

Supplemental Digital Content 1. Procedure-specific comparison of risk factors (age, gender, preoperative chronic pain intensity) for the development of worst postoperative pain intensity (numeric rating scale, NRS 0-10).

Type of surgery	n	Worst pain (NRS) mean (SD)	Preop. chronic pain (%)	Female gender (%)	Regression coefficient (95% CI)					
					Preoperative chronic pain (NRS 0-10)		Age (decades)		Female gender	
Shoulder ligaments (open)	349	6.04 (2.46)	53.7	42.3	0.17	0.09; 0.25	-0.06	-0.27; 0.14	0.44	-0.08; 0.95
Tonsillectomy	332	6.01 (2.03)	22.6	61.0	0.04	-0.06; 0.13	-0.24	-0.41; -0.08	0.12	-0.33; 0.57
Appendectomy (open)	196	5.92 (2.18)	17.1	38.8	0.14	0.03; 0.24	-0.20	-0.35; -0.05	0.41	-0.21; 1.03
Cholecystectomy (open)	285	5.87 (2.29)	24.7	47.4	0.08	-0.02; 0.18	-0.23	-0.40; -0.05	-0.09	-0.62; 0.44
Total knee replacement	1,247	5.56 (2.66)	70.6	67.7	0.26	0.21; 0.30	-0.33	-0.47; -0.18	0.31	0.02; 0.61
Incisional hernia repair (open)	331	5.56 (2.41)	27.5	49.1	0.07	-0.04; 0.18	-0.22	-0.42; -0.02	0.13	-0.40; 0.66
Vertical sleeve gastrectomy (lap)	162	5.41 (2.11)	7.5	66.0	0.18	0.01; 0.36	-0.39	-0.70; -0.09	0.11	-0.57; 0.79
Hysterectomy (open)	580	5.38 (2.32)	14.4	-	0.24	0.13; 0.34	-0.36	-0.55; -0.17	-	-
Appendectomy (lap)	1,078	5.36 (2.23)	18.7	55.6	0.05	0.00; 0.10	-0.25	-0.33; -0.18	0.37	0.11; 0.63
Shoulder ligaments (arthroscopic)	720	5.20 (2.55)	65.5	44.8	0.13	0.07; 0.18	-0.32	-0.46; 0.19	0.28	-0.10; 0.65
Total hip replacement	2,741	4.95 (2.53)	73.1	59.1	0.17	0.14; 0.20	-0.19	-0.27; -0.10	0.27	0.08; 0.46
Hysterectomy (vaginal)	1,282	4.83 (2.56)	17.8	-	0.17	0.11; 0.23	-0.45	-0.57; -0.34	-	-
Cholecystectomy (lap)	4,093	4.79 (2.37)	29.8	69.8	0.07	0.05; 0.10	-0.32	-0.37; 0.28	0.20	0.05; 0.36
Spinal decompression	266	4.63 (2.41)	67.4	47.3	0.16	0.09; 0.22	-0.11	-0.28; 0.05	0.54	0.08; 1.01
Plastic reconstruction nasal septum	331	4.52 (2.72)	12.7	36.7	0.22	0.06; 0.36	-0.53	-0.74; -0.33	0.59	0.00; 1.18
Laminectomy (lumbar 1-2 seg)	1020	4.46 (2.54)	67.0	44.6	0.08	0.04; 0.13	-0.11	-0.23; 0.00	0.65	0.31; 1.00
Inguinal hernia repair (open)	720	4.34 (2.43)	24.5	14.2	0.22	0.14; 0.31	-0.25	-0.37; -0.13	0.55	0.05; 1.04
Thyroidectomy	2,201	4.29 (2.28)	11.2	74.8	0.19	0.13; 0.25	-0.31	-0.38; -0.24	0.12	0.09; 0.34
Umbilical hernia repair (open)	347	4.19 (2.30)	19.3	30.5	0.14	0.04; 0.24	-0.18	-0.34; -0.02	0.71	0.19; 1.24
Closure anal fistula	248	3.84 (2.62)	34.2	30.6	0.27	0.16; 0.38	-0.29	-0.50; 0.08	0.34	-0.33; 1.08
Mastectomy	409	3.82 (2.47)	15.7	-	0.20	0.08; 0.31	-0.34	-0.50; -0.18	-	-
Inguinal hernia repair (endoscopic)	797	3.74 (2.18)	24.9	8.9	0.15	0.08; 0.22	-0.49	-0.59; -0.40	0.43	-0.07; 0.93
Inguinal hernia repair (lap)	833	3.71 (2.21)	26.4	11.6	0.16	0.09; 0.21	-0.41	-0.50; -0.31	0.20	-0.26; 0.67
Pilonidal sinus surgery	226	3.50 (2.53)	18.0	23.8	0.09	-0.07; 0.26	-0.16	-0.44; 0.11	0.03	-0.76; 0.81
BCT (seg, or quadrant resection)	462	3.31 (2.14)	12.8	-	0.11	0.01; 0.22	-0.21	-0.37; -0.05	-	-
BCT (local, ductal, lump resection)	592	3.07 (2.13)	23.9	-	0.24	0.14; 0.34	-0.11	-0.24; 0.01	-	-
Transvaginal sling suspension	251	3.03 (2.39)	41.3	-	0.13	0.00; 0.26	-0.12	-0.39; 0.15	-	-
Varicose veins surgery	222	3.03 (2.40)	13.5	57.7	0.16	0.05; 0.27	-0.19	-0.43; 0.06	0.25	-0.39; 0.88
Transurethral resection of prostate	249	2.43 (2.34)	15.2	-	0.11	-0.04; 0.26	-0.16	-0.47; 0.15	-	-

Transurethral resection of bladder	402	2.34 (2.36)	19.1	27.9	0.33	0.22; 0.44	-0.19	-0.39; 0.01	-0.31	-0.82; 0.21
Total of 30 surgical groups	22,963	4.60 (2.52)	35.0	59.6	0.14	0.13; 0.15	-0.28	-0.26; -0.31	0.29	0.22; 0.37

Regression coefficients for age, gender, and preoperative chronic pain intensity were separately calculated for 30 surgical procedures (including more than 150 patients, without regional anesthesia) with linear regression analysis.

For the group “total of 30 surgical groups” a random effect regression analysis was used as the relationship among risk factors and postoperative pain intensity was expected to be procedure-dependent (cluster-dependent), a random slope and random intercept was included in the mixed-effects model.

Age categories: 18-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, and > 80years

BCT = breast conservative therapy

lap = laparoscopic

NRS = numeric rating scale

SD = standard deviation

seg = segmental