

# Descriptive Stats

## Filters

```
discarded_patients <- readLines('five_years/discarded_patients')

clinical_data %<>%
  .[, followup_2y :=
    !is.na(`2 YEAR VISIT - Date of visit`) |
    !is.na(`3 YEAR VISIT - Date of visit`)] %>%
  .[, followup_5y :=
    !is.na(`5 YEAR VISIT - Date of visit`) |
    !is.na(`6 YEAR VISIT - Date of visit`)]

clinical_data %<>%
  .[Site != 'ANK Op'] %>%
  .[`Vital status` == 'Alive'] %>%
  .[!(`Code of the patient` %in% discarded_patients)] %>%
  .[`st1. Date of Stage 1` %>% as.Date() < as.Date('2015-3-15')]

total <- clinical_data[, `Code of the patient` %>% uniqueN]
patients_2y <- clinical_data[followup_2y==TRUE, `Code of the patient` %>% uniqueN]
patients_5y <- clinical_data[followup_5y==TRUE, `Code of the patient` %>% uniqueN]
```

- Number of Patients with 'st1. Date of Stage 1' < '2015-3-15': 361
- Number of patients with visit in 2 years: 316
- Number of patients with visit in 5 years: 258

```
clinical_data %<>% .[followup_2y==TRUE]
```

Total patients for the stats 316

## Demographics

Age

```
[1] "mean"
[1] 51.96835
[1] "sd"
[1] 19.11516
```

Gender

```
[1] "table"
variable
Female   Male
```

```

      245      71
[1] "proportion"
variable
      Female      Male
0.7753165 0.2246835

```

```

Prior Spine Surgery
[1] "table"
variable
      No Yes
213 103
[1] "proportion"
variable
      No      Yes
0.6740506 0.3259494

```

```

Height (cm)_First Visit
[1] "mean"
[1] 163.0665
[1] "sd"
[1] 9.411847

```

```

Weight (kgs)_First Visit
[1] "mean"
[1] 65.69146
[1] "sd"
[1] 12.77674

```

```

BMI_First Visit
[1] "mean"
[1] 24.74019
[1] "sd"
[1] 4.618282

```

```

ASA classification
[1] "table"
variable
      1  2  3  4
100 169 47  0
[1] "proportion"
variable
      1      2      3      4
0.3164557 0.5348101 0.1487342 0.0000000

```

```

Tobacco use_First Visit
[1] "table"
variable
      Current User: 1 pack per day      Current User: 2 packs per day

```

	17		1
Current User: 3 packs or more per day		Current User: Less than 1pk per day	
	2		48
Ex-User: 0-6 months		Ex-User: 1 year or greater	
	9		2
Ex-User: 2 yrs or greater		Ex-User: 6-12 months	
	41		4
Non-User			
	192		

[1] "proportion"  
variable

Current User: 1 pack per day		Current User: 2 packs per day	
	0.053797468		0.003164557
Current User: 3 packs or more per day		Current User: Less than 1pk per day	
	0.006329114		0.151898734
Ex-User: 0-6 months		Ex-User: 1 year or greater	
	0.028481013		0.006329114
Ex-User: 2 yrs or greater		Ex-User: 6-12 months	
	0.129746835		0.012658228
Non-User			
	0.607594937		

ESSG Diagnosis

[1] "table"  
variable

	Congenital		Degenerative
	9		108
	Failed-back		Idiopathic
	18		145
	Neuromuscular	Other: Ankylosing Spondylitis	
	4		1
	Other: hyperkyphosis	Other: radiotherapy induced	
	1		1
	Other: Spondylolisthesis	Post-traumatic	
	1		12
	Scheuermann	Syndromic	
	12		4

[1] "proportion"  
variable

	Congenital		Degenerative
	0.028481013		0.341772152
	Failed-back		Idiopathic
	0.056962025		0.458860759
	Neuromuscular	Other: Ankylosing Spondylitis	
	0.012658228		0.003164557
	Other: hyperkyphosis	Other: radiotherapy induced	
	0.003164557		0.003164557
	Other: Spondylolisthesis	Post-traumatic	
	0.003164557		0.037974684
	Scheuermann	Syndromic	
	0.037974684		0.012658228

## Radiology

Major curve Cobb angle

```
[1] "mean"  
[1] 41.12619  
[1] "sd"  
[1] 23.16212
```

6W. Major curve Cobb angle

```
[1] "mean"  
[1] 23.13217  
[1] "sd"  
[1] 16.61597
```

2Y. Major curve Cobb angle

```
[1] "mean"  
[1] 23.53952  
[1] "sd"  
[1] 17.55128
```

5Y. Major curve Cobb angle

```
[1] "mean"  
[1] 32.21214  
[1] "sd"  
[1] 23.92076
```

Major curve Cobb angle tests

6w vs 2y p-value

0.782403

2y vs 5y p-value

0.0003923058

Coronal Balance (C7PL to CSVL)

```
[1] "mean"  
[1] 22.47753  
[1] "sd"  
[1] 19.86181
```

6W. Coronal Balance (C7PL to CSVL)

```
[1] "mean"  
[1] 19.75734  
[1] "sd"  
[1] 14.57299
```

2Y. Coronal Balance (C7PL to CSVL)

```
[1] "mean"  
[1] 18.61454  
[1] "sd"
```

[1] 15.95797

5Y. Coronal Balance (C7PL to CSVL)

[1] "mean"

[1] 20.39557

[1] "sd"

[1] 17.36668

Coronal Balance (C7PL to CSVL) tests

6w vs 2y p-value

0.4113995

2y vs 5y p-value

0.3478185

Sagittal Balance

[1] "mean"

[1] 39.58853

[1] "sd"

[1] 63.57475

6W. Sagittal Balance

[1] "mean"

[1] 20.28433

[1] "sd"

[1] 39.70533

2Y. Sagittal Balance

[1] "mean"

[1] 22.97082

[1] "sd"

[1] 49.32633

5Y. Sagittal Balance

[1] "mean"

[1] 32.77252

[1] "sd"

[1] 51.26513

Sagittal Balance tests

6w vs 2y p-value

0.5090756

2y vs 5y p-value

0.08372516

Sagittal T2-T5

[1] "mean"

[1] 11.08386

[1] "sd"

[1] 9.783287

6W. Sagittal T2-T5

[1] "mean"

[1] 13.92137

[1] "sd"

[1] 8.432202

2Y. Sagittal T2-T5

[1] "mean"

[1] 14.1005

[1] "sd"

[1] 10.03214

5Y. Sagittal T2-T5

[1] "mean"

[1] 15.9775

[1] "sd"

[1] 11.73164

Sagittal T2-T5 tests

6w vs 2y p-value

0.8297433

2y vs 5y p-value

0.1309486

Sagittal T5-T12

[1] "mean"

[1] 33.15757

[1] "sd"

[1] 18.88459

6W. Sagittal T5-T12

[1] "mean"

[1] 33.634

[1] "sd"

[1] 13.89727

2Y. Sagittal T5-T12

[1] "mean"

[1] 35.73506

[1] "sd"

[1] 14.2656

5Y. Sagittal T5-T12

[1] "mean"

[1] 40.28382

```
[1] "sd"  
[1] 17.01595
```

```
Sagittal T5-T12 tests  
6w vs 2y p-value  
0.09387183  
2y vs 5y p-value  
0.01178024
```

```
Sagittal T2-T12  
[1] "mean"  
[1] 40.00771  
[1] "sd"  
[1] 19.62697
```

```
6W. Sagittal T2-T12  
[1] "mean"  
[1] 43.40126  
[1] "sd"  
[1] 15.32812
```

```
2Y. Sagittal T2-T12  
[1] "mean"  
[1] 45.5086  
[1] "sd"  
[1] 15.20779
```

```
5Y. Sagittal T2-T12  
[1] "mean"  
[1] 49.6021  
[1] "sd"  
[1] 17.39252
```

```
Sagittal T2-T12 tests  
6w vs 2y p-value  
0.1190943  
2y vs 5y p-value  
0.02723941
```

```
Lordosis (top of L1-S1)  
[1] "mean"  
[1] -44.1742  
[1] "sd"  
[1] 20.2541
```

```
6W. Lordosis (top of L1-S1)  
[1] "mean"  
[1] -51.58366
```

```
[1] "sd"  
[1] 14.56253
```

2Y. Lordosis (top of L1-S1)

```
[1] "mean"  
[1] -51.55844  
[1] "sd"  
[1] 15.30574
```

5Y. Lordosis (top of L1-S1)

```
[1] "mean"  
[1] -50.8096  
[1] "sd"  
[1] 16.16677
```

Lordosis (top of L1-S1) tests

```
6w vs 2y p-value  
0.9843705  
2y vs 5y p-value  
0.6673397
```

Pelvic Incidence

```
[1] "mean"  
[1] 54.11681  
[1] "sd"  
[1] 12.75079
```

6W. Pelvic Incidence

```
[1] "mean"  
[1] 54.15233  
[1] "sd"  
[1] 12.59486
```

2Y. Pelvic Incidence

```
[1] "mean"  
[1] 53.85629  
[1] "sd"  
[1] 12.44315
```

5Y. Pelvic Incidence

```
[1] "mean"  
[1] 54.87136  
[1] "sd"  
[1] 12.16575
```

Pelvic Incidence tests

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



0.7842142  
2y vs 5y p-value  
0.4510473

Pelvic Tilt  
[1] "mean"  
[1] 22.01349  
[1] "sd"  
[1] 10.87544

6W. Pelvic Tilt  
[1] "mean"  
[1] 18.15285  
[1] "sd"  
[1] 9.579329

2Y. Pelvic Tilt  
[1] "mean"  
[1] 19.26158  
[1] "sd"  
[1] 9.67103

5Y. Pelvic Tilt  
[1] "mean"  
[1] 21.71664  
[1] "sd"  
[1] 10.25609

Pelvic Tilt tests  
6w vs 2y p-value  
0.1838049  
2y vs 5y p-value  
0.02719146

Sacral Slope  
[1] "mean"  
[1] 32.63161  
[1] "sd"  
[1] 11.14336

6W. Sacral Slope  
[1] "mean"  
[1] 35.97939  
[1] "sd"  
[1] 10.08457

2Y. Sacral Slope  
[1] "mean"

```
[1] 34.68847
[1] "sd"
[1] 10.23718
```

5Y. Sacral Slope

```
[1] "mean"
[1] 33.17064
[1] "sd"
[1] 10.51063
```

Sacral Slope tests

```
6w vs 2y p-value
0.1417728
2y vs 5y p-value
0.1854322
```

LGap

```
[1] "mean"
[1] 17.63533
[1] "sd"
[1] 19.8406
```

6W. LGap

```
[1] "mean"
[1] 10.12703
[1] "sd"
[1] 13.00174
```

2Y. LGap

```
[1] "mean"
[1] 10.24074
[1] "sd"
[1] 14.52541
```

5Y. LGap

```
[1] "mean"
[1] 11.38093
[1] "sd"
[1] 14.56427
```

LGap tests

```
6w vs 2y p-value
0.9243776
2y vs 5y p-value
0.4756898
```

Global Tilt

```
[1] "mean"
```

```
[1] 25.99693
[1] "sd"
[1] 17.53483
```

```
6W. Global Tilt
[1] "mean"
[1] 18.68068
[1] "sd"
[1] 12.09692
```

```
2Y. Global Tilt
[1] "mean"
[1] 20.90642
[1] "sd"
[1] 14.20046
```

```
5Y. Global Tilt
[1] "mean"
[1] 24.4828
[1] "sd"
[1] 15.65169
```

```
Global Tilt tests
6w vs 2y p-value
0.06400325
2y vs 5y p-value
0.03488173
```

```
T1 Sagittal Tilt
[1] "mean"
[1] -2.117953
[1] "sd"
[1] 5.946738
```

```
6W. T1 Sagittal Tilt
[1] "mean"
[1] -3.330343
[1] "sd"
[1] 4.129364
```

```
2Y. T1 Sagittal Tilt
[1] "mean"
[1] -3.794678
[1] "sd"
[1] 4.352309
```

```
5Y. T1 Sagittal Tilt
```

```
[1] "mean"
[1] -2.848132
[1] "sd"
[1] 5.127965
```

T1 Sagittal Tilt tests  
6w vs 2y p-value  
0.2425672  
2y vs 5y p-value  
0.08501019

### Quality of Life

ODI - Score (%)\_First Visit  
[1] "mean"  
[1] 37.15615  
[1] "sd"  
[1] 19.64125

2Y. ODI - Score (%)  
[1] "mean"  
[1] 27.1512  
[1] "sd"  
[1] 21.27678

5Y. ODI - Score (%)  
[1] "mean"  
[1] 28.13208  
[1] "sd"  
[1] 21.13086

ODI - Score (%)\_First Visit tests2y vs 5y p-value  
0.6084934

SRS22 - Function / Activity\_First Visit  
[1] "mean"  
[1] 3.080265  
[1] "sd"  
[1] 0.882816

2Y. SRS22 - Function / Activity  
[1] "mean"  
[1] 3.475876  
[1] "sd"  
[1] 0.9267519

5Y. SRS22 - Function / Activity

```
[1] "mean"
[1] 3.514279
[1] "sd"
[1] 0.922512
```

SRS22 - Function / Activity\_First Visit tests2y vs 5y p-value  
0.6443057

SRS22 - Pain\_First Visit

```
[1] "mean"
[1] 2.623841
[1] "sd"
[1] 0.9758274
```

2Y. SRS22 - Pain

```
[1] "mean"
[1] 3.492955
[1] "sd"
[1] 1.09944
```

5Y. SRS22 - Pain

```
[1] "mean"
[1] 3.381628
[1] "sd"
[1] 1.126051
```

SRS22 - Pain\_First Visit tests2y vs 5y p-value  
0.2674046

SRS22 - Self image / Appearance\_First Visit

```
[1] "mean"
[1] 2.407119
[1] "sd"
[1] 0.7341006
```

2Y. SRS22 - Self image / Appearance

```
[1] "mean"
[1] 3.432646
[1] "sd"
[1] 0.9237291
```

5Y. SRS22 - Self image / Appearance

```
[1] "mean"
[1] 3.375581
[1] "sd"
[1] 0.922662
```

SRS22 - Self image / Appearance\_First Visit tests2y vs 5y p-value  
0.4921839

SRS22 - Mental health\_First Visit  
[1] "mean"  
[1] 3.179238  
[1] "sd"  
[1] 0.8769695

2Y. SRS22 - Mental health  
[1] "mean"  
[1] 3.517354  
[1] "sd"  
[1] 0.9470824

5Y. SRS22 - Mental health  
[1] "mean"  
[1] 3.554884  
[1] "sd"  
[1] 0.8930871

SRS22 - Mental health\_First Visit tests2y vs 5y p-value  
0.649045

SRS22 - SRS Subtotal score\_First Visit  
[1] "mean"  
[1] 2.827848  
[1] "sd"  
[1] 0.6994789

2Y. SRS22 - SRS Subtotal score  
[1] "mean"  
[1] 3.479278  
[1] "sd"  
[1] 0.8481069

5Y. SRS22 - SRS Subtotal score  
[1] "mean"  
[1] 3.441528  
[1] "sd"  
[1] 0.8783351

SRS22 - SRS Subtotal score\_First Visit tests2y vs 5y p-value  
0.6274817

SF36 - PCS\_First Visit  
[1] "mean"  
[1] 36.44554

```
[1] "sd"  
[1] 9.502467
```

```
2Y. SF36 - PCS  
[1] "mean"  
[1] 42.16451  
[1] "sd"  
[1] 10.3725
```

```
5Y. SF36 - PCS  
[1] "mean"  
[1] 41.79438  
[1] "sd"  
[1] 11.17991
```

```
SF36 - PCS_First Visit tests2y vs 5y p-value  
0.7074415
```

```
SF36 - MCS_First Visit  
[1] "mean"  
[1] 42.92071  
[1] "sd"  
[1] 12.21683
```

```
2Y. SF36 - MCS  
[1] "mean"  
[1] 46.7894  
[1] "sd"  
[1] 12.26477
```

```
5Y. SF36 - MCS  
[1] "mean"  
[1] 47.62  
[1] "sd"  
[1] 11.38044
```

```
SF36 - MCS_First Visit tests2y vs 5y p-value  
0.43733
```

## **Surgery**

```
Total Operative Blood Loss st1+st2+st3  
[1] "mean"  
[1] 1555.871  
[1] "sd"  
[1] 1339.169
```

Total surgical time st1+st2+st3

```
[1] "mean"
[1] 312.3079
[1] "sd"
[1] 162.0614
```

Number of Posterior Instrumented Levels

```
[1] "mean"
[1] 9.196203
[1] "sd"
[1] 4.505318
```

Pelvic Fixation

```
[1] "table"
variable
  No Yes
200 116
[1] "proportion"
variable
      No      Yes
0.6329114 0.3670886
```

Surgical Approach

```
[1] "table"
variable
      Anterior      Anterior-Posterior
      1            2
      Posterior      Posterior-Anterior
      299           11
      Posterior-Posterior Posterior-Posterior-Anterior
      2            1
[1] "proportion"
variable
      Anterior      Anterior-Posterior
0.003164557      0.006329114
      Posterior      Posterior-Anterior
0.946202532      0.034810127
      Posterior-Posterior Posterior-Posterior-Anterior
0.006329114      0.003164557
```

Number of Interbody Fusions

```
[1] "mean"
[1] 0.7879747
[1] "sd"
[1] 1.158535
```

Decompression

```
[1] "table"
```



```

variable
  No Yes
229 87
[1] "proportion"
variable
  No      Yes
0.7246835 0.2753165

```

```

Interbody Fusion
[1] "table"
variable
  No Yes
184 132
[1] "proportion"
variable
  No      Yes
0.5822785 0.4177215

```

```

Osteotomy
[1] "table"
variable
  No Yes
172 144
[1] "proportion"
variable
  No      Yes
0.5443038 0.4556962

```

```

3CO
[1] "table"
variable
  No Yes
266 50
[1] "proportion"
variable
  No      Yes
0.8417722 0.1582278

```

```

uiv_t10_12_l1
[1] "table"
variable
  No Yes
291 25
[1] "proportion"
variable
  No      Yes
0.92088608 0.07911392

```