**Supplementary Table 1**

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| **Pneumonia severity index (PSI) classification** | | | |
| **Class I: (patients who do not meet any of the following criteria)** | | | |
| Patients older than 50 years old.  Patients with a history of tumor disease, congestive heart failure, cerebrovascular disease, kidney disease or liver disease.  Patients with altered conscious state, pulse rate >125 beats/min, breathing ≥30 beats/min, systolic blood pressure <90 mmHg, or body temperature ≤35 ℃ or ≥40 ℃. | | | |
| **Class II-V needs to be scored according to the PSI scoring table** | | | |
| **Items** | | **Score** | |
| Age  Complication  Tumor  Hepatopathy  Congestive heart failure  Cerebral vascular disease  Nephropathy  Physical examination  Change of mental state  Respiratory rate ≥ 30 times / min  Systolic pressure < 90mmHg  Body temperature ≤35 ℃ or ≥40 ℃  pulse rate ≥125 beats/min  Inspection indicator  Arterial pH < 7.35  Blood urea nitrogen ≥ 11mmol / L  Serum sodium < 130 mmol / L  Blood glucose ≥ 14mmol / L  HCT < 30%  PO2 < 60 mmHg or oxygen saturation < 90%  Pleural effusion | | male=age; Female=age-10    +30  +20  +10  +10  +10  +20  +20  +20  +15  +10  +30  +20  +10  +10  +10  +10  +10 | |
| **Risk classification** | **Score** | | **Mortality** |
| **I** | No scoring required | | 0.1% |
| **II** | ≦70 | | 0.6% |
| **III** | 71-90 | | 0.9% |
| **IV** | 91-130 | | 9.3% |
| **V** | >130 | | 27% |

**Supplementary Table 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **APACHE II score table** | | | | | | | | | | | | | | |
| 1. Age | ≤44□0 45-54□2 55-64□3 65-74□≥5 | | | | | | | | | | | A score | |  |
| 1. Severe organ system dysfunction or immune damage | After elective surgery or non-operative □ 2  Emergency operation or without operation □ 5  None of the above □ 0 | | | | | | | | | | | B score | |  |
| GCS score | 6 | | 5 | | 4 | | 3 | | | 2 | | | | 1 |
| 1.Eye Opening Response |  | |  | | spontaneous | | to speech | | | to pain | | | | none |
| 2.Verbal Response |  | | oriented | | confused | | inappropriate words | | | unintelligible sounds | | | | none |
| 3.Motor Response | obey commands | | localize | | withdrawal | | decorticate flexion | | | decerebrate extension | | | | no response |
| GCS score=1+2+3 |  | | | | | | C score=15-GCS | | | | | | |  |
| D. Physiological index | Score | | | | | | | | | | | | | D score |
| +4 | +3 | | +2 | +1 | 0 | | +1 | +2 | | +3 | | +4 |  |
| 1. Axillary body temperature (℃) | ≥41 | 39-40.9 | |  | 38.5-38.9 | 36-38.4 | | 34-35.9 | 32-33.9 | | 30-31.9 | | ≤29.9 |  |
| 1. Mean blood pressure (mmHg) | ≥160 | 130-159 | | 110-129 |  | 70-109 | |  | 50-69 | |  | | ≤49 |  |
| 1. Heart rate (beats/min) | ≥180 | 140-179 | | 110-139 |  | 70-109 | |  | 55-69 | | 40-54 | | ≤39 |  |
| 1. Respiratory frequency (times/min) | ≥50 | 35-49 | |  | 25-34 | 12-24 | | 10-11 | 6-9 | |  | | ≤5 |  |
| 1. PaO2（mmHg）(FiO2<50%) A-aDO2 (FiO2>50%) | ≥500 | 350-499 | | 200-349 |  | ＞70  ＜200 | | 61-70 |  | | 55-60 | | ＜55 |  |
| 1. Arterial blood PH   Serum HCO3 (mmol/L)  (For use without blood gas) | ≥7.7  ≥52 | 7.6-7.69  41-51.9 | |  | 7.5-7.59  32-40.9 | 7.33-7.49  23-31.9 | |  | 7.25-7.32  18-21.9 | | 7.15-7.24  15-17.9 | | ＜7.15  ＜15 |  |
| 1. Serum sodium (mmol/L) | ≥180 | 160-179 | | 155-159 | 150-154 | 130-149 | |  | 120-129 | | 111-119 | | ≤110 |  |
| 1. Serum potassium (mmol/L) | ≥7 | 6-6.9 | |  | 5.5-5.9 | 3.5-5.4 | | 3-3.4 | 2.5-2.9 | |  | | ＜2.5 |  |
| 1. Serum creatinine (mg/dL) | ≥3.5 | 2-3.4 | | 1.5-1.9 |  | 0.6-1.4 | |  | ＜0.6 | |  | |  |  |
| 1. Hematocrit (%) | ≥60 |  | | 50-59.9 | 46-49.9 | 30-45.9 | |  | 20-29.9 | |  | | ＜20 |  |
| 1. WBC (\*1000) | ≥40 |  | | 20-39.9 | 15-19.9 | 3-14.9 | |  | 1-2.9 | |  | | ＜1 |  |
| D score | | | | | | | | | | | | | |  |
| APACHE Ⅱ score = A + B + C + D | | | | | | | | | | | | | | |