

Pelvis UT vs Pelvis LT stability

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

Selection criteria

```
data_ %<>% .['Posterior Instrumented Fusion' == 'Yes']

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

data_ %<>% .[post_intr_fusion == 'Iliac']

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

UT <- paste("T", 2:6, sep="")
LT <- paste("T", 7:12, sep="")

data_[post_intr_fusion %chin% UT, thoracic_type := 'UT']
data_[post_intr_fusion %chin% LT, thoracic_type := 'LT']

data_ %<>% .[!is.na(get(treatment_))]
```

Patients: 116

Increment = Future - Baseline

Estability Increment Quality of Life

ODI - Score (%)

Base Time point 6M. ODI - Score (%)

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.7835	0.7982	441.6502	-0.9815	0.3269
time_point	0.8247	0.5661	129.6922	1.4567	0.1476
thoracic_typeUT	-0.8761	1.5124	506.7754	-0.5793	0.5627

SRS22 - SRS Subtotal score

Base Time point 6M. SRS22 - SRS Subtotal score

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.0247	0.0291	464.0278	0.8487	0.3965
time_point	-0.0212	0.0212	140.3971	-1.0008	0.3186
thoracic_typeUT	0.0310	0.0550	523.0606	0.5646	0.5726

SF36 - PCS

Base Time point 6M. SF36 - PCS

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.6049	0.4087	435.5656	1.4801	0.1396
time_point	-0.0856	0.2628	133.0449	-0.3257	0.7452
thoracic_typeUT	1.5344	0.7817	497.4986	1.9628	0.0502

SF36 - MCS

Base Time point 6M. SF36 - MCS

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.4375	0.6027	435.3266	-0.7259	0.4683
time_point	-0.4352	0.3775	132.5251	-1.1529	0.2510
thoracic_typeUT	-0.5099	1.1464	495.9238	-0.4448	0.6567

Estability Increment Radiology

Static Major curve Cobb angle

Base Time point 6W. Static Major curve Cobb angle

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.5967	0.3390	513.5143	-1.7600	0.0790
time_point	0.1131	0.2131	128.3473	0.5307	0.5965
thoracic_typeUT	-0.6638	0.6014	551.3107	-1.1037	0.2702

Preop & Inc preop variable: Static Major curve Cobb angle

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	2.8528	1.7666	549.8877	1.6149	0.1069
Age	-0.0543	0.0269	547.4154	-2.0199	0.0439
SiteBOR Op	-0.1977	0.6300	544.9646	-0.3138	0.7538
SiteIST Op	2.4854	1.6955	525.4932	1.4659	0.1433
SiteMAD Op	1.2029	0.9321	539.3577	1.2906	0.1974
SiteZUR Op	1.5671	1.9320	542.0535	0.8111	0.4176
time_point	0.1147	0.2095	128.5481	0.5472	0.5852
thoracic_typeUT	-1.0652	0.6234	543.6637	-1.7088	0.0881

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	11.3380	4.2015	535.6181	2.6986	0.0072
Age	-0.0729	0.0317	537.8601	-2.2974	0.0220
SiteBOR Op	-0.4563	0.8503	529.5062	-0.5366	0.5918
SiteIST Op	1.6327	1.6977	513.0014	0.9617	0.3366
SiteMAD Op	1.2540	0.9783	525.4155	1.2818	0.2005
SiteZUR Op	0.9400	1.9224	529.6885	0.4890	0.6251
'Prior Spine Surgery'Yes	0.8625	0.6534	532.3071	1.3201	0.1874
'Osteoporosis / osteopenia'Yes	-0.9926	0.6035	530.7520	-1.6447	0.1006
essg_categoryidiopathic	-0.2840	0.7105	532.1417	-0.3997	0.6895
essg_categoryothers	0.7853	1.1058	537.9398	0.7102	0.4779
Non_instrumented_segments	-0.7086	0.2676	533.2869	-2.6484	0.0083
inc_preop	-0.0940	0.0308	534.0844	-3.0545	0.0024
preop	-0.0661	0.0231	538.5503	-2.8636	0.0044
time_point	0.1148	0.2031	127.2576	0.5652	0.5729
thoracic_typeUT	-5.5196	1.9685	533.2616	-2.8039	0.0052

Coronal Balance (C7PL to CSVL)

Base Time point 6W. Coronal Balance (C7PL to CSVL)

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.0467	0.7253	478.5856	-0.0644	0.9487
time_point	0.0933	0.6222	119.8026	0.1499	0.8811
thoracic_typeUT	0.3421	1.4148	532.5691	0.2418	0.8090

Preop & Inc preop variable: Coronal Balance (C7PL to CSVL)

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	6.2084	4.0277	530.0844	1.5414	0.1238
Age	-0.0917	0.0609	530.5080	-1.5060	0.1327
SiteBOR Op	-0.3319	1.4466	531.8917	-0.2294	0.8186
SiteIST Op	-3.0167	3.2875	532.2860	-0.9176	0.3592
SiteMAD Op	-3.6884	2.3651	535.1340	-1.5595	0.1195
SiteZUR Op	7.2103	3.8286	512.4267	1.8833	0.0602
time_point	0.1172	0.6172	118.8094	0.1900	0.8497
thoracic_typeUT	0.8091	1.4646	527.4671	0.5524	0.5809

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	10.5041	7.3669	528.8941	1.4259	0.1545
Age	-0.0073	0.0669	527.9557	-0.1093	0.9130
SiteBOR Op	-2.2974	1.5440	530.8370	-1.4879	0.1374
SiteIST Op	-5.6261	3.2930	529.5729	-1.7085	0.0881
SiteMAD Op	-3.3866	2.4332	531.6130	-1.3919	0.1645
SiteZUR Op	3.6602	3.8144	514.3199	0.9596	0.3377
'Prior Spine Surgery'Yes	0.5513	1.3167	527.0157	0.4187	0.6756
'Osteoporosis / osteopenia'Yes	2.9634	1.3564	530.7752	2.1846	0.0294
essg_categoryidiopathic	3.8820	1.5895	528.1711	2.4423	0.0149
essg_categoryothers	1.0168	2.1845	531.7907	0.4654	0.6418
Non_instrumented_segments	-0.7014	0.5394	529.9540	-1.3002	0.1941
inc_preop	-0.2201	0.0409	530.4267	-5.3860	0.0000
preop	-0.1975	0.0430	531.5483	-4.5931	0.0000

time_point	0.1467	0.5669	117.7507	0.2587	0.7963
thoracic_typeUT	-5.3473	4.0449	528.4155	-1.3220	0.1868

Sagittal Balance

Base Time point 6W. Sagittal Balance

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	1.2413	1.7975	466.7176	0.6906	0.4902
time_point	7.0784	1.4651	112.2650	4.8312	0.0000
thoracic_typeUT	-4.6566	3.5832	524.3850	-1.2996	0.1943

Preop & Inc preop variable: Sagittal Balance

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-13.4833	9.9339	522.8952	-1.3573	0.1753
Age	0.2586	0.1532	523.8548	1.6883	0.0919
SiteBOR Op	-3.2189	3.5687	524.2680	-0.9020	0.3675
SiteIST Op	-25.5964	8.8200	526.9472	-2.9021	0.0039
SiteMAD Op	14.9335	5.3244	525.1220	2.8047	0.0052
SiteZUR Op	-27.7809	9.8046	523.2440	-2.8334	0.0048
time_point	7.0811	1.4041	111.0647	5.0430	0.0000
thoracic_typeUT	-6.2014	3.5714	520.7449	-1.7364	0.0831

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-25.0534	18.1398	519.1135	-1.3811	0.1678
Age	0.1788	0.1631	518.5972	1.0960	0.2736
SiteBOR Op	-4.7350	3.6697	519.9130	-1.2903	0.1975
SiteIST Op	-20.8338	8.8255	519.7325	-2.3606	0.0186
SiteMAD Op	16.6477	5.4404	519.9569	3.0600	0.0023
SiteZUR Op	-14.6976	9.7830	517.1903	-1.5024	0.1336
'Prior Spine Surgery'Yes	-10.4374	3.1782	519.5530	-3.2841	0.0011
'Osteoporosis / osteopenia'Yes	7.9526	3.2919	519.9748	2.4158	0.0160
essg_categoryidiopathic	4.7595	3.7619	519.1326	1.2652	0.2064
essg_categoryothers	6.6970	5.2671	519.8611	1.2715	0.2041
Non_instrumented_segments	1.4484	1.3775	519.5187	1.0515	0.2935
inc_preop	-0.2878	0.0496	518.8678	-5.8056	0.0000
preop	-0.1429	0.0424	518.5605	-3.3674	0.0008
time_point	7.1464	1.2855	109.1333	5.5592	0.0000
thoracic_typeUT	-0.0060	10.3104	519.1946	-0.0006	0.9995

Sagittal T2-T5

Base Time point 6W. Sagittal T2-T5

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-1.2126	0.4180	463.9797	-2.9012	0.0039
time_point	0.9400	0.3241	120.9879	2.9004	0.0044
thoracic_typeUT	3.6100	0.7714	510.2125	4.6798	0.0000

Preop & Inc preop variable: Sagittal T2-T5

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-8.0449	2.3939	505.9376	-3.3606	0.0008
Age	0.1101	0.0366	506.5323	3.0052	0.0028
SiteBOR Op	-0.8095	0.8280	507.2957	-0.9777	0.3287
SiteIST Op	-4.6209	2.2978	505.2531	-2.0110	0.0449
SiteMAD Op	-1.2222	1.1501	507.5137	-1.0627	0.2884
SiteZUR Op	5.2106	2.0839	503.5500	2.5004	0.0127
time_point	0.9647	0.3140	122.8204	3.0725	0.0026
thoracic_typeUT	4.6091	0.8049	505.9403	5.7261	0.0000

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-4.9420	4.3557	500.9217	-1.1346	0.2571
Age	0.0635	0.0380	500.7616	1.6738	0.0948
SiteBOR Op	-0.0487	0.8442	500.9368	-0.0577	0.9540
SiteIST Op	-4.3769	2.2831	498.0562	-1.9171	0.0558
SiteMAD Op	-0.7061	1.1639	500.7920	-0.6067	0.5443
SiteZUR Op	4.8778	2.0255	499.3182	2.4081	0.0164
'Prior Spine Surgery'Yes	1.6833	0.7314	500.9986	2.3014	0.0218
'Osteoporosis / osteopenia'Yes	0.5829	0.7350	500.6477	0.7931	0.4281
essg_categoryidiopathic	-2.0653	0.8192	500.9590	-2.5211	0.0120
essg_categoryothers	-1.5264	1.2424	500.7192	-1.2285	0.2198
Non_instrumented_segments	0.2098	0.3085	500.9244	0.6801	0.4968
inc_preop	-0.3431	0.0507	500.9746	-6.7706	0.0000
preop	-0.1918	0.0472	500.9764	-4.0636	0.0001
time_point	0.9517	0.2869	125.4754	3.3176	0.0012
thoracic_typeUT	8.6595	2.3550	500.9695	3.6771	0.0003

Sagittal T5-T12

Base Time point 6W. Sagittal T5-T12

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	1.4553	0.4007	507.2082	3.6317	0.0003
time_point	1.6011	0.3299	131.5443	4.8531	0.0000
thoracic_typeUT	-1.6417	0.7667	560.6592	-2.1414	0.0327

Preop & Inc preop variable: Sagittal T5-T12

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.2314	2.2413	559.8511	0.1032	0.9178
Age	-0.0089	0.0343	560.4934	-0.2585	0.7961
SiteBOR Op	2.5893	0.8089	561.5871	3.2009	0.0014
SiteIST Op	2.6632	2.0092	561.2308	1.3255	0.1855
SiteMAD Op	3.9844	1.1683	561.8545	3.4105	0.0007
SiteZUR Op	-5.0220	2.2474	551.4516	-2.2345	0.0258
time_point	1.5885	0.3130	128.6047	5.0747	0.0000
thoracic_typeUT	-2.4143	0.7880	558.7256	-3.0637	0.0023

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	14.2062	4.4154	555.2604	3.2174	0.0014

Age	-0.0079	0.0361	553.6039	-0.2183	0.8273
SiteBOR Op	1.6690	0.8527	556.0852	1.9573	0.0508
SiteIST Op	-0.0043	2.0598	554.9410	-0.0021	0.9983
SiteMAD Op	1.3345	1.2457	555.3658	1.0713	0.2845
SiteZUR Op	-2.5961	2.2174	546.5055	-1.1708	0.2422
'Prior Spine Surgery'Yes	-1.3221	0.7613	555.9008	-1.7367	0.0830
'Osteoporosis / osteopenia'Yes	-1.0032	0.7539	556.2229	-1.3307	0.1838
essg_categoryidiopathic	-0.2133	0.7923	553.8174	-0.2692	0.7879
essg_categoryothers	-0.1447	1.2115	556.8255	-0.1194	0.9050
Non_instrumented_segments	-0.7046	0.3066	555.9101	-2.2980	0.0219
inc_preop	-0.2180	0.0337	554.9691	-6.4599	0.0000
preop	-0.1349	0.0281	555.8223	-4.8016	0.0000
time_point	1.6129	0.2986	129.4641	5.4018	0.0000
thoracic_typeUT	-9.3176	2.3458	554.9236	-3.9720	0.0001

Sagittal T2-T12

Base Time point 6W. Sagittal T2-T12

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	1.1172	0.4392	504.0478	2.5437	0.0113
time_point	1.6541	0.3602	125.6947	4.5927	0.0000
thoracic_typeUT	2.1413	0.8212	557.1299	2.6076	0.0094

Preop & Inc preop variable: Sagittal T2-T12

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-7.4627	2.4921	557.0161	-2.9946	0.0029
Age	0.1112	0.0386	557.7445	2.8799	0.0041
SiteBOR Op	1.8260	0.8782	558.1402	2.0793	0.0380
SiteIST Op	-2.9348	2.1574	560.8904	-1.3603	0.1743
SiteMAD Op	2.5861	1.2616	558.6444	2.0498	0.0408
SiteZUR Op	1.6353	2.3109	553.8045	0.7076	0.4795
time_point	1.6779	0.3435	128.6752	4.8851	0.0000
thoracic_typeUT	2.5408	0.8619	555.5116	2.9478	0.0033

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.2972	5.0056	549.2507	-0.0594	0.9527
Age	0.0701	0.0416	549.2831	1.6853	0.0925
SiteBOR Op	2.4180	0.9510	551.8839	2.5427	0.0113
SiteIST Op	-4.1268	2.2663	553.9590	-1.8209	0.0692
SiteMAD Op	2.1441	1.3753	551.8738	1.5590	0.1196
SiteZUR Op	2.5306	2.3267	547.6966	1.0876	0.2772
'Prior Spine Surgery'Yes	0.3893	0.8509	552.1093	0.4575	0.6475
'Osteoporosis / osteopenia'Yes	-0.3389	0.8176	552.8854	-0.4145	0.6787
essg_categoryidiopathic	-2.4292	0.8867	549.4567	-2.7396	0.0064
essg_categoryothers	-0.9741	1.3097	553.4749	-0.7437	0.4574
Non_instrumented_segments	-0.0319	0.3372	551.3480	-0.0948	0.9245
inc_preop	-0.1281	0.0395	550.8778	-3.2457	0.0012
preop	-0.0661	0.0292	550.5390	-2.2633	0.0240
time_point	1.6711	0.3382	124.1193	4.9417	0.0000
thoracic_typeUT	2.4200	2.6064	550.4518	0.9285	0.3536

Lordosis (top of L1-S1)

Base Time point 6W. Lordosis (top of L1-S1)

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.8385	0.3205	528.0760	2.6158	0.0092
time_point	0.8725	0.2677	134.7647	3.2588	0.0014
thoracic_typeUT	0.5618	0.6200	583.6130	0.9061	0.3653

Preop & Inc preop variable: Lordosis (top of L1-S1)

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.4565	1.8051	580.7305	-0.2529	0.8004
Age	0.0190	0.0276	581.2759	0.6872	0.4923
SiteBOR Op	0.2384	0.6467	582.4315	0.3686	0.7125
SiteIST Op	-1.6708	1.4913	586.7126	-1.1204	0.2630
SiteMAD Op	0.1630	0.9694	583.1511	0.1681	0.8665
SiteZUR Op	-1.3145	1.6514	575.5706	-0.7960	0.4264
time_point	0.8736	0.2666	135.0695	3.2775	0.0013
thoracic_typeUT	0.6451	0.6524	578.6578	0.9888	0.3232

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.9040	3.7002	577.4172	-0.2443	0.8071
Age	0.0214	0.0293	577.1305	0.7328	0.4640
SiteBOR Op	-0.5932	0.7057	579.5281	-0.8406	0.4009
SiteIST Op	-0.4692	1.4850	580.9714	-0.3160	0.7521
SiteMAD Op	0.1887	1.0159	579.9301	0.1857	0.8527
SiteZUR Op	-0.4062	1.6888	575.7305	-0.2405	0.8100
'Prior Spine Surgery'Yes	-0.9509	0.5834	578.7510	-1.6299	0.1037
'Osteoporosis / osteopenia'Yes	0.9225	0.6122	580.3455	1.5069	0.1324
essg_categoryidiopathic	1.2410	0.6885	578.5613	1.8024	0.0720
essg_categoryothers	-0.2669	0.9786	580.7033	-0.2727	0.7851
Non_instrumented_segments	-0.5330	0.2506	579.0275	-2.1270	0.0338
inc_preop	-0.1144	0.0266	579.6581	-4.2954	0.0000
preop	-0.0886	0.0215	580.0815	-4.1164	0.0000
time_point	0.8835	0.2467	133.6259	3.5811	0.0005
thoracic_typeUT	-3.6333	1.9283	578.3975	-1.8842	0.0600

Pelvic Incidence

Base Time point 6W. Pelvic Incidence

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.1025	0.1443	536.3433	0.7104	0.4778
time_point	0.0899	0.0995	142.7861	0.9029	0.3681
thoracic_typeUT	-0.2401	0.2709	588.2963	-0.8861	0.3759

Preop & Inc preop variable: Pelvic Incidence

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
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(Intercept)	0.1482	0.7825	583.8927	0.1894	0.8498
Age	0.0016	0.0119	583.6528	0.1310	0.8958
SiteBOR Op	-0.1808	0.2807	583.1091	-0.6441	0.5198
SiteIST Op	1.0251	0.6289	578.4431	1.6299	0.1037
SiteMAD Op	-0.0773	0.4191	581.7860	-0.1844	0.8538
SiteZUR Op	-1.8537	0.7169	583.8366	-2.5857	0.0100
time_point	0.0857	0.0996	133.8502	0.8605	0.3911
thoracic_typeUT	-0.3297	0.2831	583.6568	-1.1648	0.2446

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-1.0498	1.4830	566.6170	-0.7079	0.4793
Age	0.0056	0.0129	566.9831	0.4343	0.6642
SiteBOR Op	0.0147	0.2971	562.6263	0.0493	0.9607
SiteIST Op	0.9784	0.6217	559.0056	1.5739	0.1161
SiteMAD Op	0.7534	0.4795	559.1599	1.5713	0.1167
SiteZUR Op	-1.4292	0.7111	561.2473	-2.0098	0.0449
'Prior Spine Surgery'Yes	-0.4571	0.2525	563.0560	-1.8104	0.0708
'Osteoporosis / osteopenia'Yes	0.1806	0.2696	560.8309	0.6698	0.5033
essg_categoryidiopathic	-0.1126	0.2902	560.6022	-0.3881	0.6981
essg_categoryothers	0.0290	0.4251	566.6006	0.0682	0.9456
Non_instrumented_segments	0.2018	0.1057	563.1491	1.9080	0.0569
inc_preop	-0.1914	0.0367	551.2635	-5.2195	0.0000
preop	-0.0153	0.0093	561.3644	-1.6326	0.1031
time_point	0.0893	0.0892	132.2637	1.0014	0.3185
thoracic_typeUT	0.9425	0.8222	562.3638	1.1463	0.2521

Pelvic Tilt

Base Time point 6W. Pelvic Tilt

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	1.4897	0.2735	527.6180	5.4463	0.0000
time_point	1.0678	0.2068	134.8973	5.1621	0.0000
thoracic_typeUT	0.6058	0.5214	586.2292	1.1618	0.2458

Preop & Inc preop variable: Pelvic Tilt

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	2.1504	1.4920	582.2432	1.4413	0.1500
Age	-0.0205	0.0228	582.5425	-0.8983	0.3694
SiteBOR Op	1.4411	0.5366	582.8591	2.6854	0.0075
SiteIST Op	-0.6764	1.2029	581.0357	-0.5623	0.5741
SiteMAD Op	0.0626	0.8009	582.9991	0.0782	0.9377
SiteZUR Op	-3.1005	1.3670	581.5383	-2.2681	0.0237
time_point	1.0726	0.1998	134.5743	5.3698	0.0000
thoracic_typeUT	0.3997	0.5411	582.2389	0.7387	0.4604

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	3.5685	2.6867	572.9666	1.3282	0.1846
Age	0.0108	0.0242	574.1690	0.4463	0.6555
SiteBOR Op	0.3644	0.5570	571.1089	0.6542	0.5133

SiteIST Op	0.4220	1.1371	566.7519	0.3711	0.7107
SiteMAD Op	1.8261	0.8020	568.7445	2.2769	0.0232
SiteZUR Op	0.0269	1.3194	572.2861	0.0204	0.9838
'Prior Spine Surgery'Yes	-0.2400	0.4661	571.6839	-0.5149	0.6068
'Osteoporosis / osteopenia'Yes	-0.3653	0.4827	569.5097	-0.7567	0.4496
essg_categoryidiopathic	0.2360	0.5309	571.0925	0.4446	0.6568
essg_categoryothers	-0.6809	0.7715	572.1266	-0.8826	0.3778
Non_instrumented_segments	-0.3002	0.1971	571.3340	-1.5235	0.1282
inc_preop	-0.2827	0.0302	573.4314	-9.3577	0.0000
preop	-0.0814	0.0298	573.1243	-2.7327	0.0065
time_point	1.0803	0.1692	142.4113	6.3843	0.0000
thoracic_typeUT	-2.8518	1.5087	571.1538	-1.8903	0.0592

Sacral Slope

Base Time point 6W. Sacral Slope

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-1.4293	0.2874	529.8090	-4.9736	0.000
time_point	-0.9864	0.2134	135.5773	-4.6233	0.000
thoracic_typeUT	-0.7769	0.5456	588.1778	-1.4238	0.155

Preop & Inc preop variable: Sacral Slope

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-2.3728	1.5610	583.5297	-1.5201	0.1290
Age	0.0291	0.0238	583.7676	1.2209	0.2226
SiteBOR Op	-1.8328	0.5603	583.9722	-3.2709	0.0011
SiteIST Op	1.6968	1.2573	581.6169	1.3495	0.1777
SiteMAD Op	-0.2668	0.8369	583.9378	-0.3188	0.7500
SiteZUR Op	1.1046	1.4300	583.0591	0.7724	0.4402
time_point	-0.9957	0.2075	136.4769	-4.7994	0.0000
thoracic_typeUT	-0.6178	0.5648	583.5959	-1.0938	0.2745

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.5977	2.8047	569.2574	-0.2131	0.8313
Age	0.0181	0.0237	569.6595	0.7638	0.4453
SiteBOR Op	-0.4610	0.5679	566.2137	-0.8117	0.4173
SiteIST Op	0.7824	1.1589	562.1053	0.6751	0.4999
SiteMAD Op	-0.5619	0.8016	560.8907	-0.7009	0.4836
SiteZUR Op	-1.3146	1.3272	565.3571	-0.9905	0.3223
'Prior Spine Surgery'Yes	-0.2864	0.4744	565.3988	-0.6037	0.5463
'Osteoporosis / osteopenia'Yes	0.5128	0.4914	564.2163	1.0435	0.2972
essg_categoryidiopathic	-0.1935	0.5440	564.1035	-0.3557	0.7222
essg_categoryothers	1.1747	0.7938	568.9745	1.4799	0.1395
Non_instrumented_segments	0.3792	0.1995	566.2862	1.9010	0.0578
inc_preop	-0.3047	0.0287	569.3869	-10.6268	0.0000
preop	-0.0949	0.0216	562.7748	-4.3876	0.0000
time_point	-0.9995	0.1668	144.9574	-5.9928	0.0000
thoracic_typeUT	2.6169	1.5188	565.6972	1.7231	0.0854

RLL

Base Time point 6W. RLL

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.9204	0.3114	524.2359	-2.9555	0.0033
time_point	-0.9448	0.2606	133.7651	-3.6250	0.0004
thoracic_typeUT	-0.3996	0.5996	578.5503	-0.6665	0.5053

Preop & Inc preop variable: RLL

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.5067	1.7417	575.3167	0.2909	0.7712
Age	-0.0218	0.0266	575.8712	-0.8195	0.4128
SiteBOR Op	-0.1718	0.6258	577.1186	-0.2745	0.7838
SiteIST Op	0.8395	1.4389	581.5439	0.5834	0.5598
SiteMAD Op	-0.2431	0.9353	577.7440	-0.2600	0.7950
SiteZUR Op	2.4632	1.5929	569.9394	1.5463	0.1226
time_point	-0.9430	0.2599	133.2030	-3.6277	0.0004
thoracic_typeUT	-0.4053	0.6305	573.2130	-0.6428	0.5206

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-3.1214	3.2131	572.6840	-0.9715	0.3317
Age	-0.0462	0.0288	571.4366	-1.6058	0.1089
SiteBOR Op	0.3883	0.6879	574.6116	0.5645	0.5726
SiteIST Op	-0.7395	1.4488	575.9830	-0.5104	0.6099
SiteMAD Op	-0.6185	1.0110	575.0857	-0.6118	0.5409
SiteZUR Op	1.6873	1.6464	570.9037	1.0249	0.3059
'Prior Spine Surgery'Yes	1.3339	0.5667	573.7922	2.3538	0.0189
'Osteoporosis / osteopenia'Yes	-1.0216	0.5930	575.3417	-1.7228	0.0855
essg_categoryidiopathic	-1.1757	0.6650	573.6260	-1.7679	0.0776
essg_categoryothers	-0.0163	0.9449	575.7196	-0.0173	0.9862
Non_instrumented_segments	0.4391	0.2406	573.9793	1.8247	0.0686
inc_preop	-0.1192	0.0287	574.7835	-4.1553	0.0000
preop	-0.1123	0.0256	575.0976	-4.3856	0.0000
time_point	-0.9531	0.2402	132.0257	-3.9689	0.0001
thoracic_typeUT	3.6159	1.8384	573.4596	1.9669	0.0497

Global Tilt

Base Time point 6W. Global Tilt

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	1.9408	0.3129	497.7662	6.2017	0.0000
time_point	2.1344	0.2383	137.8477	8.9571	0.0000
thoracic_typeUT	-0.4315	0.6067	551.0473	-0.7112	0.4773

Preop & Inc preop variable: Global Tilt

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.9725	1.7120	547.2869	-0.5681	0.5702
Age	0.0378	0.0264	547.4947	1.4326	0.1525

SiteBOR Op	0.9557	0.6291	547.7773	1.5190	0.1293
SiteIST Op	-1.4388	1.3670	546.7777	-1.0526	0.2930
SiteMAD Op	1.6950	0.9314	547.9958	1.8199	0.0693
SiteZUR Op	-5.7862	1.6014	546.9603	-3.6131	0.0003
time_point	2.1406	0.2276	135.9255	9.4053	0.0000
thoracic_typeUT	-0.6523	0.6196	547.2333	-1.0528	0.2929

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.5745	3.2443	540.9375	-0.1771	0.8595
Age	0.0290	0.0303	540.5880	0.9571	0.3389
SiteBOR Op	0.4079	0.7123	540.8280	0.5727	0.5671
SiteIST Op	-1.3465	1.4033	539.2807	-0.9595	0.3377
SiteMAD Op	2.1009	1.0240	540.6127	2.0518	0.0407
SiteZUR Op	-5.0135	1.6811	540.8812	-2.9822	0.0030
'Prior Spine Surgery'Yes	-1.0449	0.5777	540.9581	-1.8087	0.0711
'Osteoporosis / osteopenia'Yes	-0.2738	0.5859	540.7217	-0.4673	0.6405
essg_categoryidiopathic	0.1185	0.6664	540.9865	0.1779	0.8589
essg_categoryothers	0.5381	0.9305	540.7700	0.5783	0.5633
Non_instrumented_segments	-0.0255	0.2453	540.9461	-0.1041	0.9171
inc_preop	-0.0626	0.0317	540.9999	-1.9749	0.0488
preop	0.0013	0.0286	540.9519	0.0449	0.9642
time_point	2.1396	0.2220	136.5145	9.6362	0.0000
thoracic_typeUT	-1.1761	1.8677	540.9587	-0.6297	0.5292

T1 Sagittal Tilt

Base Time point 6W. T1 Sagittal Tilt

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-0.0498	0.2492	375.9897	-0.1999	0.8417
time_point	0.4836	0.2052	84.3246	2.3568	0.0207
thoracic_typeUT	-1.3010	0.4502	422.4757	-2.8896	0.0041

Preop & Inc preop variable: T1 Sagittal Tilt

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-3.6807	1.4097	422.8100	-2.6110	0.0093
Age	0.0589	0.0226	423.6950	2.6088	0.0094
SiteBOR Op	-0.4437	0.5141	419.2381	-0.8629	0.3887
SiteIST Op	1.1095	1.1984	427.0156	0.9258	0.3551
SiteMAD Op	1.4700	0.7050	424.0977	2.0852	0.0377
SiteZUR Op	-1.6422	1.1439	417.4477	-1.4356	0.1519
time_point	0.4654	0.1972	88.7851	2.3605	0.0204
thoracic_typeUT	-1.4335	0.4660	420.3531	-3.0758	0.0022

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-6.7029	2.3047	421.9643	-2.9084	0.0038
Age	0.0354	0.0237	421.9850	1.4948	0.1357
SiteBOR Op	-0.5930	0.5395	421.8583	-1.0991	0.2724
SiteIST Op	-0.2888	1.1753	421.6600	-0.2457	0.8060
SiteMAD Op	1.4635	0.7304	421.2353	2.0037	0.0457

SiteZUR Op	-0.9589	1.1149	422.0000	-0.8602	0.3902
'Prior Spine Surgery'Yes	-1.1339	0.4486	421.9223	-2.5278	0.0118
'Osteoporosis / osteopenia'Yes	0.5090	0.4571	421.3062	1.1136	0.2661
essg_categoryidiopathic	0.5263	0.4995	421.6151	1.0535	0.2927
essg_categoryothers	1.1965	0.7087	421.9944	1.6883	0.0921
Non_instrumented_segments	0.3441	0.1754	421.9481	1.9620	0.0504
inc_preop	-0.3748	0.0520	421.9309	-7.2076	0.0000
preop	-0.2145	0.0504	421.9480	-4.2544	0.0000
time_point	0.4485	0.1628	89.3975	2.7545	0.0071
thoracic_typeUT	0.7495	1.3091	421.9886	0.5725	0.5673

Thoracolumbar L2-T10

Base Time point 6W. Thoracolumbar L2-T10

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.6483	0.3867	453.8766	1.6764	0.0943
time_point	0.2822	0.3466	108.6189	0.8142	0.4173
thoracic_typeUT	-1.0555	0.7276	501.6743	-1.4506	0.1475

Preop & Inc preop variable: Thoracolumbar L2-T10

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	2.8035	2.0832	501.5906	1.3458	0.1790
Age	-0.0361	0.0318	502.8077	-1.1355	0.2567
SiteBOR Op	0.2564	0.7652	504.9226	0.3351	0.7377
SiteIST Op	-3.0397	1.6952	515.0934	-1.7931	0.0735
SiteMAD Op	0.8682	1.1434	505.4371	0.7593	0.4480
SiteZUR Op	2.0248	1.9812	485.5737	1.0220	0.3073
time_point	0.3050	0.3383	109.3778	0.9014	0.3694
thoracic_typeUT	-1.1273	0.7640	498.9729	-1.4754	0.1407

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	7.2104	3.9700	492.8353	1.8162	0.0699
Age	-0.0235	0.0343	493.2741	-0.6857	0.4932
SiteBOR Op	-0.3568	0.8278	500.3139	-0.4309	0.6667
SiteIST Op	-3.3125	1.7070	507.5389	-1.9406	0.0529
SiteMAD Op	0.2973	1.2300	499.4738	0.2417	0.8091
SiteZUR Op	1.9038	1.9591	477.7345	0.9718	0.3316
'Prior Spine Surgery'Yes	-0.8304	0.7058	497.5331	-1.1765	0.2400
'Osteoporosis / osteopenia'Yes	-0.7117	0.7558	500.8174	-0.9417	0.3468
essg_categoryidiopathic	0.9330	0.8120	493.8938	1.1490	0.2511
essg_categoryothers	1.5430	1.2102	503.3419	1.2750	0.2029
Non_instrumented_segments	-0.3894	0.3030	497.5524	-1.2850	0.1994
inc_preop	-0.1693	0.0362	492.8110	-4.6768	0.0000
preop	-0.1488	0.0339	493.9860	-4.3904	0.0000
time_point	0.3218	0.3309	104.2222	0.9726	0.3330
thoracic_typeUT	-4.9476	2.2440	497.0098	-2.2048	0.0279

RSA

Base Time point 6W. RSA

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	1.8896	0.3074	497.0885	6.1466	0.0000
time_point	2.1004	0.2344	136.5332	8.9623	0.0000
thoracic_typeUT	-0.3190	0.5961	550.9587	-0.5352	0.5927

Preop & Inc preop variable: Global Tilt

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-1.0951	2.2101	434.5367	-0.4955	0.6205
Age	0.0538	0.0339	432.9294	1.5878	0.1131
SiteBOR Op	1.5307	0.8059	430.4029	1.8993	0.0582
SiteIST Op	-2.8747	1.8031	408.8930	-1.5943	0.1116
SiteMAD Op	2.4594	1.1850	425.4764	2.0755	0.0385
SiteZUR Op	-7.7693	2.0741	429.6515	-3.7459	0.0002
time_point	1.6931	0.2400	169.6519	7.0533	0.0000
thoracic_typeUT	-0.7495	0.7939	432.7716	-0.9441	0.3457

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.9104	4.1365	423.6920	0.2201	0.8259
Age	0.0329	0.0384	425.6656	0.8553	0.3929
SiteBOR Op	0.5197	0.9023	417.3667	0.5760	0.5649
SiteIST Op	-3.0162	1.8254	401.3719	-1.6523	0.0993
SiteMAD Op	3.0752	1.2912	414.5604	2.3818	0.0177
SiteZUR Op	-6.5926	2.1660	416.5512	-3.0437	0.0025
'Prior Spine Surgery'Yes	-1.2307	0.7346	417.3914	-1.6753	0.0946
'Osteoporosis / osteopenia'Yes	-0.3445	0.7423	416.1492	-0.4642	0.6428
essg_categoryidiopathic	0.3779	0.8429	419.0353	0.4483	0.6542
essg_categoryothers	0.8131	1.1985	416.4555	0.6785	0.4979
Non_instrumented_segments	-0.1982	0.3117	418.8512	-0.6359	0.5252
inc_preop	-0.0837	0.0405	419.0775	-2.0690	0.0392
preop	0.0182	0.0363	421.5088	0.5001	0.6173
time_point	1.6941	0.2344	170.5289	7.2280	0.0000
thoracic_typeUT	-2.6332	2.3675	418.9067	-1.1122	0.2667

RPV

Base Time point 6W. RPV

Time evolution

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-1.4916	0.2737	529.3453	-5.4506	0.0000
time_point	-1.0376	0.2060	135.8149	-5.0357	0.0000
thoracic_typeUT	-0.6338	0.5206	587.5494	-1.2176	0.2239

Preop & Inc preop variable: Sacral Slope

Basic Demographics

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	-4.1060	1.9494	464.4733	-2.1063	0.0357
Age	0.0441	0.0296	462.4855	1.4914	0.1365
SiteBOR Op	-2.5591	0.6941	459.6703	-3.6872	0.0003
SiteIST Op	1.6130	1.5994	434.9998	1.0085	0.3138

SiteMAD Op	-0.3292	1.0310	455.5343	-0.3193	0.7497
SiteZUR Op	3.3415	1.7566	465.0696	1.9022	0.0578
time_point	-0.6678	0.2136	173.0449	-3.1267	0.0021
thoracic_typeUT	-0.6706	0.7000	462.3428	-0.9581	0.3385

Factors

	Estimate	Std. Error	df	t value	Pr(> t)
(Intercept)	0.1878	3.2127	433.3076	0.0584	0.9534
Age	0.0249	0.0271	434.6764	0.9184	0.3589
SiteBOR Op	-0.6286	0.6477	428.7527	-0.9706	0.3323
SiteIST Op	0.1549	1.3558	411.0970	0.1142	0.9091
SiteMAD Op	-0.5190	0.9096	419.6412	-0.5705	0.5686
SiteZUR Op	-0.1769	1.5023	427.0044	-0.1177	0.9063
'Prior Spine Surgery'Yes	-0.0366	0.5415	425.9696	-0.0676	0.9461
'Osteoporosis / osteopenia'Yes	0.8695	0.5611	424.7351	1.5497	0.1220
essg_categoryidiopathic	-0.1045	0.6195	423.5891	-0.1686	0.8662
essg_categoryothers	1.3288	0.9211	429.8987	1.4427	0.1498
Non_instrumented_segments	0.3614	0.2280	427.5764	1.5851	0.1137
inc_preop	-0.4356	0.0329	433.7756	-13.2513	0.0000
preop	-0.1385	0.0247	420.0949	-5.6037	0.0000
time_point	-0.6740	0.1684	187.4591	-4.0022	0.0001
thoracic_typeUT	2.6751	1.7332	426.5494	1.5435	0.1235