Supplementary Table 4. Patients characteristics and univariate analysis for 30-day hospital readmission.

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|  |  | **30-day Readmission** | |  |
|  | Total  n = 711 (%) | Yes  n = 54 (7.6) | No  n = 657 (92.4) | P-value |
| **Preoperative variables** |  |  |  |  |
| Age, years, mean ± SD | 73.6 ± 6.0 | 73.9 ± 6.7 | 73.6 ± 6.0 | 0.7271 |
| Male, n (%) | 350 (49.2) | 24 (44.4) | 326 (49.6) | 0.5552 |
| Baseline living situation, n (%), n = 644 |  |  |  |  |
| Independent | 615 (95.5) | 45 (90.0) | 570 (96.0) |  |
| Nursing Home / Facility | 29 (4.5) | 5 (10.0) | 24 (4.0) | 0.0663 |
| Marital status, n (%), n = 701 |  |  |  |  |
| Married / Partner | 489 (69.8) | 32 (60.4) | 457 (70.5) |  |
| Other | 212 (30.2) | 21 (39.6) | 191 (29.5) | 0.1642 |
| Body mass index, Kg/m2, mean ± SD, n = 703 | 29.0 ± 5.5 | 29.8 ± 6.8 | 28.9 ± 5.4 | 0.3381 |
| ASA physical status, n (%) |  |  |  |  |
| < 3 | 243 (34.2) | 12 (22.2) | 231 (35.2) |  |
| ≥ 3 | 468 (65.8) | 42 (77.8) | 426 (64.8) | 0.0762 |
| Metabolic equivalents of task, n (%), n = 611 |  |  |  |  |
| < 4 | 168 (27.5) | 20 (46.5) | 148 (26.1) |  |
| ≥ 4 | 443 (72.5) | 23 (53.5) | 420 (73.9) | 0.0072 |
| Depression, n (%), n = 698 |  |  |  |  |
| No | 461 (66.0) | 36 (67.9) | 425 (65.9) |  |
| Yes | 237 (34.0) | 17 (32.1) | 220 (34.1) | 0.8812 |
| Anxiety, n (%), n = 700 |  |  |  |  |
| No | 510 (72.9) | 37 (68.5) | 473 (73.2) |  |
| Yes | 190 (27.1) | 17 (31.5) | 173 (26.8) | 0.5572 |
| Total number of medications  median [25th-75th], n = 708 | 7 [5-11] | 9 [7-11] | 7 [5-11] | 0.0784 |
| Preoperative opioid use, n (%), n = 708 |  |  |  |  |
| No | 445 (62.9) | 32 (59.3) | 413 (63.2) |  |
| Yes | 263 (37.1) | 22 (40.7) | 241 (36.8) | 0.6732 |
| Number of past previous surgeries  median [25th-75th], n = 663 | 4 [2-6] | 4 [3-5] | 4 [2-6] | 0.7384 |
| Case classification, n (%), n = 707 |  |  |  |  |
| Elective | 653 (92.4) | 42 (79.3) | 611 (93.4) |  |
| Non-elective | 54 (7.6) | 11 (20.7) | 43 (6.6) | 0.0013 |
| **Intraoperative variables** |  |  |  |  |
| Invasiveness \*, n (%) |  |  |  |  |
| Tier 1 and 2 | 255 (35.9) | 11 (20.4) | 244 (37.1) |  |
| Tier 3 and 4 | 456 (64.1) | 43 (79.6) | 413 (62.9) | 0.0202 |
| Type of anesthesia, n (%) |  |  |  |  |
| TIVA | 97 (13.6) | 9 (16.7) | 88 (13.4) |  |
| TIVA + volatile | 282 (39.7) | 25 (46.3) | 257 (39.1) |  |
| Volatile | 332 (46.7) | 20 (37.0) | 312 (47.5) | 0.3322 |
| BIS monitoring, n (%) |  |  |  |  |
| No | 271 (38.1) | 10 (18.5) | 261 (39.7) |  |
| Yes | 440 (61.9) | 44 (81.5) | 396 (60.3) | 0.0032 |
| Estimated blood loss, n (%), n = 688 |  |  |  |  |
| < 500 ml | 597 (86.8) | 40 (76.9) | 557 (87.6) |  |
| 501-999 ml | 44 (6.4) | 5 (9.6) | 39 (6.1) |  |
| > 1000 ml | 47 (6.8) | 7 (13.5) | 40 (6.3) | 0.0653 |
| Transfusion of blood products |  |  |  |  |
| No | 656 (92.3) | 45 (83.3) | 611 (93.0) |  |
| Yes | 55 (7.7) | 9 (16.7) | 46 (7.0) | 0.0283 |
| Length of surgery, min, median [25th-75th] | 129.0 [96.5-187.0] | 145.0 [112.5-187.0] | 128.0 [96.0-187.0] | 0.1684 |
| Intraoperative MEA, median [25th-75th] | 15.6 [12.4-24.0] | 15.0 [12.4-25.2] | 15.6 [12.4-24.0] | 0.6564 |
| **Postoperative variables** |  |  |  |  |
| Mean pain score on postoperative day 1  median [25th-75th], n=694 | 4.6 [3.3-5.9] | 4.8 [3.1-5.9] | 4.6 [3.3-6.0] | 0.5034 |
| MEA on postoperative day 1, median [25th-75th] | 22.0 [12.0-33.2] | 22.0 [14.1-39.0] | 22.4 [12.0-32.8] | 0.3594 |

SD: Standard deviation, ASA: American Society of Anesthesiologists physical status, TIVA: Total Intravenous Anesthesia, BIS: Bispectral Index, MEA: morphine equivalents amount

\*Invasiveness: Tier 1, microdiscectomy, lumbar laminectomy or anterior cervical procedures, minimally invasive fusions; Tier 2, lumbar fusion, trauma, or posterior cervical fusion procedures, tumor, infection, deformity, or combined anterior and posterior cervical procedures.

1T-tests were used.

2Chi-square tests were used

3Fisher’s exact tests were used

4Wilcoxon rank sum tests were used