**Supplemental Table 1.** Baseline Characteristics and Mortality of Non-obese and Obese Patients in the Overweight Group.

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| --- | --- | --- | --- |
|  | **Overweight** | **Obese** | ***P*-value** |
| 　 | **(n = 1,700)** | **(n = 262)** |
| \*Body mass index | 26.76 (±1.27) | 32.52 (±2.77) | <0.001 |
| \*Age | 65.0 (±12.77) | 60.6 (±14.83) | <0.001 |
| \*Peak cTn I level | 3,265 (±24,808) | 1,537 (±7,215) | 0.26 |
| \*\*Days to Peak cTn I level | 1.27 (0.44-3.55) | 1.29 (0.39-2.90) | 0.32 |
| Male | 1,143 (67.2) | 128 (48.9) | <0.001 |
| Smoking | 182 (10.7) | 17 (6.5) | 0.05 |
| Alcohol | 325 (19.1) | 36 (13.7) | 0.05 |
| Cardiac comorbidity |  |  |  |
| Hypertension | 1,212 (71.3) | 190 (72.5) | 0.74 |
| Coronary artery disease | 457 (26.9) | 54 (20.6) | 0.04 |
| Arrhythmia | 178 (10.5) | 27 (10.3) | >0.99 |
| Valve disease | 38 (2.2) | 4 (1.5) | 0.61 |
| Charlson comorbidity index |  |  |  |
| Heart failure | 59 (3.5) | 10 (3.8) | 0.92 |
| Dementia | 56 (3.3) | 5 (1.9) | 0.31 |
| Chronic pulmonary disease | 107 (6.3) | 13 (5.0) | 0.48 |
| Rheumatic disease | 9 (0.5) | 1 (0.4) | >0.99 |
| Mild liver disease | 194 (11.4) | 44 (16.8) | 0.02 |
| Diabetes with complication | 794 (46.7) | 115 (43.9) | 0.43 |
| Hemiplegia | 14 (0.8) | 1 (0.4) | 0.70 |
| Renal disease | 211 (12.4) | 36 (13.7) | 0.62 |
| Any malignancy | 929 (54.6) | 125 (47.7) | 0.04 |
| Moderate to severe liver disease | 24 (1.4) | 8 (3.1) | 0.09 |
| Metastatic solid tumor | 56 (3.3) | 5 (1.9) | 0.31 |
| Human immunodeficiency virus | 0 | 0 |  |
| Preoperative medication |  |  |  |
|  Beta blocker | 540 (31.8) | 92 (35.1) | 0.31 |
|  Calcium channel blocker | 678 (39.8) | 109 (41.6) | 0.65 |
|  RAAS inhibitor | 794 (46.7) | 121 (46.2) | 0.93 |
| Statin | 702 (41.3) | 103 (39.3) | 0.59 |
|  Antiplatelet agent | 719 (42.3) | 100 (38.2) | 0.23 |
|  Direct oral anticoagulant | 42 (2.5) | 5 (1.9) | 0.74 |
|  Warfarin | 96 (5.6) | 14 (5.3) | 0.96 |
| Preoperative management |  |  |  |
|  Intensive care unit | 178 (10.5) | 24 (9.2) | 0.59 |
|  ECMO | 1 (0.1) | 0 | >0.99 |
|  CRRT | 27 (1.6) | 5 (1.9) | 0.91 |
|  Ventilator | 47 (2.8) | 7 (2.7) | >0.99 |
| Operation type |  |  | <0.001 |
| Vascular | 168 (9.9) | 19 (7.3) |  |
|  Orthopedic | 248 (14.6) | 55 (21.0) |  |
|  Neuro | 209 (12.3) | 31 (11.8) |  |
|  Breast or Endo | 36 (2.1) | 3 (1.1) |  |
|  Plastic, Otolaryngeal or Eye | 78 (4.6) | 8 (3.1) |  |
| Transplantation | 144 (8.5) | 40 (15.3) |  |
|  Gynecology or Urology | 158 (9.3) | 33 (12.6) |  |
|  Gastrointestinal | 380 (22.4) | 51 (19.5) |  |
|  Noncardiac thoracic | 267 (15.7) | 22 (8.4) |  |
|  Others | 12 (0.7) | 0 |  |
| Operative variables |  |  |  |
|  General anesthesia | 1,408 (82.8) | 220 (84.0) | 0.71 |
|  Emergency operation | 438 (25.8) | 67 (25.6) | >0.99 |
|  \*Operation duration, hour | 3.49 (±2.67) | 3.07 (±2.68) | 0.002 |
|  Intraoperative inotropics | 671 (39.5) | 113 (43.1) | 0.29 |
|  Intraoperative transfusion | 222 (13.1) | 61 (23.3) | <0.001 |
| One-year mortality |  |  |  |
|  All-cause | 262 (15.4) | 28 (10.7) | 0.06 |
|  Cardiovascular | 70 (4.1) | 5 (1.9) | 0.12 |
|  Non-cardiovascular | 192 (11.3) | 23 (8.8) | 0.27 |
| 30-day mortality |  |  |  |
|  All-cause | 113 (6.6) | 14 (5.3) | 0.51 |
|  Cardiovascular | 26 (1.5) | 4 (1.5) | >0.99 |
|  Non-cardiovascular | 87 (5.1) | 10 (3.8) | 0.45 |

Data are presented as n (%), \*mean (±standard deviation), or \*\*median (interquartile range)

cTn, cardiac troponin; ASD, absolute standardized mean difference; RAAS, renin-angiotensin-aldosterone system, ECMO, extracorporeal membrane oxygenation; CRRT, Continuous renal replacement therapy

**Supplemental table 2.** Sensitivity analysis of the effect of an unmeasured confounder on hazard ratio for 1-year mortality following myocardial injury after noncardiac surgery

|  |  |  |
| --- | --- | --- |
|  |  | **OR*ZY*|*X*** |
| **Normal vs. Low BMI** |  | **1.5** | **2** | **2.5** | **3** | **3.5** | **4** |
| **ORzx** | 0.3 | 1.50 (1.16-1.93) | 1.60 (1.25-2.06) | 1.68 (1.30-2.16) | 1.79 (1.39-2.30) | 1.89 (1.47-2.44) | 1.92 (1.49-2.47) |
| 0.4 | 1.45 (1.13-1.87) | 1.53 (1.19-1.97) | 1.63 (1.27-2.09) | 1.67 (1.30-2.15) | 1.73 (1.35-2.22) | 1.78 (1.39-2.29) |
| 0.5 | 1.43 (1.16-1.91) | 1.49 (1.16-1.91) | 1.54 (1.20-1.97) | 1.60 (1.25-2.05) | 1.64 (1.27-2.10) | 1.67 (1.30-2.14) |
| 0.6 | 1.40 (1.10-1.80) | 1.46 (1.14-1.87) | 1.49 (1.16-1.90) | 1.49 (1.16-1.91) | 1.56 (1.21-1.99) | 1.60 (1.25-2.05) |
| 0.7 | 1.38 (1.08-1.77) | 1.42 (1.11-1.82) | 1.44 (1.12-1.84) | 1.48 (1.16-1.90) | 1.48 (1.16-1.90) | 1.48 (1.16-1.90) |
| **Normal vs. High BMI** | 　 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 |
| **ORzx** | 0.3 | 0.75 (0.63-0.90) | 0.81 (0.68-0.96) | **0.86 (0.72-1.02)** | **0.91 (0.79-1.08)** | **0.95 (0.80-1.13)** | **0.98 (0.82-1.17)** |
| 0.4 | 0.74 (0.62-0.88) | 0.78 (0.66-0.93) | 0.82 (0.69-0.93) | **0.85 (0.72-1.01)** | **0.88 (0.74-1.04)** | **0.90 (0.76-1.07)** |
| 0.5 | 0.73 (0.61-0.86) | 0.76 (0.64-0.90) | 0.79 (0.66-0.93) | 0.81 (0.68-0.96) | 0.83 (0.70-0.98) | 0.84 (0.71-0.99) |
| 0.6 | 0.72 (0.61-0.85) | 0.74 (0.63-0.88) | 0.76 (0.65-0.90) | 0.78 (0.66-0.92) | 0.78 (0.66-0.93) | 0.80 (0.67-0.94) |
| 0.7 | 0.71 (0.60-0.84) | 0.73 (0.61-0.86) | 0.74 (0.62-0.87) | 0.74 (0.63-0.88) | 0.76 (0.64-0.89) | 0.76 (0.65-0.90) |
| **Low BMI vs. High BMI** | 　 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 |
| **ORzx** | 0.3 | 0.56 (0.42-0.74) | 0.61 (0.46-0.80) | 0.65 (0.49-0.85) | 0.67 (0.51-0.88) | 0.70 (0.53-0.92) | 0.71 (0.54-0.93) |
| 0.4 | 0.55 (0.42-0.72) | 0.58 (0.44-0.77) | 0.61 (0.46-0.80) | 0.64 (0.49-0.84) | 0.64 (0.49-0.84) | 0.67 (0.51-0.88) |
| 0.5 | 0.55 (0.42-0.72) | 0.57 (0.43-0.75) | 0.59 (0.45-0.77) | 0.60 (0.50-0.79) | 0.62 (0.47-0.81) | 0.63 (0.48-0.82) |
| 0.6 | 0.54 (0.41-0.71) | 0.56 (0.42-0.73) | 0.57 (0.43-0.75) | 0.58 (0.44-0.76) | 0.59 (0.45-0.78) | 0.60 (0.46-0.73) |
| 0.7 | 0.53 (0.41-0.70) | 0.55 (0.42-0.71) | 0.55 (0.42-0.72) | 0.57 (0.43-0.74) | 0.57 (0.44-0.75) | 0.58 (0.44-0.76) |

Prevalence of unmeasured confounder = 40%

Numbers represent HRs (including 98.3% CIs).

BMI, body mass index; OR, odds ratio; HR, hazard ratio; x,: dichotomous exposure measure; y, dichotomous outcome measure; z, potential dichotomous confounder.

ORZX indicates the association (OR) between the unmeasured confounder and the grouping variables

ORZY|X indicates the association (OR) between the unmeasured confounder and mortality conditional on exposure status.