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  |