

Supplemental Table 1. Patient characteristics, ventilation, ECMO parameters and outcome

	Covid-19	non-Covid-19	p value
patients; no	16	23	
median age (IQR); years	61 (53 – 65)	54 (36 – 63)	0.06
male; no. (%)	14 (88)	16 (70)	0.26
median BMI (IQR)	30 (21 – 35)	25 (22 – 29)	0.16
median SOFA (IQR)*	13 (11 – 14)	11 (9 – 13)	0.7
coexisting conditions			
pulmonary disease; no. (%)	5 (31)	8 (35)	>0.99
cardiac disease; no (%)	5 (31)	4 (17)	0.44
chronic kidney disease; no. (%)	1 (6)	1 (4)	>0.99
diabetis; no. (%)	5 (31)	3 (13)	0.22
malignant disease; no (%)	4 (24)	3 (13)	0.42
cause of ARDS			
bacterial pneumonia; no (%)		14 (61)	NA
viral pneumonia; no (%)	16 (100)	1 (4)	
fungal pneumonia; no (%)		4 (17)	
extrapulmonary sepsis; no (%)		1 (4)	
trauma; no (%)		1 (4)	
ventilator settings and gas exchange before ECMO			
median ventilator days before ECMO (IQR); days	8 (3 – 12)	6 (2 – 10)	0.41
median Ppeak (IQR); mbar	35 (32 – 39)	28 (27 – 35)	0.06
median PEEP (IQR); mbar	17 (14 – 19)	16 (12 – 18)	0.31
median respirator frequency (IQR); breaths per min	25 (24 – 28)	22 (18 – 24)	0.02
median tidal volume (IQR); ml/kg PPW	5 (6 – 7)	5 (4 – 7)	0.13
NO inhalation; no. (%)	8 (50)	7 (30)	0.32
prone position; no. (%)	10 (63)	8 (35)	0.11
dexamethasone; no. (%)	11 (69)	NA	NA
P _a O ₂ /F _i O ₂ (IQR); mmHg	93 (64 – 110)	71 (61 – 128)	0.7

P _a CO ₂ (IQR); mmHg	69 (60 – 80)	62 (51 – 73)	0.16
arterial pH (IQR)	7.27 (7.21 – 7.3)	7.28 (7.19 – 7.34)	0.79
initial ECMO setting[†]			
median ECMO blood flow (IQR); L/min	3.8 (3.1 – 4.0)	3.9 (3.4 – 4.4)	0.14
median ECMO gas flow (IQR); L/min	4 (3 – 6)	3 (2.5 – 5)	0.12
survival and days on ECMO			
ICU survival; no. (%)	10 (62)	16 (70)	0.74
median days on ECMO all patients (IQR)	36 (18 – 58)	19 (13 – 44)	0.18
median days on ECMO of survivors (IQR)	43 (18 – 58)	16 (9 – 39)	0.03
median days on ECMO of dead (IQR)	23 (15 – 62)	39 (25 – 72)	0.31
outcome of patients discharged alive[#]			
tracheostomy; no. (%)	10 (100)	13 (81)	0.26
RRT; no. (%)	2 (10)	6 (38)	0.42
invasive ventilation; no (%)	7 (70)	11 (69)	>0.99
non-invasive ventilation/oxygen insufflation; no (%)	3 (30)	5 (31)	
bed; no (%)	1 (10)	4 (25)	0.66
sitting; no (%)	4 (40)	5 (31)	
standing; no (%)	1 (10)	3 (19)	
walking; no (%)	4 (10)	4 (25)	
fibrotic pulmonary lesions[§]			
fibrosis all; no (%)	12 of 16 (75)	7 of 21 (33)	0.02
fibrosis survivors; no. (%)	7 of 10 (70)	1 of 15 (7)	< 0.01
fibrosis dead; no. (%)	5 of 6 (83)	6 of 6 (100)	>0.99

Definition of abbreviations: *no* = number; *IQR* = interquartile range; *BMI* = body mass index; *SOFA* = Sequential Organ Failure Assessment score; *ECMO* = Extracorporeal Membrane Oxygenation; *P_{peak}* = peak inspiratory pressure, *PEEP* = positive end-expiratory pressure; *NO* = nitric oxide; *P_aO₂* = arterial partial pressure of oxygen; *P_aCO₂* = arterial partial pressure of carbon dioxide; *RRT* = renal replacement therapy; *NA* = not applicable. Data are presented as number and percent or median and interquartile range.

Fibrotic pulmonary lesions include the radiological diagnosis of respective lesion in the pulmonary computer tomography of the patient.

*SOFA score was calculated at ICU admission at the ARDS ECMO center.

†ECMO settings at the first measurements of included patients.

Outcome parameters at time point of discharge from the ECMO ARDS center to a weaning or rehabilitation center.

§ Two non-Covid-19 patients, who suffered from cystic fibrosis (CF), were excluded from the investigation for radiological signs of fibrotic pulmonary lesions.