**Supple 2.** Differences between early, late, and very late intubated patients

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|  | **Early Intubation (≤3 days from hospital admission)** | **Late Intubation (4-6 days from hospital admission)** | **Very Late Intubation (>6 days from hospital admission)** |
| **Patients’ characteristics** |  |  |  |
| Number, % | 65 (33.5) | 41 (21.1) | 88 (45.4) |
| Gender, male, no (%) | 45 (34.6) | 25 (19.2) | 60 (46.2) |
| Age (years) | 65.5 (59-72)\*\* | 66 (57-73) | 68 (60-74)\*\* |
| SOFA (median, IQR) | 6 (5-8) \*\* | 7(6-8)# | 8 (7-9) \*\*,# |
| BMI (median, IQR) | 29 (26-35) | 29 (27-35) | 28 (26-32) |
| Time to intubation, days | 2 (1-2)\*, \*\* | 5 (5-6)\*, # | 10 (8-12)\*\*,# |
| PO2/FiO2 after intubation (median, IQR) | 120 (90-140) | 120 (95-140) | 110 (82-140) |
| **Mechanical Ventilation Mechanics (median, IQR)** |  |  |  |
| Ppl (cmH2O) | 26 (24-28) | 26 (24-28) | 26.5 (25-29) |
| PEEP (cmH2O) | 13 (12-14)\*, \*\* | 12 (10-14) \* | 12 (10-14)\*\* |
| Compliancestat, rs (ml/cmH2O)-day 1 | 42 (35-47)\*\* | 41 (32-46)# | 34 (28-43)\*\*,# |
| Compliancestat, rs (ml/cmH2O)-day 6 | 40 (34-44) \*\* | 35 (30-44) | 32 (25-38) \*\* |
| Compliancestat, rs (ml/cmH2O)-day 12 | 37 (32-44) \*\* | 33 (27-41) | 31 (22-38) \*\* |
| Driving Pressure (cmH2O) | 13 (12-16) | 14 (12-16) | 14 (12-17) |
| **Laboratory Values (median, IQR)** |  |  |  |
| WBCs (absolute number/mm3) | 16670 (13480-18850) \*\* | 17750 (14150-21505) | 18850 (15780-23072) \*\* |
| D-dimmer (μg/l) | 2650 (1415-5600) | 2200 (1260-4410) | 3000 (1300-5720) |
| CRP (mg/dl) | 9 (6-14) | 8 (6-15) | 9 (6-16) |
| Ferritin (ng/ml) | 1560 (1006-1400) | 2200 (980-4440) | 1687 (890-3525) |
| LDH (U/l) | 514 (360-774) | 420 (275-790) | 535 (325-885) |
| **Comorbidities no** | 1 (1-2) | 1 (0-2) | 2 (1-3) |
| **Outcomes** |  |  |  |
| Mortality n (%) | 29 (44.6)\*, \*\* | 26 (63.4)\* | 69 (78.4)\*\* |
| ICU LOS (median, IQR) | 14 (9-29) | 16 (9-26) | 12 (7-23) |
| Mechanical Ventilation Days (median, IQR) | 10 (6-25) | 15 (9-26) | 10 (6-20) |

\*Statistically significant differences between early and late intubated patients (p=0.045 for mortality, p<0.001 for time to intubation and p=0.015 for PEEP).

\*\*Statistically significant differences between early and very late intubated patients (p<0.001 for mortality, time to intubation, Compliance stat, rs at day 1, 6 and 12 and Sofa score, p=0.002 for age, p=0.015 for PEEP and p=0.012 for WBCs).

# Statistically significant differences between late and very late intubated patients (p<0.001 for time to intubation, p=0.038 for Compliance stat, rs at day 1 and p=0.003 for SOFA score)

SOFA: Sequential Organ Failure Assessment Score, BMI: Body Mass Index, Ppl: Plateau Pressure, PEEP: Positive End Expiratory Pressure, Compliance stat, rs: Respiratory System Static Compliance, WBCs: white blood cells, CRP: C-reactive protein, LDH: Lactate Dehydrogenase, IQR: Interquartile range