

## ***Additional file 5***

**Title:** Prevalence of low central venous oxygen saturation in the first hours of intensive care unit admission to the intensive care unit and associated mortality in septic shock patients: A prospective multicenter study.

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## Thresholds of ScvO<sub>2</sub> and mortality : bivariate and multivariate analyses

**Table E8:** Association of central venous oxygen saturation below or above different thresholds and death rate at day 28 in 363 patients with severe sepsis or septic shock

|  | Survivors at<br>day 28, n (%) | Nonsurvivors at<br>day 28, n (%) | p-value<br>(Fisher exact<br>test) |
|--|-------------------------------|----------------------------------|-----------------------------------|
| initial S <sub>cv</sub> O <sub>2</sub> < 70%           | 69 (62.2)                     | 42 (37.8)                        |                                   |
| initial S <sub>cv</sub> O <sub>2</sub> ≥ 70%           | 183 (72.6)                    | 69 (27.4)                        | 0.049                             |
| initial S <sub>cv</sub> O <sub>2</sub> < 75%           | 118 (67.0)                    | 58 (33.0)                        |                                   |
| initial S <sub>cv</sub> O <sub>2</sub> ≥ 75%           | 134 (71.7)                    | 53 (28.3)                        | 0.36                              |
| initial S <sub>cv</sub> O <sub>2</sub> < 85%           | 225 (70.1)                    | 96 (29.9)                        |                                   |
| initial S <sub>cv</sub> O <sub>2</sub> ≥ 85%           | 27 (64.3)                     | 15 (35.7)                        | 0.48                              |
| initial S <sub>cv</sub> O <sub>2</sub> < 70% or ≥ 85%  | 96 (62.7)                     | 57 (37.3)                        |                                   |
| initial S <sub>cv</sub> O <sub>2</sub> ≥ 70% and < 85% | 156 (74.3)                    | 54 (25.7)                        | 0.02                              |

*Definition of abbreviations:* initial S<sub>cv</sub>O<sub>2</sub>= central venous oxygen saturation at time of inclusion

**Table E9:** Logistic regression for 28-day mortality in 363 septic patients, with  $S_{cv}O_2$  value entered as a continuous variable

| Covariables  | Adjusted Odds-ratio <sup>a</sup> | 95% confidence interval | p-value  |
|--|----------------------------------|-------------------------|----------|
| SAPS II (for each 1 point-increase)  | 1.05                             | 1.03-1.07               | <0.00001 |
| Initial arterial lactate (for each 1mmol/L-increase)                           | 1.17                             | 1.05-1.30               | 0.004    |
| Initial $S_{cv}O_2$ (for each 1%-increase) <sup>b</sup>                        | 0.96                             | 0.93-0.99               | 0.004    |
| McCabe class 1 (versus class 0)  | 2.5                              | 1.28-4.87               | 0.007    |
| McCabe class 2 (versus class 0)  | 3.27                             | 1.35-7.96               | 0.009    |
| Initial arterial partial pressure in CO <sub>2</sub> (for each 1mmHg-increase) | 1.03                             | 1.01-1.05               | 0.012    |
| Male gender  | 2.09                             | 1.08-4.02               | 0.028    |
| Initial body temperature (for each 1°C-increase)                               | 0.79                             | .64-.99                 | 0.045    |
| Abdominal sepsis   | 1.98                             | .98-4.00                | 0.057    |
| Urinary tract infection  | 0.28                             | .07-1.16                | 0.079    |

*Definition of abbreviations:* SAPS II = Simplified acute physiology score;  $S_{cv}O_2$  = Central venous oxygen saturation

<sup>a</sup> : For each continuous covariable Odds-ratios are given per each unit of the given covariable

<sup>b</sup>: The variable “initial  $S_{cv}O_2$ “ (continuous variable) was forced in the model. All the other covariables were variables linked to day-28 mortality with  $p < 0.05$  by univariate analysis and selected using the backward method.

**Table E10:** Logistic regression for 28-day mortality in 363 septic patients with ScvO<sub>2</sub> value at H0 below 75% adjusted for the other confounders

| Covariables  | Adjusted Odds-ratio <sup>a</sup> | 95% confidence interval | p-value  |
|--|----------------------------------|-------------------------|----------|
| SAPS II (for each 1 point-increase)  | 1.05                             | 1.03-1.07               | <0.00001 |
| Arterial lactate (for each 1mmol/L-increase)                                   | 1.16                             | 1.06-1.27               | 0.002    |
| McCabe class 2   | 3.34                             | 1.48-7.55               | 0.004    |
| Initial arterial partial pressure in CO <sub>2</sub> (for each 1mmHg-increase) | 1.03                             | 1.01-1.05               | 0.005    |
| Initial S <sub>cv</sub> O <sub>2</sub> < 75% <sup>b</sup>                      | 2.15                             | 1.16-3.98               | 0.015    |
| McCabe class 1   | 2.20                             | 1.16-4.15               | 0.015    |
| Liver cirrhosis  | 3.44                             | 1.26-9.39               | 0.016    |
| Urinary tract infection  | 0.26                             | 0.08-0.93               | 0.038    |

*Definition of abbreviations:* SAPS II = Simplified acute physiology score; S<sub>cv</sub>O<sub>2</sub> = Central venous oxygen saturation

<sup>a</sup> : For each continuous covariable odds-ratios are given per each unit of the given covariable

<sup>b</sup>: The variable “Initial S<sub>cv</sub>O<sub>2</sub> < 75%” was forced in the model. All the other covariables were variables linked to day-28 mortality with p<0.05 by univariate analysis and selected using the backward method.

**Table E11:** Logistic regression for 28-day mortality in 345 septic patients, with  $S_{cv}O_2$  value at H6 below 70% adjusted for SAPS II, McCabe classification and initial arterial lactate level

| Covariables                                  | Adjusted Odds-ratio <sup>a</sup> | 95% confidence interval | p-value |
|--|----------------------------------|-------------------------|---------|
| $S_{cv}O_2$ at H6 <70% <sup>b</sup>          | 2.18                             | 1.12-4.26               | 0.022   |
| McCabe class 1 ( <i>versus</i> class 0)      | 2.13                             | 1.13-4.00               | 0.020   |
| Arterial lactate (for each 1mmol/L-increase) | 1.13                             | 1.03-1.23               | 0.008   |
| McCabe class 2 ( <i>versus</i> class 0)      | 3.24                             | 1.46-7.20               | 0.004   |
| SAPS II (for each 1 point-increase)          | 1.05                             | 1.03-1.06               | <0.0001 |

*Definition of abbreviations:* SAPS II = Simplified acute physiology score;  $S_{cv}O_2$  =

Central venous oxygen saturation

<sup>a</sup>: For each continuous covariable odds-ratios are given per each unit of the given covariable.

<sup>b</sup>: The variable " $S_{cv}O_2$  at H6<70%" was forced in the model