eTable 1   Demographic data

Variables	Study Population (n=14)
Age (years)	62 [58-64]
BMI (kg.m^{-2})	29.4 [29.2-32.6]
Male sex, n (%)	12 (86)
Comorbidities, n (%)	
Hypertension	6 (43)
Diabetes	6 (43)
Severe obesity (BMI>35 kg.m^{-2})	5 (36)
Smoking (former or active)	2 (14)
Chronic renal disease	2 (14)
Organ transplantation	1 (7)
Auto immune disease	1 (7)
COPD/asthma	0 (0)
Coronary disease	0 (0)
Valvular disease or prosthesis	0 (0)
Heart failure	0 (0)
Chronic medication use, n (%)	
ACE inhibitor or ARBs	4 (29)
Beta blockers	4 (29)
Diuretics	2 (14)
Statins	3 (21)
Calcium blockers	4 (29)
Antidiabetic drugs (other than insulin)	3 (21)
Insulin therapy	2 (14)
Immunosuppressive drugs	2 (14)

BMI: body mass index; **COPD:** chronic obstructive pulmonary disease; **ACE:** Angiotensin converting enzyme; **ARBs**: Angiotensin II receptor blockers. Data are presented as median [interquartile range] or as number (percentage).

eTable 2   Clinical presentation, biological characteristics and respiratory management of patients prior to VV ECMO

Variables	Study Population (n=14)
Ventilator parameters prior to ECMO procedure	
Respiratory rate (b.min^{-1})	31 [30-32]
Tidal volume (ml.kg PBW)	6.1 [5.9-6.2]
PEEP (cmH$_2$O)	14 [13-15]
Plateau pressure (cmH$_2$O)	29 [28-30]
Compliance (ml. cmH$_2$O^{-1})	30 [27-32]
PaO$_2$/FiO$_2$ ratio	76 [66-83]
Respiratory management prior to ECMO	
Length of ICU stay before ECMO (days)	6 [4-8]
MV duration before ECMO (days)	3.5 [2-6.5]
Prone positioning, n (%)	14 (100)
Numbers of prone positioning before ECMO, n (%)	2 [1-3]
Inhaled NO, n (%)	12 (100)
Inhaled NO doses (ppm)	10 [10-15]
Neuromuscular relaxant, n (%)	12 (100)
Hemodynamic variables on the day of ECMO initiation	
MAP (mmHg)	78 [68-85]
HR (bpm)	76 [67-95]
Norepinephrine use, n (%)	9 (56)
Median dose (mcg.kg^{-1}.min^{-1})	0.16 [0.07-0.33]
Dobutamine, n (%)	1 (7)
Lactate (mmol. l^{-1})	2.4 [1.5-2.7]
SOFA score	11.5 [10-14]
Biological investigations on the day of ECMO initiation	
PaO$_2$ (mmHg)	72 [61-83]
PaCO$_2$ (mmHg)	55 [42-60]
pH	7.31 [7.22-7.36]
White blood count (mm^{-3})	10300 [8200-14800]

Lymphocyte (.mm^{-3})	600 [400-1000]
Haemoglobin (g dl^{-1})	10.3 [9.6-12.05]
Platelet count (mm^{-3})	275000 [161000-335000]
Fibrinogen (g.l^{-1})	7.5 [5.1-9]
D-dimers (μg.ml^{-1})	24 [20-26]
Fibrin monomers (μg.ml^{-1})	52 [51.5-105]
Procalcitonin (ng. ml^{-1})	2 [0.6-3.3]
C-reactive protein (mg. ml^{-1})	257 [181-295]
UFH before ECMO, n (%)	7 (50)
Anti-Xa UFH assay measurement (for 7 patients) (UI.ml^{-1})	0.19 [0.00-0.20]

Data are presented as median [interquartile range] or as number (percentage). **VV ECMO: veno-venous** extra corporeal membrane oxygenation; **HR:** heart rate; **MAP:** mean arterial pressure; **MV:** mechanical ventilation**; NO:** nitric oxide; **PBW:** Predicted body weight; **PEEP**: Positive end expiratory pressure; **RR:** respiratory rate; **SOFA:** Sequential Organ Failure Assessment; **UFH**: unfractionated heparin.
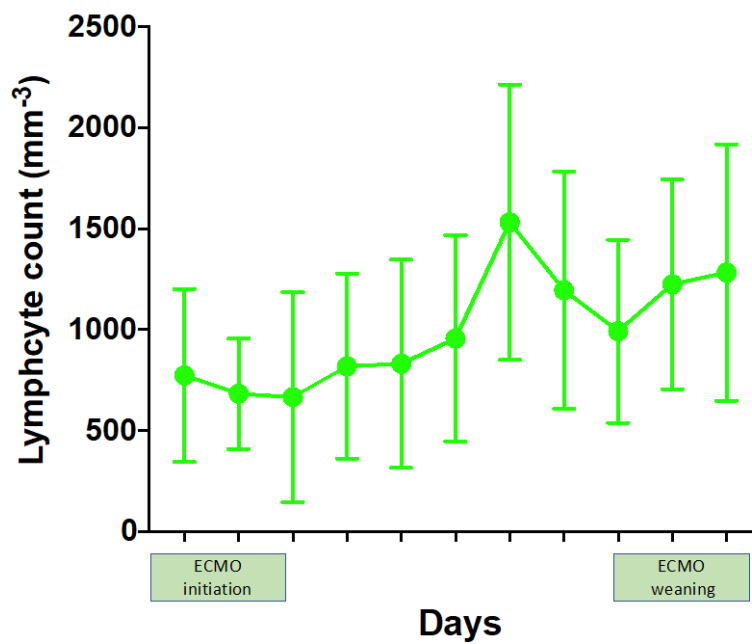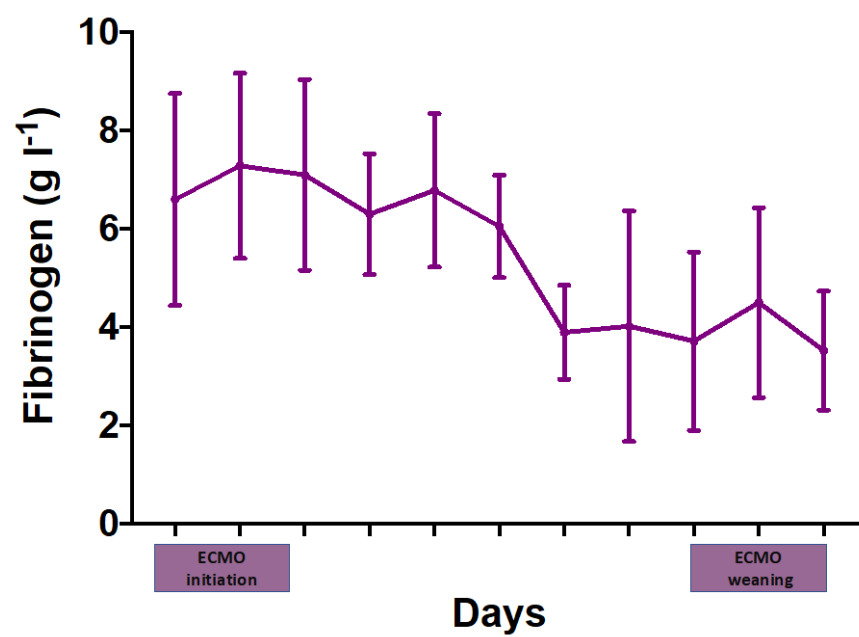
eTable 3   Complications and outcomes under ECMO

Variables	Study Population (n=12)
Ventilator associated pneumoniae (VAP), n (%)	10 (83)
Documented by BAL	6 (50)
Citrobacter Koseri	3 (25)
Escherichia coli	1 (8)
Enterobacter cloacae	1 (8)
Proteus vulgaris	1 (8)
No documentation	4 (33)
Timing from ECMO initiation to VAP, days	7.5 [2-12]
Thrombotic events, n (%)	11 (92)
Deep vein thrombosis	4 (33)
ECMO circuit thrombosis	3 (25)
RRT circuit thrombosis	2 (17)
Pulmonary embolism	2 (17)
Cannula infection, n (%)	3 (25)
Enteroccocus faecium	1 (8)
Escherichia coli	1 (8)
Staphylococcus epidermidis	1 (8)
AKI KDIGO 2 or KDIGO 3, n (%)	11 (92)
RRT requirement	8 (67)
Massive bleeding	3 (25)
Pneumothorax	3 (25)
Acute hepatic failure (Defined by PT<50%)	2 (17)
Tracheotomy	1 (8)
Recovered cardiac arrest	1 (8)
HIT	1 (8)
ECMO course	

Weaned from ECMO, n (%)	10 (83)
Died under ECMO, n (%)	2 (17)
ECMO duration (days)	12 [9-22]
ICU Course	
Mechanical ventilation duration (days)	25 [19-30]
Weaned from mechanical ventilation, n (%)	9 (75)
Length of stay (days)	30 [26-41]
Discharged from ICU, n (%)	8 (67)
Died, n (%)	4 (33)
Still hospitalized in ICU, n (%)	0

Data are presented as median [interquartile range] or as number (percentage). **BAL:** bronchoalveolar lavage. **AKI:** Acute kidney injury. **ECMO:** extra corporeal membrane oxygenation; **HIT:** heparin induced thrombocytopenia; **ICU:** Intensive care unit; **RRT:** Renal replacement therapy; **PT:** prothrombin time.

eFigure   Biological and respiratory parameters time-course

A: Biological parameters time-course

eFigure **Biological and respiratory parameters time course**

B: Respiratory parameters time-course