

ADDITIONAL FILE 2: Data on external scores

Calculation of the SOFA score

Table 1: The SOFA score

| SOFA score | 0 | 1 | 2 | 3 | 4 |
|---|----------------|---------|--------------------------------------|---|---|
| Respiration | | | | | |
| PaO ₂ /FIO ₂ (mm Hg) | >400 | <400 | <300 | <200 ^a | <100 ^a |
| Coagulation | | | | | |
| Platelets x10 ³ /mm ³ | >150 | <150 | <100 | <50 | <20 |
| Liver | | | | | |
| Bilirubin (mg/dL) | <1.2 | 1.2-1.9 | 2.0-5.9 | 6.-11.9 | >12.0 |
| Cardiovascular^b | No hypotension | MAP <70 | Dopamine ≤5 or dobutamine (any dose) | Dopamine >5 or norepinephrine /epinephrine ≤0.1 | Dopamine >15 or norepinephrine/epinephrine >0.1 |
| CNS^c | | | | | |
| Glasgow Coma Score | 15 | 13-14 | 10-12 | 6-9 | <6 |
| Renal | | | | | |
| Creatinine (mg/dL) or urine output (mL/day) | <1.2 | 1.2-1.9 | 2.0-3.4 | 3.5-4.9 or <500 | >5.0 or <200 |

MAP mean arterial pressure, CNS central nervous system.

^awith respiratory support

^bvasoactive mediations administered for at least 1 hr (doses are given in ug/kg/min)

^cas we do not know the "real" Glasgow Coma Scale in intubated patients, the Glasgow Coma Scale was set to 15 (=SOFA score 0) for all patients.

Reprinted with kind permission from Springer Science+Business Media: Intensive care medicine, The SOFA (Sepsis-related Organ Failure Assessment) score to describe organ dysfunction/failure. On behalf of the Working Group on Sepsis-Related Problems of the European Society of Intensive Care Medicine, Vol. 22, 1996, pp. 707-710, Vincent JL, Moreno R, Takala J, Willatts S, De Mendonca A, Bruining H, Reinhart CK, Suter PM, Thijs LG, Table 3.

Calculation of the ECMOnet score

In accordance with the original manuscript, the ECMOnet score for each individual was calculated with the following formula where ps_i is the partial score assigned to each of the 5 parameters as given in Table 2:

$$ECMOnet\ score = \left(\sum_{i=1}^5 ps_i \right) - 1$$

Table 2: The ECMOnet score

| PARAMETER | PARTIAL SCORE (ps_i) |
|---|--|
| <i>1) PreECMO hospital length of stay, days</i> | |
| ≤ 3 | 0.5 |
| 4 - 7 | 1 |
| 8 - 11 | 1.5 |
| > 11 | 2 |
| <i>2) Bilirubin, mg/dl</i> | |
| ≤ 0.15 | 0 |
| 0.16 - 0.65 | 0.5 |
| 0.66 - 1.15 | 1 |
| 1.16 - 1.65 | 1.5 |
| 1.66 - 2.15 | 2 |
| > 2.15 | 2.5 |
| <i>3) Creatinine, mg/dl</i> | |
| ≤ 0.5 | 0 |
| 0.51 - 0.80 | 0.5 |
| 0.81 - 1.10 | 1 |
| 1.11 - 1.40 | 1.5 |
| 1.41 - 1.70 | 2 |
| 1.71 - 2.00 | 2.5 |
| 2.01 - 2.30 | 3 |
| > 2.30 | 3.5 |
| <i>4) Hematocrit, %</i> | |
| > 40 | 0.5 |
| 36 - 40 | 1 |
| 31 - 35 | 1.5 |
| ≤ 30 | 2.0 |
| <i>5) Mean arterial pressure, mmHg</i> | |
| > 90 | 0 |
| 61 - 90 | 0.5 |
| ≤ 60 | 1 |

ECMO extracorporeal membrane oxygenation

Reprinted with kind permission from Springer Science+Business Media: *Intensive care medicine, Predicting mortality risk in patients undergoing venovenous ECMO for ARDS due to influenza A (H1N1) pneumonia: the ECMOnet score*, Vol. 39, 2013, pp. 275-281, Pappalardo F, Pieri M, Greco T, Patroniti N, Pesenti A, Arcadipane A, Ranieri VM, Gattinoni L, Landoni G, Holzgraefe B, Beutel G, Zangrillo A, *Italian ECMOnet, Table 2.*

Calculation of the PRESERVE score

Table 3: The PRESERVE score calculated with parameters available at the time of decision to initiate ECMO

| Parameter | Score |
|--|-------|
| Age (years) | |
| <45 | 0 |
| 45–55 | 2 |
| >55 | 3 |
| Body mass index >30 | -2 |
| Immunocompromised | 2 |
| SOFA >12 ^a | 1 |
| MV >6 days | 1 |
| No prone positioning before ECMO | 1 |
| PEEP < 10 cm H ₂ O | 2 |
| Plateau pressure >30 cm H ₂ O | 2 |
| Total score ^c | 0–12 |

ECMO extracorporeal membrane oxygenation, ICU intensive care unit, MV mechanical ventilation, PEEP positive end-expiratory pressure, PRESERVE PRedicting dEath for SEvere ARDS on VV-ECMO, SAPS II simplified acute physiology score, SOFA sepsis-related organ failure assessment

^aImmunocompromised status included hematological malignancies, solid tumors, solid organ transplantation, high-dose or long-term corticosteroid and/or immunosuppressant use, or human immunodeficiency virus infection

^bSOFA score was preferred over SAPS II (excluding the age component) for simpler use of the score at the bedside

^cHigher score indicates higher probability of death by 6 months post-ICU discharge; PRESERVE scores -1 and -2 converted to 0 for simplification

Reprinted with kind permission from Springer Science+Business Media: *Intensive care medicine, The PRESERVE mortality risk score and analysis of long-term outcomes after extracorporeal membrane oxygenation for severe acute respiratory distress syndrome*, Vol. 39, 2013, pp. 1704-1713, Schmidt M, Zogheib E, Roze H, Repesse X, Lebreton G, Luyt CE, Trouillet JL, Brechot N, Nieszkowska A, Dupont H, Ouattara A, Leprince P, Chastre J, Combes A, *Table 4.*