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| Supplementary digital content 6: Characteristics of individuals undergoing colorectal cancer surgery with anesthesia data in Denmark 2004-2018 |
|  | Before propensity score matching |  | After propensity score matching |  |
|  | Epidural analgesia | No epidural analgesia | Standardized mean difference | Epidural analgesia | No epidural analgesia | Standardized mean difference |
| N |  3496 |  8122 |  |  2980 |  2980 |  |
| Median age, years (IQR)  | 70 (63-77 | 70 (63-77) | 0.022 | 70 (63-77) | 70 (63-77) | 0.009 |
| Sex |  |  | 0.009 |  |  | 0.030 |
|  Male |  1901 (54.4)  |  4380 (53.9)  |  |  1631 (54.7)  |  1587 (53.3)  |  |
|  Female |  1595 (45.6)  |  3742 (46.1)  |  |  1349 (45.3)  |  1393 (46.7)  |  |
| Body Mass Index, kg x m2 |  |  | 0.081 |  |  | 0.021 |
|  <18.5 |  138 ( 3.9)  |  274 ( 3.4)  |  |  108 ( 3.6)  |  111 ( 3.7)  |  |
|  18.5-25 |  1596 (45.7)  |  3487 (42.9)  |  |  1343 (45.1)  |  1322 (44.4)  |  |
|  25-30 |  1157 (33.1)  |  2977 (36.7)  |  |  1008 (33.8)  |  1007 (33.8)  |  |
|  >30 |  595 (17.0)  |  1352 (16.6)  |  |  511 (17.1)  |  528 (17.7)  |  |
|  Missing |  10 ( 0.3)  |  32 ( 0.4)  |  |  10 ( 0.3)  |  12 ( 0.4)  |  |
| ASA Physical Status |  |  | 0.031 |  |  | 0.032 |
|  I |  638 (18.2)  |  1522 (18.7)  |  |  552 (18.5)  |  528 (17.7)  |  |
|  II |  2074 (59.3)  |  4789 (59.0)  |  |  1767 (59.3)  |  1775 (59.6)  |  |
|  III |  726 (20.8)  |  1653 (20.4)  |  |  610 (20.5)  |  616 (20.7)  |  |
|  IV+ |  51 ( 1.5)  |  132 ( 1.6)  |  |  45 ( 1.5)  |  53 ( 1.8)  |  |
|  Missing |  7 ( 0.2)  |  26 ( 0.3)  |  |  6 ( 0.2)  |  8 ( 0.3)  |  |
| Charlson Comorbidity Index |  |  | 0.023 |  |  | 0.012 |
|  0 |  2344 (67.0)  |  5379 (66.2)  |  |  1988 (66.7)  |  1975 (66.3)  |  |
|  1 |  684 (19.6)  |  1613 (19.9)  |  |  580 (19.5)  |  593 (19.9)  |  |
|  2 |  257 ( 7.4)  |  600 ( 7.4)  |  |  228 ( 7.7)  |  231 ( 7.8)  |  |
|  >2 |  211 ( 6.0)  |  530 ( 6.5)  |  |  184 ( 6.2)  |  181 ( 6.1)  |  |
| Tobacco |  |  | 0.028 |  |  | 0.041 |
|  Smoker |  721 (20.6)  |  1587 (19.5)  |  |  596 (20.0)  |  619 (20.8)  |  |
|  Non-smoker |  2673 (76.5)  |  6283 (77.4)  |  |  2306 (77.4)  |  2266 (76.0)  |  |
|  Missing |  102 ( 2.9)  |  252 ( 3.1)  |  |  78 ( 2.6)  |  95 ( 3.2)  |  |
| Alcohol, weekly units |  |  | 0.091 |  |  | 0.020 |
|  0 |  942 (26.9)  |  2191 (27.0)  |  |  787 (26.4)  |  795 (26.7)  |  |
|  1-21 |  2222 (63.6)  |  5190 (63.9)  |  |  1912 (64.2)  |  1899 (63.7)  |  |
|  >21 |  223 ( 6.4)  |  594 ( 7.3)  |  |  202 ( 6.8)  |  198 ( 6.6)  |  |
|  Missing |  109 ( 3.1)  |  147 ( 1.8)  |  |  79 ( 2.7)  |  88 ( 3.0)  |  |
| Filled prescriptions 3 months prior to surgery (ATC-code) |  |  |  |  |  |  |
|  Proton pump inhibitors (A02BC) |  654 (18.7)  |  1417 (17.4)  | 0.033 |  551 (18.5)  |  545 (18.3)  | 0.005 |
|  Antidiabetics (A10) |  347 ( 9.9)  |  781 ( 9.6)  | 0.010 |  300 (10.1)  |  300 (10.1)  | <0.001 |
|  Acetyl Salicylic acid (B01AC06) |  540 (15.4)  |  1211 (14.9)  | 0.015 |  451 (15.1)  |  444 (14.9)  | 0.007 |
|  Other platelet inhibitors (B01AC |  165 ( 4.7)  |  450 ( 5.5)  | 0.037 |  145 ( 4.9)  |  133 ( 4.5)  | 0.019 |
|  Anticoagulants (B01A) |  159 ( 4.5)  |  505 ( 6.2)  | 0.074 |  141 ( 4.7)  |  154 ( 5.2)  | 0.020 |
|  Digoxin (C01AA05) |  85 ( 2.4)  |  242 ( 3.0)  | 0.034 |  72 ( 2.4)  |  77 ( 2.6)  | 0.011 |
|  Thiazides (C03) |  625 (17.9)  |  1461 (18.0)  | 0.003 |  529 (17.8)  |  547 (18.4)  | 0.016 |
|  Beta blockers (C07) |  511 (14.6)  |  1223 (15.1)  | 0.012 |  433 (14.5)  |  434 (14.6)  | 0.001 |
|  Calcium channel blockers (C08) |  516 (14.8)  |  1231 (15.2)  | 0.011 |  444 (14.9)  |  464 (15.6)  | 0.019 |
|  Drugs acting on renin angiotensin system (C09) |  889 (25.4)  |  2131 (26.2)  | 0.018 |  781 (26.2)  |  783 (26.3)  | 0.002 |
|  Lipid lowering drugs (C10) |  782 (22.4)  |  1748 (21.5)  | 0.020 |  677 (22.7)  |  646 (21.7)  | 0.025 |
|  Estrogen hormone replacement (G03C) |  154 ( 4.4)  |  329 ( 4.1)  | 0.018 |  135 ( 4.5)  |  136 ( 4.6)  | 0.002 |
|  Corticosteroids for systemic use (H02) |  102 ( 2.9)  |  217 ( 2.7)  | 0.015 |  81 ( 2.7)  |  92 ( 3.1)  | 0.022 |
|  Non-steroid anti-inflammatory drugs (M01A) |  244 ( 7.0)  |  586 ( 7.2)  | 0.009 |  211 ( 7.1)  |  206 ( 6.9)  | 0.007 |
|  Urate lowering drugs (M04) |  51 ( 1.5)  |  174 ( 2.1)  | 0.051 |  49 ( 1.6)  |  51 ( 1.7)  | 0.005 |
|  Bisphosphonates (M05BA,M05BB) |  112 ( 3.2)  |  235 ( 2.9)  | 0.018 |  97 ( 3.3)  |  101 ( 3.4)  | 0.007 |
|  Opioids (N02A) |  413 (11.8)  |  860 (10.6)  | 0.039 |  342 (11.5)  |  352 (11.8)  | 0.010 |
|  Benzodiazepines (N05CD,N05CF) |  319 ( 9.1)  |  787 ( 9.7)  | 0.019 |  276 ( 9.3)  |  266 ( 8.9)  | 0.012 |
|  Antidepressants (N06A) |  250 ( 7.2)  |  603 ( 7.4)  | 0.011 |  209 ( 7.0)  |  207 ( 6.9)  | 0.003 |
|  Drugs for obstructive airway diseases (R03) |  312 ( 8.9)  |  663 ( 8.2)  | 0.027 |  259 ( 8.7)  |  248 ( 8.3)  | 0.013 |
| Number of different prescriptions |  |  | 0.015 |  |  | 0.024 |
|  0-4 |  2330 (66.6)  |  5451 (67.1)  |  |  1990 (66.8)  |  1972 (66.2)  |  |
|  5-9 |  970 (27.7)  |  2202 (27.1)  |  |  817 (27.4)  |  845 (28.4)  |  |
|  ≥10 |  196 ( 5.6)  |  469 ( 5.8)  |  |  173 ( 5.8)  |  163 ( 5.5)  |  |
| Tumor localization |  |  | 0.200 |  |  | 0.004 |
|  Right hemicolon | 1166 (33.4)  |  2721 (33.5)  |  |  974 (32.7)  |  968 (32.5)  |  |
|  Left hemicolon |  1011 (28.9)  |  2992 (36.8)  |  |  932 (31.3)  |  934 (31.3)  |  |
|  Rectum |  1319 (37.7)  |  2405 (29.6)  |  |  1074 (36.0)  |  1078 (36.2)  |  |
|  Unspecified | <5 ( 0.0)  | <5 ( 0.0)  |  | <5 (0.0) | <5 (0.0) |  |
| Preoperative metastases |  |  | 0.027 |  |  | 0.024 |
|  Yes |  124 ( 3.5)  |  261 ( 3.2)  |  |  112 (3.8)  |  116 (3.9)  |  |
|  No |  3333 (95.3)  |  7786 (95.9)  |  |  2833 (95.1)  |  2836 (95.2)  |  |
|  Missing |  39 ( 1.1)  |  75 ( 0.9)  |  |  35 (1.2)  |  28 (0.9)  |  |
| Cancer stage\* |  |  | 0.105 |  |  | 0.044 |
|  I |  694 (19.9)  |  1798 (22.1)  |  |  604 (20.3)  |  635 (21.3)  |  |
|  II |  1506 (43.1)  |  3173 (39.1)  |  |  1271 (42.7)  |  1216 (40.8)  |  |
|  III |  1080 (30.9)  |  2550 (31.4)  |  |  904 (30.3)  |  910 (30.5)  |  |
|  IV |  141 ( 4.0)  |  337 ( 4.1)  |  |  127 ( 4.3)  |  142 ( 4.8)  |  |
|  Missing |  75 ( 2.1)  |  264 ( 3.3)  |  |  74 ( 2.5)  |  77 ( 2.6)  |  |
| Neoadjuvant oncologic treatment  |  |  | 0.074 |  |  | 0.011 |
|  No |  3079 (88.1)  |  7339 (90.4)  |  |  2653 (89.0)  |  2643 (88.7)  |  |
|  Yes |  417 (11.9)  |  783 ( 9.6)  |  |  327 (11.0)  |  337 (11.3)  |  |
| Urgency  |  |  | 0.040 |  |  | 0.022 |
|  Elective |  3225 (92.2)  |  7543 (92.9)  |  |  2726 (91.5)  |  2707 (90.8)  |  |
|  Acute |  271 ( 7.8)  |  575 ( 7.1)  |  |  254 ( 8.5)  |  273 ( 9.2)  |  |
|  Missing | <5 ( 0.0)  | <5 ( 0.0)  |  | <5 ( 0.0)  | <5 ( 0.0)  |  |
| Intended surgical approach |  |  | 0.307 |  |  | 0.032 |
|  Laparotomy |  1672 (47.8)  |  2674 (32.9)  |  |  1159 (38.9)  |  1205 (40.4)  |  |
|  Laparoscopy |  1824 (52.2)  |  5448 (67.1)  |  |  1821 (61.1)  |  1775 (59.6)  |  |
| General anesthesia type |  |  | 0.188 |  |  | 0.024 |
|  Inhalation |  1370 (39.2)  |  3869 (47.6)  |  |  1200 (40.3)  |  1231 (41.3)  |  |
|  Total intravenous anesthesia |  2117 (60.6)  |  4195 (51.6)  |  |  1771 (59.4)  |  1742 (58.5)  |  |
|  Missing |  9 ( 0.3)  |  58 ( 0.7)  |  |  9 ( 0.3)  |  7 ( 0.2)  |  |
| Year |  |  | 0.600 |  |  |  |
|  2004-2008 |  392 (11.2)  |  2110 (26.0)  |  |  392 (13.2)  |  434 (14.6)  | 0.049 |
|  2009-2012 |  1868 (53.4)  |  2170 (26.7)  |  |  1364 (45.8)  |  1378 (46.2)  |  |
|  2013-2018 |  1236 (35.4)  |  3842 (47.3)  |  |  1224 (41.1)  | 1. .2)
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| \* Union for International Cancer Control classification. ASA = American Society of Anesthesiologists physical performance score, ATC = Anatomical Therapeutic Chemical (ATC) Classification System. |