### Vital signs

| Variables                          | Total (N=109) | Survival (n=61) | Non-survival (n=48) | P-value |
|------------------------------------|---------------|-----------------|---------------------|---------|
| **Systolic blood pressure (mmHg, IQR)** | 130 (120-140) | 131 (120-140)   | 130 (120-140)       | 0.470   |
| >140                               | 1 (0.9)       | 0 (0.0)         | 1 (2.1)             |         |
| <90                                | 23 (21.1)     | 14 (23.0)       | 9 (18.8)            |         |
| **Diastolic blood pressure (mmHg, IQR)** | 80 (72-85)   | 80 (75-87.75)   | 78 (70-82)          | 0.433   |
| >90                                | 6 (5.5)       | 2 (3.3)         | 4 (8.3)             |         |
| <60                                | 9 (8.3)       | 6 (9.8)         | 3 (6.3)             |         |
| **Heart rate (beats per minute, IQR)** | 90 (80-101)  | 88 (80-99)      | 98 (80-102)         | 0.102   |
| >100                               | 30 (27.5)     | 13 (21.3)       | 17 (35.4)           |         |
| **Axillary temperature (°C, IQR)** | 36.8 (36.6-37.7) | 36.8 (36.50-37.58) | 36.9 (36.6-37.8)   | 0.638   |
| >37.3                              | 36 (33.0)     | 19 (31.1)       | 17 (35.4)           |         |
| **Respiratory rate (breaths per minute, IQR)** | 23 (20-26)   | 21.5 (20-26)    | 25 (20-28)          | 0.075   |
| 21-29                              | 49 (45.4)     | 23 (37.7)       | 26 (55.3)           |         |
| ≥30                                | 16 (14.8)     | 8 (13.1)        | 8 (17.0)            |         |
| **Oxygen saturation (%), IQR**      | 89 (85-94)    | 91 (85-96.75)   | 88 (84-90)          | 0.003   |
| ≤93%                               | 80 (73.4)     | 38 (62.3)       | 42 (87.5)           |         |

### Laboratory findings

| Variables                          | Total (N=109) | Survival (n=61) | Non-survival (n=48) | P-value |
|------------------------------------|---------------|-----------------|---------------------|---------|
| **Leucocytes** (10⁹/L, IQR)        | 6.71 (4.74-10.9) | 6.17 (4.60-9.69) | 7.8 (5.2-11.5)      | 0.195   |
| >9.5                               | 33 (30.6)     | 15 (25.0)       | 18 (37.5)           |         |
| <3.5                               | 9 (8.3)       | 7 (11.7)        | 2 (4.2)             |         |
| **Neutrophils** (10⁹/L, IQR)       | 6.09 (3.44-9.93) | 5.82 (3.19-8.76) | 6.40 (3.58-10.11)  | 0.509   |
| >6.3                               | 52 (48.1)     | 26 (43.3)       | 26 (54.2)           |         |
| **Lymphocytes** (10⁹/L, IQR)       | 0.58 (0.36-0.89) | 0.5 (0.36-0.81) | 0.72 (0.43-0.96)    |         |
| <1.0                               | 90 (83.3)     | 51 (85)         | 39 (81.3)           |         |
| ≥1.0                               | 18 (16.7)     | 9 (15)          | 9 (18.7)            |         |
| **Monocyte** (10⁹/L, IQR)          | 0.31 (0.15-0.47) | 0.27 (0.15-0.42) | 0.33 (0.14-0.51)    |         |
| >0.6                               | 15 (13.9)     | 6 (10)          | 9 (18.8)            | 0.376   |
| <0.1                               | 19 (17.6)     | 12 (20)         | 7 (14.6)            |         |
| **Erythrocyte** (10ⁱ²/L, IQR)      | 4.05 (3.66-4.51) | 4.07 (3.68-4.36) | 4.3 (3.64-4.62)    |         |
| <4.3                               | 71 (65.7)     | 42 (70)         | 29 (60.4)           | 0.468   |
| **Hemoglobin** (g/L, IQR)          | 121 (108.25-133.50) | 122 (109-134)   | 120 (108-133.50)   | 0.650   |
| <130                               | 77 (71.3)     | 43 (71.7)       | 34 (70.8)           |         |
| **Platelet count** (10⁹/L, IQR)    | 173 (127-240.25) | 184 (142-256)   | 158 (110-211.50)   | 0.333   |
| <125                               | 26 (24.1)     | 12 (20)         | 14 (29.2)           |         |
| **Procalcitonin** (ng/mL, IQR)     | 0.28 (0.06-1.29) | 0.64 (0.06-1.32) | 0.16 (0.06-1.26)   | 0.120   |
| >0.5                               | 46 (44.2)     | 30 (50.8)       | 16 (35.6)           |         |
| **IL-6** (pg/mL, IQR)              | 0 (0-94.07)   | 0 (0-94.07)     | 0 (0-4.14)          | 0.053   |
| >7.0                               | 3 (9.4)       | 0 (0)           | 3 (20)              |         |
| **ESR** (mm/h, IQR)                | 43 (23-54.50) | 40 (22-61)      | 46 (22-55)          | 0.457   |
| >15.0                              | 16 (88.9)     | 4 (80.0)        | 12 (92.3)           |         |
| **APTT** (s, IQR)                  | 30 (28.3-37)  | 32.75 (28.75-37.68) | 30 (25.3-30.7)     | 0.831   |
| >43.5                              | 1 (5.9)       | 1 (7.1)         | 0 (0.0)             |         |
| **PT** (s, IQR)                    | 13.8 (12.05-16.65) | 13.2 (11.90-16.88) | 14 (13.1-15.4)    | 0.218   |
| >16.0                              | 5 (29.4)      | 5 (35.7)        | 0 (0)               |         |
| **D-dimer** (ng/mL, IQR)           | 1.11 (0.41-5.03) | 0.92 (0.37-2.94) | 1.04 (0.45-5.61)   | 0.148   |
| >500.0                             | 2 (2.2)       | 0 (0.0)         | 2 (4.3)             |         |
| **Fibrinogen** (mg/dl, IQR)        | 3.85 (2.86-5.03) | 3.85 (2.90-4.93) | 3.86 (2.66-5.07)   | 0.897   |
| >498                               | 3 (3)         | 1 (1.9)         | 2 (4.3)             |         |
| <238                               | 92 (92.9)     | 50 (94.3)       | 42 (91.3)           |         |
| **ALT** (U/L, IQR)                 | 35 (23-52)    | 36 (23-47.5)    | 33.95 (20.8-56.18)  | 0.320   |
| >50.0                              | 28 (26.2)     | 13 (22)         | 15 (31.3)           |         |
| Parameter | Value Description | Mean | Median | Lower Limit | Upper Limit | p-Value |
|-----------|-------------------|------|--------|-------------|-------------|---------|
| AST (U/L, IQR) | >40.0 | 41 (28.6-59.9) | 37 (27-53) | 44.5 (31.9-70) | 0.320 |
| TBLI (μmol/L, IQR) | >104.0 | 29 (27.1) | 12 (20.3) | 17 (35.4) | 0.150 |
| Albumin (g/L, IQR) | >40.0 | 97 (90.7) | 51 (86.4) | 46 (95.8) | 0.097 |
| Creatinine (μmol/L, IQR) | >21.0 | 10.5 (7.5-16.51) | 11.6 (7.49-15.10) | 10.35 (5.40-19.70) | 0.002 |
| TBLI (μmol/L, IQR) | >104.0 | 29 (27.1) | 12 (20.3) | 17 (35.4) | 0.150 |
| Albumin (g/L, IQR) | >40.0 | 97 (90.7) | 51 (86.4) | 46 (95.8) | 0.097 |
| Creatinine (μmol/L, IQR) | >21.0 | 10.5 (7.5-16.51) | 11.6 (7.49-15.10) | 10.35 (5.40-19.70) | 0.002 |
| Blood glucose (mmol/L, IQR) | >6.1 | 6.9 (5.89-10.40) | 6.66 (5.71-9.75) | 7.78 (6.41-10.64) | 0.036 |
| pH (IQR) | >7.45 | 7.42 (7.36-7.46) | 7.42 (7.39-7.45) | 7.44 (7.30-7.48) | 0.038 |
| PaO2 (mmHg, IQR) | <80 | 68.4 (47-81.6) | 73 (60.75-89.65) | 59.05 (54-75) | 0.055 |
| PaCO2 (mmHg, IQR) | >45 | 39.10 (33.70-47.70) | 36.45 (31.98-40.45) | 46 (34.75-63.50) | 0.016 |
| HCO3- (mmol/L, IQR) | >27.3 | 24.75 (20.90-20.18) | 25.50 (23.35-28.98) | 27.70 (18.10-31.15) | 0.001 |
| Lactate (mmol/L, IQR) | >1.6 | 2.26 (1.50-3.15) | 1.88 (1.40-2.48) | 3.10 (2.19-3.85) | 0.066 |

IQR, interquartile range
| Antiviral agents         | Survival | Non-survival | P-value |
|-------------------------|----------|--------------|---------|
| Abidor                  | 6 (9.8)  | 17 (35.4)    | 0.001   |
| Dose: median (min–max), g/day | 0.2 (0.2-0.2) | 0.2 (0.2-0.2) | -       |
| Lopinavir/ritonavir (LPV/r) | 6 (9.8)  | 1 (2.1)      | 0.101   |
| Dose: median (min–max), mg/day | 400 (200-400) | 400 (200-400) | -       |
| Oseltamivir (n, %)      | 27 (44.3)| 18 (37.5)    | 0.477   |
| Dose: median (min–max), mg/day | 150 (150-150) | 150 (150-150) | -       |
| Ribavirin               | 30 (49.2)| 20 (41.7)    | 0.434   |
| Dose: median (Min–Max), g/day | 0.9 (0.8-1.0) | 0.9 (0.8-1.0) | -       |
| Interferon (IFN)-α      | 12 (19.7)| 4 (8.3)      | 0.097   |
| Dose: median (min–max), mIU/day | 4 (3-5)  | 4 (3-5)      | -       |

mIU, million international units
| Treatment                        | Survival (n=61) | Non-survival (n=48) | P-value |
|---------------------------------|-----------------|---------------------|---------|
| **Antibiotics**                 | 58 (95.1)       | 48 (100)            | 0.119   |
| Glucocorticoids                 | 37 (60.7)       | 43 (89.6)           | 0.001   |
|                                 |                 |                     |         |
| Initial dose, median (IQR), mg/qd | 40 (40-80)     | 40 (40-80)          | 0.341   |
| Duration of therapy, median (IQR), d | 3 (2-7)       | 5 (2-7)             | 0.131   |
| **Vasoactive drugs**            | 12 (19.7)       | 20 (41.7)           | 0.012   |
| Duration of therapy, median (IQR), d | 5.00 (3.25-9.25) | 2.50 (0.00-7.75) | 0.125   |
| **High-flow oxygen therapy**    | 17 (27.9)       | 14 (29.2)           | 0.881   |
| Duration of therapy, median (IQR), d | 4.00 (1.00-6.75) | 4.00 (1.00-6.75) | 0.882   |
| **Non-invasive ventilation**    | 7 (11.7)        | 24 (50)             | <0.001  |
| Duration of therapy, median (IQR), d | 8.5 (0.25-14.00) | 3.50 (0.00-12.75) | 0.627   |
| **Invasive mechanical ventilation** | 18 (29.5)    | 38 (79.2)          | <0.001  |
| Duration of therapy, median (IQR), d | 8.50 (5.00-15.00) | 8.00 (0.00-14.25) | 0.549   |
| **Prone position ventilation**  | 5 (8.2)         | 4 (8.3)             | 0.979   |
| CRRT                            | 0 (0)           | 4 (8.3)             |         |
| Duration of therapy, median (IQR), d | 3.00 (1.25-7.75) |             | 0.022   |
| **ICU admission**               | 60 (98.4)       | 46 (95.8)           | 0.432   |
| Length of stay, median (IQR), d | 9.50 (3.50-13.75)| 7.00 (3.00-14.25) | 0.459   |

IQR, interquartile range; CRRT, continuous renal replacement therapy; ICU, intensive care unit;
| Complications            | Arbidol (n=23) | Lopinavir/ritonavir (n=7) | Ribavirin (n=50) | Oseltamivir (n=45) | Interferon-α (n=16) |
|--------------------------|----------------|---------------------------|------------------|--------------------|---------------------|
| Respiratory failure      | 19 (82.6)      | 3 (42.9)*                  | 36 (72.0)        | 41 (91.1)*         | 10 (62.5)           |
| ARDS                     | 10 (43.5)      | 2 (28.6)                   | 20 (40.0)*       | 35 (77.8)*         | 10 (62.5)           |
| Sepsis                   | 2 (8.7)*       | 1 (14.3)                   | 35 (70.0)*       | 8 (17.8)*          | 4 (25.0)            |
| Acute cardiac injury     | 2 (8.7)        | 2 (28.6)                   | 12 (24.0)*       | 8 (17.8)*          | 4 (25.0)            |
| Acute liver injury       | 6 (26.1)       | 2 (28.6)                   | 6 (12.0)         | 19 (42.2)          | 7 (43.8)            |
| Acute kidney injury      | 3 (13.0)       | 0 (0.0)                    | 13 (26.0)        | 15 (33.3)*         | 4 (25.0)            |
| Septic shock             | 3 (13.0)       | 0 (0.0)                    | 9 (18.0)         | 15 (33.3)          | 4 (25.0)            |
| DIC                      | 3 (13.0)       | 0 (0.0)                    | 2 (4.0)          | 4 (8.9)            | 1 (6.2)             |
| Gastrointestinal bleeding| 1 (4.3)        | 0 (0.0)                    | 1 (2.0)          | 5 (11.1)*          | 1 (6.2)             |
| ACVD                     | 0 (0.0)        | 0 (0.0)                    | 0 (0.0)*         | 5 (11.1)*          | 0 (0.0)             |
| Arrhythmia               | 2 (8.7)        | 2 (28.6)                   | 0 (0.0)*         | 7 (15.6)           | 2 (12.5)            |

ARDS, Acute respiratory distress syndrome; DIC, disseminated intravascular coagulation; ACVD, Acute cerebrovascular disease;
* Statistically significant compared to patients who were not treated the antiviral agent.