Table 1: Frequencies of worst pain intensity scores (Numeric Rati	ing Scale, N	IRS 0-10) of	179 surgica	l procedure	s. Frequenc	ies of patien	ts with pain	intensities h	nigher than	NRS 6 and 8			
	Total	NRS 0	NRS 1	NRS 2	NRS 3	NRS 4	NRS 5	NRS 6	NRS 7	NRS 8	NRS 9	NRS 10	Cut-off NRS ≥ 6	$Cut\text{-off}\\NRS \geq 8$
Total	50199	3056 6.1%	3090 6.2%	5032 10.0%	6455 12.9%	6176 12.3%	7721 15.4%	5070 10.1%	4614 9.2%	5250 10.5%	2033 4.0%	1702 3.4%	18669 37.2%	898 17.99
1. Open reduction (calcaneus)	90	0 0.0%	1 1.1%	5 5.6%	4 4.4%	11 12.2%	8 8.9%	9 10.0%	12 13.3%	18 20.0%	8 8.9%	14 15.6%	61 67.8%	4 44.59
2. Spinal fusion, dorsal (1-2 segments)	126	1 0.8%	2 1.6%	8 6.3%	5 4.0%	13 10.3%	6 4.8%	15 11.9%	19 15.1%	32 25.4%	11 8.7%	14 11.1%	91 72.2%	5 45.2
3. Spinal fusion, dorsal (3 or more segments)	40	1 2.5%	0 0.0%	1 2.5%	3 7.5%	5 12.5%	5 12.5%	2 5.0%	5 12.5%	6 15.0%	9 22.5%	3 7.5%	25 62.5%	1 45.0%
4. Myomectomy (open)	36	0 0.0%	3 8.3%	1 2.8%	2 5.6%	1 2.8%	1 2.8%	6 16.7%	5 13.9%	12 33.3%	4 11.1%	1 2.8%	28 77.8%	1 47.2
5. Proctocolectomy (open)	14	0 0.0%	0 0.0%	0 0.0%	3 21.4%	2 14.3%	0 0.0%	0 0.0%	4 28.6%	3 21.4%	1 7.1%	1 7.1%	9 64.2%	35.69
6. Vertebra body replacement and complex spinal reconstruction (e.g. scoliosis)	37	1 2.7%	2 5.4%	3 8.1%	1 2.7%	4 10.8%	2 5.4%	4 10.8%	9 24.3%	9 24.3%	0	2 5.4%	24 64.8%	1 29.79
7. Arthrodesis (foot joint)	77	0 0.0%	3 3.9%	3 3.9%	5 6.5%	5 6.5%	15 19.5%	8 10.4%	11 14.3%	14 18.2%	6 7.8%	7 9.1%	46 59.8%	2 35.19
8. Arthodesis (metacarpophalangeal, interphalangeal joints)	112	0 0.0%	3 2.7%	5 4.5%	10 8.9%	14 12.5%	14 12.5%	12 10.7%	16 14.3%	20 17.9%	5 4.5%	13 11.6%	66 59.0%	3 34.0
9. Caesarean section	818	3 0.4%	16 2.0%	42 5.1%	57 7.0%	91 11.1%	107 13.1%	106 13.0%	125 15.3%	148 18.1%	72 8.8%	51 6.2%	502 61.4%	27 33.19
10. Open reduction (acetabulum and head of femur with internal fixation)	31	1 3.2%	2 6.5%	0 0.0%	5 16.1%	2 6.5%	3 9.7%	3 9.7%	2 6.5%	5 16.1%	2 6.5%	6 19.4%	18 58.2%	1 42.0
11. Hand resection arthroplasty	78	1 1.3%	2 2.6%	3 3.8%	4 5.1%	5 6.4%	18 23.1%	8 10.3%	12 15.4%	14 17.9%	6 7.7%	5 6.4%	45 57.7%	2 32.09
12. Shoulder joint replacement	79	5 6.3%	0 0.0%	1 1.3%	5 6.3%	6 7.6%	18 22.8%	9 11.4%	5 6.3%	13 16.5%	13 16.5%	4 5.1%	44 55.8%	3 38.19
13. Arthrodesis (ankle joint)	124	3 2.4%	6 4.8%	3 2.4%	7 5.6%	19 15.3%	15 12.1%	11 8.9%	13 10.5%	26 21.0%	7 5.6%	14 11.3%	71 57.3%	4 37.9
14. Pancreatectomy (partial - Whipple)	18	0 0.0%	0 0.0%	0 0.0%	1 5.6%	1 5.6%	6 33.3%	2 11.1%	5 27.8%	2 11.1%	1 5.6%	0 0.0%	10 55.6%	16.7
 Open refixation and reconstruction (w or w/o plastic) (knee ligaments) 	148	4 2.7%	1 .7%	8 5.4%	8 5.4%	12 8.1%	23 15.5%	22 14.9%	25 16.9%	28 18.9%	9 6.1%	8 5.4%	92 62.2%	4 30.4
16. Open reduction (tibia shaft)	49	1 2.0%	1 2.0%	3 6.1%	3 6.1%	4 8.2%	7 14.3%	9 18.4%	6 12.2%	8 16.3%	1 2.0%	6 12.2%	30 61.1%	1 30.5
17. Open reduction (patella)	55	0 0.0%	2 3.6%	1 1.8%	7 12.7%	7 12.7%	8 14.5%	6 10.9%	7 12.7%	7 12.7%	5 9.1%	5 9.1%	30 54.5%	1 30.99
18. Open reduction (proximal radius)	76	0 0.0%	0 0.0%	4 5.3%	11 14.5%	8 10.5%	11 14.5%	8 10.5%	10 13.2%	14 18.4%	5 6.6%	5 6.6%	42 55.3%	2 31.69
19. Appendectomy (open)	227	0 0.0%	4 1.8%	10 4.4%	20 8.8%	24 10.6%	40 17.6%	32 14.1%	32 14.1%	38 16.7%	19 8.4%	8 3.5%	129 56.8%	6 28.69
20. Open reduction (proximal tibia)	141	3 2.1%	2 1.4%	6 4.3%	12 8.5%	17 12.1%	20 14.2%	23 16.3%	15 10.6%	21 14.9%	10 7.1%	12 8.5%	81 57.4%	4 30.59
21. Open reconstruction (shoulder joint ligaments)	633	8 1.3%	19 3.0%	44 7.0%	59 9.3%	45 7.1%	100 15.8%	79 12.5%	74 11.7%	102 16.1%	59 9.3%	44 7.0%	358 56.6%	20 32.49
22. Partial shoulder joint replacement (humerus)	113	5 4.4%	6 5.3%	5 4.4%	4 3.5%	10 8.8%	18 15.9%	14 12.4%	9 8.0%	21 18.6%	15 13.3%	6 5.3%	65 57.6%	4 37.2
23. Hemorrhoids (plastic reconstruction)	67	2 3.0%	1 1.5%	4 6.0%	5 7.5%	5 7.5%	12 17.9%	9 13.4%	7 10.4%	12 17.9%	7 10.4%	3 4.5%	38 56.6%	2 32.89
24. Tonsillectomy	402	0 0.0%	6 1.5%	22 5.5%	30 7.5%	40 10.0%	79 19.7%	43 10.7%	83 20.6%	63 15.7%	32 8.0%	4 1.0%	225 56.0%	9 24.79
25. Cholecystectomy (open)	335	4 1.2%	5 1.5%	9 2.7%	36 10.7%	45 13.4%	61 18.2%	49 14.6%	31 9.3%	53 15.8%	18 5.4%	24 7.2%	175 52.3%	9 28.49
26. Kidney transplantation	43	2 4.7%	0 0.0%	3 7.0%	5 11.6%	4 9.3%	7 16.3%	5 11.6%	2 4.7%	5 11.6%	6 14.0%	4 9.3%	22 51.2%	1 34.9
27. Hysterectomy (subtotal) (open)	19	0 0.0%	0 0.0%	3 15.8%	2 10.5%	3 15.8%	1 5.3%	1 5.3%	1 5.3%	5 26.3%	2 10.5%	1 5.3%	10 52.7%	42.1
28. Vertical sleeve gastrectomy for biliopancreatic diversion with duodenal switch (open)	15	0 0.0%	0 0.0%	1 6.7%	2 13.3%	0 .0%	3 20.0%	4 26.7%	1 6.7%	4 26.7%	0 0.0%	0 0.0%	9 60.1%	26.79
29. Incisional hernia repair, with alloplastic material (lap)	132	0 0.0%	4 3.0%	9 6.8%	18 13.6%	16 12.1%	15 11.4%	19 14.4%	14 10.6%	19 14.4%	8 6.1%	10 7.6%	70 53.1%	3 28.1
30. Open reduction (pelvic rim and ring)	127	8 6.3%	2	9 7.1%	12 9.4%	13 10.2%	17 13.4%	10 7.9%	17 13.4%	16 12.6%	15 11.8%	8	66 52.0%	30.7
31. Oophorectomy and salpingo-oophorectomy (open)	21	1 4.8%	1 4.8%	1 4.8%	1 4.8%	4	2 9.5%	3 14.3%	2 9.5%	2 9.5%	2	2 9.5%	11	28.5

	Total	NRS 0	NRS 1	NRS 2	NRS 3	NRS 4	NRS 5	NRS 6	NRS 7	NRS 8	NRS 9	NRS 10	Cut-off NRS ≥ 6	$\begin{array}{c} Cut\text{-off} \\ NRS \geq 8 \end{array}$
32. Arthrodesis (toe joint)	70	2 2.9%	3 4.3%	8 11.4%	6 8.6%	7 10.0%	5 7.1%	6 8.6%	13 18.6%	12 17.1%	2 2.9%	6 8.6%	39 55.8%	20 28.6%
33. Open reduction (distal humerus)	55	2 3.6%	2 3.6%	5 9.1%	6 10.9%	3 5.5%	7 12.7%	6 10.9%	6 10.9%	11 20.0%	6 10.9%	1 1.8%	30 54.5%	18 32.7%
34. Open reduction (distal fibula)	677	19 2.8%	17 2.5%	53 7.8%	75 11.1%	80 11.8%	88 13.0%	73 10.8%	90 13.3%	91 13.4%	54 8.0%	37 5.5%	345 51.0%	182 26.9%
35. Small bowel resection (open)	49	1 2.0%	2 4.1%	4 8.2%	6 12.2%	6 12.2%	5 10.2%	5 10.2%	7 14.3%	9 18.4%	1 2.0%	3 6.1%	25 51.0%	13 26.5%
36. Arthroscopic surgery (knee ligaments)	633	14 2.2%	40	39 6.2%	71	53 8.4%	91	88 13.9%	84 13.3%	87 13.7%	46 7.3%	20	325 51.4%	153 24.2%
 Vertical sleeve gastrectomy for biliopancreatic diversion with duodenal switch (lap) 	164	2.276	4 2.4%	10 6.1%	19 11.6%	19 11.6%	26	30 18.3%	29 17.7%	18	3	4 2.4%	84 51.2%	25 15.2%
38. Arthroscopic surgery (hip joint)	27	0	3	3	1 3.7%	2 7.4%	4	3	7 25.9%	2 7.4%	0	2	14 51.8%	4
39. Arthroscopic revision (wrist joint)	32	3 9.4%	0	4	3 9.4%	2 6.3%	3	5	5	5	2	0	17	7 21.9%
40. Open reduction (distal femur)	29	3 10.3%	0.0%	5 17.2%	1 3.4%	4 13.8%	1 3.4%	6 20.7%	2	4	1 3.4%	2	15 51.7%	24.1%
41. Splenectomy (open)	18	1 5.6%	1 5.6%	1 5.6%	0 0.0%	2 11.1%	4 22.2%	1 5.6%	3 16.7%	4 22.2%	0 0.0%	1 5.6%	9 50.1%	5 27.8%
42. Open reduction (fibula shaft)	20	2 10.0%	0 0.0%	2 10.0%	3 15.0%	2 10.0%	1 5.0%	1 5.0%	3 15.0%	5 25.0%	0 0.0%	1 5.0%	10 50.0%	6 30.0%
43. Closed reduction with internal fixation (fibula)	28	0 0.0%	4 14.3%	1 3.6%	5 17.9%	3 10.7%	1 3.6%	1 3.6%	8 28.6%	2 7.1%	3 10.7%	0 0.0%	14 50.0%	5 17.8%
44. Open reduction (distal tibia)	355	7 2.0%	9 2.5%	25 7.0%	35 9.9%	39 11.0%	66 18.6%	34 9.6%	34 9.6%	52 14.6%	29 8.2%	25 7.0%	174 49.0%	106 29.8%
45. Breast augmentation	37	2 5.4%	1 2.7%	3 8.1%	2 5.4%	6 16.2%	6 16.2%	2 5.4%	4 10.8%	4 10.8%	4 10.8%	3 8.1%	17 45.9%	11 29.7%
46. Knee joint replacement (revision, exchange, removal)	351	18 5.1%	15 4.3%	20 5.7%	30 8.5%	45 12.8%	53	40	31	59 16.8%	19 5.4%	21	170 48.4%	99 28.2%
47. Appendectomy (lap)	1198	16 1.3%	44 3.7%	68 5.7%	146 12.2%	134 11.2%	197 16.4%	188	168 14.0%	163 13.6%	43	31	593 49.5%	237 19.8%
48. Open reduction (distal radius)	996	33	39 3.9%	65 6.5%	101 10.1%	120 12.0%	163 16.4%	137 13.8%	111 11.1%	124 12.4%	58	45	475 47.6%	227 22.7%
49. Open reduction (metatarsal bone)	103	5 4.9%	2 1.9%	7 6.8%	10 9.7%	16 15.5%	15 14.6%	10 9.7%	16 15.5%	11 10.7%	5 4.9%	6 5.8%	48 46.6%	22 21.4%
50. Open reduction (clavicle)	240	4 1.7%	9 3.8%	19 7.9%	29 12.1%	27 11.3%	41 17.1%	26 10.8%	29 12.1%	36 15.0%	13 5.4%	7 2.9%	111 46.2%	56 23.3%
51. Incisional hernia repair, with alloplastic material (open)	413	15 3.6%	19 4.6%	30 7.3%	39 9.4%	46	69 16.7%	57 13.8%	40 9.7%	57 13.8%	18 4.4%	23 5.6%	195 47.3%	98 23.8%
52. Sternotomy (cardiac surgery)	134	6 4.5%	5 3.7%	9 6.7%	9 6.7%	19 14.2%	25 18.7%	15 11.2%	12 9.0%	26 19.4%	2 1.5%	6 4.5%	61 45.6%	34 25.4%
53. Knee joint replacement	4439	300 6.8%	181 4.1%	297 6.7%	408 9.2%	442 10.0%	735 16.6%	467 10.5%	416 9.4%	634 14.3%	275 6.2%	284 6.4%	2076 46.8%	1193 26.9%
54. Open reconstruction (ankle joint ligaments)	77	2 2.6%	1 1.3%	9 11.7%	8 10.4%	5 6.5%	15 19.5%	13 16.9%	8 10.4%	11 14.3%	2 2.6%	3	37 48.1%	16 20.8%
55. Arthroscopic surgery (shoulder ligaments)	1083	56 5.2%	51 4.7%	77 7.1%	119 11.0%	111 10.2%	161 14.9%	112 10.3%	130 12.0%	149 13.8%	68 6.3%	49 4.5%	508 46.9%	266 24.6%
56. Open reduction (humerus shaft)	46	1 2.2%	1 2.2%	4 8.7%	5	5	10 21.7%	9 19.6%	2 4.3%	5 10.9%	1 2.2%	3 6.5%	20 43.5%	9 19.6%
57. Extrauterine pregnancy (lap)	34	1 2.9%	1 2.9%	1 2.9%	3 8.8%	5 14.7%	10 29.4%	4 11.8%	4	2 5.9%	3 8.8%	0 0.0%	13 38.3%	5 14.7%
58. Closed reduction with internal fixation (tibia)	182	9 4.9%	6 3.3%	11 6.0%	22 12.1%	24 13.2%	30 16.5%	17 9.3%	21 11.5%	26 14.3%	10 5.5%	6 3.3%	80 43.9%	42 23.1%
59. Implantation or exchange of an adjustable gastric band (lap)	25	1 4.0%	1 4.0%	2 8.0%	2 8.0%	1 4.0%	7 28.0%	2 8.0%	6 24.0%	2 8.0%	0	1 4.0%	11 44.0%	3
60. Open reduction (femur shaft)	73	4 5.5%	1	5	5	11 15.1%	18 24.7%	4 5.5%	13 17.8%	7 9.6%	2	3	29 39.7%	12.070 12 16.4%
61. Closed reduction with internal fixation (clavicle)	298	7 2.3%	9 3.0%	20 6.7%	39 13.1%	35 11.7%	65 21.8%	38 12.8%	27 9.1%	33 11.1%	17 5.7%	8	123 41.4%	58 19.5%
62. Pancreatectomy (partial - w or w/o resection of duodenum)	43	5	1 2.3%	1 2.3%	5	8 18.6%	21.070	4 9.3%	5	8 18.6%	1 2.3%	3	21	12
63. Lower leg amputation	61	4 6.6%	1 1.6%	5 8.2%	8 13.1%	7 11.5%	10	8 13.1%	4 6.6%	5 8.2%	6 9.8%	3 4.9%	26 42.6%	14 22.9%

	Total	NRS 0	NRS 1	NRS 2	NRS 3	NRS 4	NRS 5	NRS 6	NRS 7	NRS 8	NRS 9	NRS 10	Cut-off NRS ≥ 6	$\begin{array}{c} \text{Cut-off} \\ \text{NRS} \geq 8 \end{array}$
64. Open reduction (proximal humerus)	402	17 4.2%	10 2.5%	40 10.0%	40 10.0%	53 13.2%	79 19.7%	39 9.7%	42 10.4%	47 11.7%	16 4.0%	19 4.7%	163 40.5%	82 20.4%
65. Sigmoidectomy (open)	119	7 5.9%	4 3.4%	9 7.6%	12 10.1%	10 8.4%	26 21.8%	18 15.1%	9 7.6%	13 10.9%	6 5.0%	5 4.2%	51 42.8%	24 20.1%
66. Surgical correction procedures (metatarsus and toes)	209	17 8.1%	10 4.8%	17 8.1%	19 9.1%	22 10.5%	23 11.0%	23 11.0%	26 12.4%	34 16.3%	10 4.8%	8 3.8%	101 48.3%	52 24.9%
 Thoracoscopic lung resection (atypical, segmental, lobar pneumonectomy) 	60	2 3.3%	3	8 13.3%	8 13.3%	5 8.3%	7	4 6.7%	9	8 13.3%	4 6.7%	2	45.0%	14 23.3%
68. Spinal fusion, ventral (1-2 segments)	95	6 6.3%	5.3%	11 11.6%	8 8.4%	8.4%	15	8.4%	14	10 10.5%	6	4	42	20 21.0%
69. Closed reduction with internal fixation (humerus)	126	5 4.0%	9 7.1%	11.0% 12 9.5%	9 7.1%	17 13.5%	25	9	14.778	10.5% 17 13.5%	7 5.6%	4 3.2%	49 38.9%	21.0% 28 22.3%
70. Closed reduction with internal fixation (radius)	117	2	9	12 10.3%	14	13.11.1%	21	12 10.3%	12	11 9.4%	4 3.4%	7 6.0%	46	22.576 22 18.8%
71. Open reduction (metacarpal bone)	95	2	5	12 12.6%	15	10	11 11.6%	8.4%	12 12.6%	12 12.6%	5	3	40 42.1%	20 21.1%
72. Incisional hernia repair, with reconstruction	158	2	6 3.8%	17 10.8%	15 9.5%	19 12.0%	41 25.9%	23 14.6%	11 7.0%	16 10.1%	4 2.5%	4 2.5%	58 36.7%	24 15.1%
73. Sigmoidectomy (lap)	127	6 4.7%	8 6.3%	16 12.6%	12 9.4%	12 9.4%	17 13.4%	14	12	22 17.3%	5	3	56 44.0%	30 23.6%
74. Open reduction (carpal bones)	50	0	3 6.0%	5 10.0%	8	6	8	8	4 8.0%	5	1 2.0%	2 4.0%	20 40.0%	8 16.0%
75. Hysterectomy (open, vaginal)	2401	82 3.4%	130 5.4%	242 10.1%	295 12.3%	324 13.5%	400 16.7%	252 10.5%	208 8.7%	270 11.2%	120	78	928 38.6%	468 19.4%
76. Oophorectomy and salpingo-oophorectomy (lap)	52	0	4 7.7%	4 7.7%	8 15.4%	8 15.4%	9 17.3%	4	5 9.6%	8 15.4%	1	1	19 36.5%	10 19.2%
77. Liver resection (atypical), w or w/o cholecystectomy (open)	51	3 5.9%	4 7.8%	2 3.9%	8 15.7%	5 9.8%	6 11.8%	7 13.7%	5 9.8%	9 17.6%	1 2.0%	1 2.0%	23 45.1%	11 21.6%
78. Myomectomy (lap, vaginal laparoscopically assisted)	56	2 3.6%	3 5.4%	6 10.7%	5 8.9%	6 10.7%	12 21.4%	7 12.5%	7 12.5%	3 5.4%	5 8.9%	0 0.0%	22 39.3%	8 14.3%
79. Open reduction (ulnar shaft)	26	0	0	5 19.2%	1 3.8%	5 19.2%	5 19.2%	4	4	1 3.8%	1 3.8%	0	10 38.4%	2 7.6%
80. Open reduction (proximal ulna)	107	5 4.7%	6 5.6%	8 7.5%	10 9.3%	23 21.5%	17 15.9%	9 8.4%	9 8.4%	11 10.3%	4	5 4.7%	38 35.5%	20 18.7%
81. Hip joint replacement (revision, exchange, removal)	411	24 5.8%	21 5.1%	41 10.0%	50 12.2%	50 12.2%	65 15.8%	35 8.5%	40 9.7%	54 13.1%	14 3.4%	17 4.1%	160 38.8%	85 20.6%
82. Hip joint replacement	4208	256 6.1%	197 4.7%	367 8.7%	483 11.5%	541 12.9%	734 17.4%	429 10.2%	432 10.3%	452 10.7%	164 3.9%	153	1630 38.7%	769 18.2%
83. Incisional hernia repair, without reconstruction	66	4 6.1%	1 1.5%	6 9.1%	8 12.1%	9 13.6%	13 19.7%	8 12.1%	8 12.1%	5 7.6%	2 3.0%	2 3.0%	25 37.8%	9 13.6%
84. Removal of osteosynthetic material (ulnar)	55	2 3.6%	3 5.5%	8 14.5%	5 9.1%	7 12.7%	9 16.4%	7 12.7%	3 5.5%	6 10.9%	2 3.6%	3 5.5%	21 38.2%	11 20.0%
 Enterostomy as independent procedure, double barrel and end enterostomy 	86	2 2.3%	1 1.2%	5 5.8%	10 11.6%	18 20.9%	26 30.2%	7 8.1%	9 10.5%	5 5.8%	3	0	24 27.9%	8 9.3%
 Removal of osteosynthesis material (femur without femoral neck) 	193	8 4.1%	11 5.7%	19 9.8%	26 13.5%	24 12.4%	36 18.7%	18 9.3%	16 8.3%	16 8.3%	11 5.7%	8 4.1%	69 35.7%	35 18.1%
87. Resection of rectum with sphincter preservation (open)	182	5 2.7%	8 4.4%	22 12.1%	22 12.1%	25 13.7%	40 22.0%	18 9.9%	11 6.0%	19 10.4%	5 2.7%	7 3.8%	60 32.8%	31 16.9%
88. Reduction mammoplasty	146	4 2.7%	11 7.5%	16 11.0%	22 15.1%	17 11.6%	18 12.3%	14 9.6%	15 10.3%	22 15.1%	5 3.4%	2	58 39.8%	29 19.9%
89. Epigastric hernia repair (lap)	13	0 0.0%	2 15.4%	1 7.7%	0 0.0%	0 0.0%	4 30.8%	4 30.8%	2 15.4%	0 0.0%	0	0 0.0%	6 46.2%	0
90. Spinal canal decompression (2 segments)	167	10 6.0%	6 3.6%	18 10.8%	18 10.8%	25 15.0%	29 17.4%	21 12.6%	9 5.4%	20 12.0%	4 2.4%	7 4.2%	61 36.6%	31 18.6%
91. Laminectomy, hemilaminectomy (cervical, ventral, 1-2 segments)	88	2	5	7 8.0%	14 15.9%	14 15.9%	16 18.2%	8 9.1%	9 10.2%	9 10.2%	1	3	30 34.0%	13 14.7%
92. Right hemicolectomy (open)	163	11 6.7%	7 4.3%	18 11.0%	23 14.1%	20	22	14 8.6%	14 8.6%	20 12.3%	8 4.9%	6 3.7%	62 38.1%	34 20.9%
93. Femoral hernia repair (open)	79	3	1 1.3%	9	14	12.576	13.57%	6	6 7.6%	8 10.1%	5 6.3%	1	26 32.9%	14 17.7%
94. Cholecystectomy (lap)	4460	149 3.3%	225	406	635 14.2%	661 14.8%	775	527 11.8%	420	406	146	110	1609 36.1%	662 14.9%
95. Closed reduction with internal fixation (metacarpal bones)	36	0	2 5.6%	6 16.7%	2 5.6%	6 16.7%	7 19.4%	5	4	3 8.3%	0	1 2.8%	13 36.1%	4

	Total	NRS 0	NRS 1	NRS 2	NRS 3	NRS 4	NRS 5	NRS 6	NRS 7	NRS 8	NRS 9	NRS 10	Cut-off NRS ≥ 6	$\begin{array}{c} Cut\text{-off} \\ NRS \geq 8 \end{array}$
96. Resection of rectum with sphincter preservation (lap)	151	9 6.0%	4 2.6%	10 6.6%	20 13.2%	32 21.2%	23 15.2%	15 9.9%	12 7.9%	21 13.9%	3 2.0%	2 1.3%	53 35.0%	26 17.2%
97. Hemorrhoids. excision (e.g. Milligan-Morgan)	143	11 7.7%	9 6.3%	10 7.0%	22 15.4%	18 12.6%	16 11.2%	10 7.0%	17 11.9%	22 15.4%	4 2.8%	4 2.8%	57 39.9%	30 21.0%
98. Fallopian tube (insufflation. chromopertubation) (lap)	23	0 0.0%	1 4.3%	1 4.3%	4 17.4%	5 21.7%	5 21.7%	2 8.7%	3 13.0%	2 8.7%	0	0 0.0%	7 30.4%	2 8.7%
99. Closed reduction with internal fixation (femur - neck of femur)	59	5 8.5%	0.0%	5 8.5%	10 16.9%	8 13.6%	8 13.6%	10 16.9%	6 10.2%	4 6.8%	0	3 5.1%	23 39.0%	7
100. Arthroscopic surgery (shoulder joint)	96	8 8.3%	6	9 9.4%	13 13.5%	9 9.4%	16 16.7%	6	8.3%	14 14.6%	4 4.2%	3	35 36.5%	21 21.9%
 Shunt or bypass - femoral and popliteal artery (femoro-pop. femoro-crural. femoro-femoral) 	248	20 8.1%	12	20 8.1%	38 15.3%	31 12.5%	38	35 14.1%	15 6.0%	17	6	16 6.5%	89 35.9%	39 15.8%
102. Liver resection (anatomical). w or w/o cholecystectomy (segmental. bisegmental. hemihepatectomy)	62	4 6.5%	5 8.1%	2 3.2%	6 9.7%	7 11.3%	16 25.8%	11 17.7%	5 8.1%	5 8.1%	0	1	22 35.5%	9.7%
103. Arthroscopic surgery (knee) (excl. ligaments and meniscus)	1001	41 4.1%	81 8.1%	107 10.7%	141 14.1%	124 12.4%	149 14.9%	107	83 8.3%	109 10.9%	34	25	358 35.8%	168 16.8%
104. Open reduction (proximal femur)	108	4.1% 5 4.6%	5 4.6%	6 5.6%	18	12.476 17 15.7%	25 23.1%	10.7%	11 10.2%	5 4.6%	4 3.7%	2.5%	33.876 32 29.7%	11 10.2%
105. Open reduction (finger)	69	2 2 9%	8	6 8.7%	13 18.8%	5 7.2%	10 14.5%	5	7 10.1%	10 14.5%	1	2	25 36.1%	13 18.8%
106. Hemorrhoids (stapler procedure)	130	4 3.1%	14 10.8%	19 14.6%	14 10.8%	12 9.2%	21 16.2%	16 12.3%	7 5.4%	12 9.2%	5	6 4.6%	46 35.3%	23 17.6%
107. Nephrectomy (open)	158	25 15.8%	7 4.4%	12 7.6%	16 10.1%	15 9.5%	22 13.9%	16 10.1%	10 6.3%	19 12.0%	9 5.7%	7 4.4%	61 38.5%	35 22.1%
108. Liver resection (atypical). w or w/o cholecystectomy (lap)	40	1 2.5%	2	7	4 10.0%	4 10.0%	11 27.5%	4 10.0%	3	2	2	0	11 27.5%	4
109. Left hemicolectomy (open)	53	3	3 5.7%	5 9.4%	7 13.2%	10	6	3	6 11.3%	6 11.3%	0.0%	4	19 35.8%	10
110. Umbilical hernia repair (lap)	22	0	1 4.5%	3	3 13.6%	5 22.7%	4 18.2%	0	1 4.5%	4 18.2%	1 4.5%	0	6 27.2%	5
111. Arthroscopic surgery (ankle joint)	79	8 10.1%	5 6.3%	8	13 16.5%	6 7.6%	6	2	10	10.276	7	0.0%	33 41.8%	21 26.6%
112. Spinal canal decompression (1 segment)	407	12	20 4.9%	50 12.3%	58 14.3%	64 15.7%	59 14.5%	41 10.1%	43	36	9	15	144	60 14.7%
113. Open reduction (radius shaft)	29	0	2 6.9%	3 10.3%	4 13.8%	6 20.7%	5	1 3.4%	3 10.3%	5 17.2%	0	0.0%	9 30.9%	5
114. Removal of osteosynthetic material (tibia w or w/o fibula)	397	10 2.5%	28 7.1%	40 10.1%	65 16.4%	58 14.6%	59 14.9%	47	32 8.1%	39 9.8%	12	7	137 34.5%	58 14.6%
115. Trans-femoral amputation	53	7 13.2%	2 3.8%	4 7.5%	3	12 22.6%	6	7 13.2%	2	3	4 7.5%	3	19 35.9%	10
116. Laminectomy. hemilaminectomy (lumbar. 1-2 segments)	867	45 5.2%	46	108 12.5%	144 16.6%	113 13.0%	137	61 7.0%	69 8.0%	78	35	31	274 31.6%	144 16.6%
117. Epigastric hernia repair (open)	125	7 5.6%	3 2.4%	12	22	21	21	13 10.4%	11 8.8%	11 8.8%	2	2	39 31.2%	15
118. Open lung resection (atypical. segmental. lobar pneumonectomy)	80	5 6.3%	10 12.5%	12 15.0%	11 13.8%	8	4 5.0%	7 8.8%	4 5.0%	9 11.3%	3	7	30 37.7%	19 23.9%
119. Right hemicolectomy (lap)	15	1 6.7%	0	2	2	5	1 6.7%	1 6.7%	0	2	0	1 6.7%	4 26.7%	3
120. Gastrectomy (total or subtotal)	98	7	2	12 12.2%	16 16.3%	13 13.3%	20 20.4%	8.2%	7	8.2%	1	4 4.1%	28 28.6%	13 13.3%
121. Hysterectomy (subtotal) (lap)	106	2 1.9%	6	10 9.4%	20 18.9%	18 17.0%	19 17.9%	9 8.5%	13 12.3%	8 7.5%	1	0	31 29.2%	9 8.4%
122. Submucosal resection und plastic reconstruction of nasal septum	388	31 8.0%	32 8.2%	43	50 12.9%	45	51	39 10.1%	33 8.5%	36	19 4.9%	9 2.3%	136	64 16.5%
123. Inguinal hernia repair (w or w/o mesh) (open)	941	41 4.4%	57 6.1%	120 12.8%	171 18.2%	127 13.5%	136	91	81 8.6%	73	25	19 2.0%	289 30.8%	10.5% 117 12.5%
124. Fundoplication (lap)	153	8 5.2%	11	12.8%	23 15.0%	26 17.0%	23	13 8.5%	17	12	4 2.6%	1 0.7%	47 30.7%	12.5% 17 11.1%
125. Removal of osteosynthetic material (fibula)	150	6 4.0%	17	9.8% 14 9.3%	24 16.0%	17.0% 16 10.7%	25	8.5% 16 10.7%	11.1%	17 11.3%	3	1	48	21
126. Surgical wound debridement	618	53 8.6%	43	78 12.6%	78	87 14.1%	83	48 7.8%	57 9.2%	52 8.4%	18	21	196 31.7%	91 14.7%
127. Thyroid (total. hemi. partial resection)	2362	91 3.9%	164 6.9%	295 12.5%	402	347 14.7%	401 17.0%	224 9.5%	203 8.6%	166 7.0%	41	28	662 28.0%	235

	Total	NRS 0	NRS 1	NRS 2	NRS 3	NRS 4	NRS 5	NRS 6	NRS 7	NRS 8	NRS 9	NRS 10	Cut-off NRS ≥ 6	$Cut\text{-off}\\NRS \ge 8$
128. Nephrectomy (lap)	34	0 0.0%	1 2.9%	7 20.6%	4 11.8%	10 29.4%	5 14.7%	3 8.8%	0 0.0%	3 8.8%	0 0.0%	1 2.9%	7 20.5%	4 11.7%
129. Hand tendon repair	192	17 8.9%	14 7.3%	23 12.0%	29 15.1%	21 10.9%	29 15.1%	23 12.0%	13 6.8%	8 4.2%	7 3.6%	8 4.2%	59 30.8%	23 12.0%
130. Umbilical hernia repair (open)	378	17 4.5%	23 6.1%	55 14.6%	65 17.2%	48 12.7%	65 17.2%	43 11.4%	29 7.7%	19 5.0%	11 2.9%	3	105 27.8%	33 8.7%
131. Orchidectomy	74	6 8.1%	6 8.1%	11 14.9%	10 13.5%	5 6.8%	16 21.6%	5 6.8%	6 8.1%	6 8.1%	0	3 4.1%	20 27.1%	9 12.2%
132. Removal/reconstruction of teeth	37	3 8.1%	4 10.8%	8 21.6%	1 2.7%	4 10.8%	3 8.1%	5 13.5%	5 13.5%	3 8.1%	1 2.7%	0	14 37.8%	4 10.8%
133. Resection of rectum without sphincter preservation	47	4 8.5%	1 2.1%	9 19.1%	7 14.9%	8 17.0%	5 10.6%	4 8.5%	3 6.4%	3 6.4%	3 6.4%	0 0.0%	13 27.7%	6 12.8%
134. Breast reconstruction (muscle or skin flap)	11	1 9.1%	2 18.2%	1 9.1%	0 .0%	2 18.2%	1 9.1%	2 18.2%	1 9.1%	0 0.0%	1 9.1%	0 0.0%	4 36.4%	1 9.1%
135. Reduction of facial bone fractures	578	45 7.8%	60 10.4%	78 13.5%	98 17.0%	72 12.5%	75 13.0%	58 10.0%	36 6.2%	44 7.6%	7 1.2%	5 0.9%	150 25.9%	56 9.7%
136. Adrenal glands surgery (open)	22	4 18.2%	1 4.5%	3 13.6%	2 9.1%	3 13.6%	3 13.6%	1 4.5%	1 4.5%	4 18.2%	0 0.0%	0	6 27.2%	4 18.2%
137. Rhinoplasty	70	5 7.1%	12 17.1%	7 10.0%	9 12.9%	9 12.9%	8 11.4%	7 10.0%	7 10.0%	5 7.1%	0 0.0%	1 1.4%	20 28.5%	6 8.5%
138. Female pelvic floor reconstruction	293	35 11.9%	27 9.2%	39 13.3%	41 14.0%	31 10.6%	50 17.1%	23 7.8%	17 5.8%	15 5.1%	7 2.4%	8 2.7%	70 23.8%	30 10.2%
139. Adrenal glands surgery (lap)	17	0 0.0%	2 11.8%	4 23.5%	2 11.8%	3 17.6%	3 17.6%	2 11.8%	0 0.0%	0 0.0%	1 5.9%	0 0.0%	3 17.7%	1 5.9%
140. Inguinal hernia repair (w or w/o mesh) (endoscopic)	836	43 5.1%	76 9.1%	135 16.1%	163 19.5%	144 17.2%	111 13.3%	62 7.4%	37 4.4%	51 6.1%	9 1.1%	5 0.6%	164 19.6%	65 7.8%
141. Radical prostatectomy (lap)	33	2 6.1%	4 12.1%	3 9.1%	7 21.2%	7 21.2%	6 18.2%	2 6.1%	1 3.0%	0 0.0%	0 0.0%	1 3.0%	4 12.1%	1 3.0%
142. Cystectomie (total) (urinary bladder)	26	1 3.8%	3 11.5%	2 7.7%	7 26.9%	2 7.7%	2 7.7%	1 3.8%	0 0.0%	3 11.5%	4 15.4%	1 3.8%	9 34.5%	8 30.7%
143. Pleurodesis (thoracoscopic)	24	2 8.3%	2 8.3%	2 8.3%	6 25.0%	2 8.3%	3 12.5%	2 8.3%	3 12.5%	1 4.2%	0 0.0%	1 4.2%	7 29.2%	2 8.4%
144. Removal of osteosynthetic material (radius)	147	8 5.4%	13 8.8%	28 19.0%	30 20.4%	14 9.5%	11 7.5%	12 8.2%	13 8.8%	10 6.8%	2 1.4%	6 4.1%	43 29.3%	18 12.3%
145. Anal fistula closure	305	26 8.5%	43 14.1%	39 12.8%	52 17.0%	30 9.8%	32 10.5%	25 8.2%	21 6.9%	27 8.9%	6 2.0%	4	83 27.3%	37 12.2%
 Mastectomy w or w/o axillary lymphadenectomy (with or without prothesis) 	451	33 7.3%	53 11.8%	64 14.2%	77 17.1%	67 14.9%	60 13.3%	20 4.4%	24 5.3%	33 7.3%	15 3.3%	5 1.1%	97 21.4%	53 11.7%
 Kidney stone removal (nephrostomy. ureterrenoscopic. lithotripsy) 	88	17 19.3%	11 12.5%	11 12.5%	8 9.1%	6 6.8%	9 10.2%	6 6.8%	6 6.8%	7 8.0%	2 2.3%	5 5.7%	26 29.6%	14 16.0%
148. Paranasal sinus surgery (several sinuses)	178	26 14.6%	24 13.5%	19 10.7%	22 12.4%	16 9.0%	19 10.7%	14 7.9%	20 11.2%	13 7.3%	2 1.1%	3 1.7%	52 29.2%	18 10.1%
149. Vulva (incision. Bartholins gland. local excision)	36	1 2.8%	5 13.9%	7 19.4%	7 19.4%	5 13.9%	4 11.1%	3 8.3%	0 .0%	2 5.6%	1 2.8%	1 2.8%	7 19.5%	4 11.2%
150. Inguinal hernia repair (w or w/o mesh) (lap)	924	61 6.6%	83 9.0%	157 17.0%	170 18.4%	139 15.0%	137 14.8%	73 7.9%	52 5.6%	35 3.8%	11 1.2%	6 .6%	177 19.1%	52 5.6%
151. Pilonidal sinus surgery	248	27 10.9%	32 12.9%	38 15.3%	45 18.1%	26 10.5%	22 8.9%	18 7.3%	21 8.5%	9 3.6%	6 2.4%	4 1.6%	58 23.4%	19 7.6%
152. Excision of solitary lymph nodes or lymphatic vessels (inguinal) (open)	31	3 9.7%	3 9.7%	6 19.4%	5 16.1%	5 16.1%	4 12.9%	1 3.2%	2 6.5%	1 3.2%	0 0.0%	1 3.2%	5 16.1%	2 6.4%
153. Endarterectomy (femoral arteries)	95	13 13.7%	7 7.4%	13 13.7%	19 20.0%	15 15.8%	9 9.5%	9 9.5%	5 5.3%	2 2.1%	2 2.1%	1 1.1%	19 20.1%	5 5.3%
154. Removal of osteosynthetic material (clavicle)	90	5 5.6%	19 21.1%	13 14.4%	15 16.7%	10 11.1%	9 10.0%	8 8.9%	5 5.6%	4 4.4%	1 1.1%	1 1.1%	19 21.1%	6 6.6%
155. Middle and inner ear surgery	184	28 15.2%	21 11.4%	25 13.6%	35 19.0%	16 8.7%	21 11.4%	8 4.3%	13 7.1%	12 6.5%	3 1.6%	2	38 20.6%	17 9.2%
156. Creation of AV-fistula (e.g. Cimino-shunt)	72	13 18.1%	12 16.7%	8 11.1%	6 8.3%	7 9.7%	8 11.1%	5 6.9%	8 11.1%	3 4.2%	1 1.4%	1 1.4%	18 25.0%	5 7.0%
157. Extended excision of diseased cutaneous and subcutaneous tissue	199	43 21.6%	21 10.6%	18 9.0%	33 16.6%	19 9.5%	25 12.6%	6 3.0%	14 7.0%	11 5.5%	6 3.0%	3 1.5%	40 20.0%	20 10.0%
158. Transmetatarsal amputation	59	11 18.6%	9 15.3%	7 11.9%	7 11.9%	7 11.9%	5 8.5%	2 3.4%	3 5.1%	7 11.9%	1 1.7%	0 0.0%	13 22.1%	8 13.6%
159. Toe amputation	183	43 23.5%	18 9.8%	26 14.2%	22 12.0%	11 6.0%	21 11.5%	12 6.6%	11 6.0%	9 4.9%	4 2.2%	6 3.3%	42 23.0%	19 10.4%

	Total	NRS 0	NRS 1	NRS 2	NRS 3	NRS 4	NRS 5	NRS 6	NRS 7	NRS 8	NRS 9	NRS 10	$Cut\text{-off}\\NRS \ge 6$	$\begin{array}{c} Cut\text{-}off\\ NRS \geq 8 \end{array}$
 Breast conservation surgery, w or w/o axillary lymphadenectomy (segment or quadrant resection) 	542	49 9.0%	77 14.2%	79 14.6%	111 20.5%	81 14.9%	70 12.9%	33 6.1%	20 3.7%	15 2.8%	4 0.7%	3 0.6%	75 13.9%	22 4.1%
161. Submandibular gland surgery	30	3 10.0%	5 16.7%	4 13.3%	7 23.3%	3 10.0%	2 6.7%	4 13.3%	1 3.3%	1 3.3%	0 0.0%	0 0.0%	6 19.9%	1 3.3%
162. Transvaginal sling suspension of bladder neck	277	46 16.6%	39 14.1%	39 14.1%	42 15.2%	23 8.3%	43 15.5%	18 6.5%	7 2.5%	12 4.3%	6 2.2%	2	45 16.2%	20 7.2%
163. Radical prostatectomy (open)	266	50 18.8%	28 10.5%	43 16.2%	38 14.3%	28 10.5%	32 12.0%	19 7.1%	12 4.5%	10 3.8%	3	3	47 17.6%	16 6.0%
164. Varicose veins surgery (ligation, excision, stripping)	307	36 11.7%	54 17.6%	62 20.2%	41 13.4%	37 12.1%	30 9.8%	17 5.5%	10 3.3%	11 3.6%	5 1.6%	4	47 15.3%	20 6.5%
 Excision of solitary lymph nodes or lymphatic vessels (axillary) 	57	5 8.8%	7 12.3%	12 21.1%	13 22.8%	7 12.3%	9 15.8%	2 3.5%	0 0.0%	1	1	0 0.0%	4 7.1%	2 3.6%
166. Breast conservation surgery, w or w/o axillary lymphadenectomy (local, cone, ductal or lump resections)	664	63 9.5%	110 16.6%	141 21.2%	124 18.7%	88 13.3%	57 8.6%	32 4.8%	21 3.2%	19 2.9%	6 0.9%	3 0.5%	81 12.3%	28 4.3%
167. Parotidectomy	33	5 15.2%	7 21.2%	4 12.1%	5 15.2%	4 12.1%	3 9.1%	2 6.1%	0 0.0%	3 9.1%	0 0.0%	0 0.0%	5 15.2%	3 9.1%
168. Carotid endarterectomy	160	26 16.3%	17 10.6%	31 19.4%	30 18.8%	22 13.8%	18 11.3%	6 3.8%	5 3.1%	5 3.1%	0 0.0%	0	16 10.0%	5 3.1%
169. Metatarsophalangeal amputation	35	10 28.6%	4 11.4%	5 14.3%	3 8.6%	2 5.7%	4 11.4%	2 5.7%	1 2.9%	0 0.0%	1 2.9%	3 8.6%	7 20.1%	4 11.5%
170. Testicular hydrocele surgery	71	7 9.9%	15 21.1%	15 21.1%	7 9.9%	12 16.9%	4 5.6%	5 7.0%	0 0.0%	3 4.2%	2 2.8%	1 1.4%	11 15.4%	6 8.4%
171. Widening of ureter (stent, dilatation, incision) (transurethral)	102	26 25.5%	18 17.6%	16 15.7%	12 11.8%	5 4.9%	5 4.9%	9 8.8%	2 2.0%	5 4.9%	1 1.0%	3 2.9%	20 19.6%	9 8.8%
172. Eye surgery	100	32 32.0%	14 14.0%	14 14.0%	8 8.0%	4 4.0%	9 9.0%	7 7.0%	3 3.0%	5 5.0%	1 1.0%	3 3.0%	19 19.0%	9 9.0%
173. Skull surgery (trepanation, craniotomy, stereotactic surgery, meninges, CSF shunts, intracranial blood vessels)	80	20 25.0%	6 7.5%	15 18.8%	13 16.3%	9 11.3%	8 10.0%	2 2.5%	5 6.3%	2 2.5%	0 0.0%	0	9 11.3%	2 2.5%
174. Cervical conization	56	13 23.2%	9 16.1%	11 19.6%	6 10.7%	3 5.4%	6 10.7%	2 3.6%	2 3.6%	4 7.1%	0 0.0%	0 0.0%	8 14.3%	4 7.1%
175. Transurethral resection of bladder	590	177 30.0%	82 13.9%	96 16.3%	67 11.4%	42 7.1%	56 9.5%	25 4.2%	21 3.6%	17 2.9%	5 0.8%	2 0.3%	70 11.8%	24 4.0%
176. Transurethral resection of prostate	572	173 30.2%	67 11.7%	98 17.1%	82 14.3%	54 9.4%	38 6.6%	22 3.8%	15 2.6%	15 2.6%	4 0.7%	4 0.7%	60 10.4%	23 4.0%
177. Prepuce surgery	20	5 25.0%	3 15.0%	4 20.0%	2 5.0%	2 10.0%	3 15.0%	0 0.0%	1 5.0%	0 0.0%	0 0.0%	0 0.0%	1 5.0%	0 0.0%
178. Urethra, transurethral incision	137	50 36.5%	17 12.4%	19 13.9%	16 11.7%	6 4.4%	11 8.0%	7 5.1%	3 2.2%	4 2.9%	1 0.7%	3 2.2%	18 13.1%	8 5.8%
 Excision of solitary lymph nodes or lymphatic vessels (cervical) 	31	8 25.8%	6 19.4%	5 16.1%	3 9.7%	6 19.4%	0 0.0%	0 0.0%	2 6.5%	1 3.2%	0 0.0%	0	3 9.7%	1 3.2%

NRS = numeric rating score w = with w/o = without AV = arterio-venous CSF = cerebrospinal fluid

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