Table S1. Baseline demographics of the matched cohort

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics | Non-PAC | PAC | SMD |
| Age(yr), median (IQR) | 68.93 (11.47) | 69.56 (12.08) | 0.054 |
| Male (%) | 1095 (70.1) | 1082 (69.3) | 0.018 |
| White (%) | 1109 (71.0) | 1128 (72.3) | 0.027 |
| Emergency (%) | 465 (29.8) | 479 (30.7) | 0.020 |
| Insurance (%) | 750 (48.0) | 788 (50.5) | 0.049 |
| Marry (%) | 936 (60.0) | 921 (59.0) | 0.020 |
| Weight (kg), median (IQR) | 87.22 (20.44) | 87.07 (19.61) | 0.007 |
| SAPS-II, median (IQR) | 34.35 (12.40) | 34.33 (11.34) | 0.002 |
| SOFA, median (IQR) | 5.84 (2.39) | 5.78 (2.25) | 0.027 |
| CCI, median (IQR) | 5.62 (2.71) | 5.63 (2.30) | 0.007 |
| Heart rate (bpm), median (IQR) | 83.56 (12.80) | 83.49 (11.36) | 0.006 |
| Respiratory rate (/min), median (IQR) | 18.15 (3.22) | 18.06 (3.01) | 0.029 |
| Temperature (°C) median (IQR) | 36.72 (0.45) | 36.72 (0.55) | 0.013 |
| SpO2 (%) median (IQR) | 97.52 (1.86) | 97.55 (1.89) | 0.015 |
| MAP (mmHg), median (IQR) | 75.76 (6.33) | 75.90 (6.59) | 0.021 |
| Lactate (mmol/L), median (IQR) | 2.27 (1.73) | 2.18 (1.25) | 0.058 |
| White blood cell (WBC) (×109), median (IQR) | 12.95 (6.14) | 12.76 (5.30) | 0.034 |
| Platelet (×1012), median (IQR) | 172.35 (62.48) | 171.41 (66.88) | 0.014 |
| Creatinine (mg/dl), median (IQR) | 1.28 (1.11) | 1.27 (1.12) | 0.007 |
| Cardiac surgery (%) | 1151 (73.7) | 1181 (75.7) | 0.044 |
| Mv use (1st 24 h) | 1273 (81.6) | 1271 (81.4) | 0.003 |
| Vasopressor use (1st 24 h) | 1225 (78.5) | 1209 (77.5) | 0.025 |
| Comorbidities (%) |  |  |  |
| Renal disease | 320 (20.5) | 311 (19.9) | 0.014 |
| Cancer | 81 ( 5.2) | 76 ( 4.9) | 0.015 |
| COPD | 395 (25.3) | 379 (24.3) | 0.024 |

CCI Charlson Comorbidity Index; COPD chronic obstructive pulmoriary diseases; SOFA: Sequential Organ Failure Assessment; SAPS-II The Simplified Acute Physiology Score

Table S2. Sensitivity analysis for different timing of the initial PAC against to those in non-PAC group

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outcomes | Initial timing ≤ 3 hours | | | | Initial timing >3 hours | | | |
| Estimate | LOW | UP | *P* | Estimate | LOW | UP | *P* |
| **Odd ratios** |  |  |  |  |  |  |  |  |
| 28-day mortality | 1.08 | 0.88 | 1.32 | 0.440 | 1.26 | 1.02 | 1.56 | 0.034 |
| 90-day mortality | 1.08 | 0.88 | 1.31 | 0.458 | 1.27 | 1.03 | 1.56 | 0.025 |
| Incidence of AKI | 1.12 | 1.00 | 1.26 | 0.048 | 1.10 | 0.97 | 1.24 | 0.136 |
| **Mean difference** |  |  |  |  |  |  |  |  |
| Ventilation-free days | -0.41 | -0.70 | -0.13 | 0.004 | -0.42 | -0.72 | -0.11 | 0.007 |
| Vasopressor-free days | -0.53 | -0.77 | -0.28 | 0.000 | -0.45 | -0.71 | -0.19 | 0.001 |
| Daily fluid input | 0.16 | 0.06 | 0.26 | 0.001 | -0.03 | -0.13 | 0.07 | 0.608 |

Table S3. Additional analysis for different duration of the PAC

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outcomes | PAC duration ≤1 d | | | | PAC duration >1 d | | | |
| Estimate | LOW | UP | *P* | Estimate | LOW | UP | *P* |
| **Odd ratios** |  |  |  |  |  |  |  |  |
| 28-day mortality | 0.83 | 0.63 | 1.09 | 0.187 | 1.43 | 1.20 | 1.71 | <0.001 |
| 90-day mortality | 0.86 | 0.66 | 1.12 | 0.263 | 1.41 | 1.19 | 1.68 | <0.001 |
| Incidence of AKI | 1.19 | 1.08 | 1.31 | 0.001 | 2.28 | 1.98 | 2.64 | <0.001 |
| **Mean difference** |  |  |  |  |  |  |  |  |
| Ventilation-free days | 0.04 | -0.22 | 0.30 | 0.765 | -1.97 | -2.34 | -1.60 | <0.001 |
| Vasopressor-free days | 0.98 | 0.89 | 1.09 | 0.730 | 3.22 | 2.78 | 3.72 | <0.001 |
| Daily fluid input | 0.09 | -0.13 | 0.32 | 0.412 | -2.37 | -2.70 | -2.04 | <0.001 |

Table S4. Sensitivity analysis for complete case analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Outcomes | Estimate | LOW | UP | *P* |
| **Odd ratios** |  |  |  |  |
| 28-day mortality | 1.31 | 0.96 | 1.78 | 0.089 |
| 90-day mortality | 1.25 | 0.93 | 1.70 | 0.144 |
| Incidence of AKI | 1.21 | 1.03 | 1.43 | 0.024 |
| **Mean difference** |  |  |  |  |
| Ventilation-free days | -0.33 | -0.55 | -0.11 | 0.003 |
| Vasopressor-free days | -0.46 | -0.66 | -0.26 | 0.000 |
| Daily fluid input | 0.06 | -0.14 | 0.15 | 0.106 |