**Reproduced Charts:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Normal Weight (BMI, 18.5-24.9), n = 408** | **Obese (BMI, > 30), n =784** | **p** |
| Age (yr), (median, IQR) | 69.0 (61.0-79.0) | 66 (58-73.8) | < 0.001 |
| Male, n (%) | 256 (56) | 566 (68) | 0.22 |
| Ethnicity: white, n (%) | 583 (60) | 678 (81) | 0.85 |
| Marital status, n (%) |  |  | 0.69 |
| Married | 240 (56) | 530(63) |  |
| Single/divorced/separated | 31 (7) | 66(8) |  |
| Other/unknown | 153 (36) | 242 (30) |  |
| Insurance, n (%) |  |  | 0.41 |
| Medicare/Medicaid | 184 (44) | 341 (41) |  |
| Private/other | 240 (57) | 497 (59) |  |
| Comorbidity index (median, IQR) | 5 (3-6) | 5(3-6) | 0.52 |
| BMI (kg/m²), (median, IQR) | 23 (21.7-24.3) | 34.1 (31.6-37.3) | < 0.001 |
| Smoker, yes, n (%) | NA | NA |  |
| Admission type, n (%) |  |  | 0.62 |
| Elective | 56 (13) | 87 (10) |  |
| Emergency | 38 (9) | 41 (5) |  |
| Urgent | 32(8) | 67 (8) |  |
| Other | 298(70) | 643(77) |  |
| Source of admission, n (%) |  |  | 0.89 |
| Emergency room | 16 (4) | 7 (8) |  |
| Physician referral | 365 (86) | 762 (91) |  |
| Other, n (%) | 43 (10) | 69(8) |  |
| ICU admission type, n (%) |  |  | 0.96 |
| Cardiac surgery recovery unit | 300 (71) | 654 (78) |  |
| Medical ICU | 29 (7) | 54 (6) |  |
| Surgical ICU/trauma CU/coronary care unit | 89 (20) | 129 (15) |  |
| Neurological unit | 6 (1) | 1(0.001) |  |
| Primary International Classification of Disease version 9 diagnosis, n (%) |  |  | <0.001 |
| Sepsis, including pneumonia | 3(0.7) | 2(0.3) |  |
| Cardiovascular disease | 49(12) | 138(17.6) |  |
| Other respiratory condition | 6(1.5) | 16(2) |  |
| Neurological condition | 0(0) | 0(0) |  |
| Other | 350(86) | 628(80) |  |
| Procedures in the first 24 hr of ICU admission, n (%) |  |  |  |
| Mechanical ventilation | 194 (51) | 431 (51) | < 0.001 |
| Vasopressors | 253(62) | 518 (62) | 1 |
| Renal replacement therapy | 10 (12) | 10 (1.2) | 0.42 |
| Severity of illness |  |  |  |
| Simplified Acute Physiology score version Il (median, IQR) | 34 (27-41) | 33.5 (27.0-42.0) | 0.41 |
| Sequential Organ Failure Assessment score (median, IQR) | 3.6 (2.5-4.9) | 3.5 (2.9-5.4) | < 0.001 |

*BMI = body mass index, IQR = interquartile range.*

*TABLE 2. Laboratory Results at Baseline and Change in Results Between ICU and Baseline:*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Baseline |  |  |
| Variables | Normal Weight | Obese | p |
| SAPS-II laboratory | parameters |  |  |
| WBC x 109/L, median (IQR) | 6.6 (5.5-8.3) | 7.42(6-8.7) | < 0.001 |
| Sodium, mmol/L, median (IQR) | 139 (137-141) | 140 (137-141) | < 0.19 |
| Potassium, mmol/L, median (IQR) | 4.2(4-4.5) | 4.2(4-4.5) | 0.96 |
| BUN, mg/dL, median (IQR) | 17(14-22) | 18(15-23) | 0.02 |
| BIC, mg/dL, median (IQR) | 27 (25-29) | 26 (24-28) | < 0.001 |
| SOFA laboratory parameters |  |  |  |
| Creatinine, mg/dL, median (IQR) | 0.9 (0.7-1.2) | 1 (0.8-1.2) | 0.05 |
| Platelets x 10%/L, median (IQR) | 222 (183-270) | 212 (175-256) | 0.03 |

*TABLE 2. Laboratory Results at Baseline and Change in Results Between ICU and Baseline:*

|  |  |  |  |
| --- | --- | --- | --- |
|  | (ICU - baseline) | |  |
| Variables | Normal Weight | Obese | p |
| SAPS-II laboratory | parameters |  |  |
| WBC x 109/L, mean + SD | 7.8(6.1) | 8.9 (5.5) | < 0.001 |
| Sodium, mmol/L, mean + SD | 0.4(3.6) | 0.2(5.5) | 0.3 |
| Potassium, mmol/L, mean + SD | 0.3(0.6) | 0.4(0.6) | < 0.001 |
| Log (BUN, mg/dl), mean +1 SD | -0.03 ( 0.2) | -0.02 ( 0.2) | 0.11 |
| BIC, mg/dL, mean +1 SD | -2.52 ( 3.3) | -1.89 (3.0) | 0.002 |
| SOFA laboratory parameters | | |  |
| Log (creatinine, mg/dL), mean + SD | -0.03 ( 0.2) | 0.02(0.1) | < 0.001 |
| Platelets x 109/L, mean + SD | -51 (64) | -35 (50) | < 0.001 |

*BIC = bicarbonate, BUN = blood urea nitrogen, IQR = interquartile range, SAPS-II = Simplified Acute Physiology Score version II, SOFA = Sequential OrganFailure Assessment score.*

***TABLE 3. Multivariable Linear Regression of***

***Laboratory Deviation (Δ = ICU – Baseline)***

|  |  |  |
| --- | --- | --- |
| **Variables** | **Adjusted Difference in Deviation (ICU - Baseline) Between Obese and Normal Weight Individuals (95% CI)** | **p** |
| Simplified Acute Physiology parameters | Score version Il laboratory |  |
| WBC, x 109/L | 0.64(0.52 to 0.76) | <0.001 |
| Sodium, mmol/L | -0.64(-0.7 to 0.57) | <0.001 |
| Potassium, mmol/L | -0.74(-0.81 to -0.67) | <0.001 |
| log (blood urea nitrogen, mg/dL) | -0.35 ( -0.40 to -0.30) | <0.001 |
| Bicarbonate, mg/dL | -0.65 (-0.70 to -0.60) | <0.001 |
| Sequential Organ Failure parameters | Assessment score laboratory |  |
| log (creatinine, mg/dL) | -0.26 (-0.31 to -0.22) | <0.001 |
| Platelets, x109/L | -0.36 (-0.41 to -0.32) | <0.001 |

*Effect while keeping all other model covariates constant: models were fit*

*via stepwise backward elimination with the full model composed of relevant*

*score (Simplified Acute Physiology Score version II or Sequential Organ*

*Failure Assessment score), baseline laboratory result, ICU type, age,*

*gender, and comorbidity index.*

*Δ: laboratory deviation = ICU laboratory result – baseline laboratory result.*