

Supplementary material to “Surgical techniques for degenerative cervical spine in Finland from 1999 to 2015”.

Supplementary Table S1. Adjusted annual incidence of posterior decompression and fusion operations in each diagnostic group (operations / 100 000 people age 18 or older).

Year	Disc protrusion	Foraminal stenosis	Spinal canal stenosis	Degenerative atlanto-axial subluxation	Degenerative indications combined
1999	0	0	0	0.1	0.2
2000	0	0.1	0	0.1	0.2
2001	0	0.1	0.1	0.1	0.2
2002	0	0	0.1	0.1	0.2
2003	0	0.1	0.1	0.1	0.3
2004	0	0	0.3	0.1	0.4
2005	0	0	0.2	0	0.3
2006	0	0.1	0.2	0	0.3
2007	0	0.1	0.4	0	0.5
2008	0	0.1	0.2	0	0.3
2009	0	0.2	0.3	0	0.4
2010	0	0.3	0.3	0	0.6
2011	0	0.1	0.5	0	0.6
2012	0	0.1	0.5	0	0.6
2013	0	0.3	0.3	0	0.6
2014	0	0.2	0.5	0.1	0.7
2015	0	0.2	0.4	0	0.7
Overall	0	0.1	0.3	0	0.4

Supplementary Table S2. The distribution of operative techniques according to the NOMESCO^a operative codes in each university hospital.

Operative techniques		The distribution of the operations in each hospital, % (N)					
		Helsinki	Kuopio	Oulu	Tampere	Turku	Overall
Anterior decompression	ABC01 ABC10 ABC20	1.5 (95)	1.0 (50)	3.4 (73)	2.4 (112)	7.3 (132)	2.3 (461)
Foraminotomy*	ABC30	30.0 (1876)	3.2 (158)	17.4 (347)	10.8 (498)	6.8 (122)	15.2 (3001)
Unspecified decompression	ABC99	5.9 (370)	0.9 (46)	0.7 (15)	2.2 (102)	1.1 (20)	2.8 (553)
ACDF ^b without plating	NAG40 ABC21	44.2 (2764)	82.1 (4041)	61.6 (1303)	60.0 (2772)	8.3 (150)	56.0 (11030)
ACDF ^b with plating*	NAG41	3.4 (215)	3.7 (180)	4.2 (88)	12.8 (590)	52.1 (937)	10.2 (2010)
Disc prosthesis	NAB92	0.4 (22)	0.0 (1)	0.9 (19)	0.1 (3)	0.7 (12)	0.3 (57)
Corpectomy	NAG72	0	0	0.1 (2)	0.0 (1)	0.1 (1)	0.0 (4)
Laminectomy / laminoplasty	ABC50 ABC60	12.3 (771)	6.2 (306)	9.5 (202)	8.5 (391)	17.4 (313)	10.1 (1984)
Posterior decompression and fusion	NAG42	2.1 (134)	2.8 (138)	3.2 (67)	3.3 (151)	6.2 (111)	3.1 (601)
Total		6247	4920	2116	4620	1798	19701

* The foraminotomy code (ABC30) was used for ACDF as well as foraminotomy in Helsinki until 2005-2006; the ACDF code NAG41 was used in Turku for most ACDF operations, with or without plating

^aNOMESCO Nordic Medico-Statistical Committee Classification of Surgical Procedures, ^bACDF Anterior cervical decompression and fusion

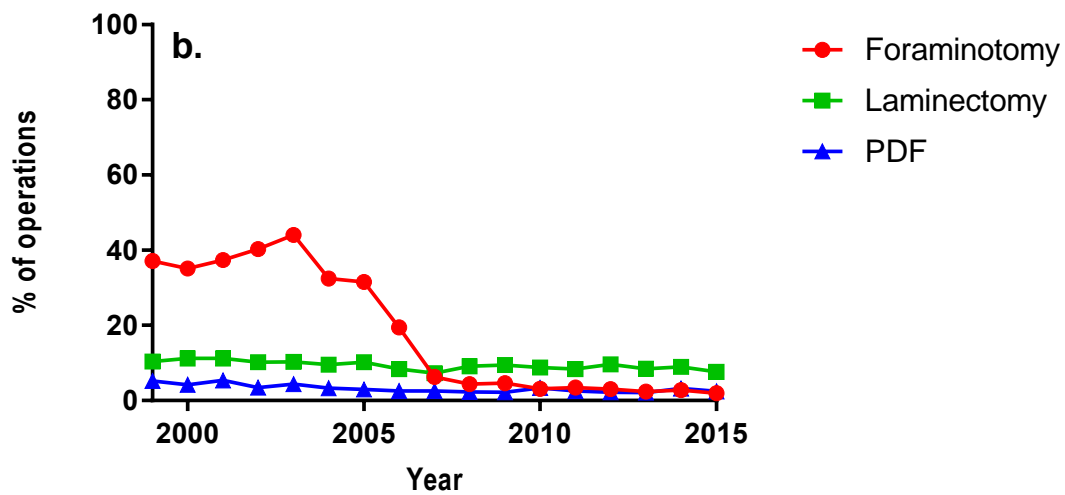
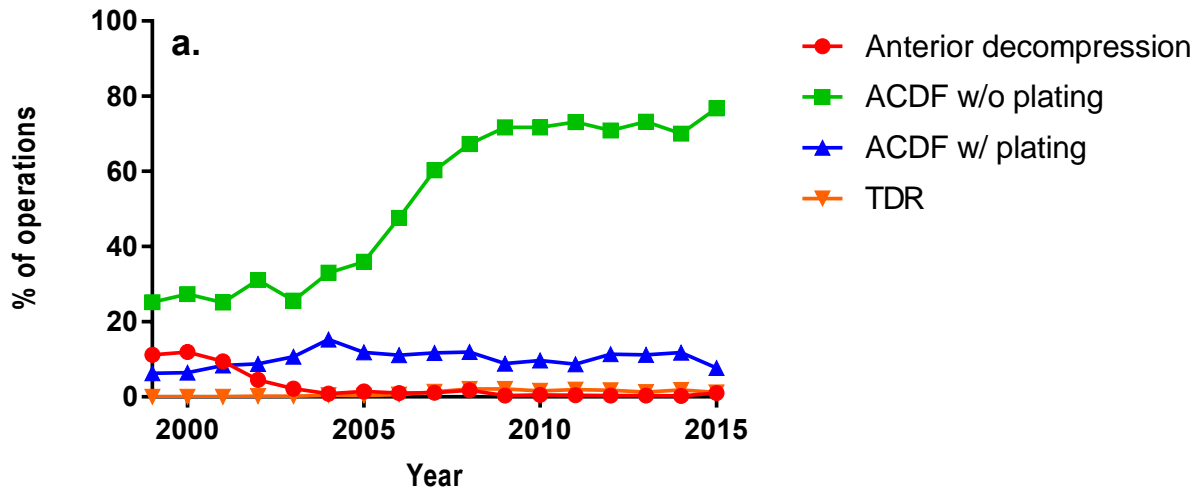
Supplementary Table S3. The distribution of the operative techniques within the diagnosis groups (% , N).

	Anterior decompression	Foraminotomy*	Unspecified decompression	ACDF ^b without plating	ACDF ^b with plating*	Disc prosthesis	Corpectomy	Laminectomy / laminoplasty	PDF ^c
Disc protrusion	6.7 (460)	14.9 (1029)	0	59.7 (4134)	16.5 (1141)	0.8 (57)	0	1.5 (103)	0
Foraminal stenosis	0	19.0 (1306)	0.6 (40)	72.8 (5001)	5.6 (383)	0	0	0.8 (56)	1.3 (88)
Spinal canal stenosis	0	11.9 (666)	9.2 (513)	34.0 (1895)	8.7 (486)	0	0.1 (4)	13.8 (773)	3.4 (192)
Rheumatoid AAS^a	0	0	0	0	0	0	0	0	100.0 (30)
Degenerative AAS^a	0	0	0	0	0	0	0	0	100.0 (291)

* The foraminotomy code (ABC30) was used for ACDF as well as foraminotomy in Helsinki until 2005-2006; the ACDF code NAG41 was used in Turku for most ACDF operations, with or without plating

^aAAS Atlanto-axial subluxation, ^bACDF Anterior Cervical Decompression and Fusion, ^cPDF posterior decompression and fusion

Supplementary Figure S4. The proportional use of anterior (a) and posterior (b) techniques in the treatment of degenerative cervical spine disease between 1999 and 2015.



ACDF Anterior cervical decompression and fusion, w/ with, w/o without, TDR total disc replacement, PDF posterior decompression and fusion.