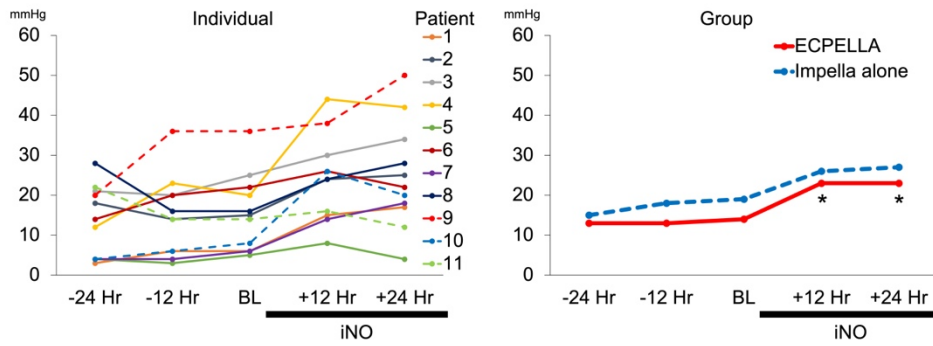
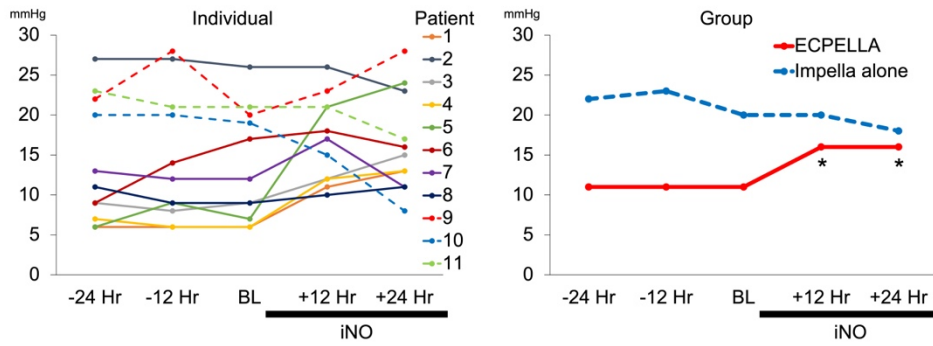


Supplementary Figure 1

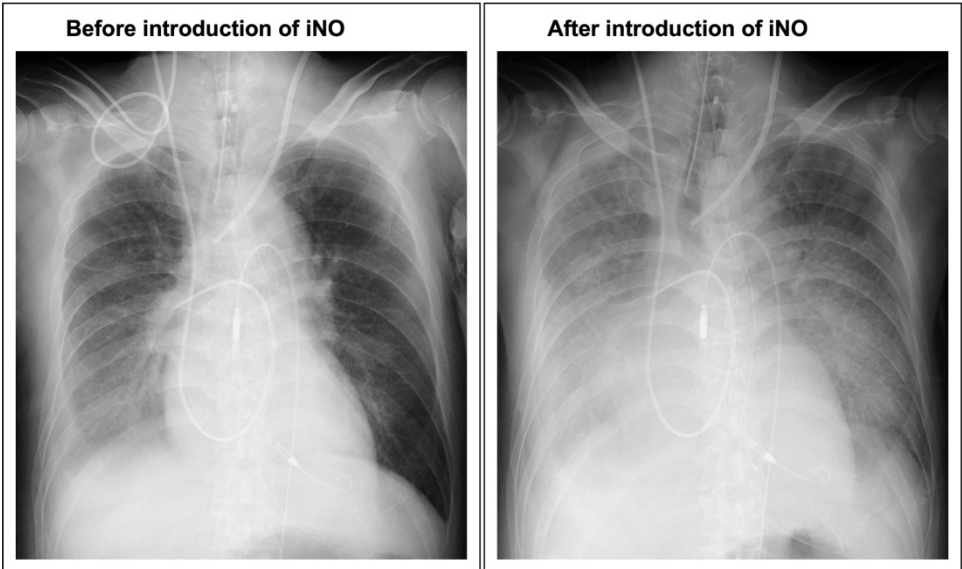
### Aortic pulse pressure



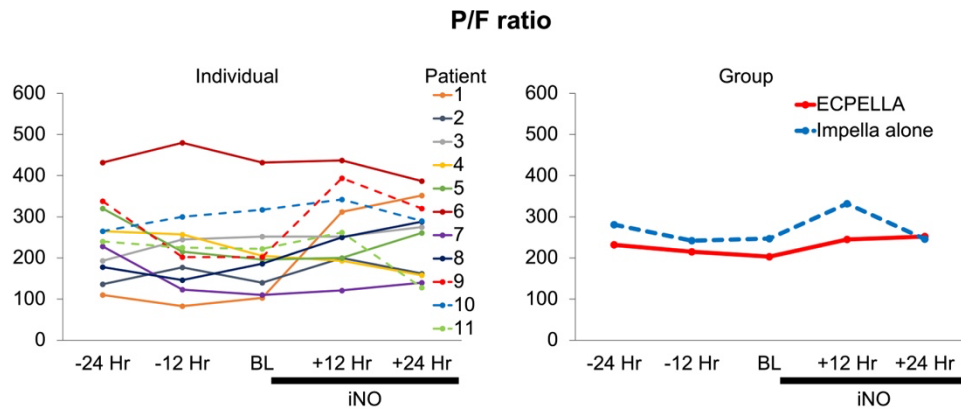
### Pulmonary pulse pressure



Supplementary Figure 2



Supplementary Figure 3



**Supplemental Table 1. Baseline echocardiographic parameters**

Parameter	ECPELLA, n=8		Impella alone, n=3		P-value
	Mean±SEM	Median [range]	Mean±SEM	Median [range]	
LVEDD, mm	39±16	37 [23–76]	52±6	50 [48–60]	0.035
LVESD, mm	34±16	30 [17–73]	45±9	45 [37–55]	0.035
LVEF, %	15±9	17 [4–30]	18±3	18 [15–21]	0.712
RVEDD, mm	33±9	33 [22–47]	36±6	32 [32–44]	0.694
RVESD, mm	28±8	28 [20–43]	28±3	26 [26–32]	0.882
TAPSE, mm	10±3	10 [6–17]	15±3	17 [11–18]	0.041
RV/LVEDD ratio	0.9±0.4	0.7 [0.6–1.9]	0.6±0.1	0.6 [0.5–0.9]	0.412

ECPELLA = combination treatment with venoarterial extracorporeal membrane oxygenation and Impella, LVEDD = left ventricular end-diastolic dimension, LVESD = left ventricular end-systolic dimension, LVEF = left ventricular ejection fraction, RVEDD = right ventricular end-diastolic dimension, RVESD = right ventricular end-systolic dimension, TAPSE = tricuspid annular plane systolic excursion.

**Supplemental Table 2. Baseline hemodynamic parameters**

Parameter	ECPELLA, n=8		Impella alone, n=3		P-value
	Mean±SEM	Median [range]	Mean±SEM	Median [range]	
HR, bpm	82±16	83 [60–104]	90±32	94 [56–120]	0.838
MAP, mmHg	80±8	79 [69–91]	79±8	75 [75–89]	0.836
Aortic PP, mmHg	14±7	15 [5–25]	19±14	14 [8–36]	0.682
RAP, mmHg	16±6	16 [6–28]	8±3	8 [5–11]	0.039
SPAP, mmHg	29±10	30 [17–46]	41±4	44 [37–44]	0.124
DPAP, mmHg	18±6	19 [10–27]	21±3	23 [18–24]	0.538
MPAP, mmHg	22±7	24 [13–31]	28±3	30 [24–31]	0.352
Pulmonary PP, mmHg	11±6	9 [6–26]	20±1	20 [19–21]	0.081
PAPi	0.83±0.56	0.51 [0.33–1.54]	2.73±1.00	2.60 [1.81–3.80]	0.002
PAWP, mmHg	17±5	15 [12–25]	15±2	15 [13–18]	0.915
RAP/PAWP ratio	0.9±0.3	0.9 [0.4–1.6]	0.5±0.2	0.4 [0.3–0.8]	0.066
CO, L/min	2.3±1.4	2.0 [1.0–5.3]	3.1±0.5	3.4 [2.5–3.4]	0.179
CI, L/min/m <sup>2</sup>	1.3±0.6	1.4 [0.6–2.7]	1.9±0.3	2.1 [1.5–2.1]	0.098
RVSWi, g·m/m <sup>2</sup>	159±160	140 [0–478]	460±93	497 [354–530]	0.032
PVR, wood units	2.6±1.9	2.4 [0.3–6.0]	4.1±1.0	3.6 [3.5–5.2]	0.085
Impella flow rate, L/min	2.0±1.1	1.7 [0.8–4.5]	3.1±0.1	3.2 [3.0–3.3]	0.038

VA-ECMO

flow rate,	2.6±0.4	2.7 [2.0–3.2]	-	-	-
L/min					

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ECPELLA = combination treatment with venoarterial extracorporeal membrane oxygenation and Impella, HR = heart rate, MAP = mean arterial pressure, PP = pulse pressure, RAP = right atrial pressure, SPAP = systolic pulmonary artery pressure, DPAP = diastolic pulmonary artery pressure, MPAP = mean pulmonary artery pressure, PAPI = pulmonary artery pulsatility index, PAWP = pulmonary artery wedge pressure, CO = cardiac output, CI = cardiac index, RVSWi = right ventricular stroke work index, PVR = pulmonary vascular resistance, VA-ECMO = venoarterial extracorporeal membrane oxygenation.

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