

# Hospital Report

## Sample Hospital

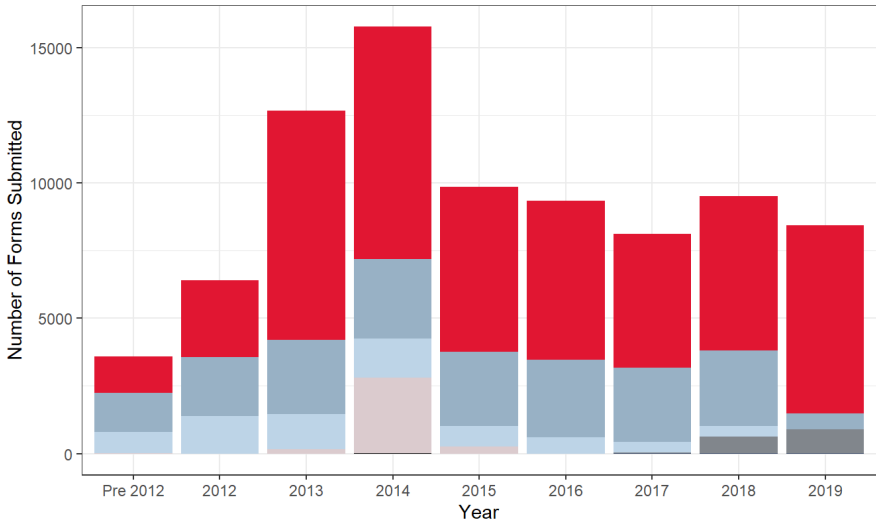
Containing usage data up to 31/12/2019  
Created on 23/07/2020

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This report has been produced by Northgate Public Services on behalf of EUROSPINE. It represents activity recorded in Spine Tango for Sample Hospital, based on data collected up to the specified date. This report is made available to Sample Hospital under the Spine Tango Agreement between the parties. Under this Agreement, Sample Hospital is free to share this report as they choose.

# Activity Overview



Form Type

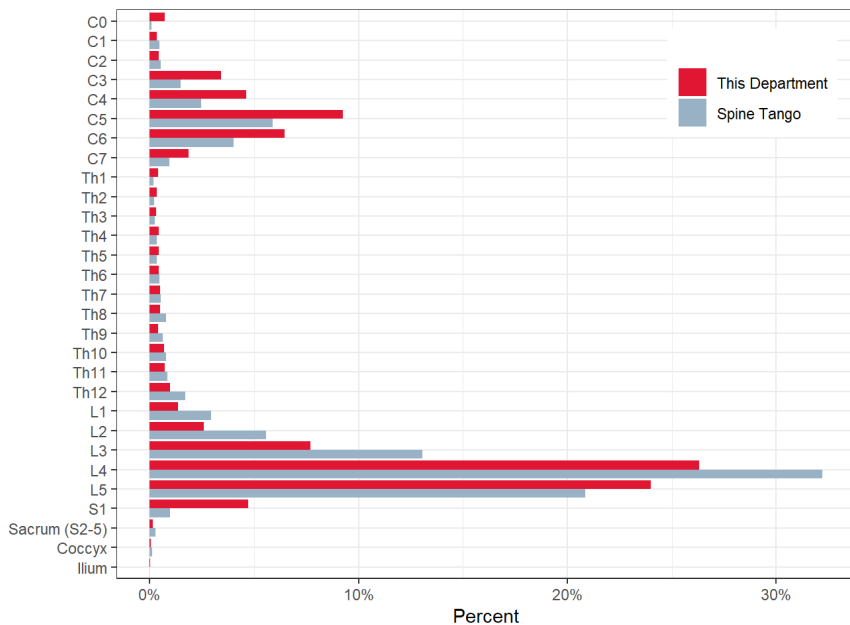
- Patient COMI
- Surgery Followup
- Patient COMI Conservative
- Scoliosis Research Society
- Surgery
- EuroQol
- Deformity

Form Type	Pre 2012	2012	2013	2014	2015	2016	2017	2018	2019	Total
Patient COMI	1,341	2,821	8,451	8,583	6,098	5,866	4,956	5,725	6,949	50,790
Surgery	1,446	2,194	2,740	2,934	2,746	2,859	2,734	2,787	605	21,045
Surgery Followup	788	1,380	1,301	1,458	757	606	397	396	0	7,083
EuroQol	5	0	170	2,788	262	1	0	0	0	3,226
Patient COMI Conservative	0	0	0	0	0	0	0	33	603	1,518
Deformity	0	0	0	0	1	0	4	13	5	23
Scoliosis Research Society (30)	0	0	0	9	0	0	0	0	0	9
<b>Total</b>	<b>3,580</b>	<b>6,395</b>	<b>12,662</b>	<b>15,772</b>	<b>9,864</b>	<b>9,332</b>	<b>8,124</b>	<b>9,524</b>	<b>8,441</b>	<b>83,694</b>

## Consultant Activity

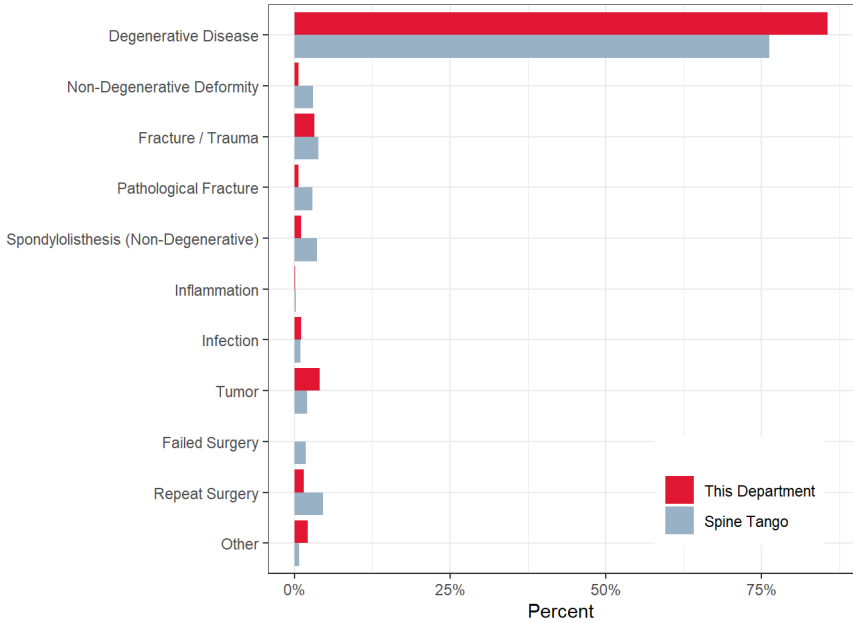
Consultant	Patient COMI			Surgery			Surgery Followup		Patient COMI Conservative			Total
	Pre 2018	2018	2019	Pre 2018	2018	2019	Pre 2018	2018	Pre 2018	2018	2019	
1	206	249	421	82	164	48	50	30	0	12	10	1,272
2	68	137	291	22	104	32	13	12	0	4	0	683
3	21	52	88	12	36	6	7	7	0	0	0	229
4	49	48	76	15	40	13	13	11	0	1	0	266
5	0	26	15	0	16	0	0	1	0	0	0	58
6	46	138	187	17	110	32	8	6	1	0	0	545
7	9	8	125	2	11	8	1	1	0	0	1	166
8	91	196	425	41	145	27	20	12	0	0	5	962
9	14	53	89	5	46	14	2	9	0	0	0	232
10	27	60	78	16	45	3	4	13	0	0	0	246
11	13	56	91	6	58	6	2	7	0	0	0	239
12	128	253	455	57	181	52	29	30	0	5	9	1,199
13	2	11	14	1	9	2	1	1	0	0	1	42
14	30	33	217	11	24	41	8	0	0	0	4	368
15	121	172	341	40	132	54	22	8	0	8	2	900
16	57	218	436	19	133	54	11	17	0	6	6	957
17	21	96	91	8	67	14	5	1	0	0	3	306
18	18	17	103	6	8	6	2	0	0	0	0	160
19	69	127	310	22	99	33	13	2	0	0	3	678
20	118	191	366	45	149	40	22	20	0	7	5	963
21	165	210	455	67	146	68	40	26	0	0	2	1,179
22	0	0	115	0	0	2	0	0	0	0	8	125
23	0	2	30	0	1	2	0	0	0	0	0	35
24	14	2	30	5	0	0	2	0	0	0	0	53
25	1,287	2,355	4,849	499	1,724	557	275	214	1	43	59	11,863

## Level of Procedure



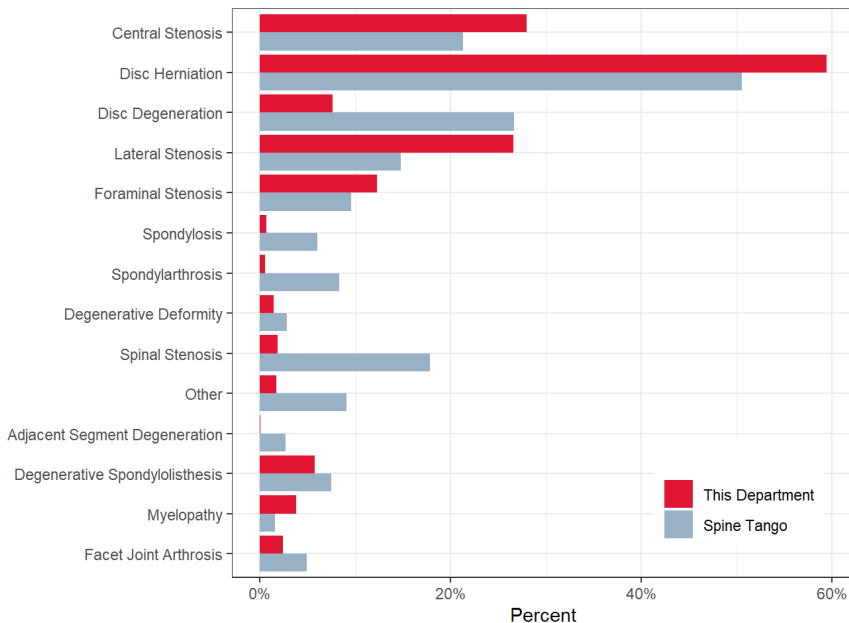
Level of Procedure	This Department	Spine Tango
Upper Cervical	1.5% (324)	1.1% (1,172)
Mid-Lower Cervical	23.7% (5,221)	13.9% (15,045)
Cervico-thoracic	2.2% (493)	1.1% (1,235)
Thoracic	4.7% (1,041)	5.1% (5,572)
Thoracolumbar	2.3% (510)	4.6% (5,009)
Lumbar	36.6% (8,047)	50.8% (55,054)
Lumbosacral	28.7% (6,315)	21.8% (23,650)
Sacral	0.2% (35)	0.3% (299)
Coccyx	0.0% (10)	0.1% (109)
Ilium	0.0% (2)	0.0% (4)
Not Assessable	0.0% (3)	1.0% (1,092)
Unknown	0.0% (1)	0.0% (36)

## Main Pathology



Main Pathology	This Department	Spine Tango
Degenerative Disease	85.6% (18,873)	76.2% (82,717)
Non-Degenerative Deformity	0.7% (150)	3.0% (3,304)
Fracture / Trauma	3.2% (698)	3.9% (4,200)
Pathological Fracture	0.6% (134)	2.9% (3,108)
Spondylolisthesis (Non-Degenerative)	1.1% (234)	3.6% (3,946)
Inflammation	0.1% (26)	0.2% (218)
Infection	1.0% (231)	0.9% (1,020)
Tumor	4.0% (889)	2.0% (2,214)
Failed Surgery	0.0% (6)	1.8% (1,977)
Repeat Surgery	1.5% (337)	4.6% (4,995)
Other	2.2% (482)	0.8% (829)

# Degenerative Disease



Type of Degeneration	This Department	Spine Tango
Central Stenosis	27.9% (5,271)	21.3% (17,614)
Disc Herniation	59.4% (11,216)	50.5% (41,771)
Disc Degeneration	7.6% (1,441)	26.6% (22,037)
Lateral Stenosis	26.6% (5,011)	14.8% (12,238)
Foraminal Stenosis	12.3% (2,315)	9.6% (7,930)
Spondylosis	0.7% (132)	6.0% (4,953)
Spondylarthrosis	0.5% (103)	8.3% (6,884)
Degenerative Deformity	1.5% (276)	2.8% (2,341)
Spinal Stenosis	1.8% (349)	17.8% (14,756)
Other	1.7% (318)	9.1% (7,507)
Adjacent Segment Degeneration	0.0% (5)	2.7% (2,246)
Degenerative Spondylolisthesis	5.7% (1,079)	7.5% (6,182)
Myelopathy	3.8% (716)	1.6% (1,293)
Facet Joint Arthrosis	2.4% (453)	4.9% (4,064)

## Preoperative Profile

	This Department	Spine Tango
Mean Age	53.8	58.8
< 40	19.9% (3,577)	12.3% (10,006)
40-49	23.2% (4,165)	17.6% (14,251)
50-59	21.7% (3,901)	21.3% (17,285)
60-79	31.8% (5,709)	41.9% (33,960)
> 80	3.5% (625)	6.9% (5,594)
Male	52.3% (9,396)	49.0% (39,740)
Smoker		
No	42.3% (7,613)	28.2% (22,836)
Unknown	47.5% (8,543)	63.3% (51,339)
Yes	10.1% (1,824)	8.5% (6,924)
Median BMI	28.6	26.9
< 18.5	3.3% (733)	1.8% (1,789)
18.5-24	20.3% (4,469)	15.9% (15,504)
25-29	32.8% (7,205)	19.8% (19,303)
30-34	17.3% (3,812)	9.2% (8,976)
35-39	7.7% (1,693)	3.2% (3,077)
> 40	10.3% (2,256)	5.4% (5,231)
Unknown	8.3% (1,822)	44.8% (43,751)
Number of Segments Affected		
1	74.8% (13,452)	60.5% (49,094)
2	19.1% (3,435)	28.8% (23,324)
3	4.5% (802)	7.2% (5,802)
3+	1.6% (291)	3.5% (2,864)
Previous Surgeries (Any Level)		
0	79.8% (14,354)	73.8% (59,723)
1	15.4% (2,777)	18.1% (14,656)
> 1	4.7% (837)	7.7% (6,233)
Unknown	0.1% (10)	0.4% (287)

## Perioperative Profile

Characteristic	This Department	Spine Tango
<b>Blood Loss</b>		
Unknown	14.5% (2,616)	10.6% (8,609)
None	69.1% (12,418)	38.2% (30,959)
100 - 500 MI	14.3% (2,578)	42.4% (34,349)
500 - 1000 MI	1.4% (259)	6.6% (5,318)
1000 - 2000 MI	0.5% (86)	1.9% (1,507)
> 2000 MI	0.1% (23)	0.4% (357)
<b>Blood Transfusion</b>		
None	89.5% (16,098)	49.7% (40,330)
< 2 Units	0.3% (46)	0.6% (459)
>= 2 Units	0.2% (29)	0.6% (483)
Cell Saver	0.7% (128)	3.8% (3,064)
Unknown	9.4% (1,691)	45.9% (37,224)
<b>Prophylaxis</b>		
None	4.4% (798)	1.4% (1,124)
Infection	70.5% (12,674)	45.3% (36,760)
Thromboembolism	56.0% (10,073)	35.3% (28,614)
Ossification	1.2% (221)	0.2% (132)
Other	0.9% (157)	0.1% (41)
Unknown	22.8% (4,098)	51.5% (41,738)
<b>Technology</b>		
Conventional	33.5% (6,027)	39.5% (32,017)
MISS / LISS	3.1% (562)	14.6% (11,857)
Loops	0.5% (86)	10.6% (8,560)
Endoscope	0.2% (34)	0.4% (298)
Microscope	82.6% (14,844)	57.1% (46,280)
CASS	0.2% (29)	0.5% (371)
Neuromonitoring	0.9% (161)	2.9% (2,356)
Other	8.0% (1,430)	0.8% (676)
Intraoperative 3d-Imaging	0.2% (36)	0.1% (82)
Unknown	0.6% (108)	3.3% (2,683)



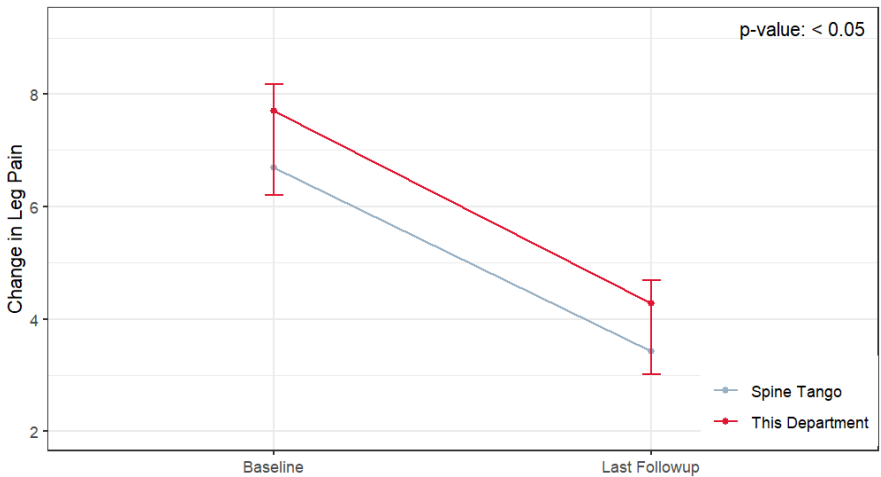
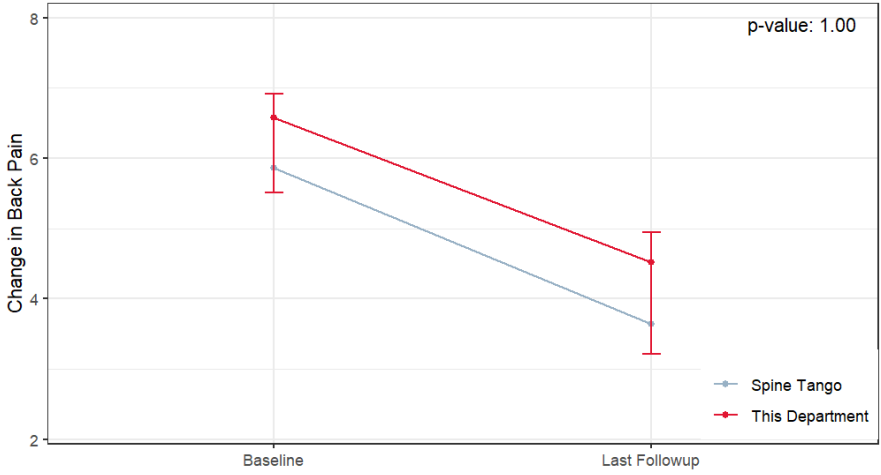
Characteristic	This Department	Spine Tango
<b>Operation Time</b>		
Unknown	2.9% (514)	5.5% (4,448)
< 1 Hr.	31.5% (5,665)	26.6% (21,534)
1-2 Hrs.	46.2% (8,308)	37.8% (30,637)
2-3 Hrs.	12.7% (2,284)	17.1% (13,855)
3-4 Hrs.	4.1% (740)	7.4% (6,028)
4-5 Hrs.	1.3% (225)	3.1% (2,507)
5-6 Hrs.	0.6% (99)	1.4% (1,139)
6-8 Hrs.	0.6% (110)	0.9% (698)
8-10 Hrs.	0.2% (27)	0.2% (184)
> 10 Hrs.	0.0% (8)	0.1% (69)
<b>Anterior Access</b>		
No Anterior Access	79.8% (14,340)	80.8% (65,518)
Transoral	0.3% (47)	0.1% (104)
Anterior	1.0% (173)	5.3% (4,322)
Anterolateral	18.3% (3,287)	9.7% (7,837)
Cervicothoracic Anterolateral	0.3% (57)	0.3% (247)
Cervicothoracic With Sternotomy	0.0% (0)	0.0% (1)
Cervicothoracic Anterolat With Sternotomy	0.0% (0)	0.0% (4)
Thoracoabdominal	0.0% (4)	0.0% (13)
Thoracotomy	0.2% (27)	0.1% (74)
Retroperitoneal	0.1% (14)	2.1% (1,696)
Thoraco-Phrenico-Lumbotomy	0.0% (0)	0.0% (8)
Trans-Psoas (XLIF)	0.0% (6)	1.1% (894)
Transperitoneal	0.0% (0)	0.0% (36)
Other	0.2% (27)	0.2% (147)
Unknown	0.0% (2)	0.2% (200)
<b>Posterior Access</b>		
No Posterior Access	20.2% (3,636)	17.5% (14,219)
Midline	74.7% (13,429)	69.8% (56,590)
Paramedian	4.7% (846)	10.0% (8,077)
Posterolateral	0.2% (44)	1.6% (1,258)
Percutaneous	0.1% (22)	0.5% (435)
Other	0.1% (10)	0.4% (345)
Para-Coccygeal (AxialIF)	0.0% (0)	0.0% (2)
Unknown	0.0% (2)	0.2% (200)

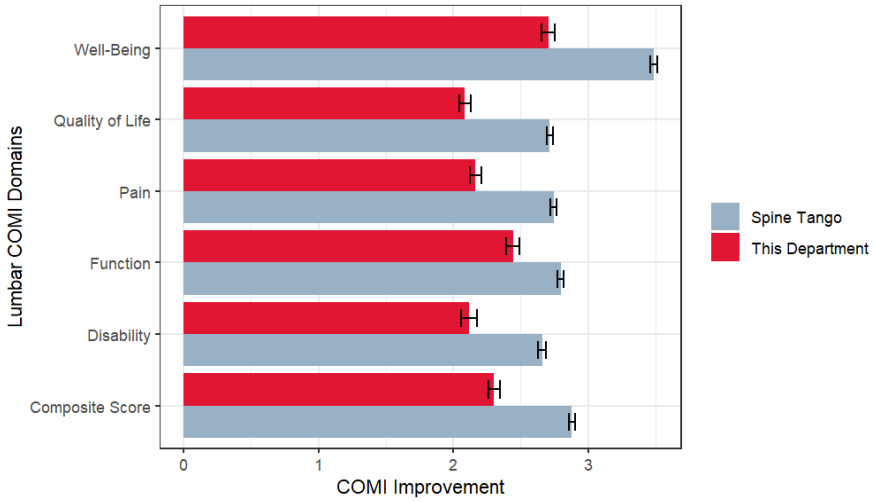
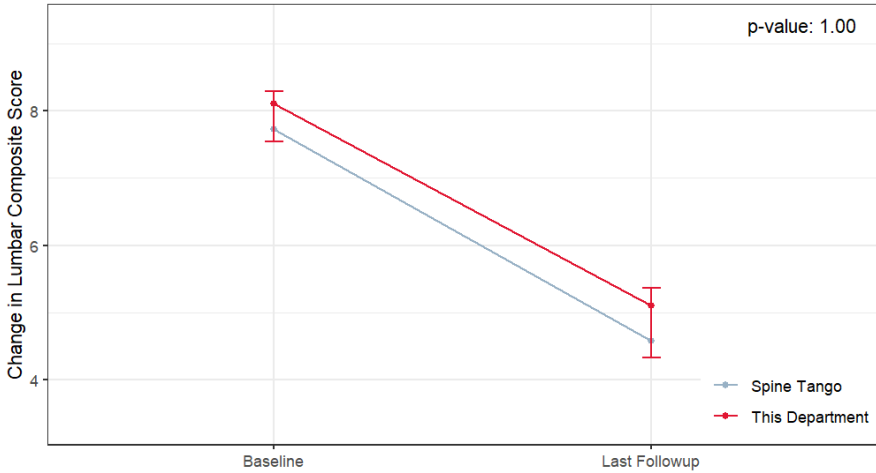
## Surgical Measures

Characteristic	This Department	Spine Tango
<b>Decompression</b>		
Discectomy	62.1% (11,157)	53.7% (43,555)
None	1.2% (210)	3.0% (2,458)
Anterior	18.1% (3,261)	23.7% (19,221)
Vertebrectomy Partial	0.6% (105)	1.2% (1,003)
Posterior	65.8% (11,839)	69.2% (56,138)
Vertebrectomy Full	0.2% (36)	0.3% (231)
Osteotomy	1.3% (241)	1.6% (1,303)
Laminotomy	24.9% (4,477)	32.3% (26,223)
Hemi-Laminectomy	6.2% (1,110)	8.3% (6,691)
Laminectomy	20.4% (3,666)	11.0% (8,916)
Facet Joint Resection Partial	14.6% (2,623)	33.1% (26,811)
Facet Joint Resection Full	3.4% (609)	5.0% (4,074)
Flavectomy	36.0% (6,480)	45.9% (37,242)
Foraminotomy	30.9% (5,556)	31.8% (25,755)
Sequestrectomy	3.7% (674)	22.5% (18,251)
Other	1.5% (267)	4.1% (3,329)
Flavotomy	1.9% (348)	3.4% (2,776)
Uncoforaminotomy	2.9% (514)	2.0% (1,624)
Unknown	0.1% (9)	0.9% (695)
<b>Fusion</b>		
None	72.5% (13,027)	60.4% (49,004)
Anterior	16.8% (3,029)	21.3% (17,291)
Posterior	6.7% (1,208)	18.8% (15,216)
Other	2.4% (440)	13.2% (10,671)
Posterolateral Fusion	3.9% (697)	8.3% (6,759)
Posterior Fusion	1.2% (207)	6.0% (4,902)
Interbody Fusion (A-IF)	14.3% (2,573)	6.1% (4,917)
Interbody Fusion (PLIF)	2.6% (462)	3.6% (2,906)
Interbody Fusion (TLIF)	3.1% (558)	6.6% (5,356)
Interbody Fusion (XLIF)	0.1% (14)	1.2% (1,010)
Other Interbody Fusion	2.4% (429)	2.2% (1,757)
Ilio-Sacral Fusion	0.0% (1)	0.0% (8)
Unknown	0.0% (2)	2.2% (1,807)

Characteristic	This Department	Spine Tango
<b>Rigid Stabilization</b>		
Interbody Stabilization With Cage	19.5% (3,515)	17.2% (13,988)
Interbody Stabilization With Cage (Ant. Approach)	1.2% (213)	3.8% (3,086)
Interbody Stabilization With Auto-/ Allograft	0.3% (48)	0.5% (408)
Interbody Stabilization With Cage (Post. Approach)	0.0% (2)	4.3% (3,448)
Vertebral Body Replacement By Cage	0.3% (48)	0.3% (276)
Plates	2.2% (401)	7.7% (6,255)
Pedicle Screws With Rod	5.4% (977)	18.7% (15,183)
Pedicle Screws With Plate	0.0% (0)	0.2% (160)
Facet Screws	0.2% (33)	0.5% (395)
Transarticular Screw	0.0% (0)	0.5% (416)
Transarticular Screw C1-C2	0.0% (2)	0.1% (62)
Laminar Hooks	0.0% (0)	0.0% (3)
Laminar Hooks With Rod	0.0% (0)	0.0% (34)
Pedicle Hooks	0.0% (0)	0.0% (4)
Pedicle Hooks With Rod	0.1% (13)	0.2% (176)
Lateral Mass Screw	0.2% (34)	0.0% (27)
Lateral Mass Screw With Rod	1.3% (227)	0.8% (633)
Lateral Mass Screw With Plate	0.0% (0)	0.0% (33)
Other	0.3% (52)	0.9% (721)
Odontoid Screws	0.0% (2)	0.0% (2)
Laminar Screws	0.1% (9)	0.1% (87)
Pedicle Screws Cemented	0.1% (15)	0.2% (129)
Pedicle Screws Uncemented	1.3% (237)	1.4% (1,120)
None	73.9% (13,284)	60.6% (49,115)
Anterior	15.3% (2,742)	19.8% (16,047)
Posterior	6.9% (1,242)	20.2% (16,379)
Unknown	0.0% (2)	3.0% (2,418)
<b>Motion Preserving Stabilization</b>		
Disc Replacement	0.3% (60)	2.7% (2,172)
Dynamic Stabilization	0.1% (10)	2.9% (2,334)
Interspinous Spacer	0.0% (8)	0.6% (456)
Other	0.1% (18)	0.3% (272)
None	99.5% (17,882)	89.8% (72,801)
Anterior	0.3% (47)	2.5% (2,023)
Posterior	0.1% (26)	3.6% (2,887)
Unknown	0.0% (2)	3.8% (3,115)

# COMI Analysis - Lumbar



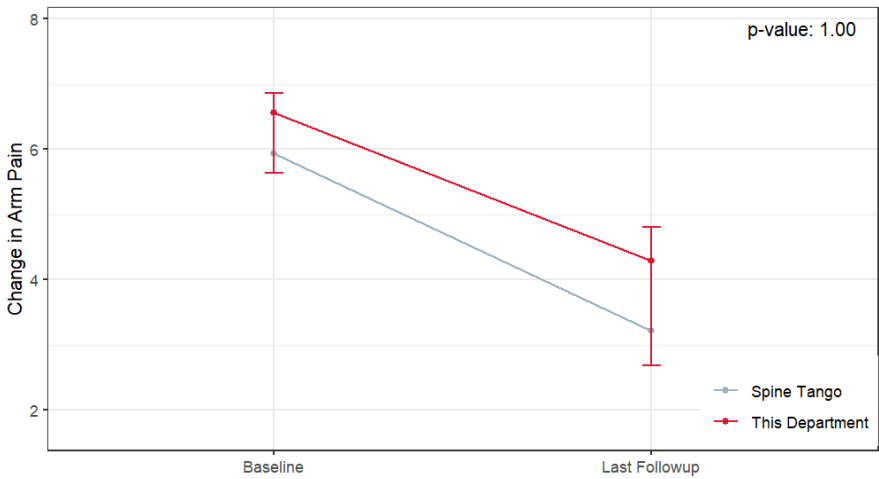
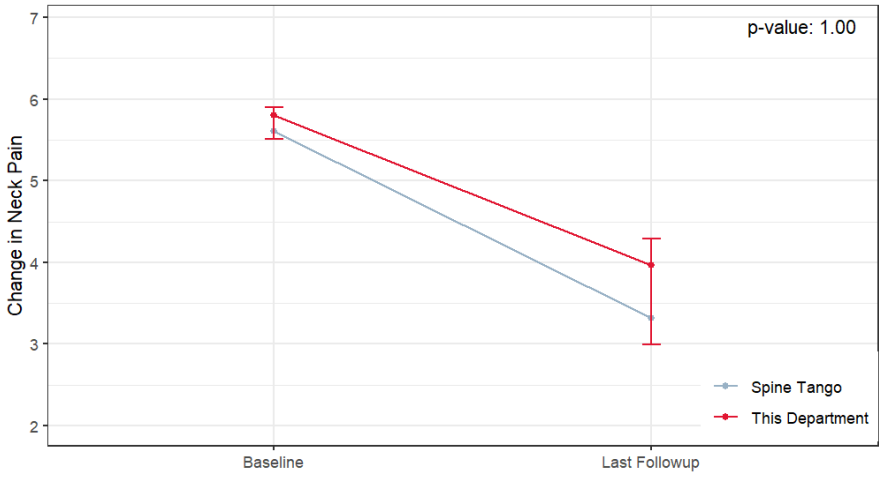


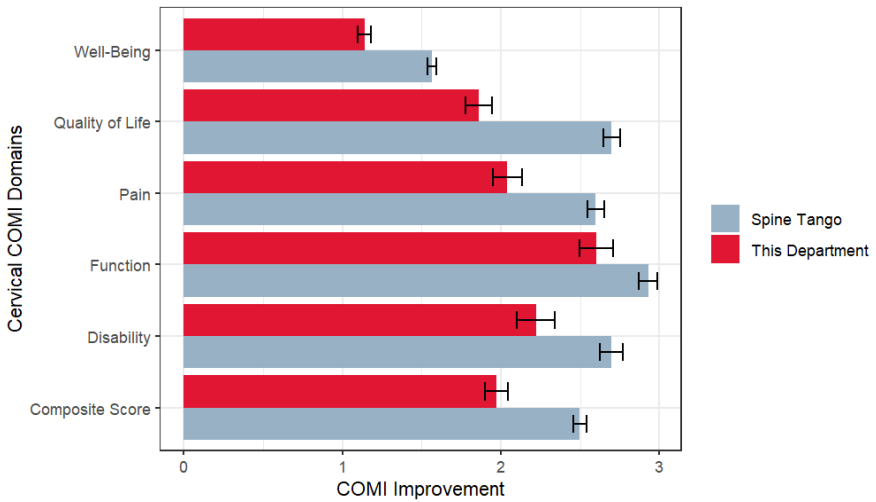
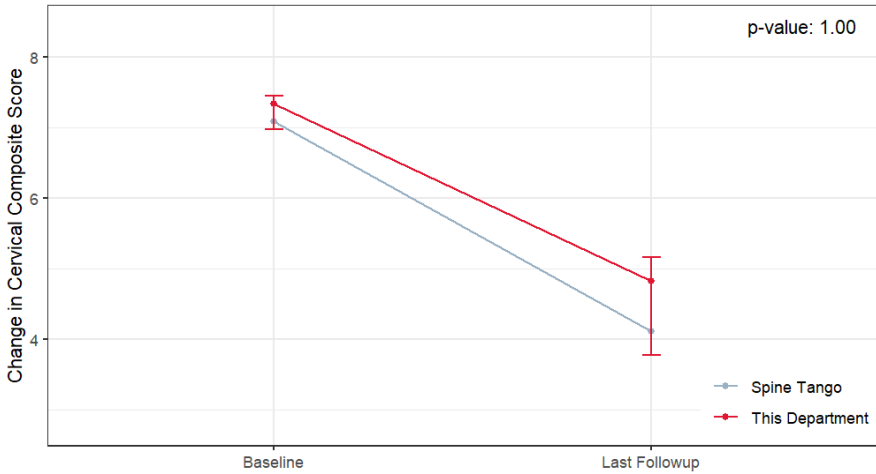
All charts contain error bars showing the 95% confidence interval.

P-values were calculated using a one-sided unpaired Wilcoxon test. The alternative hypothesis in each case is that the COMI score improvement of the study group is greater than that of the comparator group.

Composite scores are the average of i) the higher of the two pain scores, ii) the average of the two disability items, iii) function, iv) symptom-specific well-being and v) quality of life.

# COMI Analysis - Cervical





All charts contain error bars showing the 95% confidence interval.

P-values were calculated using a one-sided unpaired Wilcoxon test. The alternative hypothesis in each case is that the COMI score improvement of the study group is greater than that of the comparator group.

Composite scores are the average of i) the higher of the two pain scores, ii) the average of the two disability items, iii) function, iv) symptom-specific well-being and v) quality of life.

## General Complications

	This Department	Spine Tango
<b>Intraop General Complications</b>		
None	93.3% (16,770)	57.8% (46,858)
Anaesthesiological	0.1% (10)	0.0% (37)
Cardiovascular	0.1% (11)	0.1% (47)
Pulmonary	0.0% (6)	0.0% (9)
Thromboembolism	0.0% (3)	0.0% (10)
Death	0.0% (0)	0.0% (2)
Other	0.1% (10)	0.0% (24)
Not Documented	0.5% (87)	0.2% (196)
Unknown	6.0% (1,085)	41.8% (33,928)
<b>Postop General Before Discharge</b>		
None	91.9% (16,524)	56.3% (45,636)
Cardiovascular	0.2% (34)	0.3% (270)
Pulmonary	0.3% (52)	0.2% (181)
Cerebral	0.1% (10)	0.1% (78)
Kidney / Urinary	0.4% (68)	0.4% (320)
Liver / Gi	0.1% (11)	0.2% (154)
Thromboembolism	0.0% (7)	0.1% (41)
Death	0.0% (6)	0.0% (24)
Other	0.4% (66)	0.5% (389)
Not Documented	0.8% (144)	0.3% (262)
Unknown	6.0% (1,085)	41.8% (33,932)



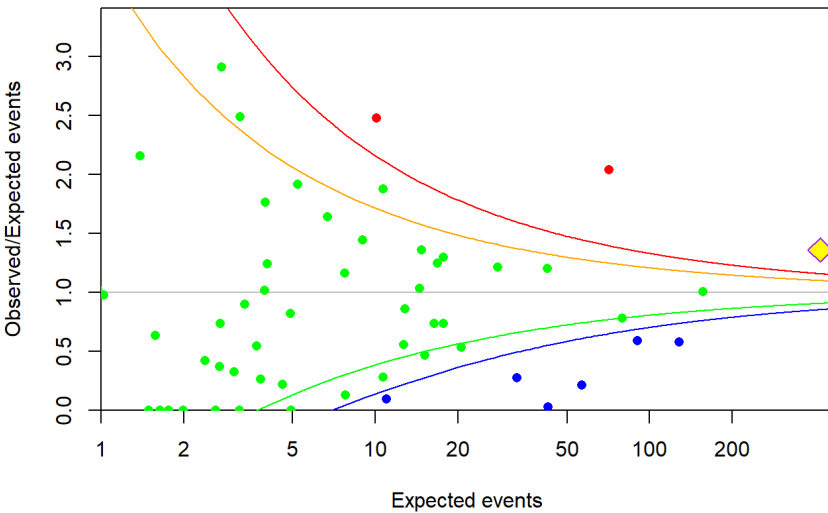
## Surgical Complications

	This Department	Spine Tango
<b>Intraop Adverse Events</b>		
None	87.3% (15,688)	55.1% (44,653)
Nerve Root Damage	0.2% (44)	0.1% (101)
Spinal Cord Damage	0.0% (3)	0.0% (16)
Dural Lesion	5.9% (1,066)	2.6% (2,117)
Vascular Injury	0.1% (14)	0.0% (38)
Fracture Vertebral Structures	0.1% (9)	0.1% (43)
Other	0.4% (80)	0.2% (154)
Not Documented	0.1% (18)	0.1% (103)
Unknown	6.0% (1,085)	41.8% (33,928)
<b>Postop Surgical Before Discharge</b>		
None	90.8% (16,325)	55.9% (45,334)
Epidural Hematoma	0.3% (45)	0.3% (254)
Other Hematoma	0.1% (23)	0.2% (130)
Radiculopathy	0.3% (48)	0.3% (273)
CSF Leak / Pseudomeningocele	0.4% (63)	0.1% (118)
Motor Dysfunction	0.4% (80)	0.4% (345)
Sensory Dysfunction	0.4% (63)	0.3% (258)
Bowel / Bladder Dysfunction	0.5% (95)	0.1% (84)
Wound Infection Superficial	0.3% (48)	0.2% (145)
Wound Infection Deep	0.1% (24)	0.1% (97)
Implant Malposition	0.1% (14)	0.1% (78)
Implant Failure	0.1% (13)	0.0% (38)
Wrong Level	0.0% (3)	0.0% (6)
Other	0.5% (83)	0.4% (303)
Not Documented	0.4% (63)	0.2% (190)
Recurrent Nerve Paresis	0.0% (1)	0.0% (4)
Unknown	6.0% (1,085)	41.8% (33,932)

Disc Herniation - Adverse Events

Adverse Event	This Department	Spine Tango	Expected	p-value
Dural Lesion	5.1% (568)	3.7% (897)	418	< 0.001
Nerve Root Damage	0.3% (32)	0.2% (45)	23	0.1
Spinal Cord Damage	0.0% (2)	0.0% (6)	2	1.0
Vascular Injury	0.1% (8)	0.0% (12)	6	0.4
Fx Vertebral Structures	0.0% (0)	0.0% (0)	0	1.0

Disc Herniation - Dural Lesions

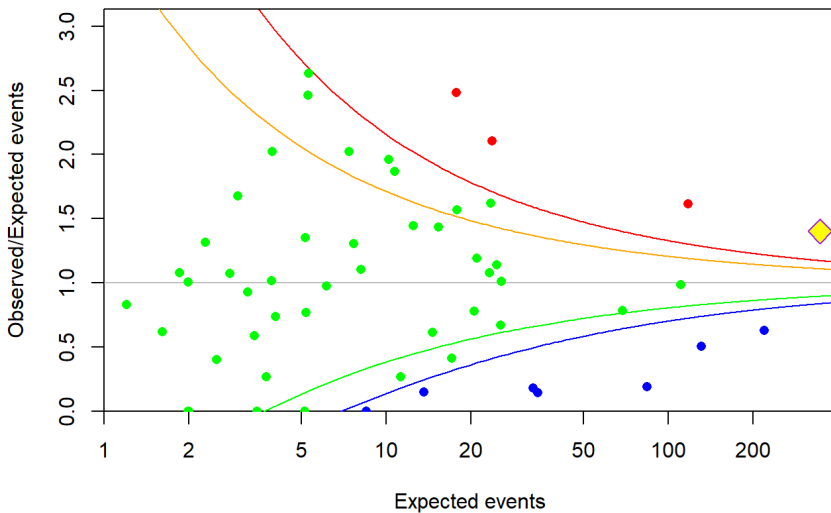


The expected number of adverse events has been adjusted by patient age, gender, smoking status, BMI, the number of segments affected by the target lesion and the number of prior spinal surgeries (at any level). The statistical model used was a binomial generalised linear model. P-values were calculated using a Poisson test.

### Central Stenosis - Adverse Events

Adverse Event	This Department	Spine Tango	Expected	p-value
Dural Lesion	8.8% (483)	6.6% (1,110)	345	< 0.001
Nerve Root Damage	0.2% (11)	0.2% (42)	10	0.6
Spinal Cord Damage	0.0% (1)	0.1% (10)	2	0.7
Vascular Injury	0.1% (4)	0.1% (10)	3	0.5
FX Vertebral Structures	0.0% (0)	0.0% (0)	0	1.0

### Central Stenosis - Dural Lesions



The expected number of adverse events has been adjusted by patient age, gender, smoking status, BMI, the number of segments affected by the target lesion and the number of prior spinal surgeries (at any level). The statistical model used was a binomial generalised linear model. P-values were calculated using a Poisson test.

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