**Supplementary Table 1:** Multivariable logistic regression analysis.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Lab vs non-sever | Clinical vs non-sever | Both vs non-sever | Clinical vs lab | Both vs lab | Both vs clinical |
| Overal complication | **1.924 (****1.808 –** **2.041)** | **1.184 (****1.011 –** **1.388)** | **2.595 (****2.025 –** **3.326)** | **0.615 (****0.518 –** **0.730)** | **1.404 (****1.087 –** **1.813)** | **2.276 (1.678 – 3.088)** |
| Major complication | **1.984 (****1.861 –** **2.114)** | **1.207 (****1.002 –** **1.454)** | **2.512 (****1.984 –** **3.181)** | **0.563 (****0.462 –** **0.687)** | **1.323 (****1.037 –** **1.688)** | **2.598 (1.888 – 3.575)** |
| Surgical complications | **1.765 (****1.655 –** **1.883)** | 1.098 (0.909 – 1.325) | **2.263 (****1.785 –** **2.869)** | **0.565 (****0.461 –** **0.691)** | **1.324 (****1.035 –** **1.695)** | **2.364 (1.707 – 3.274)** |
| Any SSI | **1.317 (****1.207 –** **1.436)** | 0.863 (0.664 – 1.120) | 1.314 (0.947 – 1.821) | **0.630 (****0.476 –** **0.834)** | 1.008 (0.717 – 1.418) | 1.510 (0.961 – 2.373) |
| Wound Disruption | **1.353 (1.069 – 1.713)** | 1.533 (0.874 – 2.691) | 1.393 (0.611 – 3.179) | 1.023 (0.551 – 1.901) | 1.060 (0.451 – 2.492) | 1.230 (0.421 – 3.591) |
| Systemic sepsis | **1.715 (1.537 – 1.913)** | 1.054 (0.742 – 1.499) | **1.793 (1.221 – 2.632)** | **0.611 (0.423 – 0.883)** | 1.101 (0.743 – 1.102) | **2.228 (1.290 – 3.847)** |
| Need for Blood Transfusion | **2.004 (1.885 – 2.217)** | **1.473 (1.159 – 1.873)** | **3.075 (2.331 – 4.058)** | **0.609 (0.472 – 0.786)** | **1.532 (1.148 – 2.043)** | **2.507 (1.692 – 3.715)** |
| Medical complications | **1.727 (****1.593 –** **1.872)** | 1.158 (0.904 – 1.482) | **1.824 (****1.359 –** **2.448)** | **0.658 (****0.508 –** **0.852)** | 1.090 (0.807 – 1.473) | **1.978 (1.315 – 2.976)** |
| UTI | **1.349 (1.172 – 1.553)** | 1.223 (0.826 – 1.811) | 1.369 (0.819 – 2.288) | 0.862 (0.568 – 1.310) | 1.024 (0.604 – 1.736) | 1.255 (0.635 – 2.482) |
| Respiratory complication | **1.921 (1.717 – 2.150)** | **1.434 (1.020 – 2.016)** | **2.374 (1.634 – 3.448)** | 0.742 (0.520 – 1.057) | 1.314 (0.900 – 1.917) | **2.193 (1.279 – 3.759)** |
| Renal Complications | **1.458 (1.196 – 1.778)** | **0.227 (0.056 – 0.915)** | **1.285 (0.564 – 2.928)** | **0.170 (0.042 – 0.697)** | 1.001 (0.430 – 2.334) | 17.705 (1.846 – 169.8) |
| MACE | **1.632 (1.361 – 1.958)** | 1.535 (0.909 – 2.591) | **2.344 (1.319 – 4.167)** | 0.833 (0.480 – 1.446) | 1.433 (0.792 – 2.594) | 2.113 (0.902 – 4.951) |
| VTE | **1.831 (1.547 – 2.167)** | 0.608 (0.287 – 1.287) | 1.324 (0.650 – 2.697) | **0.320 (0.148 – 0.690)** | 0.751 (0.363 – 1.553) | 3.076 (1.053 – 8.983) |
| LOS > 7 days (Q3)  | **1.793 (****1.683 –** **1.910)** | **1.223 (****1.027 –** **1.457)** | **1.968 (****1.545 –** **2.506)** | **0.687 (****0.571 –** **0.826)** | 1.134 (0.887 – 1.450) | **1.674 (1.231 – 2.277)** |
| Unplanned readmission related to the primary procedure# | **1.197 (****1.059 –** **1.353)** | 0.855 (0.608 – 1.203) | 1.298 (0.806 – 2.090) | 0.737 (0.510 – 1.067) | 1.128 (0.687 – 1.850) | 1.765 (0.933 – 3.339) |
| Unplanned reoperation related to the primary procedure# | **1.257 (****1.058 –** **1.493)** | 1.096 (0.703 – 1.710) | 0.859 (0.377 – 1.954) | 0.841 (0.516 – 1.371) | 0.720 (0.309 – 1.677) | 0.654 (0.321 – 1.854) |
| Mortality (within 30 days) | **2.948 (****2.521 –** **3.448)** | **1.928 (****1.171 –** **3.174)** | **5.239 (****3.446 –** **7.965)** | 0.677 (0.406 – 1.129) | **1.914 (****1.251 –** **2.930)** | **2.718 (1.390 – 5.315)** |

Adjusted for age > 80 years, gender, race, ASA class ≥ 3, diabetes mellitus, current smoker within one year of surgery, dyspnea, history of severe COPD, functional status, hypertension requiring medication, disseminated cancer, steroid use for chronic condition, bleeding disorders, blood transfusion ≥ 1 units within 72 hours of surgery, underlying disease (colon or rectal cancer), operative approach, extent of surgical resection, total operation time, pre-operative SGOT.

CHF (low event rate), platelets and hematocrit (inconsistent assessment) not retained for regression model.

SSI: surgical site infection, UTI: urinary tract infection, MACE: major adverse cardiovascular events, VTE: vascular thromboembolism, LOS: length of stay
# analyzed from 2012 to 2018 only (not captured before 2012)