd
All
[1] 9.504553
UT
[1] 9.916312
LT
[1] 8.268536




6W. Pelvic Tilt - mean
All
[1] 20.33603
UT
[1] 19.08042
LT
[1] 20.7671

UT vs LT p-value:[1] 0.3418861


6W. Pelvic Tilt - sd
All
[1] 9.170741
UT
[1] 8.980618
LT
[1] 9.449312
```

```
6M. Pelvic Tilt - mean
All
[1] 23.21298
UT
[1] 23.17511
LT
[1] 22.90656

UT vs LT p-value:[1] 0.8688681


6M. Pelvic Tilt - sd
All
[1] 8.719259
UT
[1] 8.593542
LT
[1] 7.958946



1Y. Pelvic Tilt - mean
All
[1] 23.64202
UT
[1] 23.64152
LT
[1] 23.76683

UT vs LT p-value:[1] 0.9457442


1Y. Pelvic Tilt - sd
All
[1] 9.400252
UT
[1] 10.05492
LT
[1] 8.390729



2Y. Pelvic Tilt - mean
All
[1] 23.30915
UT
[1] 23.09489
LT
[1] 23.57414

UT vs LT p-value:[1] 0.765077
```

```
2Y. Pelvic Tilt - sd
All
[1] 8.14145
UT
[1] 8.080561
LT
[1] 8.010542




5Y. Pelvic Tilt - mean
All
[1] 24.80725
UT
[1] 25.6029
LT
[1] 24.27559

UT vs LT p-value:[1] 0.5414092


5Y. Pelvic Tilt - sd
All
[1] 8.535904
UT
[1] 8.713313
LT
[1] 8.694201




Pelvic Tilt tests all
Preop vs 6w p-value
1.145462e-10

Preop vs 2y p-value
2.120399e-05

Preop vs 5y p-value
0.0124794

6w vs 2y p-value
0.007831914

2y vs 5y p-value
0.2408959

6w vs 5y p-value
0.0008481963

Pelvic Tilt tests UT
Preop vs 6w p-value
```

5.736509e-07

Preop vs 2y p-value
0.001064304

Preop vs 5y p-value
0.07763912

6w vs 2y p-value
0.02565724

2y vs 5y p-value
0.2088897

6w vs 5y p-value
0.002057593

Pelvic Tilt tests LT
Preop vs 6w p-value
6.752917e-05

Preop vs 2y p-value
0.01304572

Preop vs 5y p-value
0.1029524

6w vs 2y p-value
0.08118715

2y vs 5y p-value
0.7019291

6w vs 5y p-value
0.07086717

Sacral Slope - mean
All
[1] 29.16887
UT
[1] 28.68469
LT
[1] 29.76409

UT vs LT p-value:[1] 0.6351505

Sacral Slope - sd
All
[1] 11.79675
UT
[1] 13.01713
LT
[1] 10.53582

```
6W. Sacral Slope - mean
All
[1] 37.1704
UT
[1] 38.43438
LT
[1] 36.87403

UT vs LT p-value:[1] 0.4666164


6W. Sacral Slope - sd
All
[1] 10.83215
UT
[1] 11.36505
LT
[1] 10.75989



6M. Sacral Slope - mean
All
[1] 34.20091
UT
[1] 34.52333
LT
[1] 34.63953

UT vs LT p-value:[1] 0.9554193


6M. Sacral Slope - sd
All
[1] 10.56087
UT
[1] 11.44759
LT
[1] 9.405277



1Y. Sacral Slope - mean
All
[1] 33.30605
UT
[1] 33.43652
LT
[1] 33.225

UT vs LT p-value:[1] 0.9144979
```

1Y. Sacral Slope - sd
All
[1] 9.570563
UT
[1] 11.02087
LT
[1] 8.545606

2Y. Sacral Slope - mean
All
[1] 33.79681
UT
[1] 34.25413
LT
[1] 33.59759

UT vs LT p-value:[1] 0.7484465

2Y. Sacral Slope - sd
All
[1] 10.00184
UT
[1] 10.98583
LT
[1] 9.456738

5Y. Sacral Slope - mean
All
[1] 32.33797
UT
[1] 32.22774
LT
[1] 33.01706

UT vs LT p-value:[1] 0.7323264

5Y. Sacral Slope - sd
All
[1] 9.232743
UT
[1] 9.922095
LT
[1] 8.449545

```
Sacral Slope tests all
Preop vs 6w p-value
3.457491e-08

Preop vs 2y p-value
0.0008739056

Preop vs 5y p-value
0.03739082

6w vs 2y p-value
0.01189328

2y vs 5y p-value
0.3129219

6w vs 5y p-value
0.001261725

Sacral Slope tests UT
Preop vs 6w p-value
0.0001614065

Preop vs 2y p-value
0.02628577

Preop vs 5y p-value
0.1730269

6w vs 2y p-value
0.07304834

2y vs 5y p-value
0.40301

6w vs 5y p-value
0.01253971

Sacral Slope tests LT
Preop vs 6w p-value
0.0002468874

Preop vs 2y p-value
0.03475547

Preop vs 5y p-value
0.09824427

6w vs 2y p-value
0.0785702

2y vs 5y p-value
0.7618061
```

```
6w vs 5y p-value
0.05623723

RLL - mean
All
[1] -31.20526
UT
[1] -27.85592
LT
[1] -32.39636

UT vs LT p-value:[1] 0.154616


RLL - sd
All
[1] 16.99722
UT
[1] 16.80203
LT
[1] 16.77838



6W. RLL - mean
All
[1] -11.42754
UT
[1] -9.145833
LT
[1] -11.28629

UT vs LT p-value:[1] 0.3370016


6W. RLL - sd
All
[1] 11.9567
UT
[1] 11.50005
LT
[1] 11.594



6M. RLL - mean
All
[1] -12.80843
UT
[1] -11.07022
LT
[1] -12.05703

UT vs LT p-value:[1] 0.6174753
```

```
6M. RLL - sd
All
[1] 11.60084
UT
[1] 10.0016
LT
[1] 10.29455




1Y. RLL - mean
All
[1] -14.11714
UT
[1] -12.61391
LT
[1] -13.4085

UT vs LT p-value:[1] 0.7288452


1Y. RLL - sd
All
[1] 12.30395
UT
[1] 12.27742
LT
[1] 10.8009




2Y. RLL - mean
All
[1] -14.36068
UT
[1] -12.09326
LT
[1] -13.89947

UT vs LT p-value:[1] 0.4039805


2Y. RLL - sd
All
[1] 11.96885
UT
[1] 11.1951
LT
[1] 10.4542
```

```
5Y. RLL - mean
All
[1] -14.12043
UT
[1] -13.69226
LT
[1] -13.73882

UT vs LT p-value:[1] 0.9873371


5Y. RLL - sd
All
[1] 11.74509
UT
[1] 12.18539
LT
[1] 11.28904



RLL tests all
Preop vs 6w p-value
1.275195e-22

Preop vs 2y p-value
2.62431e-17

Preop vs 5y p-value
1.461175e-14

6w vs 2y p-value
0.05681475

2y vs 5y p-value
0.8935707

6w vs 5y p-value
0.1304363

RLL tests UT
Preop vs 6w p-value
7.735522e-09

Preop vs 2y p-value
5.801655e-07

Preop vs 5y p-value
4.000946e-05

6w vs 2y p-value
0.2111799

2y vs 5y p-value
```

0.5618426

6w vs 5y p-value
0.1029905

RLL tests LT
Preop vs 6w p-value
1.92115e-13

Preop vs 2y p-value
2.325444e-11

Preop vs 5y p-value
2.790424e-09

6w vs 2y p-value
0.1986092

2y vs 5y p-value
0.9463958

6w vs 5y p-value
0.3168057

Global Tilt - mean
All
[1] 37.41583
UT
[1] 38.92653
LT
[1] 36.41877

UT vs LT p-value:[1] 0.4184608

Global Tilt - sd
All
[1] 15.65997
UT
[1] 17.42111
LT
[1] 14.70759

6W. Global Tilt - mean
All
[1] 21.55992
UT
[1] 19.74587
LT
[1] 21.96746

UT vs LT p-value:[1] 0.3050412

```
6W. Global Tilt - sd
All
[1] 10.83496
UT
[1] 10.5807
LT
[1] 11.41784




6M. Global Tilt - mean
All
[1] 24.50067
UT
[1] 23.00636
LT
[1] 24.96547

UT vs LT p-value:[1] 0.4004804


6M. Global Tilt - sd
All
[1] 11.97089
UT
[1] 11.89371
LT
[1] 11.76929




1Y. Global Tilt - mean
All
[1] 25.85863
UT
[1] 24.41311
LT
[1] 27.14678

UT vs LT p-value:[1] 0.2963713


1Y. Global Tilt - sd
All
[1] 13.00601
UT
[1] 13.4457
LT
[1] 12.75651
```

```
2Y. Global Tilt - mean
All
[1] 27.43893
UT
[1] 26.4969
LT
[1] 28.09375

UT vs LT p-value:[1] 0.5298836


2Y. Global Tilt - sd
All
[1] 12.0053
UT
[1] 12.47319
LT
[1] 12.31073



5Y. Global Tilt - mean
All
[1] 29.58783
UT
[1] 28.96097
LT
[1] 30.75765

UT vs LT p-value:[1] 0.6224227


5Y. Global Tilt - sd
All
[1] 14.34015
UT
[1] 13.21061
LT
[1] 16.02301



Global Tilt tests all
Preop vs 6w p-value
4.272585e-18

Preop vs 2y p-value
5.125482e-08

Preop vs 5y p-value
0.0004999244

6w vs 2y p-value
0.0001208684
```

2y vs 5y p-value
0.3002192

6w vs 5y p-value
9.829168e-05

Global Tilt tests UT
Preop vs 6w p-value
5.59285e-09

Preop vs 2y p-value
0.0001586354

Preop vs 5y p-value
0.004912815

6w vs 2y p-value
0.007881775

2y vs 5y p-value
0.4229919

6w vs 5y p-value
0.002004502

Global Tilt tests LT
Preop vs 6w p-value
1.112664e-08

Preop vs 2y p-value
0.0009521047

Preop vs 5y p-value
0.09106801

6w vs 2y p-value
0.006702508

2y vs 5y p-value
0.4090431

6w vs 5y p-value
0.00687607

T1 Sagittal Tilt - mean
All
[1] 0.89531
UT
[1] 0.8575145
LT
[1] 0.8724589

UT vs LT p-value:[1] 0.9916898

```
T1 Sagittal Tilt - sd
All
[1] 6.901359
UT
[1] 6.946382
LT
[1] 7.298485




6W. T1 Sagittal Tilt - mean
All
[1] -3.535074
UT
[1] -3.736336
LT
[1] -3.705679

UT vs LT p-value:[1] 0.9714292


6W. T1 Sagittal Tilt - sd
All
[1] 4.071843
UT
[1] 4.556314
LT
[1] 3.57108




6M. T1 Sagittal Tilt - mean
All
[1] -4.06248
UT
[1] -5.498332
LT
[1] -3.174677

UT vs LT p-value:[1] 0.00597074


6M. T1 Sagittal Tilt - sd
All
[1] 4.353201
UT
[1] 4.022662
LT
[1] 4.249171
```

```
1Y. T1 Sagittal Tilt - mean
All
[1] -3.725109
UT
[1] -4.923439
LT
[1] -2.966462

UT vs LT p-value:[1] 0.09418523


1Y. T1 Sagittal Tilt - sd
All
[1] 5.255397
UT
[1] 6.193764
LT
[1] 4.705629




2Y. T1 Sagittal Tilt - mean
All
[1] -2.808082
UT
[1] -3.439201
LT
[1] -2.423156

UT vs LT p-value:[1] 0.3055629


2Y. T1 Sagittal Tilt - sd
All
[1] 4.720359
UT
[1] 4.545917
LT
[1] 4.865099




5Y. T1 Sagittal Tilt - mean
All
[1] -1.768644
UT
[1] -3.390563
LT
[1] 0.03445605

UT vs LT p-value:[1] 0.02231991


5Y. T1 Sagittal Tilt - sd
```

```
All
[1] 6.098895
UT
[1] 4.717571
LT
[1] 6.926982
```

T1 Sagittal Tilt tests all
Preop vs 6w p-value
1.393605e-08

Preop vs 2y p-value
4.2005e-06

Preop vs 5y p-value
0.006783126

6w vs 2y p-value
0.230332

2y vs 5y p-value
0.2321972

6w vs 5y p-value
0.03628728

T1 Sagittal Tilt tests UT
Preop vs 6w p-value
0.0004759627

Preop vs 2y p-value
0.001144449

Preop vs 5y p-value
0.002342076

6w vs 2y p-value
0.7670634

2y vs 5y p-value
0.9652215

6w vs 5y p-value
0.7533782

T1 Sagittal Tilt tests LT
Preop vs 6w p-value
7.165564e-05

Preop vs 2y p-value
0.006555795

```
Preop vs 5y p-value
0.5872806


6w vs 2y p-value
0.1287851


2y vs 5y p-value
0.07761634


6w vs 5y p-value
0.005681698


Thoracolumbar L2-T10 - mean
All
[1] 10.09445
UT
[1] 16.55271
LT
[1] 6.202381

UT vs LT p-value:[1] 0.009809645



Thoracolumbar L2-T10 - sd
All
[1] 19.92459
UT
[1] 23.39716
LT
[1] 15.62605




6W. Thoracolumbar L2-T10 - mean
All
[1] 7.497417
UT
[1] 6.133617
LT
[1] 8.152759

UT vs LT p-value:[1] 0.2979986



6W. Thoracolumbar L2-T10 - sd
All
[1] 10.57649
UT
[1] 10.17245
LT
[1] 9.392997
```

```
6M. Thoracolumbar L2-T10 - mean
All
[1] 7.796053
UT
[1] 6.291905
LT
[1] 9.751129

UT vs LT p-value:[1] 0.07149419


6M. Thoracolumbar L2-T10 - sd
All
[1] 10.17511
UT
[1] 9.338628
LT
[1] 9.711992



1Y. Thoracolumbar L2-T10 - mean
All
[1] 7.449565
UT
[1] 6.337111
LT
[1] 9.205

UT vs LT p-value:[1] 0.1664197


1Y. Thoracolumbar L2-T10 - sd
All
[1] 10.88731
UT
[1] 10.3551
LT
[1] 10.34863



2Y. Thoracolumbar L2-T10 - mean
All
[1] 7.408621
UT
[1] 4.766444
LT
[1] 10.82107

UT vs LT p-value:[1] 0.01483952


2Y. Thoracolumbar L2-T10 - sd
```

```
All
[1] 12.79969
UT
[1] 11.04109
LT
[1] 13.49672
```

```
5Y. Thoracolumbar L2-T10 - mean
All
[1] 7.891912
UT
[1] 3.082581
LT
[1] 12.78
```

```
UT vs LT p-value:[1] 0.007065408
```

```
5Y. Thoracolumbar L2-T10 - sd
All
[1] 14.57937
UT
[1] 10.06361
LT
[1] 16.94312
```

```
Thoracolumbar L2-T10 tests all
Preop vs 6w p-value
0.1975031
```

```
Preop vs 2y p-value
0.2075124
```

```
Preop vs 5y p-value
0.378653
```

```
6w vs 2y p-value
0.9538072
```

```
2y vs 5y p-value
0.820896
```

```
6w vs 5y p-value
0.8451113
```

```
Thoracolumbar L2-T10 tests UT
Preop vs 6w p-value
0.006293502
```

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

0.002521864

Preop vs 5y p-value
0.000777807

6w vs 2y p-value
0.5388478

2y vs 5y p-value
0.4932721

6w vs 5y p-value
0.1966093

Thoracolumbar L2-T10 tests LT
Preop vs 6w p-value
0.4031079

Preop vs 2y p-value
0.08629132

Preop vs 5y p-value
0.06847461

6w vs 2y p-value
0.2249391

2y vs 5y p-value
0.5732357

6w vs 5y p-value
0.1549637

RSA - mean
All
[1] 24.90394
UT
[1] 26.06367
LT
[1] 24.03138

UT vs LT p-value:[1] 0.4641439

RSA - sd
All
[1] 14.09656
UT
[1] 15.81032
LT
[1] 12.85144

```
6W. RSA - mean
All
[1] 8.855785
UT
[1] 7.159348
LT
[1] 9.113729

UT vs LT p-value:[1] 0.2369487


6W. RSA - sd
All
[1] 8.375629
UT
[1] 7.928084
LT
[1] 8.865584



6M. RSA - mean
All
[1] 11.92252
UT
[1] 10.28182
LT
[1] 12.32828

UT vs LT p-value:[1] 0.2443634


6M. RSA - sd
All
[1] 9.382194
UT
[1] 8.51521
LT
[1] 9.484359



1Y. RSA - mean
All
[1] 13.46641
UT
[1] 11.972
LT
[1] 14.70932

UT vs LT p-value:[1] 0.1772613


1Y. RSA - sd
```

```
All
[1] 10.00494
UT
[1] 10.5739
LT
[1] 9.615454




2Y. RSA - mean
All
[1] 15.0433
UT
[1] 13.79429
LT
[1] 15.78571

UT vs LT p-value:[1] 0.3185885


2Y. RSA - sd
All
[1] 9.497141
UT
[1] 9.670365
LT
[1] 9.802041




5Y. RSA - mean
All
[1] 17.15725
UT
[1] 16.20097
LT
[1] 18.25647

UT vs LT p-value:[1] 0.4808679


5Y. RSA - sd
All
[1] 11.56455
UT
[1] 10.4014
LT
[1] 12.92169




RSA tests all
Preop vs 6w p-value
5.407071e-23
```

```
Preop vs 2y p-value
5.282738e-10

Preop vs 5y p-value
4.842609e-05

6w vs 2y p-value
3.426983e-07

2y vs 5y p-value
0.2042676

6w vs 5y p-value
8.1873e-07

RSA tests UT
Preop vs 6w p-value
1.783886e-10

Preop vs 2y p-value
1.99111e-05

Preop vs 5y p-value
0.001191172

6w vs 2y p-value
0.0007649056

2y vs 5y p-value
0.3180437

6w vs 5y p-value
0.0001421322

RSA tests LT
Preop vs 6w p-value
9.953301e-12

Preop vs 2y p-value
0.0001126156

Preop vs 5y p-value
0.03812072

6w vs 2y p-value
0.0002195756

2y vs 5y p-value
0.3412786

6w vs 5y p-value
0.0005985329
```

```
RPV - mean
All
[1] -13.65526
UT
[1] -14.56327
LT
[1] -12.91697

UT vs LT p-value:[1] 0.2860396


RPV - sd
All
[1] 8.352423
UT
[1] 8.973744
LT
[1] 6.838108



6W. RPV - mean
All
[1] -5.758254
UT
[1] -4.400833
LT
[1] -6.162742

UT vs LT p-value:[1] 0.2394746


6W. RPV - sd
All
[1] 7.806764
UT
[1] 7.556897
LT
[1] 7.983781



6M. RPV - mean
All
[1] -8.687934
UT
[1] -8.518667
LT
[1] -8.331094

UT vs LT p-value:[1] 0.8859282


6M. RPV - sd
```

```
All
[1] 7.161054
UT
[1] 7.053948
LT
[1] 6.164593
```

```
1Y. RPV - mean
All
[1] -9.313193
UT
[1] -9.265217
LT
[1] -9.419833
```

```
UT vs LT p-value:[1] 0.9136583
```

```
1Y. RPV - sd
All
[1] 7.166444
UT
[1] 8.177811
LT
[1] 5.830123
```

```
2Y. RPV - mean
All
[1] -8.755294
UT
[1] -8.247174
LT
[1] -9.103103
```

```
UT vs LT p-value:[1] 0.5173185
```

```
2Y. RPV - sd
All
[1] 6.653436
UT
[1] 7.028439
LT
[1] 6.186714
```

```
5Y. RPV - mean
All
[1] -10.37768
```

```
UT
[1] -10.89226
LT
[1] -9.785588

UT vs LT p-value:[1] 0.4923841


5Y. RPV - sd
All
[1] 6.396002
UT
[1] 6.607279
LT
[1] 6.278502



RPV tests all
Preop vs 6w p-value
1.025799e-13

Preop vs 2y p-value
4.723301e-07

Preop vs 5y p-value
0.002256949

6w vs 2y p-value
0.001364533

2y vs 5y p-value
0.1007442

6w vs 5y p-value
1.562604e-05

RPV tests UT
Preop vs 6w p-value
3.184183e-08

Preop vs 2y p-value
0.0002351296

Preop vs 5y p-value
0.0389132

6w vs 2y p-value
0.01221239

2y vs 5y p-value
0.09781836

6w vs 5y p-value
```

0.0001409533

RPV tests LT
Preop vs 6w p-value
1.145975e-06

Preop vs 2y p-value
0.001443021

Preop vs 5y p-value
0.02488087

6w vs 2y p-value
0.02551705

2y vs 5y p-value
0.614493

6w vs 5y p-value
0.01642413

Quality of Life

ODI - Score (%) - mean
All
[1] 45.38583
UT
[1] 43.30612
LT
[1] 48.29508

UT vs LT p-value:[1] 0.138456

ODI - Score (%) - sd
All
[1] 17.30953
UT
[1] 18.32599
LT
[1] 16.19295

6M. ODI - Score (%) - mean
All
[1] 33.18852
UT
[1] 32.32609
LT
[1] 33.29688

UT vs LT p-value:[1] 0.7860108

```
6M. ODI - Score (%) - sd
All
[1] 18.95071
UT
[1] 18.2733
LT
[1] 18.68849



1Y. ODI - Score (%) - mean
All
[1] 32.06504
UT
[1] 31.21277
LT
[1] 32.5082

UT vs LT p-value:[1] 0.6991855


1Y. ODI - Score (%) - sd
All
[1] 17.90674
UT
[1] 18.49669
LT
[1] 15.39764



2Y. ODI - Score (%) - mean
All
[1] 34.96774
UT
[1] 30.85106
LT
[1] 36.91667

UT vs LT p-value:[1] 0.1562687


2Y. ODI - Score (%) - sd
All
[1] 22.68768
UT
[1] 22.03651
LT
[1] 21.48258
```

```
5Y. ODI - Score (%) - mean
All
[1] 37.46875
UT
[1] 34.925
LT
[1] 38.46

UT vs LT p-value:[1] 0.4803839


5Y. ODI - Score (%) - sd
All
[1] 23.45071
UT
[1] 26.02601
LT
[1] 19.87123



ODI - Score (%) tests all
Preop vs 6m p-value
2.641367e-07

Preop vs 2y p-value
6.135507e-05

Preop vs 5y p-value
0.005987551

6m vs 2y p-value
0.5047968

2y vs 5y p-value
0.427148

6w vs 5y p-value
6.517998e-34

ODI - Score (%) tests UT
Preop vs 6m p-value
0.004359141

Preop vs 2y p-value
0.003450846

Preop vs 5y p-value
0.09027846

6m vs 2y p-value
0.72591

2y vs 5y p-value
```

0.4376713

6w vs 5y p-value
1.817713e-12

ODI - Score (%) tests LT
Preop vs 6m p-value
9.37933e-06

Preop vs 2y p-value
0.001365108

Preop vs 5y p-value
0.005919652

6m vs 2y p-value
0.2378699

2y vs 5y p-value
0.6966599

6w vs 5y p-value
3.60124e-22

SRS22 - Function / Activity - mean
All
[1] 2.737
UT
[1] 2.8456
LT
[1] 2.591613

UT vs LT p-value:[1] 0.05511297

SRS22 - Function / Activity - sd
All
[1] 0.7049566
UT
[1] 0.6986055
LT
[1] 0.6764909

6M. SRS22 - Function / Activity - mean
All
[1] 2.990574
UT
[1] 3.040217
LT
[1] 2.98125

UT vs LT p-value:[1] 0.6407194

6M. SRS22 - Function / Activity - sd
All
[1] 0.7217498
UT
[1] 0.5369274
LT
[1] 0.7841435

1Y. SRS22 - Function / Activity - mean
All
[1] 3.076371
UT
[1] 3.071875
LT
[1] 3.006774

UT vs LT p-value:[1] 0.6580784

1Y. SRS22 - Function / Activity - sd
All
[1] 0.779309
UT
[1] 0.7852975
LT
[1] 0.7326524

2Y. SRS22 - Function / Activity - mean
All
[1] 3.149032
UT
[1] 3.244681
LT
[1] 3.123443

UT vs LT p-value:[1] 0.464053

2Y. SRS22 - Function / Activity - sd
All
[1] 0.8607866
UT
[1] 0.880417
LT
[1] 0.8080262

```
5Y. SRS22 - Function / Activity - mean
All
[1] 3.186735
UT
[1] 3.3325
LT
[1] 3.107843

UT vs LT p-value:[1] 0.2540803


5Y. SRS22 - Function / Activity - sd
All
[1] 0.9242593
UT
[1] 0.9881704
LT
[1] 0.8391885



SRS22 - Function / Activity tests all
Preop vs 6m p-value
0.005209729

Preop vs 2y p-value
4.40169e-05

Preop vs 5y p-value
8.759409e-05

6m vs 2y p-value
0.1187939

2y vs 5y p-value
0.7560881

6w vs 5y p-value
3.606983e-13

SRS22 - Function / Activity tests UT
Preop vs 6m p-value
0.1276993

Preop vs 2y p-value
0.01573023

Preop vs 5y p-value
0.01044835

6m vs 2y p-value
0.1793191

2y vs 5y p-value
```

0.6653166

6w vs 5y p-value
2.067139e-13

SRS22 - Function / Activity tests LT
Preop vs 6m p-value
0.0002102953

Preop vs 2y p-value
0.0001318648

Preop vs 5y p-value
0.0006075494

6m vs 2y p-value
0.5243242

2y vs 5y p-value
0.9208224

6w vs 5y p-value
4.909452e-13

SRS22 - Pain - mean
All
[1] 2.301538
UT
[1] 2.3044
LT
[1] 2.216935

UT vs LT p-value:[1] 0.571902

SRS22 - Pain - sd
All
[1] 0.8126304
UT
[1] 0.8158936
LT
[1] 0.8060195

6M. SRS22 - Pain - mean
All
[1] 3.313525
UT
[1] 3.323913
LT
[1] 3.31875

UT vs LT p-value:[1] 0.9749666

```
6M. SRS22 - Pain - sd
All
[1] 0.8821938
UT
[1] 0.7756531
LT
[1] 0.9419879




1Y. SRS22 - Pain - mean
All
[1] 3.368468
UT
[1] 3.338542
LT
[1] 3.386935

UT vs LT p-value:[1] 0.8053658


1Y. SRS22 - Pain - sd
All
[1] 1.008803
UT
[1] 1.071797
LT
[1] 0.9456346




2Y. SRS22 - Pain - mean
All
[1] 3.308871
UT
[1] 3.551064
LT
[1] 3.244262

UT vs LT p-value:[1] 0.1586165


2Y. SRS22 - Pain - sd
All
[1] 1.157409
UT
[1] 1.056784
LT
[1] 1.182444
```

```
5Y. SRS22 - Pain - mean
All
[1] 3.087245
UT
[1] 3.1325
LT
[1] 3.071569

UT vs LT p-value:[1] 0.8142032


5Y. SRS22 - Pain - sd
All
[1] 1.201338
UT
[1] 1.309803
LT
[1] 1.103325



SRS22 - Pain tests all
Preop vs 6m p-value
2.786954e-18

Preop vs 2y p-value
7.428262e-14

Preop vs 5y p-value
9.838289e-08

6m vs 2y p-value
0.9717105

2y vs 5y p-value
0.1669307

6w vs 5y p-value
5.316567e-13

SRS22 - Pain tests UT
Preop vs 6m p-value
1.065709e-08

Preop vs 2y p-value
5.538537e-09

Preop vs 5y p-value
0.0008853114

6m vs 2y p-value
0.2399515

2y vs 5y p-value
```

0.1091694

6w vs 5y p-value
4.671229e-13

SRS22 - Pain tests LT
Preop vs 6m p-value
1.115399e-10

Preop vs 2y p-value
1.556111e-07

Preop vs 5y p-value
1.326198e-05

6m vs 2y p-value
0.6755068

2y vs 5y p-value
0.4264022

6w vs 5y p-value
5.712676e-13

SRS22 - Self image / Appearance - mean
All
[1] 2.049846
UT
[1] 1.87
LT
[1] 2.135484

UT vs LT p-value:[1] 0.01954816

SRS22 - Self image / Appearance - sd
All
[1] 0.6234338
UT
[1] 0.5035588
LT
[1] 0.6809099

6M. SRS22 - Self image / Appearance - mean
All
[1] 3.304918
UT
[1] 3.481522
LT
[1] 3.235156

UT vs LT p-value:[1] 0.1421289

```
6M. SRS22 - Self image / Appearance - sd
All
[1] 0.8756676
UT
[1] 0.8941389
LT
[1] 0.8120462




1Y. SRS22 - Self image / Appearance - mean
All
[1] 3.332258
UT
[1] 3.34625
LT
[1] 3.322258

UT vs LT p-value:[1] 0.8747993




1Y. SRS22 - Self image / Appearance - sd
All
[1] 0.7851455
UT
[1] 0.8711294
LT
[1] 0.669875




2Y. SRS22 - Self image / Appearance - mean
All
[1] 3.193548
UT
[1] 3.429787
LT
[1] 3.07541

UT vs LT p-value:[1] 0.0580529




2Y. SRS22 - Self image / Appearance - sd
All
[1] 0.9629935
UT
[1] 1.013209
LT
[1] 0.8638877
```

```
5Y. SRS22 - Self image / Appearance - mean
All
[1] 3.084184
UT
[1] 3.2875
LT
[1] 2.963725

UT vs LT p-value:[1] 0.1417772


5Y. SRS22 - Self image / Appearance - sd
All
[1] 1.012794
UT
[1] 1.140218
LT
[1] 0.8744758



SRS22 - Self image / Appearance tests all
Preop vs 6m p-value
4.5482e-29

Preop vs 2y p-value
4.774737e-23

Preop vs 5y p-value
1.469375e-15

6m vs 2y p-value
0.3434209

2y vs 5y p-value
0.4152314

6w vs 5y p-value
5.367606e-13

SRS22 - Self image / Appearance tests UT
Preop vs 6m p-value
1.892906e-16

Preop vs 2y p-value
5.130801e-14

Preop vs 5y p-value
1.721936e-09

6m vs 2y p-value
0.7945165

2y vs 5y p-value
```

0.543378

6w vs 5y p-value
2.487551e-13

SRS22 - Self image / Appearance tests LT
Preop vs 6m p-value
6.535681e-13

Preop vs 2y p-value
8.544067e-10

Preop vs 5y p-value
2.967336e-07

6m vs 2y p-value
0.02032001

2y vs 5y p-value
0.4999885

6w vs 5y p-value
8.610168e-13

SRS22 - Mental health - mean
All
[1] 2.921385
UT
[1] 2.916
LT
[1] 2.915806

UT vs LT p-value:[1] 0.9991302

SRS22 - Mental health - sd
All
[1] 0.8953279
UT
[1] 0.9963935
LT
[1] 0.8443827

6M. SRS22 - Mental health - mean
All
[1] 3.406639
UT
[1] 3.554348
LT
[1] 3.367344

UT vs LT p-value:[1] 0.2727963

6M. SRS22 - Mental health - sd
All
[1] 0.8748881
UT
[1] 0.881339
LT
[1] 0.8712703

1Y. SRS22 - Mental health - mean
All
[1] 3.475403
UT
[1] 3.55
LT
[1] 3.479839

UT vs LT p-value:[1] 0.674828

1Y. SRS22 - Mental health - sd
All
[1] 0.8549591
UT
[1] 0.8986988
LT
[1] 0.8247931

2Y. SRS22 - Mental health - mean
All
[1] 3.331855
UT
[1] 3.565957
LT
[1] 3.254918

UT vs LT p-value:[1] 0.1108344

2Y. SRS22 - Mental health - sd
All
[1] 1.008527
UT
[1] 1.079709
LT
[1] 0.8725301

5Y. SRS22 - Mental health - mean
All
[1] 3.298469
UT
[1] 3.445
LT
[1] 3.228431

UT vs LT p-value:[1] 0.3188781

5Y. SRS22 - Mental health - sd
All
[1] 1.00202
UT
[1] 1.079874
LT
[1] 0.9434116

SRS22 - Mental health tests all
Preop vs 6m p-value
1.979881e-05

Preop vs 2y p-value
0.0007223483

Preop vs 5y p-value
0.003637971

6m vs 2y p-value
0.5348257

2y vs 5y p-value
0.806078

6w vs 5y p-value
2.342302e-13

SRS22 - Mental health tests UT
Preop vs 6m p-value
0.001241491

Preop vs 2y p-value
0.002757877

Preop vs 5y p-value
0.01920686

6m vs 2y p-value
0.9547857

2y vs 5y p-value

```
0.6039477

6w vs 5y p-value
1.338575e-13

SRS22 - Mental health tests LT
Preop vs 6m p-value
0.0002647627

Preop vs 2y p-value
0.03045711

Preop vs 5y p-value
0.0690852

6m vs 2y p-value
0.08376415

2y vs 5y p-value
0.8786229

6w vs 5y p-value
3.080019e-13

SRS22 - SRS Subtotal score - mean
All
[1] 2.506231
UT
[1] 2.4838
LT
[1] 2.472419

UT vs LT p-value:[1] 0.9191315


SRS22 - SRS Subtotal score - sd
All
[1] 0.5888871
UT
[1] 0.575166
LT
[1] 0.6042763



6M. SRS22 - SRS Subtotal score - mean
All
[1] 3.255492
UT
[1] 3.354565
LT
[1] 3.222812

UT vs LT p-value:[1] 0.2892153
```

```
6M. SRS22 - SRS Subtotal score - sd
All
[1] 0.6756633
UT
[1] 0.5995728
LT
[1] 0.6919778




1Y. SRS22 - SRS Subtotal score - mean
All
[1] 3.323145
UT
[1] 3.337083
LT
[1] 3.31

UT vs LT p-value:[1] 0.8439715




1Y. SRS22 - SRS Subtotal score - sd
All
[1] 0.7107804
UT
[1] 0.760193
LT
[1] 0.648835




2Y. SRS22 - SRS Subtotal score - mean
All
[1] 3.242903
UT
[1] 3.44234
LT
[1] 3.172131

UT vs LT p-value:[1] 0.1044387




2Y. SRS22 - SRS Subtotal score - sd
All
[1] 0.8732081
UT
[1] 0.8767559
LT
[1] 0.8120983
```

5Y. SRS22 - SRS Subtotal score - mean
All
[1] 3.16602
UT
[1] 3.299
LT
[1] 3.095882

UT vs LT p-value:[1] 0.2994017

5Y. SRS22 - SRS Subtotal score - sd
All
[1] 0.9081858
UT
[1] 1.002407
LT
[1] 0.8033136

SRS22 - SRS Subtotal score tests all
Preop vs 6m p-value
5.960475e-18

Preop vs 2y p-value
2.017802e-13

Preop vs 5y p-value
3.417195e-09

6m vs 2y p-value
0.8993853

2y vs 5y p-value
0.5248112

6w vs 5y p-value
3.907577e-13

SRS22 - SRS Subtotal score tests UT
Preop vs 6m p-value
1.243987e-10

Preop vs 2y p-value
1.434867e-08

Preop vs 5y p-value
2.489603e-05

6m vs 2y p-value
0.5739062

2y vs 5y p-value

0.4836256

6w vs 5y p-value
2.35703e-13

SRS22 - SRS Subtotal score tests LT
Preop vs 6m p-value
2.506969e-11

Preop vs 2y p-value
3.605091e-07

Preop vs 5y p-value
1.476828e-05

6m vs 2y p-value
0.1842041

2y vs 5y p-value
0.6196713

6w vs 5y p-value
5.138926e-13

SF36 - PCS - mean
All
[1] 33.1957
UT
[1] 33.13163
LT
[1] 32.13869

UT vs LT p-value:[1] 0.4785594

SF36 - PCS - sd
All
[1] 7.609383
UT
[1] 7.726337
LT
[1] 6.671866

6M. SF36 - PCS - mean
All
[1] 37.69933
UT
[1] 38.14682
LT
[1] 37.61794

UT vs LT p-value:[1] 0.7451637

```
6M. SF36 - PCS - sd
All
[1] 8.544207
UT
[1] 8.514085
LT
[1] 7.872421




1Y. SF36 - PCS - mean
All
[1] 38.61164
UT
[1] 39.04565
LT
[1] 37.6829

UT vs LT p-value:[1] 0.3905862




1Y. SF36 - PCS - sd
All
[1] 8.712728
UT
[1] 8.086252
LT
[1] 8.16609




2Y. SF36 - PCS - mean
All
[1] 39.15934
UT
[1] 40.25289
LT
[1] 38.36984

UT vs LT p-value:[1] 0.3206407




2Y. SF36 - PCS - sd
All
[1] 9.848393
UT
[1] 9.940389
LT
[1] 9.107156
```

```
5Y. SF36 - PCS - mean
All
[1] 37.41546
UT
[1] 38.6955
LT
[1] 36.3664

UT vs LT p-value:[1] 0.3195528


5Y. SF36 - PCS - sd
All
[1] 11.20565
UT
[1] 11.60901
LT
[1] 10.08994



SF36 - PCS tests all
Preop vs 6m p-value
1.922192e-05

Preop vs 2y p-value
2.251152e-07

Preop vs 5y p-value
0.001697199

6m vs 2y p-value
0.2198412

2y vs 5y p-value
0.2291401

6w vs 5y p-value
1.018515e-63

SF36 - PCS tests UT
Preop vs 6m p-value
0.003930214

Preop vs 2y p-value
0.0002282296

Preop vs 5y p-value
0.01158439

6m vs 2y p-value
0.285715

2y vs 5y p-value
```

```
0.5111

6w vs 5y p-value
1.652374e-30

SF36 - PCS tests LT
Preop vs 6m p-value
0.0002039053

Preop vs 2y p-value
3.558592e-05

Preop vs 5y p-value
0.01290518

6m vs 2y p-value
0.8979378

2y vs 5y p-value
0.2795708

6w vs 5y p-value
7.836835e-42

SF36 - MCS - mean
All
[1] 40.67375
UT
[1] 41.95776
LT
[1] 40.10754

UT vs LT p-value:[1] 0.433693


SF36 - MCS - sd
All
[1] 12.09412
UT
[1] 12.85983
LT
[1] 11.48953



6M. SF36 - MCS - mean
All
[1] 45.60563
UT
[1] 47.8525
LT
[1] 45.77825

UT vs LT p-value:[1] 0.3853768
```

```
6M. SF36 - MCS - sd
All
[1] 12.25145
UT
[1] 11.95693
LT
[1] 12.31679




1Y. SF36 - MCS - mean
All
[1] 45.48172
UT
[1] 44.99196
LT
[1] 46.68952

UT vs LT p-value:[1] 0.5068176


1Y. SF36 - MCS - sd
All
[1] 12.54993
UT
[1] 14.05073
LT
[1] 11.66205




2Y. SF36 - MCS - mean
All
[1] 45.13557
UT
[1] 46.27711
LT
[1] 45.40738

UT vs LT p-value:[1] 0.7166485


2Y. SF36 - MCS - sd
All
[1] 12.23986
UT
[1] 12.33076
LT
[1] 11.91885
```

```
5Y. SF36 - MCS - mean
All
[1] 44.58361
UT
[1] 45.99475
LT
[1] 44.1556


UT vs LT p-value:[1] 0.4863939



5Y. SF36 - MCS - sd
All
[1] 12.32628
UT
[1] 12.70002
LT
[1] 12.01214




SF36 - MCS tests all
Preop vs 6m p-value
0.001659429


Preop vs 2y p-value
0.004094832


Preop vs 5y p-value
0.01844923


6m vs 2y p-value
0.7660176


2y vs 5y p-value
0.7415884


6w vs 5y p-value
9.336918e-70


SF36 - MCS tests UT
Preop vs 6m p-value
0.02431659


Preop vs 2y p-value
0.09991349


Preop vs 5y p-value
0.1417428


6m vs 2y p-value
0.5421883


2y vs 5y p-value
```

```
0.9176471

6w vs 5y p-value
2.529305e-31

SF36 - MCS tests LT
Preop vs 6m p-value
0.001262495

Preop vs 2y p-value
0.01375908

Preop vs 5y p-value
0.07457433

6m vs 2y p-value
0.3032342

2y vs 5y p-value
0.5847462

6w vs 5y p-value
1.33258e-40
```

Surgery

```
Total Operative Blood Loss st1+st2+st3 - mean
All
[1] 2038.088
UT
[1] 1995.022
LT
[1] 2132.302

UT vs LT p-value:[1] 0.5900444


Total Operative Blood Loss st1+st2+st3 - sd
All
[1] 1491.783
UT
[1] 1280.577
LT
[1] 1329.364



Total surgical time st1+st2+st3 - mean
All
[1] 315.8284
UT
[1] 322
LT
```

```
[1] 334.7879

UT vs LT p-value:[1] 0.7179277


Total surgical time st1+st2+st3 - sd
All
[1] 181.9499
UT
[1] 205.9294
LT
[1] 161.9307



Number of Posterior Instrumented Levels - mean
All
[1] 10.67442
UT
[1] 14.51064
LT
[1] 9.265625

UT vs LT p-value:[1] 1.626679e-16


Number of Posterior Instrumented Levels - sd
All
[1] 3.708442
UT
[1] 2.918251
LT
[1] 0.8589803



Pelvic fixation - table
All
variable
Yes
134
UT
variable
Yes
 50
LT
variable
Yes
 66

Pelvic fixation - proportion
All
variable
Yes
```

```
   1
UT
variable
Yes
   1
LT
variable
Yes
   1




Surgical Approach - table
All
variable
        Anterior-Posterior                           Posterior
                        2                                121
        Posterior-Anterior Posterior-Posterior-Anterior
                       10                                  1
UT
variable
        Anterior-Posterior                           Posterior
                        2                                 41
        Posterior-Anterior Posterior-Posterior-Anterior
                        6                                  1
LT
variable
        Posterior Posterior-Anterior
               62                  4

Surgical Approach - proportion
All
variable
        Anterior-Posterior                           Posterior
              0.014925373                        0.902985075
        Posterior-Anterior Posterior-Posterior-Anterior
              0.074626866                        0.007462687
UT
variable
        Anterior-Posterior                           Posterior
                     0.04                               0.82
        Posterior-Anterior Posterior-Posterior-Anterior
                     0.12                               0.02
LT
variable
        Posterior Posterior-Anterior
       0.93939394          0.06060606




Number of Interbody Fusions - mean
All
[1] 1.171642
UT
```

```
[1] 1.22
LT
[1] 1.272727

UT vs LT p-value:[1] 0.8399707


Number of Interbody Fusions - sd
All
[1] 1.283359
UT
[1] 1.555635
LT
[1] 1.130629



Decompression - table
All
variable
 No Yes
101  33
UT
variable
 No Yes
 42   8
LT
variable
 No Yes
 49  17

Decompression - proportion
All
variable
       No       Yes
0.7537313 0.2462687
UT
variable
  No  Yes
0.84 0.16
LT
variable
       No       Yes
0.7424242 0.2575758



Interbody Fusion - table
All
variable
 No Yes
 52  82
UT
variable
```

```
 No Yes
 19  31
LT
variable
 No Yes
 23  43


Interbody Fusion - proportion
All
variable
        No       Yes
0.3880597 0.6119403
UT
variable
  No  Yes
0.38 0.62
LT
variable
        No       Yes
0.3484848 0.6515152




Osteotomy - table
All
variable
 No Yes
 53  81
UT
variable
 No Yes
 21  29
LT
variable
 No Yes
 27  39

Osteotomy - proportion
All
variable
        No       Yes
0.3955224 0.6044776
UT
variable
  No  Yes
0.42 0.58
LT
variable
        No       Yes
0.4090909 0.5909091




3CO - table
```

```
All
variable
 No Yes
100  34
UT
variable
 No Yes
 41   9
LT
variable
 No Yes
 49  17


3CO - proportion
All
variable
       No       Yes
0.7462687 0.2537313
UT
variable
  No  Yes
0.82 0.18
LT
variable
       No       Yes
0.7424242 0.2575758
```

Reinterventions

```
   group reiqs patients total
1:   all   168       56   134
2:    UT    62       20    50
3:    LT    91       28    66


  p_val_1_total p_val_2_total  p_val_1_2
1  1.774297e-12  1.976333e-06 0.02328012
```

Impacts

```
   Complication Impact all_num all_patients UT_num UT_patients LT_num
1:                   0       1            1      0           0      1
2:       Adverse Event       4            3      1           1      0
3:  Major Complication     197           65     66          22    105
4:  Minor Complication     162           83     59          29     84
   LT_patients total_all UT LT p_val_1_total p_val_2_total p_val_1_2
1:           1       134 50 66  1.000000e+00  1.0000000000 1.0000000
2:           0       134 50 66  6.250000e-01  0.2500000000 1.0000000
3:          33       134 50 66  4.348703e-06  0.0016005802 0.1770014
4:          43       134 50 66  3.290846e-07  0.0004639398 0.1249182
```

Categories

```
          Category of the complication all_num all_patients UT_num UT_patients
1:    Central neurologic complications       2            2      1           1
2:                         Iatrogenic       32           25     11           8
3:          Infectious complications        18           14      5           4
4:          Mechanical complications       197           85     78          31
5:               Other complications        70           36     19          11
6:                               Pain       10           10      5           5
7: Peripheral neurologic complications      35           28      7           6
   LT_num LT_patients total_all UT LT p_val_1_total  p_val_2_total  p_val_1_2
1:      0           0       134 50 66   1.000000e+00  0.5000000000 1.00000000
2:     17          14       134 50 66   4.551384e-03  0.1081290214 0.28627872
3:      7           6       134 50 66   3.088379e-02  0.1153182983 0.75390625
4:    104          46       134 50 66   5.444609e-07  0.0008320421 0.11001560
5:     40          22       134 50 66   3.460011e-04  0.0869488997 0.08014331
6:      4           4       134 50 66   3.017578e-01  0.1795654297 1.00000000
7:     18          14       134 50 66   1.951256e-04  0.0435585219 0.11531830
```