

Clusters Descriptives

Initial Patients: 1180

Number of patients

Demographics

	variable	All.mean	1.mean	2.mean	3.mean
Age	Age	53.55	60.59	64.33	28.33
Height (cm)_First Visit	Height (cm)_First Visit	162.65	162.88	159.74	164.62
Weight (kgs)_First Visit	Weight (kgs)_First Visit	66.27	68.10	69.44	59.40
BMI_First Visit	BMI_First Visit	25.04	25.60	27.29	21.88
	p.val_1.2	p.val_1.3	p.val_2.3	p.val_all	
Age	0.0000	0.0000	0	0	
Height (cm)_First Visit	0.0000	0.0093	0	0	
Weight (kgs)_First Visit	0.1608	0.0000	0	0	
BMI_First Visit	0.0000	0.0000	0	0	

\$Gender

\$Gender\$All

\$Gender\$All\$table

variable

Female Male

938 242

\$Gender\$All\$proportion

variable

Female Male

0.7949153 0.2050847

\$Gender\$'1'

\$Gender\$'1'\$table

variable

Female Male

505 144

\$Gender\$'1'\$proportion

variable

Female Male

0.7781202 0.2218798

\$Gender\$'2'

\$Gender\$'2'\$table

variable

Female	Male
212	33

\$Gender\$'2'\$proportion
variable

Female	Male
0.8653061	0.1346939

\$Gender\$'3'
\$Gender\$'3'\$table
variable

Female	Male
221	65

\$Gender\$'3'\$proportion
variable

Female	Male
0.7727273	0.2272727

\$'Prior Spine Surgery'
\$'Prior Spine Surgery'\$All
\$'Prior Spine Surgery'\$All\$table
variable

No	Yes
795	382

\$'Prior Spine Surgery'\$All\$proportion
variable

No	Yes
0.675446	0.324554

\$'Prior Spine Surgery'\$'1'
\$'Prior Spine Surgery'\$'1'\$table
variable

No	Yes
429	219

\$'Prior Spine Surgery'\$'1'\$proportion
variable

No	Yes
0.662037	0.337963

\$'Prior Spine Surgery'\$'2'
\$'Prior Spine Surgery'\$'2'\$table
variable

No	Yes
120	125

\$'Prior Spine Surgery'\$'2'\$proportion

```
variable
      No      Yes
0.4897959 0.5102041
```

```

$'Prior Spine Surgery'$'3'
$'Prior Spine Surgery'$'3'$table
variable
      No      Yes
246    38
```

```

$'Prior Spine Surgery'$'3'$proportion
variable
      No      Yes
0.8661972 0.1338028
```

```

$'ASA classification'
$'ASA classification'$All
$'ASA classification'$All$table
variable
      1      2      3      4
304 639 228    3
```

```

$'ASA classification'$All$proportion
variable
      1      2      3      4
0.258943782 0.544293015 0.194207836 0.002555366
```

```

$'ASA classification'$'1'
$'ASA classification'$'1'$table
variable
      1      2      3      4
98 395 150    1
```

```

$'ASA classification'$'1'$proportion
variable
      1      2      3      4
0.152173913 0.613354037 0.232919255 0.001552795
```

```

$'ASA classification'$'2'
$'ASA classification'$'2'$table
variable
      1      2      3      4
21 160  62    2
```

```

$'ASA classification'$'2'$proportion
variable
      1      2      3      4
0.085714286 0.653061224 0.253061224 0.008163265
```

```

$'ASA classification'$'3'
$'ASA classification'$'3'$table
variable
  1   2   3
185 84 16

```

```

$'ASA classification'$'3'$proportion
variable
      1           2           3
0.64912281 0.29473684 0.05614035

```

```

$'Tobacco use_First Visit'
$'Tobacco use_First Visit'$All
$'Tobacco use_First Visit'$All$table
variable
  Current      Ex Non-User
      222      200      727

```

```

$'Tobacco use_First Visit'$All$proportion
variable
  Current      Ex Non-User
0.1932115 0.1740644 0.6327241

```

```

$'Tobacco use_First Visit'$'1'
$'Tobacco use_First Visit'$'1'$table
variable
  Current      Ex Non-User
      114      125      392

```

```

$'Tobacco use_First Visit'$'1'$proportion
variable
  Current      Ex Non-User
0.1806656 0.1980983 0.6212361

```

```

$'Tobacco use_First Visit'$'2'
$'Tobacco use_First Visit'$'2'$table
variable
  Current      Ex Non-User
      54       39      144

```

```

$'Tobacco use_First Visit'$'2'$proportion
variable
  Current      Ex Non-User
0.2278481 0.1645570 0.6075949

```

```

$'Tobacco use_First Visit'$'3'
$'Tobacco use_First Visit'$'3'$table
variable

```

Current	Ex	Non-User
54	36	191

\$'Tobacco use_First Visit'\$3'\$proportion
variable
Current Ex Non-User
0.1921708 0.1281139 0.6797153

\$'ESSG Diagnosis'
\$'ESSG Diagnosis'\$All
\$'ESSG Diagnosis'\$All\$table
variable

	Congenital	Degenerative
	21	500
	Failed-back	Idiopathic
	63	483
	Neuromuscular	Other: Ankylosing spondylitis
	9	1
Other: Ankylosing Spondylitis	Other: congenital spinal stenosis	
	1	1
Other: hyperkyphosis	Other: Multiple Myelom	
	1	1
Other: radiotherapy induced	Other: spondylolisthesis	
	1	3
Other: Spondylolisthesis	Post-infection	
	7	5
Post-traumatic	Scheuermann	
	34	35
Syndromic		
	13	

\$'ESSG Diagnosis'\$All\$proportion
variable

	Congenital	Degenerative
	0.0178117048	0.4240882103
	Failed-back	Idiopathic
	0.0534351145	0.4096692112
	Neuromuscular	Other: Ankylosing spondylitis
	0.0076335878	0.0008481764
Other: Ankylosing Spondylitis	Other: congenital spinal stenosis	
	0.0008481764	0.0008481764
Other: hyperkyphosis	Other: Multiple Myelom	
	0.0008481764	0.0008481764
Other: radiotherapy induced	Other: spondylolisthesis	
	0.0008481764	0.0025445293
Other: Spondylolisthesis	Post-infection	
	0.0059372349	0.0042408821
Post-traumatic	Scheuermann	
	0.0288379983	0.0296861747
Syndromic		
	0.0110262935	

\$'ESSG Diagnosis'\$'1'
 '\$'ESSG Diagnosis'\$'1'\$table
 variable

	Congenital	Degenerative
	8	344
	Failed-back	Idiopathic
	34	203
	Neuromuscular	Other: Ankylosing spondylitis
	6	1
Other: congenital spinal stenosis		Other: hyperkyphosis
	1	1
Other: Multiple Myelom		Other: spondylolisthesis
	1	1
Other: Spondylolisthesis		Post-infection
	6	1
Post-traumatic		Scheuermann
	18	17
Syndromic		
	7	

\$'ESSG Diagnosis'\$'1'\$proportion
 variable

	Congenital	Degenerative
	0.012326656	0.530046225
	Failed-back	Idiopathic
	0.052388290	0.312788906
	Neuromuscular	Other: Ankylosing spondylitis
	0.009244992	0.001540832
Other: congenital spinal stenosis		Other: hyperkyphosis
	0.001540832	0.001540832
Other: Multiple Myelom		Other: spondylolisthesis
	0.001540832	0.001540832
Other: Spondylolisthesis		Post-infection
	0.009244992	0.001540832
Post-traumatic		Scheuermann
	0.027734977	0.026194145
Syndromic		
	0.010785824	

\$'ESSG Diagnosis'\$'2'
 '\$'ESSG Diagnosis'\$'2'\$table
 variable

	Congenital	Degenerative
	3	149
	Failed-back	Idiopathic
	27	46
	Neuromuscular	Other: Ankylosing Spondylitis
	2	1
Post-infection		Post-traumatic
	1	13
Scheuermann		Syndromic
	2	1

\$'ESSG Diagnosis'\$'2'\$proportion
variable

Congenital	Degenerative
0.012244898	0.608163265
Failed-back	Idiopathic
0.110204082	0.187755102
Neuromuscular	Other: Ankylosing Spondylitis
0.008163265	0.004081633
Post-infection	Post-traumatic
0.004081633	0.053061224
Scheuermann	Syndromic
0.008163265	0.004081633

\$'ESSG Diagnosis'\$'3'
\$'ESSG Diagnosis'\$'3'\$table
variable

Congenital	Degenerative
10	7
Failed-back	Idiopathic
2	234
Neuromuscular	Other: radiotherapy induced
1	1
Other: spondylolisthesis	Other: Spondylolisthesis
2	1
Post-infection	Post-traumatic
3	3
Scheuermann	Syndromic
16	5

\$'ESSG Diagnosis'\$'3'\$proportion
variable

Congenital	Degenerative
0.035087719	0.024561404
Failed-back	Idiopathic
0.007017544	0.821052632
Neuromuscular	Other: radiotherapy induced
0.003508772	0.003508772
Other: spondylolisthesis	Other: Spondylolisthesis
0.007017544	0.003508772
Post-infection	Post-traumatic
0.010526316	0.010526316
Scheuermann	Syndromic
0.056140351	0.017543860

Radiology

[1] "Static Major curve Cobb angle"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2
Static Major curve Cobb angle	41.62	39.03	31.54	56.34	0.0000

6W. Static Major curve Cobb angle	22.69	23.02	18.35	25.38	0.0001
6M. Static Major curve Cobb angle	22.77	22.74	18.39	26.45	0.0012
1Y. Static Major curve Cobb angle	21.69	21.81	17.21	25.23	0.0006
2Y. Static Major curve Cobb angle	22.66	22.49	19.44	26.09	0.0636
5Y. Static Major curve Cobb angle	24.86	25.00	16.55	33.24	0.0045
	p.val_1.3	p.val_2.3	p.val_all		
Static Major curve Cobb angle	0.0000	0e+00	0.0000		
6W. Static Major curve Cobb angle	0.0360	0e+00	0.0000		
6M. Static Major curve Cobb angle	0.0028	0e+00	0.0000		
1Y. Static Major curve Cobb angle	0.0116	0e+00	0.0000		
2Y. Static Major curve Cobb angle	0.0176	2e-04	0.0032		
5Y. Static Major curve Cobb angle	0.0111	0e+00	0.0000		
	t0 t1	1	2	3	All
1: Preop 2Y	0.0000	0.0000	0.0000	0.0000	0.0000
2: Preop 5Y	0.0000	0.0000	0.0000	0.0000	0.0000
3: Preop 6W	0.0000	0.0000	0.0000	0.0000	0.0000
4: 6W 2Y	0.6493	0.5071	0.6304	0.9723	
5: 6W 5Y	0.2759	0.4833	0.0077	0.1157	
6: 2Y 5Y	0.1899	0.2916	0.0181	0.1288	

[1] "Coronal Balance (C7PL to CSVL)"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2
Coronal Balance (C7PL to CSVL)	21.53	20.18	31.01	16.14	0.0000
6W. Coronal Balance (C7PL to CSVL)	18.15	17.99	21.01	16.22	0.0266
6M. Coronal Balance (C7PL to CSVL)	16.43	16.23	20.84	13.30	0.0021
1Y. Coronal Balance (C7PL to CSVL)	17.31	17.08	21.27	14.47	0.0081
2Y. Coronal Balance (C7PL to CSVL)	16.94	16.38	22.17	13.02	0.0008
5Y. Coronal Balance (C7PL to CSVL)	19.61	20.45	24.24	13.15	0.2296
	p.val_1.3	p.val_2.3	p.val_all		
Coronal Balance (C7PL to CSVL)	0.0002	0.0000	0.0000		
6W. Coronal Balance (C7PL to CSVL)	0.1018	0.0014	0.0024		
6M. Coronal Balance (C7PL to CSVL)	0.0048	0.0000	0.0000		
1Y. Coronal Balance (C7PL to CSVL)	0.0220	0.0001	0.0000		
2Y. Coronal Balance (C7PL to CSVL)	0.0052	0.0000	0.0000		
5Y. Coronal Balance (C7PL to CSVL)	0.0034	0.0004	0.0056		
	t0 t1	1	2	3	All
1: Preop 2Y	0.0002	0.0010	0.0130	0.0000	0.0000
2: Preop 5Y	0.8916	0.0446	0.0986	0.1678	
3: Preop 6W	0.0177	0.0001	0.9425	0.0000	
4: 6W 2Y	0.0977	0.5508	0.0130	0.1088	
5: 6W 5Y	0.2151	0.2515	0.0935	0.2738	
6: 2Y 5Y	0.0451	0.4842	0.9403	0.0521	

[1] "Sagittal Balance"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3
Sagittal Balance	46.35	52.79	89.73	-6.83	0.0000	0
6W. Sagittal Balance	23.08	28.41	39.47	-1.08	0.0030	0
6M. Sagittal Balance	22.49	28.82	40.17	-5.33	0.0128	0
1Y. Sagittal Balance	23.56	30.51	46.60	-10.50	0.0009	0
2Y. Sagittal Balance	27.80	33.15	52.55	-8.00	0.0003	0
5Y. Sagittal Balance	34.96	37.08	61.84	4.03	0.0191	0
	p.val_2.3	p.val_all				

Sagittal Balance	0	0
6W. Sagittal Balance	0	0
6M. Sagittal Balance	0	0
1Y. Sagittal Balance	0	0
2Y. Sagittal Balance	0	0
5Y. Sagittal Balance	0	0

	t0	t1	1	2	3	All
1: Preop 2Y	0.0000	0.0000	0.7165	0.0000		
2: Preop 5Y	0.0034	0.0078	0.0799	0.0086		
3: Preop 6W	0.0000	0.0000	0.0402	0.0000		
4: 6W 2Y	0.1387	0.0211	0.0318	0.0562		
5: 6W 5Y	0.0927	0.0248	0.4045	0.0041		
6: 2Y 5Y	0.4671	0.3686	0.0603	0.1013		

[1] "Sagittal T2-T5"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
Sagittal T2-T5	12.26	12.36	11.98	12.28	0.5828	0.9011	0.7110
6W. Sagittal T2-T5	14.36	14.04	14.36	14.98	0.6974	0.1644	0.4958
6M. Sagittal T2-T5	14.35	13.72	14.24	15.78	0.5635	0.0070	0.1218
1Y. Sagittal T2-T5	14.80	14.15	14.65	16.25	0.6119	0.0079	0.1264
2Y. Sagittal T2-T5	14.76	13.79	14.54	17.17	0.4808	0.0008	0.0303
5Y. Sagittal T2-T5	15.72	15.38	17.43	14.71	0.3973	0.7237	0.3028

	p.val_all
Sagittal T2-T5	0.8625
6W. Sagittal T2-T5	0.4008
6M. Sagittal T2-T5	0.0361
1Y. Sagittal T2-T5	0.0522
2Y. Sagittal T2-T5	0.0043
5Y. Sagittal T2-T5	0.5026

	t0	t1	1	2	3	All
1: Preop 2Y	0.0405	0.0180	0.0000	0.0000		
2: Preop 5Y	0.0119	0.0174	0.1417	0.0002		
3: Preop 6W	0.0023	0.0116	0.0007	0.0000		
4: 6W 2Y	0.7193	0.8753	0.0265	0.4333		
5: 6W 5Y	0.2585	0.1784	0.8684	0.1355		
6: 2Y 5Y	0.2069	0.2162	0.1597	0.3181		

[1] "Sagittal T5-T12"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
Sagittal T5-T12	32.99	33.01	31.67	34.08	0.3413	0.4534	0.1538
6W. Sagittal T5-T12	34.69	36.18	36.39	30.41	0.8586	0.0000	0.0000
6M. Sagittal T5-T12	35.90	36.98	38.56	31.48	0.2341	0.0000	0.0000
1Y. Sagittal T5-T12	35.95	37.31	38.48	31.05	0.3789	0.0000	0.0000
2Y. Sagittal T5-T12	37.30	38.63	40.39	31.46	0.3216	0.0000	0.0000
5Y. Sagittal T5-T12	41.28	42.79	45.49	33.62	0.3499	0.0025	0.0005

	p.val_all
Sagittal T5-T12	0.3593
6W. Sagittal T5-T12	0.0000
6M. Sagittal T5-T12	0.0000
1Y. Sagittal T5-T12	0.0000
2Y. Sagittal T5-T12	0.0000
5Y. Sagittal T5-T12	0.0016

	t0	t1	1	2	3	All
1: Preop	2Y	0.0000	0.0000	0.0963	0.0000	
2: Preop	5Y	0.0000	0.0000	0.8640	0.0000	
3: Preop	6W	0.0017	0.0022	0.0133	0.0213	
4:	6W 2Y	0.0274	0.0285	0.4301	0.0011	
5:	6W 5Y	0.0005	0.0005	0.2097	0.0000	
6:	2Y 5Y	0.0348	0.0669	0.4063	0.0047	

[1] "Sagittal T2-T12"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
Sagittal T2-T12	40.27	40.31	38.95	41.33	0.3677	0.4795	0.1748
6W. Sagittal T2-T12	44.41	45.36	46.44	41.01	0.4148	0.0003	0.0002
6M. Sagittal T2-T12	45.54	45.74	48.78	42.62	0.0396	0.0174	0.0002
1Y. Sagittal T2-T12	46.12	46.85	48.48	42.69	0.2947	0.0011	0.0005
2Y. Sagittal T2-T12	46.96	47.38	49.02	44.11	0.3411	0.0339	0.0091
5Y. Sagittal T2-T12	50.30	51.13	55.44	43.38	0.1826	0.0088	0.0014

	p.val_all
Sagittal T2-T12	0.3969
6W. Sagittal T2-T12	0.0002
6M. Sagittal T2-T12	0.0010
1Y. Sagittal T2-T12	0.0012
2Y. Sagittal T2-T12	0.0369
5Y. Sagittal T2-T12	0.0026

	t0	t1	1	2	3	All
1: Preop	2Y	0.0000	0.0000	0.1030	0.0000	
2: Preop	5Y	0.0000	0.0000	0.4453	0.0000	
3: Preop	6W	0.0000	0.0000	0.8324	0.0000	
4:	6W 2Y	0.0918	0.1538	0.0425	0.0026	
5:	6W 5Y	0.0016	0.0036	0.3578	0.0000	
6:	2Y 5Y	0.0495	0.0423	0.7839	0.0197	

[1] "Lordosis (top of L1-S1)"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3
Lordosis (top of L1-S1)	-44.15	-41.26	-34.63	-59.02	0.0000	0.0000
6W. Lordosis (top of L1-S1)	-51.03	-49.28	-49.97	-55.89	0.5675	0.0000
6M. Lordosis (top of L1-S1)	-51.17	-49.04	-49.64	-57.58	0.6495	0.0000
1Y. Lordosis (top of L1-S1)	-51.92	-49.89	-49.54	-58.69	0.8005	0.0000
2Y. Lordosis (top of L1-S1)	-52.40	-50.49	-50.35	-58.80	0.9232	0.0000
5Y. Lordosis (top of L1-S1)	-51.00	-49.33	-50.36	-55.39	0.6906	0.0385

	p.val_2.3	p.val_all
Lordosis (top of L1-S1)	0.0000	0.0000
6W. Lordosis (top of L1-S1)	0.0000	0.0000
6M. Lordosis (top of L1-S1)	0.0000	0.0000
1Y. Lordosis (top of L1-S1)	0.0000	0.0000
2Y. Lordosis (top of L1-S1)	0.0000	0.0000
5Y. Lordosis (top of L1-S1)	0.1156	0.0919

	t0	t1	1	2	3	All
1: Preop	2Y	0.0000	0.0000	0.8756	0.0000	
2: Preop	5Y	0.0000	0.0000	0.1654	0.0000	
3: Preop	6W	0.0000	0.0000	0.0096	0.0000	
4:	6W 2Y	0.2317	0.8149	0.0206	0.0650	
5:	6W 5Y	0.9776	0.8634	0.8435	0.9763	

6: 2Y 5Y 0.5145 0.9952 0.1951 0.2736

[1] "Pelvic Incidence"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3
Pelvic Incidence	54.99	55.24	58.16	51.64	0.0033	0.0001
6W. Pelvic Incidence	54.81	55.19	57.71	51.58	0.0131	0.0002
6M. Pelvic Incidence	55.18	55.57	57.88	52.05	0.0423	0.0004
1Y. Pelvic Incidence	54.80	55.04	58.02	51.47	0.0094	0.0008
2Y. Pelvic Incidence	55.38	55.61	58.57	51.84	0.0292	0.0011
5Y. Pelvic Incidence	54.56	54.37	58.95	50.59	0.0527	0.0722

	p.val_2.3	p.val_all
Pelvic Incidence	0.0000	0.0000
6W. Pelvic Incidence	0.0000	0.0000
6M. Pelvic Incidence	0.0000	0.0000
1Y. Pelvic Incidence	0.0000	0.0000
2Y. Pelvic Incidence	0.0000	0.0001
5Y. Pelvic Incidence	0.0015	0.0073

	t0	t1	1	2	3	All
1: Preop 2Y	0.6700	0.7746	0.8610	0.5430		
2: Preop 5Y	0.5281	0.7110	0.5639	0.6691		
3: Preop 6W	0.9477	0.7101	0.9603	0.7548		
4: 6W 2Y	0.6359	0.5508	0.8276	0.3866		
5: 6W 5Y	0.5547	0.5634	0.5864	0.8007		
6: 2Y 5Y	0.3949	0.8660	0.5055	0.4389		

[1] "Pelvic Tilt"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
Pelvic Tilt	21.91	23.69	27.89	12.50	0.0000	0	0
6W. Pelvic Tilt	19.30	20.72	22.89	13.07	0.0027	0	0
6M. Pelvic Tilt	20.29	21.97	24.14	13.00	0.0053	0	0
1Y. Pelvic Tilt	19.61	21.12	24.39	11.96	0.0000	0	0
2Y. Pelvic Tilt	20.07	21.86	23.91	12.24	0.0195	0	0
5Y. Pelvic Tilt	21.38	23.19	26.06	12.60	0.0840	0	0

	p.val_all
Pelvic Tilt	0
6W. Pelvic Tilt	0
6M. Pelvic Tilt	0
1Y. Pelvic Tilt	0
2Y. Pelvic Tilt	0
5Y. Pelvic Tilt	0

	t0	t1	1	2	3	All
1: Preop 2Y	0.0046	0.0001	0.7642	0.0004		
2: Preop 5Y	0.6302	0.2269	0.9507	0.5342		
3: Preop 6W	0.0000	0.0000	0.4797	0.0000		
4: 6W 2Y	0.0680	0.2778	0.3496	0.1210		
5: 6W 5Y	0.0163	0.0353	0.7710	0.0134		
6: 2Y 5Y	0.2083	0.1646	0.8267	0.1317		

[1] "Sacral Slope"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
Sacral Slope	33.23	31.73	30.24	39.24	0.0942	0e+00	0.0000

6W. Sacral Slope	35.49	34.41	34.83	38.50	0.6196	0e+00	0.0001
6M. Sacral Slope	34.88	33.53	33.71	39.13	0.8447	0e+00	0.0000
1Y. Sacral Slope	35.20	33.89	33.63	39.61	0.7774	0e+00	0.0000
2Y. Sacral Slope	35.35	33.81	34.67	39.65	0.4303	0e+00	0.0000
5Y. Sacral Slope	33.19	31.18	32.89	38.02	0.3198	3e-04	0.0127

	p.val_all
Sacral Slope	0.000
6W. Sacral Slope	0.000
6M. Sacral Slope	0.000
1Y. Sacral Slope	0.000
2Y. Sacral Slope	0.000
5Y. Sacral Slope	0.001

	t0	t1	1	2	3	All
1: Preop 2Y	0.0044	0.0003	0.6686	0.0001		
2: Preop 5Y	0.6244	0.0938	0.4504	0.9615		
3: Preop 6W	0.0000	0.0000	0.3688	0.0000		
4: 6W 2Y	0.3986	0.8907	0.2212	0.7947		
5: 6W 5Y	0.0049	0.2108	0.7634	0.0052		
6: 2Y 5Y	0.0289	0.2808	0.3318	0.0128		

[1] "RLL"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3	p.val_all
RLL	-18.92	-21.98	-30.43	-1.84	0.0000	0.0000	0e+00	0.0000
6W. RLL	-11.94	-13.93	-14.86	-4.94	0.3826	0.0000	0e+00	0.0000
6M. RLL	-12.03	-14.39	-15.16	-3.74	0.5266	0.0000	0e+00	0.0000
1Y. RLL	-11.07	-13.21	-15.43	-2.25	0.0755	0.0000	0e+00	0.0000
2Y. RLL	-10.84	-12.82	-14.96	-2.30	0.1118	0.0000	0e+00	0.0000
5Y. RLL	-11.83	-13.38	-15.19	-4.98	0.4348	0.0028	8e-04	0.0011

	t0	t1	1	2	3	All
1: Preop 2Y	0.0000	0.0000	0.7172	0.0000		
2: Preop 5Y	0.0000	0.0000	0.2111	0.0000		
3: Preop 6W	0.0000	0.0000	0.0077	0.0000		
4: 6W 2Y	0.2305	0.9409	0.0241	0.1122		
5: 6W 5Y	0.7222	0.8696	0.9866	0.9221		
6: 2Y 5Y	0.7311	0.9159	0.2860	0.4097		

[1] "Global Tilt"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
Global Tilt	26.67	29.24	38.74	9.97	0.0000	0	0
6W. Global Tilt	20.44	22.49	26.14	11.23	0.0001	0	0
6M. Global Tilt	21.64	24.07	27.49	11.04	0.0025	0	0
1Y. Global Tilt	21.13	23.36	28.29	9.53	0.0000	0	0
2Y. Global Tilt	22.02	24.54	28.96	9.69	0.0005	0	0
5Y. Global Tilt	24.45	26.49	32.50	11.78	0.0251	0	0

	p.val_all
Global Tilt	0
6W. Global Tilt	0
6M. Global Tilt	0
1Y. Global Tilt	0
2Y. Global Tilt	0
5Y. Global Tilt	0

	t0	t1	1	2	3	All
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1: Preop 2Y 0.0000 0.0000 0.7994 0.0000
2: Preop 5Y 0.0755 0.0133 0.3839 0.0803
3: Preop 6W 0.0000 0.0000 0.1992 0.0000
4:   6W 2Y 0.0159 0.0322 0.1603 0.0220
5:   6W 5Y 0.0081 0.0096 0.7924 0.0012
6:   2Y 5Y 0.2096 0.1560 0.3277 0.0585

```

[1] "T1 Sagittal Tilt"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3
T1 Sagittal Tilt	-1.34	-1.17	2.29	-4.91	0.0000	0.0000
6W. T1 Sagittal Tilt	-3.18	-2.75	-2.61	-4.62	0.7352	0.0000
6M. T1 Sagittal Tilt	-3.48	-3.05	-2.74	-5.09	0.5024	0.0000
1Y. T1 Sagittal Tilt	-3.31	-2.88	-2.40	-5.11	0.3331	0.0000
2Y. T1 Sagittal Tilt	-3.30	-3.03	-1.87	-5.23	0.0326	0.0000
5Y. T1 Sagittal Tilt	-2.86	-3.22	-1.07	-3.86	0.0548	0.4707

	p.val_2.3	p.val_all
T1 Sagittal Tilt	0.0000	0.0000
6W. T1 Sagittal Tilt	0.0000	0.0000
6M. T1 Sagittal Tilt	0.0000	0.0000
1Y. T1 Sagittal Tilt	0.0000	0.0000
2Y. T1 Sagittal Tilt	0.0000	0.0000
5Y. T1 Sagittal Tilt	0.0057	0.0767

	t0	t1	1	2	3	All
1: Preop 2Y	0.0000	0.0000	0.2945	0.0000		
2: Preop 5Y	0.0080	0.0009	0.0593	0.0022		
3: Preop 6W	0.0000	0.0000	0.3155	0.0000		
4: 6W 2Y	0.3679	0.2147	0.0517	0.6113		
5: 6W 5Y	0.5314	0.0947	0.1718	0.4981		
6: 2Y 5Y	0.8086	0.4095	0.0169	0.3691		

[1] "Thoracolumbar L2-T10"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3
Thoracolumbar L2-T10	9.06	10.37	11.26	4.22	0.5730	0.0000
6W. Thoracolumbar L2-T10	5.69	7.47	8.71	-0.31	0.2773	0.0000
6M. Thoracolumbar L2-T10	6.08	7.90	9.42	-0.68	0.1994	0.0000
1Y. Thoracolumbar L2-T10	6.36	8.48	9.37	-0.73	0.5043	0.0000
2Y. Thoracolumbar L2-T10	6.74	8.30	8.71	1.25	0.7713	0.0000
5Y. Thoracolumbar L2-T10	7.65	7.70	11.26	3.91	0.1463	0.1808

	p.val_2.3	p.val_all
Thoracolumbar L2-T10	0.0001	0.0000
6W. Thoracolumbar L2-T10	0.0000	0.0000
6M. Thoracolumbar L2-T10	0.0000	0.0000
1Y. Thoracolumbar L2-T10	0.0000	0.0000
2Y. Thoracolumbar L2-T10	0.0000	0.0000
5Y. Thoracolumbar L2-T10	0.0220	0.0545

	t0	t1	1	2	3	All
1: Preop 2Y	0.0601	0.1615	0.0488	0.0044		
2: Preop 5Y	0.0996	0.9991	0.9080	0.2457		
3: Preop 6W	0.0037	0.1295	0.0010	0.0000		
4: 6W 2Y	0.3813	0.9982	0.2196	0.1386		
5: 6W 5Y	0.8768	0.2553	0.1062	0.0887		
6: 2Y 5Y	0.7076	0.2767	0.3180	0.4458		

[1] "RSA"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3	p.val_all
RSA	15.26	17.73	25.82	0.12	0.0000	0	0	0
6W. RSA	9.13	10.98	13.48	1.45	0.0017	0	0	0
6M. RSA	10.16	12.44	14.64	1.07	0.0176	0	0	0
1Y. RSA	9.74	11.88	15.40	-0.33	0.0002	0	0	0
2Y. RSA	10.41	12.78	15.83	-0.16	0.0041	0	0	0
5Y. RSA	13.26	15.39	19.21	2.49	0.0825	0	0	0

	t0	t1	1	2	3	All
1: Preop 2Y	0.0000	0.0000	0.7579	0.0000		
2: Preop 5Y	0.0758	0.0019	0.1919	0.0643		
3: Preop 6W	0.0000	0.0000	0.0836	0.0000		
4: 6W 2Y	0.0093	0.0366	0.0700	0.0242		
5: 6W 5Y	0.0006	0.0047	0.5616	0.0001		
6: 2Y 5Y	0.0472	0.1006	0.1562	0.0084		

[1] "RPV"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3	p.val_all
RPV	-8.24	-9.89	-13.07	-0.22	0.0000	0	0	0
6W. RPV	-5.85	-7.15	-8.22	-0.89	0.0768	0	0	0
6M. RPV	-6.67	-8.26	-9.43	-0.57	0.0650	0	0	0
1Y. RPV	-6.14	-7.59	-9.61	0.22	0.0015	0	0	0
2Y. RPV	-6.33	-8.01	-8.88	0.06	0.2193	0	0	0
5Y. RPV	-8.00	-9.90	-10.90	-0.83	0.4151	0	0	0

	t0	t1	1	2	3	All
1: Preop 2Y	0.0004	0.0000	0.6913	0.0000		
2: Preop 5Y	0.9902	0.0523	0.6451	0.7326		
3: Preop 6W	0.0000	0.0000	0.2742	0.0000		
4: 6W 2Y	0.0852	0.3967	0.1725	0.2247		
5: 6W 5Y	0.0010	0.0158	0.9675	0.0013		
6: 2Y 5Y	0.0281	0.0766	0.5160	0.0163		

Quality of Life

[1] "ODI - Score (%)"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
ODI - Score (%)	40.26	42.15	61.80	16.80	0	0	0
6M. ODI - Score (%)	29.04	29.48	42.66	16.52	0	0	0
1Y. ODI - Score (%)	26.72	27.27	41.84	12.19	0	0	0
2Y. ODI - Score (%)	27.97	28.67	44.30	12.06	0	0	0
5Y. ODI - Score (%)	28.19	28.19	47.55	9.91	0	0	0

	p.val_all
ODI - Score (%)	0
6M. ODI - Score (%)	0
1Y. ODI - Score (%)	0
2Y. ODI - Score (%)	0
5Y. ODI - Score (%)	0

	t0	t1	1	2	3	All
ODI - Score (%)						

```

1: Preop 2Y 0.0000 0.0000 0.0000 0.0000
2: Preop 5Y 0.0000 0.0000 0.0000 0.0000
3: Preop 6M 0.0000 0.0000 0.7925 0.0000
4:   6M 2Y 0.4658 0.4407 0.0002 0.2523
5:   6M 5Y 0.4121 0.0781 0.0000 0.5181
6:   2Y 5Y 0.7699 0.2667 0.1283 0.8794

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[1] "SRS22 - Function / Activity"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2
SRS22 - Function / Activity	3.08	2.94	2.17	4.18	0
6M. SRS22 - Function / Activity	3.27	3.21	2.76	3.86	0
1Y. SRS22 - Function / Activity	3.45	3.38	2.81	4.16	0
2Y. SRS22 - Function / Activity	3.50	3.40	2.84	4.31	0
5Y. SRS22 - Function / Activity	3.51	3.45	2.74	4.39	0

	p.val_1.3	p.val_2.3	p.val_all
SRS22 - Function / Activity	0	0	0
6M. SRS22 - Function / Activity	0	0	0
1Y. SRS22 - Function / Activity	0	0	0
2Y. SRS22 - Function / Activity	0	0	0
5Y. SRS22 - Function / Activity	0	0	0

	t0	t1	1	2	3	All
1: Preop 2Y	0.0000	0.0000	0.0000	0.0324	0.0000	0.0000
2: Preop 5Y	0.0000	0.0000	0.0000	0.0173	0.0000	0.0000
3: Preop 6M	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4: 6M 2Y	0.0001	0.3367	0.0000	0.0000	0.0000	0.0000
5: 6M 5Y	0.0002	0.8774	0.0000	0.0000	0.0001	0.0001
6: 2Y 5Y	0.4887	0.4253	0.3999	0.8813		

[1] "SRS22 - Pain"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
SRS22 - Pain	2.61	2.47	1.72	3.71	0	0	0
6M. SRS22 - Pain	3.32	3.30	2.73	3.85	0	0	0
1Y. SRS22 - Pain	3.51	3.49	2.84	4.11	0	0	0
2Y. SRS22 - Pain	3.46	3.44	2.76	4.11	0	0	0
5Y. SRS22 - Pain	3.42	3.39	2.61	4.24	0	0	0

	p.val_all
SRS22 - Pain	0
6M. SRS22 - Pain	0
1Y. SRS22 - Pain	0
2Y. SRS22 - Pain	0
5Y. SRS22 - Pain	0

	t0	t1	1	2	3	All
1: Preop 2Y	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2: Preop 5Y	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3: Preop 6M	0.0000	0.0000	0.0000	0.0383	0.0000	0.0000
4: 6M 2Y	0.0243	0.7880	0.0003	0.0037		
5: 6M 5Y	0.3019	0.4520	0.0000	0.1475		
6: 2Y 5Y	0.6126	0.3743	0.1778	0.5917		

[1] "SRS22 - Self image / Appearance"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2
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SRS22 - Self image / Appearance	2.39	2.47	1.59	2.91	0
6M. SRS22 - Self image / Appearance	3.44	3.41	3.00	3.88	0
1Y. SRS22 - Self image / Appearance	3.48	3.46	2.98	3.95	0
2Y. SRS22 - Self image / Appearance	3.46	3.44	2.86	4.03	0
5Y. SRS22 - Self image / Appearance	3.38	3.39	2.65	4.03	0
	p.val_1.3	p.val_2.3	p.val_all		
SRS22 - Self image / Appearance	0	0	0		
6M. SRS22 - Self image / Appearance	0	0	0		
1Y. SRS22 - Self image / Appearance	0	0	0		
2Y. SRS22 - Self image / Appearance	0	0	0		
5Y. SRS22 - Self image / Appearance	0	0	0		
t0 t1 1 2 3 All					
1: Preop 2Y	0.0000	0.0000	0.0000	0.0000	
2: Preop 5Y	0.0000	0.0000	0.0000	0.0000	
3: Preop 6M	0.0000	0.0000	0.0000	0.0000	
4: 6M 2Y	0.5674	0.1410	0.0169	0.6253	
5: 6M 5Y	0.7853	0.0068	0.0860	0.2974	
6: 2Y 5Y	0.5098	0.1141	0.9985	0.1839	

[1] "SRS22 - Mental health"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3
SRS22 - Mental health	3.16	3.31	2.26	3.60	0	0.0000
6M. SRS22 - Mental health	3.51	3.58	2.96	3.79	0	0.0002
1Y. SRS22 - Mental health	3.56	3.68	2.91	3.83	0	0.0117
2Y. SRS22 - Mental health	3.53	3.64	2.84	3.84	0	0.0009
5Y. SRS22 - Mental health	3.54	3.63	2.74	4.02	0	0.0001
	p.val_2.3	p.val_all				
SRS22 - Mental health	0	0				
6M. SRS22 - Mental health	0	0				
1Y. SRS22 - Mental health	0	0				
2Y. SRS22 - Mental health	0	0				
5Y. SRS22 - Mental health	0	0				
t0 t1 1 2 3 All						
1: Preop 2Y	0.0000	0.0000	0.0001	0.0000		
2: Preop 5Y	0.0000	0.0002	0.0000	0.0000		
3: Preop 6M	0.0000	0.0000	0.0020	0.0000		
4: 6M 2Y	0.2551	0.2357	0.3812	0.5926		
5: 6M 5Y	0.4474	0.1056	0.0067	0.6000		
6: 2Y 5Y	0.9170	0.4882	0.0414	0.8979		

[1] "SRS22 - SRS Subtotal score"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2
SRS22 - SRS Subtotal score	2.81	2.80	1.93	3.60	0
6M. SRS22 - SRS Subtotal score	3.38	3.38	2.86	3.83	0
1Y. SRS22 - SRS Subtotal score	3.50	3.50	2.89	4.01	0
2Y. SRS22 - SRS Subtotal score	3.49	3.48	2.83	4.08	0
5Y. SRS22 - SRS Subtotal score	3.45	3.45	2.69	4.17	0
	p.val_1.3	p.val_2.3	p.val_all		
SRS22 - SRS Subtotal score	0	0	0		
6M. SRS22 - SRS Subtotal score	0	0	0		
1Y. SRS22 - SRS Subtotal score	0	0	0		
2Y. SRS22 - SRS Subtotal score	0	0	0		

5Y. SRS22 - SRS Subtotal score		0	0	0
t0 t1	1	2	3	All
1: Preop 2Y	0.0000	0.0000	0.000	0.0000
2: Preop 5Y	0.0000	0.0000	0.000	0.0000
3: Preop 6M	0.0000	0.0000	0.000	0.0000
4: 6M 2Y	0.0198	0.6445	0.000	0.0049
5: 6M 5Y	0.2698	0.1038	0.000	0.2144
6: 2Y 5Y	0.6320	0.2270	0.199	0.5140

[1] "SF36 - PCS"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
SF36 - PCS	36.24	33.94	29.91	47.51	0	0	0
6M. SF36 - PCS	40.70	39.78	35.61	47.09	0	0	0
1Y. SF36 - PCS	42.28	41.10	36.25	50.33	0	0	0
2Y. SF36 - PCS	42.07	40.86	36.04	50.48	0	0	0
5Y. SF36 - PCS	42.01	41.24	33.67	51.42	0	0	0
	p.val_all						
SF36 - PCS	0						
6M. SF36 - PCS	0						
1Y. SF36 - PCS	0						
2Y. SF36 - PCS	0						
5Y. SF36 - PCS	0						
t0 t1	1	2	3	All			
1: Preop 2Y	0.0000	0.0000	0.0001	0.0000			
2: Preop 5Y	0.0000	0.0029	0.0002	0.0000			
3: Preop 6M	0.0000	0.0000	0.5643	0.0000			
4: 6M 2Y	0.0716	0.6732	0.0000	0.0053			
5: 6M 5Y	0.0943	0.1392	0.0001	0.0632			
6: 2Y 5Y	0.6791	0.0913	0.3821	0.9306			

[1] "SF36 - MCS"

	All.mean	1.mean	2.mean	3.mean	p.val_1.2	p.val_1.3	p.val_2.3
SF36 - MCS	42.97	44.88	32.87	47.51	0	0.0009	0
6M. SF36 - MCS	47.14	48.76	39.08	49.93	0	0.1417	0
1Y. SF36 - MCS	47.04	48.59	38.74	50.58	0	0.0135	0
2Y. SF36 - MCS	47.26	48.71	39.36	50.50	0	0.0294	0
5Y. SF36 - MCS	47.50	48.20	39.96	52.36	0	0.0009	0
	p.val_all						
SF36 - MCS	0						
6M. SF36 - MCS	0						
1Y. SF36 - MCS	0						
2Y. SF36 - MCS	0						
5Y. SF36 - MCS	0						
t0 t1	1	2	3	All			
1: Preop 2Y	0.0000	0.0000	0.0007	0.0000			
2: Preop 5Y	0.0006	0.0001	0.0000	0.0000			
3: Preop 6M	0.0000	0.0000	0.0057	0.0000			
4: 6M 2Y	0.9409	0.8437	0.5079	0.8316			
5: 6M 5Y	0.5655	0.6275	0.0290	0.6279			
6: 2Y 5Y	0.6133	0.7512	0.0931	0.7549			

Surgery