

# **SUPPLEMENTARY MATERIALS**

**Supplementary Figure 1.** Internal guide for the management of patients with Covid-19 at Cisanello hospital.

<b>Patient category</b>	<b>Clinical characteristics</b>	<b>Antiviral treatment</b>	<b>Other therapies</b>	<b>Immunosuppressant agents</b>
<b>LEVEL 1*</b>	No evidence of pneumonia	Hydroxychloroquine ± macrolide OR LPV/r OR DRV/r	NO	NO
<b>LEVEL 2</b>	Radiological evidence of Pneumonia  PiO <sub>2</sub> /FiO <sub>2</sub> > 300	Hydroxychloroquine ± macrolide OR LPV/r OR DRV/r	Consider LMWH	NO
<b>LEVEL 3</b>	Radiological evidence of Pneumonia  PiO <sub>2</sub> /FiO <sub>2</sub> 200-300	Hydroxychloroquine ± macrolide OR LPV/r OR DRV/r	Consider LMWH	Consider: Tocilizumab OR Baricitinib ± Steroids
<b>LEVEL 4</b>	Radiological evidence of Pneumonia  PiO <sub>2</sub> /FiO <sub>2</sub> <200	Hydroxychloroquine ± macrolide OR LPV/r OR DRV/r  If invasive ventilation: Remdesivir (compassionate use)	Consider LMWH	Consider: Tocilizumab OR Baricitinib ± Steroids

\* Patients of Level 1 were discharged and managed at home

LPV/r: lopinavir/ritonavir; DRV/r: darunavir/ritonavir; LMWH: low-molecular weight heparin

**Supplementary Table 1.** Logistic regression analysis evaluating the association between interventions and 30-day mortality.

<b>Intervention</b>	<b>OR (95% CI)</b>	<b>P-Value</b>
Medications during hospital course, n (%)		
Doxycycline	0.72 (0.36-1.41)	0.333
Macrolides	0.22 (0.06-0.8)	<b>0.021</b>
Proteases inhibitors (LPV/r or DRV/r)	0.58 (0.28-1.17)	0.128
Remdesivir	0.32 (0.04-2.8)	0.304
Hydroxychloroquine	0.82 (0.38-1.8)	0.625
Steroids	1.07 (0.57-2.0)	0.838
Low-molecular-weight heparin	0.33 (0.17-0.66)	<b>0.002</b>
Immunosuppressants, n (%)		
Tocilizumab	0.7 (0.14-3.57)	0.671
Baricitinib	0.68 (0.22-2.13)	0.512
Other Interventions, n (%)		
Non-invasive ventilation	1.44 (0.65-3.17)	0.371

**Supplementary Table 2.** Logistic regression analysis evaluating the association between interventions and the composite endpoint of death or severe ARDS.

<b>Intervention</b>	<b>OR (95% CI)</b>	<b>P-Value</b>
Medications during hospital course, n (%)		
Doxycycline	1.11 (0.62-1.97)	0.733
Macrolides	0.46 (0.2-1.06)	0.068
Proteases inhibitors (LPV/r or DRV/r)	0.73 (0.39-1.35)	0.323
Remdesivir	0.71 (0.21-2.47)	0.593
Hydroxychloroquine	0.9 (0.44-1.86)	0.780
Steroids	2.62 (1.52-4.51)	<b>0.001</b>
Low-molecular-weight heparin	0.37 (0.19-0.72)	<b>0.003</b>
Immunosuppressants, n (%)		
Tocilizumab	2.19 (0.66-7.32)	0.202
Baricitinib	2.04 (0.91-4.55)	0.083
Other Interventions, n (%)		
Non-invasive ventilation	2.14 (1.12-4.09)	<b>0.022</b>

**Supplementary Table 3.** Comparison of matched patients who received or not LMWH.

Variable	LMWH N=55	Controls N=55	p value
Age, years, median (IQR)	68 (57-79)	69 (55-81)	0.342
Male sex, n (%)	38 (69.1)	45 (81.8)	0.121
Coexisting comorbidities, n (%)			
COPD	5 (9.1)	12 (21.8)	0.065
Arterial hypertension	23 (41.8)	33 (60)	0.056
Cardiovascular disease	20 (36.4)	16 (29.1)	0.416
Diabetes mellitus	11 (20)	9 (16.4)	0.621
Cerebrovascular disease	6 (10.9)	10 (18.2)	0.279
Haemodialysis	1 (1.8)	1 (1.8)	1.0
Solid cancer	8 (14.5)	3 (5.5)	0.112
Chronic kidney disease	3 (5.5)	9 (16.4)	0.067
Charlson Comorbidity Index, median (IQR)	2 (1-5)	3 (1-5)	0.371
SOFA score on admission, median (IQR)	2 (1-3)	3 (1-4)	0.092
Vital signs on admission, n (%)			
Systolic blood pressure < 90 mmHg	2 (3.6)	5 (9.1)	0.241
Heart rate > 110 bpm	7 (12.7)	7 (12.7)	1.0
Respiratory rate > 24 bpm	14 (25.5)	16 (29.1)	0.669
PaO <sub>2</sub> /FiO <sub>2</sub> ratio < 300	30 (54.5)	31 (56.4)	0.848
Laboratory findings on admission <sup>a</sup> , n (%)			
Glucose > 140 mg/dL	8 (14.5)	9 (16.4)	0.792
Lymphopenia (L < 800/mcL)	25 (45.5)	23 (41.8)	0.701
Thrombocytopenia (< 150 < 10 <sup>3</sup> /mcL)	19 (35.8)	15 (27.3)	0.337
Aspartate transaminase x 3 ULN	1 (1.8)	7 (12.7)	0.028
Alanine transaminase, x 3 ULN	1 (1.8)	2 (3.)	0.558
Creatinine > 1.5 mg/dL	8 (14.5)	10 (18.2)	0.606
D-dimer, mg/L, median (IQR)	0.38 (0.2-0.76)	0.47 (0.22-0.72)	0.325
High sensitivity troponin T, ng/L, median (IQR)	15 (7-32)	24 (5-56)	0.394
Procalcitonin, ng/mL, median (IQR)	0.12 (0.06-0.3)	0.13 (0.08-0.3)	0.332
C-reactive protein, mg/dl, median (IQR)	5.6 (2.7-12.1)	5.3 (2.7-10.5)	0.669
Medications			
Doxycycline	30 (54.5)	28 (50.9)	0.702
Macrolides	2 (3.6)	3 (5.5)	0.647
Proteases inhibitors (LPV/r or DRV/r)	37 (67.)	37 (67.3)	1.0
Remdesivir	0	0	-
Hydroxychloroquine	39 (70.9)	42 (76.4)	0.516
Steroids	15 (27.3)	19 (34.5)	0.409
Baricitinib	1 (1.8)	1 (1.8)	1.0
Tocilizumab	3 (5.5)	2 (3.6)	0.647
Interventions			
Non-invasive mechanical ventilation, n (%)	9 (16.4)	11 (20)	0.621

COPD: chronic obstructive pulmonary disease; LMWH: low-molecular weight heparin; IQR: interquartile ranges; LPV/r: lopinavir/ritonavir; DRV/r: darunavir/ritonavir; ULN upper limit of normality

**Supplementary Table 4.** Comparison of matched patients who received or not hydroxychloroquine.

Variable	Hydroxychloroquine N=20	Controls N=20	p value
Age, years, median (IQR)	65 (58-78.5)	73 (62.25-86)	0.462
Male sex, n (%)	12 (60)	11 (55)	0.749
Coexisting comorbidities, n (%)			
COPD	0	2 (10)	0.147
Arterial hypertension	9 (45)	15 (75)	0.053
Cardiovascular disease	6 (30)	13 (65)	0.027
Diabetes mellitus	4 (20)	5 (25)	0.705
Cerebrovascular disease	4 (20)	4 (20)	1.0
Haemodialysis	0	2 (10)	0.147
Solid cancer	7 (35)	6 (30)	0.736
Chronic kidney disease	0	2 (10)	0.147
Charlson Comorbidity Index, median (IQR)	3 (1-5)	3 (3-5)	0.486
SOFA score on admission, median (IQR)	2 (1-3)	3 (2-4.5)	0.059
Vital signs on admission, n (%)			
Systolic blood pressure < 90 mmHg	0	2 (10)	0.147
Heart rate > 110 bpm	1 (5)	2 (10)	0.548
Respiratory rate > 22 bpm	5 (25)	5 (25)	1.0
PaO <sub>2</sub> /FiO <sub>2</sub> ratio < 300	10 (50)	14 (70)	0.197
Laboratory findings on admission <sup>a</sup> , n (%)			
Glucose > 140 mg/dL	8 (40)	6 (30)	0.507
Lymphopenia (L < 800/mcL)	12 (60)	12 (60)	1.0
Thrombocytopenia (< 150 < 10 <sup>3</sup> /mcL)	8 (42.1)	11 (55)	0.421
Aspartate transaminase x 3 ULN	1 (5)	2 (10)	0.548
Alanine transaminase, x 3 ULN	0	2 (10)	0.147
Creatinine > 1.5 mg/dL	1 (5)	2 (10)	0.548
D-dimer, mg/L, median (IQR)	0.37 (0.16-0.56)	0.38 (0.2-0.74)	0.862
High sensitivity troponin T, ng/L, median (IQR)	15.5 (6.2-30)	19 (12.7-39)	0.122
Procalcitonin, ng/mL, median (IQR)	0.16 (0.06-0.48)	0.15 (0.05-0.25)	0.440
C-reactive protein, mg/dl, median (IQR)	4 (0.7-13.7)	9.4 (0.4-14.2)	0.179
Medications			
Doxycycline	9 (45)	12 (60)	0.342
Macrolides	1 (5)	1 (5)	1.0
Proteases inhibitors (LPV/r or DRV/r)	13 (65)	9 (45)	0.204
Remdesivir	0	1 (5)	0.311
LMWH	16 (80)	15 (75)	0.705
Steroids	5 (25)	10 (50)	0.102
Baricitinib	2 (10)	5 (25)	0.212
Tocilizumab	3 (15)	1 (5)	0.292
Interventions			
Non-invasive mechanical ventilation, n (%)	3 (15)	6 (30)	0.256

COPD: chronic obstructive pulmonary disease; LMWH: low-molecular weight heparin; IQR: interquartile ranges; LPV/r: lopinavir/ritonavir; DRV/r: darunavir/ritonavir; ULN upper limit of normality

**Supplementary Table 5.** Comparison of matched patients who received or not macrolides.

Variable	Macrolides N=31	Controls N=31	p value
Age, years, median (IQR)	67 (57-78)	68 (58-76)	0.932
Male sex, n (%)	21 (67.7)	25 (80.6)	0.384
Coexisting comorbidities, n (%)			
COPD	3 (9.7)	2 (6.5)	1.0
Arterial hypertension	19 (61.3)	16 (51.6)	0.609
Cardiovascular disease	8 (25.8)	7 (22.6)	1.0
Diabetes mellitus	14 (45.2)	7 (22.6)	0.106
Cerebrovascular disease	2 (6.5)	3 (9.7)	1.0
Haemodialysis	1 (3.2)	0	1.0
Solid cancer	4 (12.9)	4 (12.9)	1.0
Chronic kidney disease	2 (6.5)	1 (3.2)	1.0
Charlson Comorbidity Index, median (IQR)	3 (1-4)	3 (0.5-4)	0.91
SOFA score on admission, median (IQR)	2 (1-2)	2 (1-3)	0.846
Vital signs on admission, n (%)			
Systolic blood pressure < 90 mmHg	5 (16.1)	1 (3.2)	0.098
Heart rate > 110 bpm	6 (19.4)	2 (6.5)	0.255
Respiratory rate > 22 bpm	3 (9.7)	10 (32.3)	0.059
PaO <sub>2</sub> /FiO <sub>2</sub> ratio < 300	14 (45.2)	12 (38.7)	0.797
Laboratory findings on admission <sup>a</sup> , n (%)			
Glucose > 140 mg/dL	10 (32.3)	5 (16.1)	0.235
Lymphopenia (L < 800/mcL)	10 (32.3)	14 (45.2)	0.434
Thrombocytopenia (< 150 < 10 <sup>3</sup> /mcL)	8 (25.8)	9 (30)	0.78
Aspartate transaminase x 3 ULN	0	0	-
Alanine transaminase, x 3 ULN	0	3 (9.7)	0.238
Creatinine > 1.5 mg/dL	1 (3.2)	0	1.0
D-dimer, mg/L, median (IQR)	0.55 (0.32-0.76)	0.41 (0.26-0.9)	0.396
High sensitivity troponin T, ng/L, median (IQR)	16 (9-24)	17 (6-39)	0.279
Procalcitonin, ng/mL, median (IQR)	0.08 (0.05-0.12)	0.08 (0.06-0.2)	0.389
C-reactive protein, mg/dl, median (IQR)	8.8 (1.81-10.6)	6.2 (1.2-14)	0.62
Medications			
Doxycycline	15 (48.4)	16 (51.6)	1.0
Proteases inhibitors (LPV/r or DRV/r)	22 (71)	21 (67.7)	1.0
Remdesivir	1 (3.2)	3 (9.7)	0.612
Hydroxychloroquine	26 (83.9)	27 (87.1)	1.0
LMWH	28 (90.3)	30 (96.8)	0.612
Steroids	19 (61.3)	12 (38.7)	0.127
Baricitinib	7 (22.6)	2 (6.5)	0.147
Tocilizumab	31 (100)	31 (100)	-
Interventions			
Non-invasive mechanical ventilation, n (%)	6 (19.4)	4 (12.9)	0.731

COPD: chronic obstructive pulmonary disease; LMWH: low-molecular weight heparin; IQR: interquartile ranges;

LPV/r: lopinavir/ritonavir; DRV/r: darunavir/ritonavir; ULN upper limit of normality

**Supplementary Table 6.** Comparison of matched patients who received or not doxycycline.

Variable	Doxycycline N=74	Controls N=74	p value
Age, years, median (IQR)	60 (55-78)	64 (51-78)	0.209
Male sex, n (%)	52 (70.3)	45 (60.8)	0.299
Coexisting comorbidities, n (%)			
COPD	7 (9.5)	3 (4.1)	0.327
Arterial hypertension	33 (44.6)	24 (32.4)	0.176
Cardiovascular disease	22 (29.7)	12 (16.2)	0.078
Diabetes mellitus	14 (18.9)	8 (10.8)	0.248
Cerebrovascular disease	7 (9.5)	12 (16.2)	0.326
Haemodialysis	0	2 (2.7)	0.497
Solid cancer	10 (13.5)	9 (12.2)	1.0
Chronic kidney disease	5 (6.8)	7 (9.5)	0.765
Charlson Comorbidity Index, median (IQR)	3 (1-4)	2 (0-5)	0.96
SOFA score on admission, median (IQR)	2 (1-3)	2 (1-4)	0.875
Vital signs on admission, n (%)			
Systolic blood pressure < 90 mmHg	3 (4.1)	8 (10.8)	0.209
Heart rate > 110 bpm	9 (12.2)	5 (6.8)	0.4
Respiratory rate > 22 bpm	20 (27)	18 (24.3)	0.851
PaO <sub>2</sub> /FiO <sub>2</sub> ratio < 300	43 (58.1)	38 (51.4)	0.509
Laboratory findings on admission <sup>a</sup> , n (%)			
Glucose > 140 mg/dL	10 (13.5)	23 (31.1)	0.017
Lymphopenia (L < 800/mcL)	30 (40.5)	27 (36.5)	0.736
Thrombocytopenia (< 150 < 10 <sup>3</sup> /mcL)	21 (28.8)	20 (27)	0.853
Aspartate transaminase x 3 ULN	7 (9.5)	1 (1.4)	0.063
Alanine transaminase, x 3 ULN	4 (5.4)	3 (4.1)	1.0
Creatinine > 1.5 mg/dL	2 (2.7)	6 (8.1)	0.275
D-dimer, mg/L, median (IQR)	0.34 (0.2-0.67)	0.64 (0.35-1)	0.78
High sensitivity troponin T, ng/L, median (IQR)	11 (6-39)	15 (6-21)	0.098
Procalcitonin, ng/mL, median (IQR)	0.1 (0.57-0.16)	0.13 (0.06-0.56)	0.318
C-reactive protein, mg/dl, median (IQR)	4.82 (1.5-12.01)	3.88 (2.12-15.01)	0.721
Medications, n (%)			
Macrolides	5 (6.8)	2 (2.7)	0.442
Proteases inhibitors (LPV/r or DRV/r)	63 (85.1)	62 (83.8)	1.0
Remdesivir	0	1 (1.4)	1.0
Hydroxychloroquine	65 (87.8)	65 (87.8)	1.0
LMWH	61 (82.4)	59 (79.7)	0.834
Steroids	28 (37.8)	28 (37.8)	1.0
Baricitinib	10 (13.5)	6 (8.1)	0.428
Tocilizumab	1 (1.4)	2 (2.7)	1.0
Interventions			
Non-invasive mechanical ventilation, n (%)	14 (18.9)	11 (14.9)	0.661

COPD: chronic obstructive pulmonary disease; LMWH: low-molecular weight heparin; IQR: interquartile ranges; LPV/r: lopinavir/ritonavir; DRV/r: darunavir/ritonavir; ULN upper limit of normality



**Supplementary Table 7.** Comparison of matched patients who received or not proteases inhibitors

Variable	Proteases inhibitors N=53	Controls N=53	p value
Age, years, median (IQR)	67 (57-80)	73 (57-79)	0.72
Male sex, n (%)	32 (60.4)	33 (62.3)	1.0
Coexisting comorbidities, n (%)			
COPD	4 (7.5)	5 (9.4)	1.0
Arterial hypertension	22 (41.5)	23 (43.4)	1.0
Cardiovascular disease	11 (20.8)	16 (30.2)	0.373
Diabetes mellitus	10 (18.9)	14 (26.4)	0.487
Cerebrovascular disease	5 (9.4)	7 (13.2)	0.761
Haemodialysis	0	1 (1.9)	1.0
Solid cancer	8 (15.1)	11 (20.8)	0.613
Chronic kidney disease	4 (7.5)	3 (5.7)	1.0
Charlson Comorbidity Index, median (IQR)	2 (1-4.5)	4 (1-6)	0.052
SOFA score on admission, median (IQR)	2 (1-3)	2 (1-3)	0.95
Vital signs on admission, n (%)			
Systolic blood pressure < 90 mmHg	5 (9.4)	1 (1.9)	0.205
Heart rate > 110 bpm	10 (18.9)	6 (11.3)	0.416
Respiratory rate > 22 bpm	20 (37.7)	12 (22.6)	0.138
PaO <sub>2</sub> /FiO <sub>2</sub> ratio < 300	28 (52.8)	34 (64.2)	0.324
Laboratory findings on admission <sup>a</sup> , n (%)			
Glucose > 140 mg/dL	15 (28.3)	16 (30.2)	1.0
Lymphopenia (L < 800/mcL)	25 (47.2)	19 (35.8)	0.324
Thrombocytopenia (< 150 < 10 <sup>3</sup> /mcL)	16 (30.8)	17 (32.1)	1.0
Aspartate transaminase x 3 ULN	0	1 (1.9)	1.0
Alanine transaminase, x 3 ULN	2 (3.8)	1 (1.9)	1.0
Creatinine > 1.5 mg/dL	4 (7.5)	1 (1.9)	0.363
D-dimer, mg/L, median (IQR)	0.56 (0.26-1.03)	0.26 (0.18-0.63)	0.811
High sensitivity troponin T, ng/L, median (IQR)	22 (8-48)	19 (10-42.5)	0.785
Procalcitonin, ng/mL, median (IQR)	0.13 (0.06-0.28)	0.08 (0.4-0.15)	0.686
C-reactive protein, mg/dl, median (IQR)	6.42 (1.96-14.1)	6.41 (1.83-17.4)	0.979
Medications, n (%)			
Doxycycline	27 (50.9)	31 (58.5)	0.559
Macrolides	7 (13.2)	5 (9.4)	0.761
Remdesivir	3 (5.7)	1 (1.9)	0.618
Hydroxychloroquine	47 (88.7)	44 (83)	0.579
LMWH	44 (83)	50 (94.3)	0.123
Steroids	23 (43.4)	30 (56.6)	0.244
Baricitinib	6 (11.3)	7 (13.2)	1.0
Tocilizumab	0	0	-
Interventions			
Non-invasive mechanical ventilation, n (%)	9 (17)	13 (24.5)	0.473

COPD: chronic obstructive pulmonary disease; LMWH: low-molecular weight heparin; IQR: interquartile ranges; LPV/r: lopinavir/ritonavir; DRV/r: darunavir/ritonavir; ULN upper limit of normality

**Supplementary Table 8.** Comparison of matched patients who received or not steroids

Variable	Steroids N=115	Controls N=115	p value
Age, years, median (IQR)	73 (60-82)	71 (58-84)	0.982
Male sex, n (%)	81 (70.4)	77 (67)	0.570
Coexisting comorbidities, n (%)			
COPD	18 (15.7)	8 (7)	0.037
Arterial hypertension	59 (51.3)	47 (40.9)	0.112
Cardiovascular disease	32 (27.8)	45 (39.1)	0.069
Diabetes mellitus	27 (23.5)	35 (30.4)	0.235
Cerebrovascular disease	15 (13)	21 (18.3)	0.276
Haemodialysis	0	3 (2.6)	0.081
Solid cancer	14 (12.2)	15 (13)	0.843
Chronic kidney disease	7 (6.1)	12 (10.4)	0.231
Charlson Comorbidity Index, median (IQR)	3 (1-5)	3 (1-5)	0.702
SOFA score on admission, median (IQR)	2 (1-3)	2 (1-3)	0.823
Vital signs on admission, n (%)			
Systolic blood pressure < 90 mmHg	6 (5.2)	5 (4.3)	0.757
Heart rate > 110 bpm	16 (13.9)	12 (10.4)	0.420
Respiratory rate > 22 bpm	39 (33.9)	36 (31.5)	0.673
PaO <sub>2</sub> /FiO <sub>2</sub> ratio < 300	71 (61.7)	72 (62.6)	0.892
Laboratory findings on admission <sup>a</sup> , n (%)			
Glucose > 140 mg/dL	36 (31.3)	37 (32.2)	0.887
Lymphopenia (L < 800/mcL)	59 (51.3)	46 (40)	0.085
Thrombocytopenia (< 150 < 10 <sup>3</sup> /mcL)	40 (34.8)	42 (37.8)	0.633
Aspartate transaminase x 3 ULN	1 (0.9)	13 (11.3)	0.001
Alanine transaminase, x 3 ULN	1 (0.9)	7 (6.1)	0.031
Creatinine > 1.5 mg/dL	1 (0.9)	10 (8.7)	0.005
D-dimer, mg/L, median (IQR)	0.58 (0.35-0.87)	0.33 (0.21-0.63)	0.990
High sensitivity troponin T, ng/L, median (IQR)	25 (10-41)	18 (9-89)	0.636
Procalcitonin, ng/mL, median (IQR)	0.14 (0.08-0.33)	0.09 (0.06-0.21)	0.063
C-reactive protein, mg/dl, median (IQR)	7.8 (4.3-12.5)	5.4 (3.1-11.3)	0.229
Medications, n (%)			
Doxycycline	57 (49.6)	68 (59.1)	0.145
Macrolides	20 (17.4)	20 (17.4)	1.0
Proteases inhibitors (LPV/r or DRV/r)	68 (59.1)	63 (54.8)	0.506
Remdesivir	0	0	-
Hydroxychloroquine	85 (73.9)	89 (77.4)	0.539
LMWH	97 (84.3)	101 (87.8)	0.446
Baricitinib	16 (13.9)	26 (22.6)	0.088
Tocilizumab	0	2 (1.7)	0.155
Interventions			
Non-invasive mechanical ventilation, n (%)	32 (27.8)	30 (26.1)	0.766

COPD: chronic obstructive pulmonary disease; LMWH: low-molecular weight heparin; IQR: interquartile ranges; LPV/r: lopinavir/ritonavir; DRV/r: darunavir/ritonavir; ULN upper limit of normality

**Supplementary Table 9.** Comparison of matched patients who received or not baricitinib

Variable	Baricitinib N=21	Controls N=21	p value
Age, years, median (IQR)	66 (54.5-73)	59 (43-74.5)	0.225
Male sex, n (%)	15 (71.4)	15 (71.4)	1.0
Coexisting comorbidities, n (%)			
COPD	0	1 (4.8)	0.311
Arterial hypertension	10 (47.6)	7 (33.3)	0.346
Cardiovascular disease	6 (28.6)	2 (9.5)	0.116
Diabetes mellitus	3 (14.3)	4 (19)	0.679
Cerebrovascular disease	1 (4.8)	0	0.311
Haemodialysis	0	1 (4.8)	0.311
Solid cancer	3 (14.3)	1 (4.8)	0.293
Chronic kidney disease	1 (4.8)	4 (19)	0.153
Charlson Comorbidity Index, median (IQR)	3 (1-4.5)	1.6 (0-3.5)	0.255
SOFA score on admission, median (IQR)	3 (2-3)	2 (1-4)	0.578
Vital signs on admission, n (%)			
Systolic blood pressure < 90 mmHg	1 (4.8)	2 (9.5)	0.549
Heart rate > 110 bpm	5 (23.8)	4 (19)	0.707
Respiratory rate > 22 bpm	7 (33.3)	4 (19)	0.292
PaO <sub>2</sub> /FiO <sub>2</sub> ratio < 300	17 (81)	11 (52.4)	0.050
Laboratory findings on admission <sup>a</sup> , n (%)			
Glucose > 140 mg/dL	2 (9.5)	4 (19)	0.378
Lymphopenia (L < 800/mcL)	8 (38.1)	9 (42.9)	0.753
Thrombocytopenia (< 150 < 10 <sup>3</sup> /mcL)	10 (47.6)	6 (30)	0.248
Aspartate transaminase x 3 ULN	0	0	-
Alanine transaminase, x 3 ULN	0	2 (9.5)	0.147
Creatinine > 1.5 mg/dL	0	1 (4.8)	0.311
D-dimer, mg/L, median (IQR)	0.3 (0.2-0.52)	0.51 (0.26-1.33)	0.543
High sensitivity troponin T, ng/L, median (IQR)	15 (8-84.5)	10 (6-63.5)	0.840
Procalcitonin, ng/mL, median (IQR)	0.11 (0.06-0.3)	0.11 (0.06-0.4)	0.306
C-reactive protein, mg/dl, median (IQR)	5.9 (3.4-13.1)	9.2 (4.5-16.1)	0.179
Medications, n (%)			
Doxycycline	19 (90.5)	21 (100)	0.147
Macrolides	2 (9.5)	5 (23.8)	0.214
Proteases inhibitors (LPV/r or DRV/r)	16 (76.2)	16 (76.2)	1.0
Remdesivir	1 (4.8)	1 (4.8)	1.0
Hydroxychloroquine	19 (90.5)	21 (100)	0.147
Steroids	15 (71.4)	13 (61.9)	0.513
LMWH	20 (95.2)	21 (100)	0.311
Tocilizumab	0	0	-
Interventions			
Non-invasive mechanical ventilation, n (%)	12 (57.1)	3 (14.3)	0.004

COPD: chronic obstructive pulmonary disease; LMWH: low-molecular weight heparin; IQR: interquartile ranges; LPV/r: lopinavir/ritonavir; DRV/r: darunavir/ritonavir; ULN upper limit of normality