

EIT and clinical data		FM2 - FM1				P -value*	
		Patients	Median	Q1	Q3		
TV global (units)	Sequence	8	35	-186	113	0.7	
	HFNC then NIV						
	NIV then HFNC	8	-162	-220	-50	0.1	
	p-value* (sequence)		0.2				
TV ROI1 (units)	Sequence	8	-67	-113	71	0.6	
	HFNC then NIV						
	NIV then HFNC	8	-64	-82	-6	0.1	
	p-value* (sequence)		0.9				
TV ROI2 (units)	Sequence	8	-36	-87	10	0.3	
	HFNC then NIV						
	NIV then HFNC	8	-82	-90	-12	0.1	
	p-value* (sequence)		0.5				
TV ROI3 (units)	Sequence	8	19	-151	117	0.4	
	HFNC then NIV						
	NIV then HFNC	8	-5	-41	22	0.6	
	p-value* (sequence)		0.4				
TV ROI4 (units)	Sequence	8	17	-16	116	0.1	
	HFNC then NIV						
	NIV then HFNC	8	-33	-69	8	0.5	
	p-value* (sequence)		0.1				
TV consolidation (units)	Sequence	8	17	-67	47	0.8	
	HFNC then NIV						
	NIV then HFNC	8	-14	-69	22	0.7	
	p-value* (sequence)		0.5				
EELI global (units)	Sequence	8	159	3335	2273	0.9	
	HFNC then NIV						
	NIV then HFNC	8	-968	1059	529	0.6	
	p-value* (sequence)		0.8				
EELI ROI1 (units)	Sequence	8	-158	-839	53	0.4	
	HFNC then NIV						
	NIV then HFNC	8	-220	-286	-49	0.5	
	p-value* (sequence)		1.0				
EELI ROI2 (units)	Sequence	8	-429	1189	136	0.7	
	HFNC then NIV						
	NIV then HFNC	8	-173	-461	132	0.7	
	p-value* (sequence)		0.6				
EELI ROI3 (units)	Sequence	8	9	-87	464	0.5	
	HFNC then NIV						
	NIV then HFNC	8	-10	-203	68	1.0	
	p-value* (sequence)		0.4				
EELI ROI4 (units)	Sequence	8	52	-942	289	0.6	
	HFNC then NIV						
	NIV then HFNC	8	5	-155	142	0.6	
	p-value* (sequence)		0.9				
EELI consolidation (units)	Sequence	8	95	-368	577	0.3	
	HFNC then NIV						
	NIV then HFNC	8	-80	-191	68	0.6	
	p-value* (sequence)		0,2				
RR (bpm)	Sequence	8	1	-1	1	0.4	
	HFNC then NIV						***
	NIV then HFNC	8	-1	-6	1	1.0	***

	p-value* (sequence)		0.4				
SpO2/FiO2 ratio	Sequence	8	-2	-5	0	0.5	
	HFNC then NIV						
	NIV then HFNC	8	0	-5	0	0.2	
	p-value* (sequence)		0.9				
SpO2 (%)	Sequence	8	-1	-3	0	0.3	
	HFNC then NIV						***
	NIV then HFNC	8	0	-3	0	0.2	***
	p-value* (sequence)		0.9				
HR (bpm)	Sequence	8	3	-4	8	0.7	
	HFNC then NIV						***
	NIV then HFNC	8	-1	-4	3	1.0	***
	p-value* (sequence)		0.5				
SBP (mmHg)	Sequence	8	-7	-11	-2	0.2	
	HFNC then NIV						***
	NIV then HFNC	8	-7	-16	4	0.7	***
	p-value* (sequence)		1.0				
MAP (mmHg)	sequence	8	-2	-5	-1	0,2	
	HFNC then NIV						***
	NIV then HFNC	8	-2	-7	0	0,2	***
	p-value* (sequence)		0,8				
Dyspnea score (0;10)	Sequence	7	0	0	1	0.6	
	HFNC then NIV						***
	NIV then HFNC	8	0	-1	0	1.0	***
	p-value* (sequence)		0.2				
Patient comfort score (0;10)	Sequence	7	0	-1	0	1.0	
	HFNC then NIV						***
	NIV then HFNC	8	0	-1	0	0.2	***
	p-value* (sequence)		0.4				

HFNC: high-flow nasal cannula, NIV: non-invasive ventilation, TV: tidal volume variation, EELI: end-expiratory lung impedance, RR: respiratory rate, SpO2: pulse oxygen saturation, HR: heart rate, SBP: systolic blood pressure, MAP: mean arterial pressure. All values are expressed as median accompanied by 1<sup>st</sup> and 3<sup>rd</sup> quartile [Q1;Q3]; \*:= Wilcoxon test for 2 independent samples, \*\* := Wilcoxon signed rank test if not stated otherwise, \*\*\*:= Sign test.