### Table S1. Risk factors for ICU mortality in patients with ventilator-associated lower respiratory tract infection.

|                                    | Univariate analyses             | Multivariate analysis*          |
|------------------------------------|---------------------------------|---------------------------------|
|                                    | OR (95% CI) | p-value | OR (95% CI) | p-value |
| Age, per year                      | 1.03 (1.02 to 1.04) | **<0.001** | 1.03 (1.02 to 1.04) | **<0.001** |
| Male gender                        | 0.90 (0.65 to 1.26) | 0.54 |               |         |
| SAPS II, per point                 | 1.02 (1.01 to 1.03) | **<0.001** |               |         |
| SOFA score at VA-LRTI diagnosis, per point | 1.20 (1.15 to 1.26) | **<0.001** | 1.21 (1.14 to 1.27) | **<0.001** |
| Diabetes mellitus                  | 1.49 (1.02 to 2.20) | **0.041** |               |         |
| Chronic respiratory failure        | 2.89 (1.70 to 4.92) | **<0.001** | 2.22 (1.21 to 4.07) | **0.010** |
| Chronic heart failure              | 1.49 (0.81 to 2.73) | 0.20 |               |         |
| Chronic kidney disease             | 3.34 (2.00 to 5.57) | **<0.001** | 1.89 (1.04 to 3.43) | **0.036** |
| Cirrhosis                          | 2.08 (1.01 to 4.29) | **0.047** |               |         |
| Immunosuppression                  | 2.68 (1.79 to 4.02) | **<0.001** | 2.13 (1.34 to 3.36) | **0.001** |
| Alcohol abuse                      | 1.52 (0.95 to 2.42) | 0.078 |               |         |
| Intravenous drug abuse             | 0.70 (0.19 to 2.67) | 0.60 |               |         |
| COPD                               | 1.38 (0.93 to 2.05) | 0.11 |               |         |
| Multidrug-resistant isolates       | 1.72 (1.23 to 2.40) | **0.002** | 1.53 (1.05 to 2.23) | **0.026** |
| Appropriate antibiotic treatment   | 1.07 (0.49 to 2.31) | 0.87 |               |         |
| VAP                                | 0.57 (0.37 to 0.87) | **0.009** | 0.48 (0.29 to 0.79) | **0.004** |
| VAT to VAP progression**           | 1.60 (1.16 to 2.20) | **0.004** | 1.57 (1.07 to 2.31) | **0.021** |

COPD, Chronic Obstructive Pulmonary Disease; ICU, Intensive Care Unit; OR, odds-ratio; CI, confidence interval; SAPS, Simplified Acute Physiology Score; SOFA, Sequential Organ Failure Assessment; VA-LRTI, ventilator-associated lower respiratory tract infection; VAP, ventilator-associated pneumonia; VAT, ventilator-associated tracheobronchitis.

* Factor with a p-value < 0.10 in univariate analyses (excepted VAT to VAP progression) were included into a stepwise backward logistic regression model

** Only available for VAT population (n=320)