

Supplementary table 1. Intraoperative TaMAP Recordings.

Patient Number	Procedure	Levels	Neuro exam	Approach	TaMAP Baseline	TaMAP Postoperatively	TaMAP Postoperative Baseline
1	Lumbar Laminectomy	L1-L2, L3-L4 and partial L5	Bilateral lower leg symptoms	Bilateral	Left Gastrocnemius Amp: 700	Left Gastrocnemius Amp: 800	Right Gastrocnemius
					Voltage: 62	Voltage: 38	Voltage: 118
					Right Gastrocnemius	Right Gastrocnemius	
					Amp: 650	Amp: 650	
					Voltage: 183	Voltage: 120	
					Left Vastus Medialis	Left Vastus Medialis	
					Amp: 400	Amp: 400	
					Voltage: 36	Voltage: 45	
					Right Vastus Medialis	Right Vastus Medialis	
					Amp: 400	Amp: 400	
					Voltage: 65	Voltage: 125	
					Left Tibialis Anterior	Left Tibialis Anterior	
					Amp: 650	Amp: 650	
					Voltage: 253	Voltage: 451	
					Right Tibialis Anterior	Right Tibialis Anterior	
					Amp: 700	Amp: 750	
					Voltage: 202	Voltage: 80	
					Left Biceps Femoris	Left Biceps Femoris	
					Amp: 500	Amp: 500	
					Voltage: 33	Voltage: 37	
					Right Biceps Femoris	Right Biceps Femoris	
					Amp: 550	Amp: 650	
					Voltage:	Voltage:	

					161	85	
					Left Vastus Lateralis	Left Vastus Lateralis	
					Amp: 350	Amp: 350	
					Voltage: 80	Voltage: 95	
					Right Vastus Lateralis	Right Vastus Lateralis	
					Amp: No response	Amp: No response	
					Voltage: No response	Voltage: No response	
2	Lumbar Laminectomy	L2, L3, L4	Bilateral leg pain	Bilateral	Left Gast	Left Gast	Left Gast
					Amp: 500	Amp: 500	Amp: 450
					Voltage: 37	Voltage: 39	Voltage: 38
					Right Gast	Right Gast	Right Gast
					Amp:750	Amp:600	Amp:600
					Voltage:150	Voltage:43	Voltage:35
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 500	Amp: 500	Amp: 500
					Voltage:33	Voltage:44	Voltage:44
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp: 400	Amp: 400	Amp: 400
					Voltage:32	Voltage:40	Vol:37
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp:700	Amp:800	Amp:800
					Voltage: 188	Voltage: 47	Voltage: 48
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:500	Amp:500	Amp:500
					Voltage: 70	Voltage: 72	Voltage: 70
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp:550	Amp:600	Amp:600
					Voltage:61	Voltage:44	Voltage:38
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:750	Amp:500	Amp:500
					Voltage: 66	Voltage: 35	Voltage: 37
3	Lumbar Laminectomy	L2-L5	Bilateral leg pain	Bilateral	Left Gast	Left Gast	Left Gast
					Amp: 600	Amp: 550	Amp: 900
					Voltage: 40	Voltage: 66	Voltage: 40

					Right Gast	Right Gast	Right Gast
					Amp:550	Amp:350	Amp:850
					Voltage:179	Voltage:30	Voltage:31
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 350	Amp: 550	Amp: 650
					Voltage:34	Voltage:37	Voltage:42
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp: 300	Amp: 250	Amp: 350
					Voltage:33	Voltage:31	Voltage:38
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp:450	Amp:400	Amp:600
					Voltage: 59	Voltage: 66	Voltage: 45
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:400	Amp:400	Amp:800
					Voltage: 34	Voltage: 39	Voltage: 48
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp:450	Amp:450	Amp:800
					Voltage:40	Voltage:37	Voltage:70
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:350	Amp:300	Amp:250
					Voltage: 64	Voltage: 66	Voltage: 35
4	Lumbar Laminectomy	L2-L5	Bilateral leg pain	Bilateral	Left Gast	Left Gast	
					Amp: 850	Amp: 800	
					Voltage: 50	Voltage: 31	
					Right Gast	Right Gast	
					Amp:850	Amp:850	
					Voltage:46	Voltage:46	
					Left Vast Med	Left Vast Med	
					Amp: 650	Amp: 700	
					Voltage:49	Voltage:51	
					Right Vast Med	Right Vast Med	
					Amp: 650	Amp: 550	
					Voltage:30	Voltage:39	
					Left Tib Ant	Left Tib Ant	
					Amp: 600	Amp:650	
					Voltage: 35	Voltage: 48	
					Right Tib Ant	Right Tib Ant	
					Amp:800	Amp:800	
					Voltage:	Voltage:	

					34	38	
					Left Bicep Fem	Left Bicep Fem	
					Amp:550	Amp:800	
					Voltage:35	Voltage:51	
					Right Bicep Fem	Right Bicep Fem	
					Amp:550	Amp:800	
					Voltage:41	Voltage:75	
5	Lumbar Laminectomy L3-L4, partial L2 and partial L5	L2-L5	Lumbar radiculopathy	Bilateral	Left Gast	Left Gast	Left Gast
					Amp: 700	Amp: 1100	Amp: 1100
					Voltage: 46	Voltage: 90	Voltage: 85
					Right Gast	Right Gast	Right Gast
					Amp:750	Amp:750	Amp:750
					Voltage:87	Voltage:42	Voltage:43
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 550	Amp: 650	Amp: 650
					Voltage:33	Voltage:110	Voltage:108
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp: 850	Amp: 800	Amp: 850
					Voltage:34	Voltage:31	Voltage:46
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp: 950	Amp: 950	Amp: 950
					Voltage: 31	Voltage: 74	Voltage: 73
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:950	Amp:950	Amp:950
					Voltage: 80	Voltage: 87	Voltage: 33
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp:900	Amp:850	Amp:850
					Voltage:149	Voltage:41	Voltage:62
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:900	Amp:850	Amp:800
					Voltage: 113	Voltage: 129	Voltage: 71
6	Lumbar Laminectomy with partial hemilaminotomy L3			Bilateral	Left Gast	Left Gast	Left Gast
		L2-L3, L4-L5			Amp: Not reported	Amp: Not reported	Amp: Not reported
			Low back pain		Voltage: Not	Voltage: Not	Voltage: Not

			radiating to both legs		Reported	Reported	Reported
					Right Gast	Right Gast	Right Gast
					Amp:500	Amp:550	Amp:600
					Voltage:51 2	Voltage:13 2	Voltage:13 9
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 700	Amp: 750	Amp: 700
					Voltage:36	Voltage:33	Voltage:68
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp: 600	Amp: 600	Amp: 600
					Voltage:45	Voltage:33	Voltage:34
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp: 600	Amp: 600	Amp: 600
					Voltage: 163	Voltage: 163	Voltage: 89
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:550	Amp:550	Amp:600
					Voltage: 1128	Voltage: 58	Voltage: 55
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp:750	Amp:750	Amp:800
					Voltage:35	Voltage:45	Voltage:49
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:550	Amp:650	Amp:650
					Voltage: 109	Voltage: 83	Voltage: 38
7	Lumbar Laminectomy	L2-L5	Midline lower back pain, no leg pain, numbnes s and tingling in his feet/toes	Unkno wn	Left Gast	Left Gast	Left Gast
					Amp: 300	Amp: 400	Amp: 400
					Voltage: 60	Voltage: 35	Voltage: 42
					Right Gast	Right Gast	Right Gast
					Amp:400	Amp:400	Amp:250
					Voltage:34	Voltage:41	Voltage:33
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 350	Amp: 400	Amp: Not reported
					Voltage:33	Voltage:40	Voltage:34
					Right Vast	Right Vast	Right Vast

					Med	Med	Med
					Amp: 350	Amp: 350	Amp: 350
					Voltage:77	Voltage:58	Voltage:71
							Left Tib Ant
					Left Tib Ant	Left Tib Ant	Amp: 450
					Amp: 500	Amp: 400	Voltage: 30
					Voltage: 33	Voltage: 272	
							Right Tib Ant
					Right Tib Ant	Right Tib Ant	Amp:450
					Amp:350	Amp:400	Voltage: 44
					Voltage: 31	Voltage: 33	
							Left Bicep Fem
					Left Bicep Fem	Left Bicep Fem	Amp:250
					Amp:250	Amp:250	Voltage:112
					Voltage:138	Voltage:85	
							Right Bicep Fem
					Right Bicep Fem	Right Bicep Fem	Amp:550
					Amp:350	Amp:550	Voltage: 38
					Voltage: 31	Voltage: 235	
8	Lumbar Laminectomy	L2-S1	Back pain and bilateral radicular pain	Bilateral	Left Gast	Left Gast	Left Gast
					Amp: 550	Amp: 500	Amp: 400
					Voltage: 38	Voltage: 47	Voltage: 56
					Right Gast	Right Gast	Right Gast
					Amp:600	Amp:500	Amp:500
					Voltage:189	Voltage:249	Voltage:259
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 700	Amp: 600	Amp: 600
					Voltage:30	Voltage:36	Voltage:33
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp: 550	Amp: 550	Amp: 600
					Voltage:32	Voltage:33	Voltage:64
					Left Tib	Left Tib	Left Tib

					Ant	Ant	Ant
					Amp: 500	Amp: 500	Amp: 400
					Voltage: 399	Voltage: 543	Voltage: 501
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:550	Amp:500	Amp:500
					Voltage: 121	Voltage: 121	Voltage: 115
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp:850	Amp:700	Amp:650
					Voltage:42	Voltage:82	Voltage:36
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:600	Amp:500	Amp:500
					Voltage: 41	Voltage: 31	Voltage: 36
9	Transforaminal endoscopic diskectomy	L2-L3	Left sided radicular pain	Left sided	Left Adductor	Left Adductor	Left Adductor
					Magnus: 550	Magnus	Magnus
					Voltage: 113	Amp: 600	Amp: 600
						Voltage: 159	Voltage: 156
					Right Adductor Magnus	Right Adductor Magnus	Right Adductor Magnus
					Amp: 500	Amp: 500	Amp: 500
					Voltage: 435	Voltage: 461	Voltage: 479
						Left Vast Med	Left Vast Med
					Left Vast Med	Amp: 450	Amp: 450
					Amp: 350	Voltage:233	Voltage:122
					Voltage:112		
						Right Vast Med	Right Vast Med
					Right Vast Med	Amp: 300	Amp: 300
					Amp: 300	Voltage:90	Voltage:93
					Voltage:68		
						Left Tib Ant	Left Tib Ant
					Left Tib Ant	Amp: 400	Amp: 400
					Amp: 400	Voltage: 111	Voltage: 116
					Voltage: 91		

						Right Tib Ant	Right Tib Ant
					Right Tib Ant	Amp:350	Amp:350
					Amp:300	Voltage: 838	Voltage: 844
					Voltage: 759		
						Left Bicep Fem	Left Bicep Fem
					Left Bicep Fem	Amp:450	Amp:450
					Amp:500	Voltage:36	Voltage:35
					Voltage:204		
						Right Bicep Fem	Right Bicep Fem
					Right Bicep Fem	Amp:400	Amp:400
					Amp:600	Voltage: 55	Voltage: 35
					Voltage: 41		
10	Minimally invasive hemilaminotomy and discectomy	L2-L3	Left sided radicular pain	Left sided	Left Gast	Left Gast	Left Gast
					Amp: 650	Amp: 600	Amp: 600
					Voltage: 69	Voltage: 32	Voltage: 32
					Right Gast	Right Gast	Right Gast
					Amp:550	Amp:550	Amp:600
					Voltage:34	Voltage:42	Voltage:39
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 800	Amp: 600	Amp: 800
					Voltage:32	Voltage:31	Voltage:34
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp: 450	Amp: 450	Amp: 450
					Voltage:34	Voltage:47	Voltage:56
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp: 600	Amp: 450	Amp: 450
					Voltage: 32	Voltage: 64	Voltage: 67
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:600	Amp:600	Amp:250
					Voltage: 1938	Voltage: 1151	Voltage: 33
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:550	Amp:550	Amp:500
					Voltage: 58	Voltage: 110	Voltage: 34

11	Lumbar Laminectomy and foraminotomy	L2-L5	Low back pain and occasional shoowing pains down left leg(3/10)	Bilateral	Left Gast	Left Gast	Left Gast
					Amp: 550	Amp: 550	Amp: 500
					Voltage: 46	Voltage: 74	Voltage: 60
					Right Gast	Right Gast	Right Gast
					Amp:600	Amp:600	Amp:500
					Voltage:38	Voltage:44	Voltage:32
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 200	Amp: 200	Amp: 200
					Voltage:437	Voltage:276	Voltage:276
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp: 250	Amp: 250	Amp: 250
					Voltage:130	Voltage:135	Voltage:135
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp: 400	Amp: 400	Amp: 350
					Voltage: 32	Voltage: 31	Voltage: 31
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:400	Amp:350	Amp:350
					Voltage: 48	Voltage: 40	Voltage: 47
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp:350	Amp:300	Amp:300
					Voltage: 44	Voltage: 46	Voltage: 44
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:300	Amp:300	Amp:300
					Voltage: 55	Voltage: 57	Voltage: 56
12	Lumbar Lamiectomy	L3-L4, L4-L5	Bilateral leg pain	Bilateral	Left Adductor Magnus	Left Adductor Magnus	Left Adductor Magnus
					Amp: 300	Amp: 300	Amp: 250
					Voltage: 31	Voltage: 39	Voltage: 47
					Right Adductor Magnus	Right Adductor Magnus	Right Adductor Magnus
					Amp:400	Amp:350	Amp:350
					Voltage:37	Voltage:39	Voltage:33
					Left Vast	Left Vast	Left Vast

					Med	Med	Med
					Amp: 300	Amp: 300	Amp: 300
					Voltage:45	Voltage:39	Voltage:41
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp: 300	Amp: 300	Amp: 250
					Voltage:144	Voltage:111	Voltage:114
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp: 300	Amp: 300	Amp: 350
					Voltage: 54	Voltage: 62	Voltage: 176
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:350	Amp:300	Amp:350
					Voltage: 37	Voltage: 58	Voltage: 50
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp:350	Amp:350	Amp:350
					Voltage:50	Voltage:34	Voltage:46
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:300	Amp:300	Amp:300
					Voltage: 43	Voltage: 45	Voltage: 44
13	Hemilaminotomy	L3-L4	Right sided L4 radiculopathy	Right Sided	Left Vast Med	Left Vast Med	Not recorded
					Amp: 650	Amp: 600	
					Voltage:50	Voltage:34	
					Right Vast Med	Right Vast Med	
					Amp: 300	Amp: 300	
					Voltage:86	Voltage:214	
					Left Vast Lat	Left Vast Lat	
					Amp: 350	Amp: 350	
					Voltage: 42	Voltage: 42	
					Right Tib Ant	Right Tib Ant	
					Amp:250	Amp:350	
					Voltage: 44	Voltage: 35	
					Left Tib Ant	Left Tib Ant	
					Amp: 300	Amp: 300	
					Voltage: 73	Voltage: 79	
					Right Tib Ant	Right Tib Ant	
					Amp:450	Amp:500	

					Voltage: 34	Voltage: 33	
14	Lumbar Laminectomy	L3-L4, RD L4-L5	Left sided leg pain	Bilateral	Left Gastroc	Left Gastroc	Left Gastroc
					Amp: 400	Amp: 350	Amp: 350
					Voltage:56	Voltage:44	Voltage:50
					Right Gstro	Right Gstro	Right Gstro
					Amp: 250	Amp: 250	Amp: 250
					Voltage:135	Voltage:127	Voltage:146
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 300	Amp: 300	Amp: 250
					Voltage: 160	Voltage: 143	Voltage: 45
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp:400	Amp:400	Amp:300
					Voltage: 70	Voltage: 70	Voltage: 59
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp: 450	Amp: 400	Amp: 400
					Voltage: 216	Voltage: 134	Voltage: 189
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:350	Amp:300	Amp:300
					Voltage: 87	Voltage: 96	Voltage: 74
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp: 350	Amp: 350	Amp: 350
					Voltage: 62	Voltage: 57	Voltage: 90
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:350	Amp:300	Amp:300
					Voltage: 59	Voltage: 47	Voltage: 47
15	Lumbar Laminectomy	L3-L4	Bilateral leg pain in L3-4 region	Bilateral	Left Gastroc	Left Gastroc	Left Gastroc
					Amp: 500	Amp: 500	Amp: 450
					Voltage:77	Voltage:70	Voltage:72
					Right Gstro	Right Gstro	Right Gstro
					Amp: 700	Amp: 700	Amp: 700
					Voltage:52	Voltage:36	Voltage:46
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 300	Amp: 300	Amp: 350
					Voltage:	Voltage:	Voltage:

					34	327	340
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp:650	Amp:750	Amp:650
					Voltage: 46	Voltage: 120	Voltage: 32
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp: 700	Amp: 700	Amp: 700
					Voltage: 58	Voltage: 44	Voltage: 42
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:650	Amp:650	Amp:550
					Voltage: 910	Voltage: 687	Voltage: 695
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp: 650	Amp: 650	Amp: 650
					Voltage: 32	Voltage: 31	Voltage: 31
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:300	Amp:350	Amp:350
					Voltage: 48	Voltage: 56	Voltage: 60
16	RD hemilaminotomy, foraminotomy and diskectomy L5-S1. Minimally invasive L3-4 and L4-5 hemilaminotomy, foraminotomy and diskectomy at L4-5. Hemilaminotomy, foraminotomy and medial factectomy at L3-4	L3-S1	Right sided radiular pain	Right	Left Gastroc	Left Gastroc	Left Gastroc
					Amp: 450	Amp: 400	Amp: 400
					Voltage:281	Voltage:319	Voltage:338
					Right Gstroc	Right Gstroc	Right Gstroc
					Amp: 500	Amp: 500	Amp: 500
					Voltage:435	Voltage:244	Voltage:202
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 250	Amp: 250	Amp: 250
					Voltage: 1902	Voltage: 1509	Voltage: 1509
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp:300	Amp:250	Amp:250
					Voltage: 75	Voltage: 53	Voltage: 51

					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp:250	Amp:250	Amp:350
					Voltage: 31	Voltage: 156	Voltage: 171
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:400	Amp:400	Amp:400
					Voltage: 100	Voltage: 108	Voltage: 99
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp: 300	Amp: 250	Amp: 250
					Voltage: 146	Voltage: 35	Voltage: 35
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:500	Amp:550	Amp:500
					Voltage: 34	Voltage: 38	Voltage: 32
17	Lumbar Laminectomy	L3, L4, L5	Bilateral radicular pain	Bilateral	Left Gastroc	Left Gastroc	Left Gastroc
					Amp: 550	Amp: 550	Amp: 450
					Voltage:37	Voltage:38	Voltage:34
					Right Gstro	Right Gstro	Right Gstro
					Amp: 400	Amp: 500	Amp: 500
					Voltage:56	Voltage:42	Voltage:31
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 500	Amp: 500	Amp: 550
					Voltage: 33	Voltage: 35	Voltage: 58
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp:350	Amp:400	Amp:400
					Voltage: 32	Voltage: 62	Voltage: 65
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp:450	Amp:550	Amp:450
					Voltage: 61	Voltage: 203	Voltage: 173
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:450	Amp:500	Amp:450
					Voltage: 61	Voltage: 67	Voltage: 62
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp: 550	Amp: 550	Amp: 600
					Voltage: 44	Voltage: 31	Voltage: 59
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem

					Amp:550	Amp:600	Amp:600
					Voltage: 87	Voltage: 45	Voltage: 56
18	L3, L4, L5 lumbar laminectomiesm, L3/4 and L4/5 bilateral foraminotomies	L3-L4, L4-L5	Lower back pain	Unkno wn	Left Gastroc	Left Gastroc	Left Gastroc
					Amp: 500	Amp: 500	Amp: 500
					Voltage:83	Voltage:228	Voltage:178
					Right Gstroc	Right Gstroc	Right Gstroc
					Amp: no response	Amp: no response	Amp: no response
					Voltage: no response	Voltage: no response	Voltage: no response
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 500	Amp: 500	Amp: 500
					Voltage: 38	Voltage: 41	Voltage: 38
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp:550	Amp:500	Amp:400
					Voltage: 47	Voltage: 55	Voltage: 33
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp:300	Amp:300	Amp:300
					Voltage: 43	Voltage: 46	Voltage: 41
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:550	Amp:500	Amp:500
					Voltage: 59	Voltage: 43	Voltage: 40
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp: 550	Amp: 500	Amp: 350
					Voltage: 41	Voltage: 46	Voltage: 31
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:500	Amp:500	Amp:500
					Voltage: 37	Voltage: 30	Voltage: 39
19	Lumbar Laminectomy	L3, L4, L5	Bilateral radicular pain, left greater than right	Bilateral	Left Gastroc	Left Gastroc	Left Gastroc
					Amp: 650	Amp: 650	Amp: 650
					Voltage:35	Voltage:83	Voltage:86
					Right	Right	Right

					Gastroc	Gastroc	Gstro
					Amp: 550	Amp: 550	Amp: 450
					Voltage: 52	Voltage: 104	Voltage: 106
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 250	Amp: 250	Amp: 350
					Voltage: 124	Voltage: 368	Voltage: 371
					Right Vast Med	Right Vast Med	Right Vast Med
					Amp:350	Amp:350	Amp:300
					Voltage: 44	Voltage: 55	Voltage: 36
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp:650	Amp:550	Amp:500
					Voltage: 31	Voltage: 104	Voltage: 103
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:350	Amp:350	Amp:350
					Voltage: 294	Voltage: 376	Voltage: 375
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp: 400	Amp: 400	Amp: 400
					Voltage: 44	Voltage: 75	Voltage: 77
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:350	Amp:350	Amp:350
					Voltage: 60	Voltage: 45	Voltage: 44
20	Facetectomy, decompression of nerve root and resection of tumor	L3-4	Worsening back pain and numbness in L3 distribution	Left sided	Left Gastroc	Left Gastroc	Left Gastroc
					Amp: 500	Amp: 550	Amp: 500
					Voltage:127	Voltage:54	Voltage:92
					Right Gstro	Right Gstro	Right Gstro
					Amp: 450	Amp: 450	Amp: 450
					Voltage: 93	Voltage: 75	Voltage: 67
					Left Vast Med	Left Vast Med	Left Vast Med
					Amp: 200	Amp: 200	Amp: 200
					Voltage: 397	Voltage: 272	Voltage: 328
					Right Vast Med	Right Vast Med	Right Vast Med

					Amp:350	Amp:350	Amp:350
					Voltage: 48	Voltage: 55	Voltage: 42
					Left Tib Ant	Left Tib Ant	Left Tib Ant
					Amp:450	Amp:500	Amp:450
					Voltage: 122	Voltage: 47	Voltage: 97
					Right Tib Ant	Right Tib Ant	Right Tib Ant
					Amp:350	Amp:350	Amp:350
					Voltage: 153	Voltage: 148	Voltage: 153
					Left Bicep Fem	Left Bicep Fem	Left Bicep Fem
					Amp: 400	Amp: 450	Amp: 450
					Voltage: 1116	Voltage: 247	Voltage: 74
					Right Bicep Fem	Right Bicep Fem	Right Bicep Fem
					Amp:250	Amp:350	Amp:400
					Voltage: 43	Voltage: 62	Voltage: 79
21	Lumbar hemilaminotomy, foraminotomy, partial facetectomy and discectomy	L3-L4	Just lower back pain	Left sided			
22	Lumbar Laminectomy	L4-L5	Bilateral leg symptoms	Right Sided			
23	Endoscopic Hemilaminotomy	L4-L5	Right sided leg pain, L4-L5	Right Sided			
24	XLIF, PPSx2	L4-L5	Unkown	Unkown			
25	Lumbar Laminectomy	L4-L5	Bilateral leg symptoms	Left sided			
26	Lumbar Laminectomy	L4-L5	Right sided radicular pain	Bilateral			
27	Lumbar Laminectomy	L4-L5	Bilateral leg pain	Bilateral			
28	Endoscopic Discectomy	L4-L5	Right sided leg pain, L4-L5	Right Sided			
29	MAS TLIF	L4-L5	Left sided leg pain	Left sided			
30	Lumbar Laminectomy	L4-L5	Lumbar and	Bilateral			

			bilateral front thigh pain				
31	Lumbar Laminectomy	L4-L5	Symptoms which are consistent with peripheral neuropathy in multiple levels	Bilateral			
32	Hemilaminotomy, foraminotomy, discectomy, medial facetectomy	L4-L5	Right sided radicular pain	Right			
33	Lumbar Laminectomy	L4-L5	Low back pain and left sided radicular pain, minor right-sided pain which is intermittent	Left to right			
34	Lumbar Laminectomy	L4-L5	Left sided radicular pain	Left to right			
35	Hemilaminotomy, foraminotomy, discectomy, medial facetectomy	L4-L5	Left sided radicular pain	Left sided			
36	Lumbar Laminectomy	L4-L5	Bilateral radicular pain	Bilateral			
37	Lumbar Laminectomy foraminotomy	L4-L5	Bilateral leg pain	Bilateral			
38	XLIF, PPSx2	L4-L5	Unknown	Unknown			
39	MIS laminectomy	L4-L5	Unknown	Unknown			
40	Lumbar Laminectomy	L4-L5	Right sided radicular pain	Right Sided			
41	Endoscopic Hemilaminotomy	L5-S1	Right sided leg pain, L5-S1	Right Sided			

42	Revision Open lami	L5-S1	Bilateral leg symptoms, S1	Bilateral			
43	Hemilaminotomy, foraminotomy, discectomy	L5-S1	Right sided radiular pain, heriated disc at L5-S1	Right Sided			
44	Lumbar hemilaminotomy/foraminotomy	L5-S1	Right sided radiular pain, severe in the L5 and S1 distrubution	Right Sided			
45	Minimally invasive microdiscectomy and hemilaminotomy	L5-S1	Right sided lower extremity radiculopathy referable to L5-S1 foraminal root	Right Sided			
46	XLIF	Unknown	Unknown	Unknown			
47	PSF	Unknown	Unknown	Unknown			
48	Unknown	Unknown	Unknown	Unknown			
49	Decompression	Unknown	Unknown	Unknown			
50	Decompression	Unknown	Unknown	Unknown			
51	Decompression	Unknown	Unknown	Unknown			