

Figure E1.

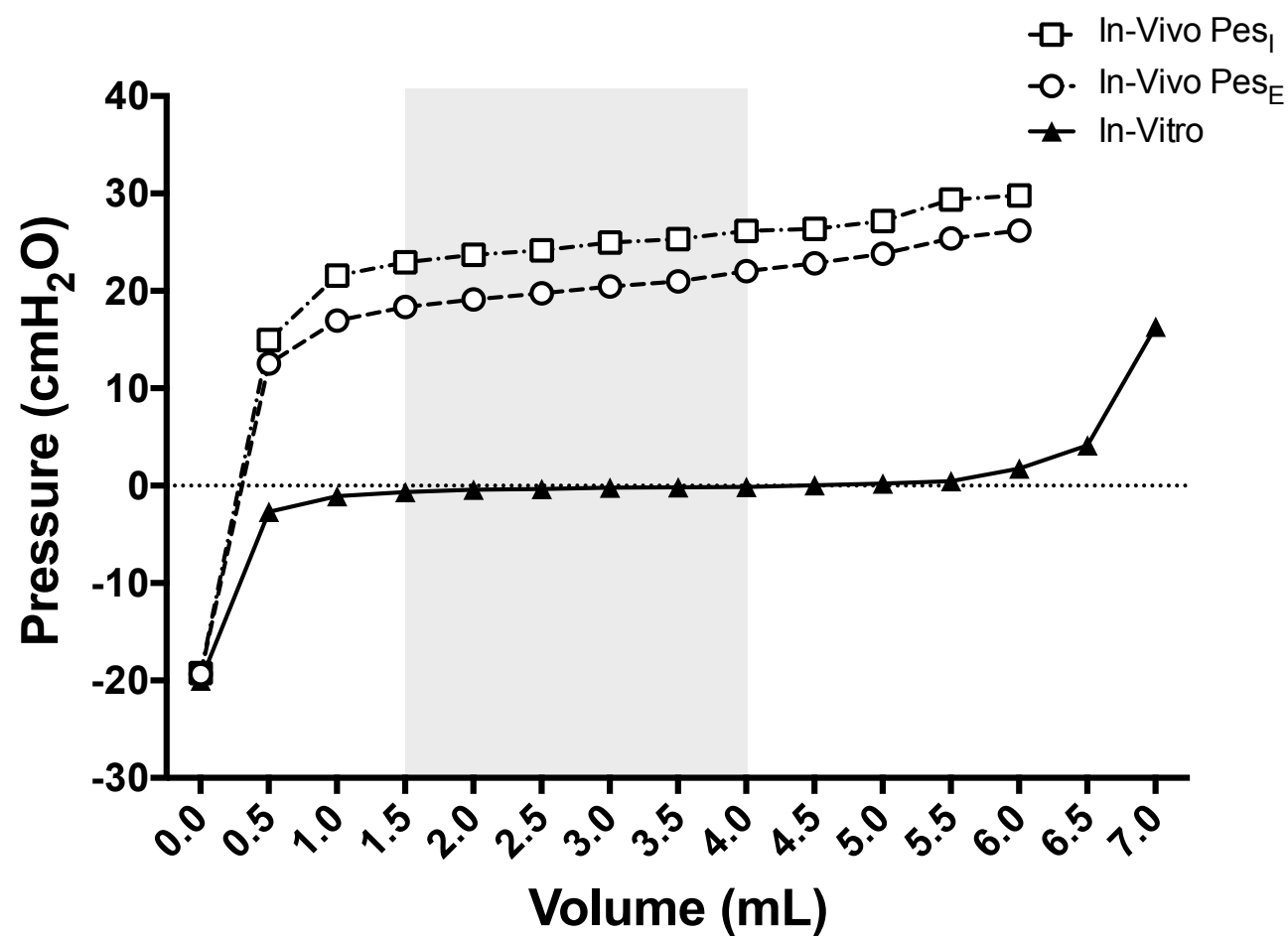


Figure E2.

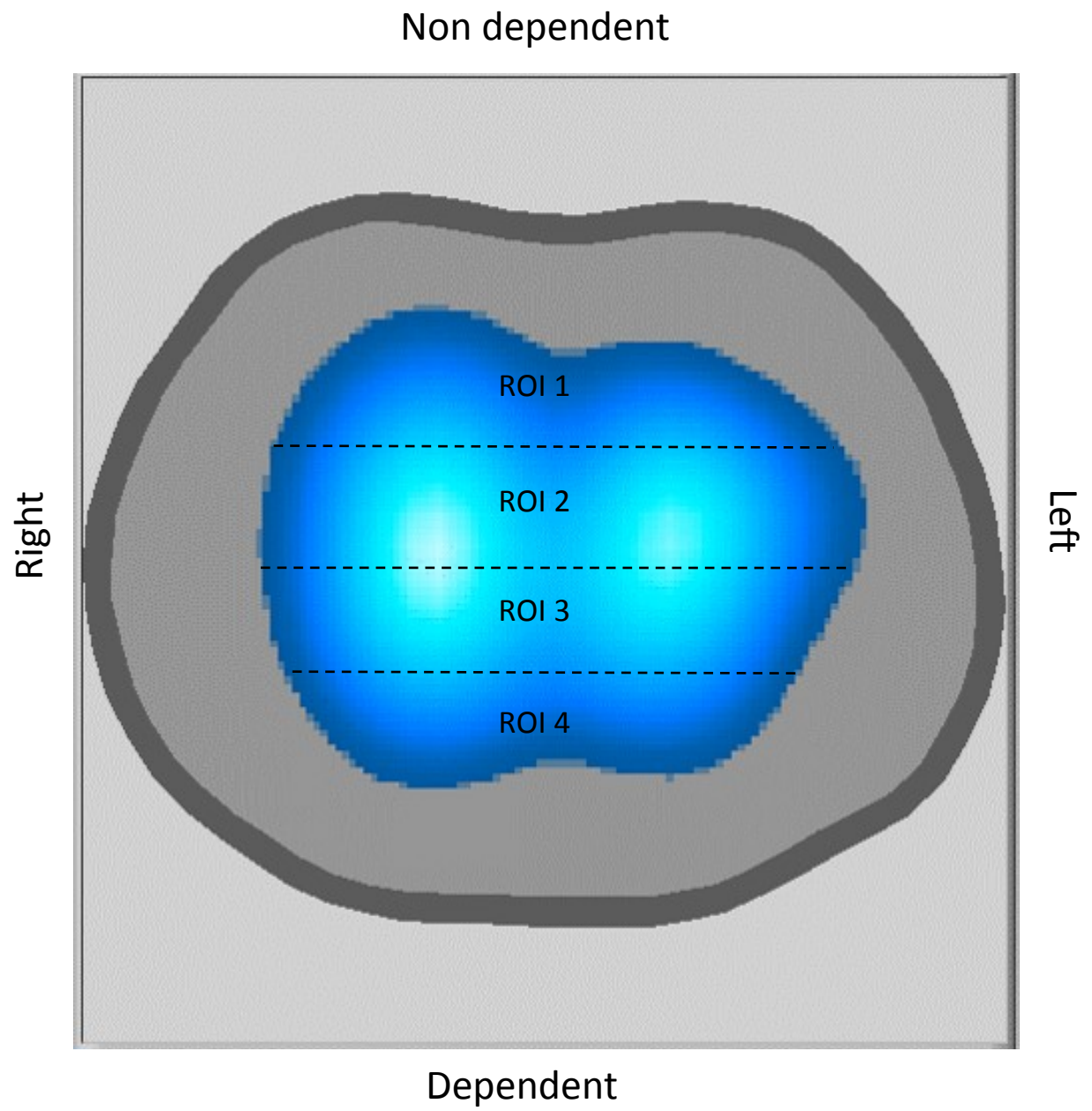


Figure E3.

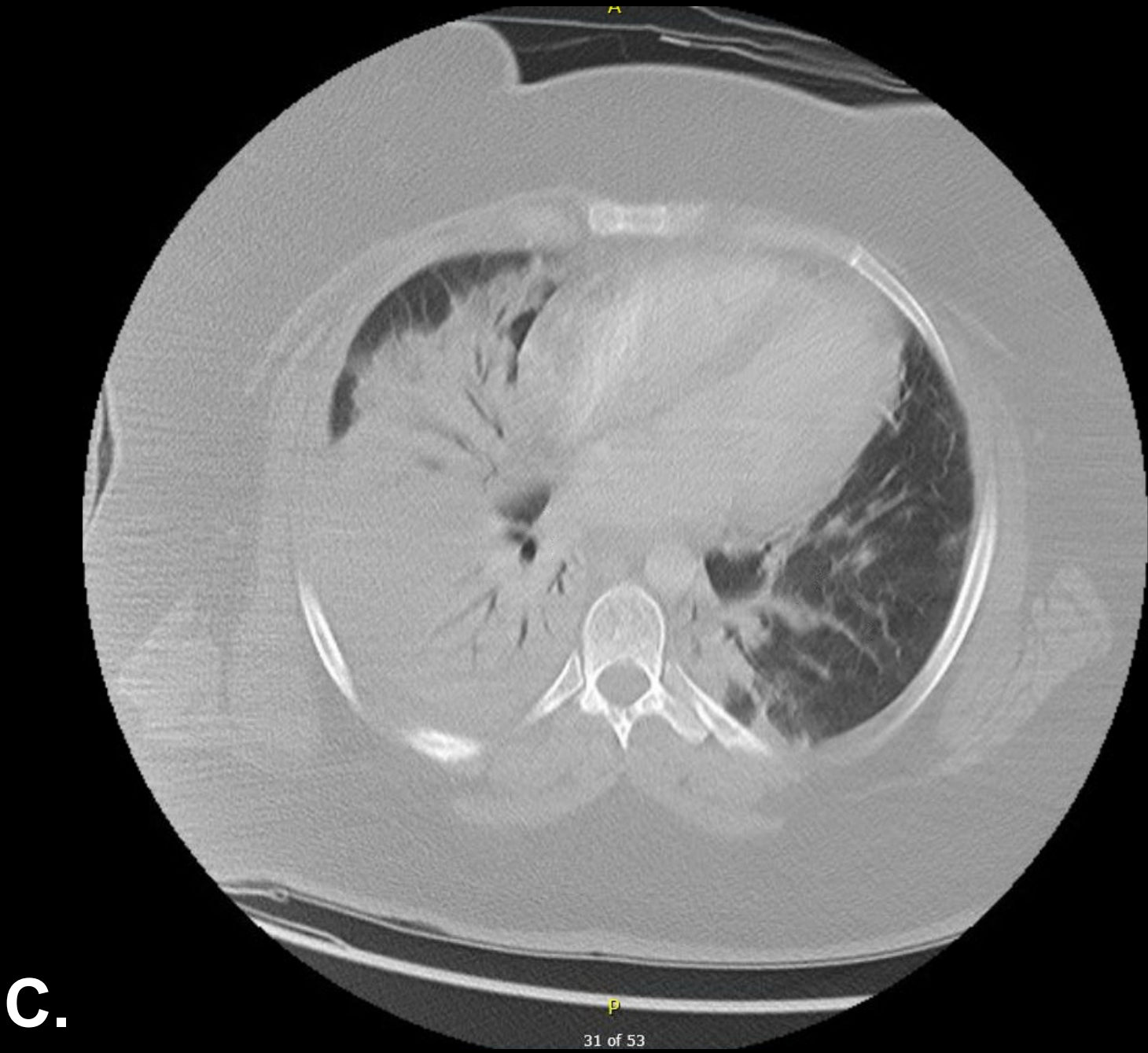
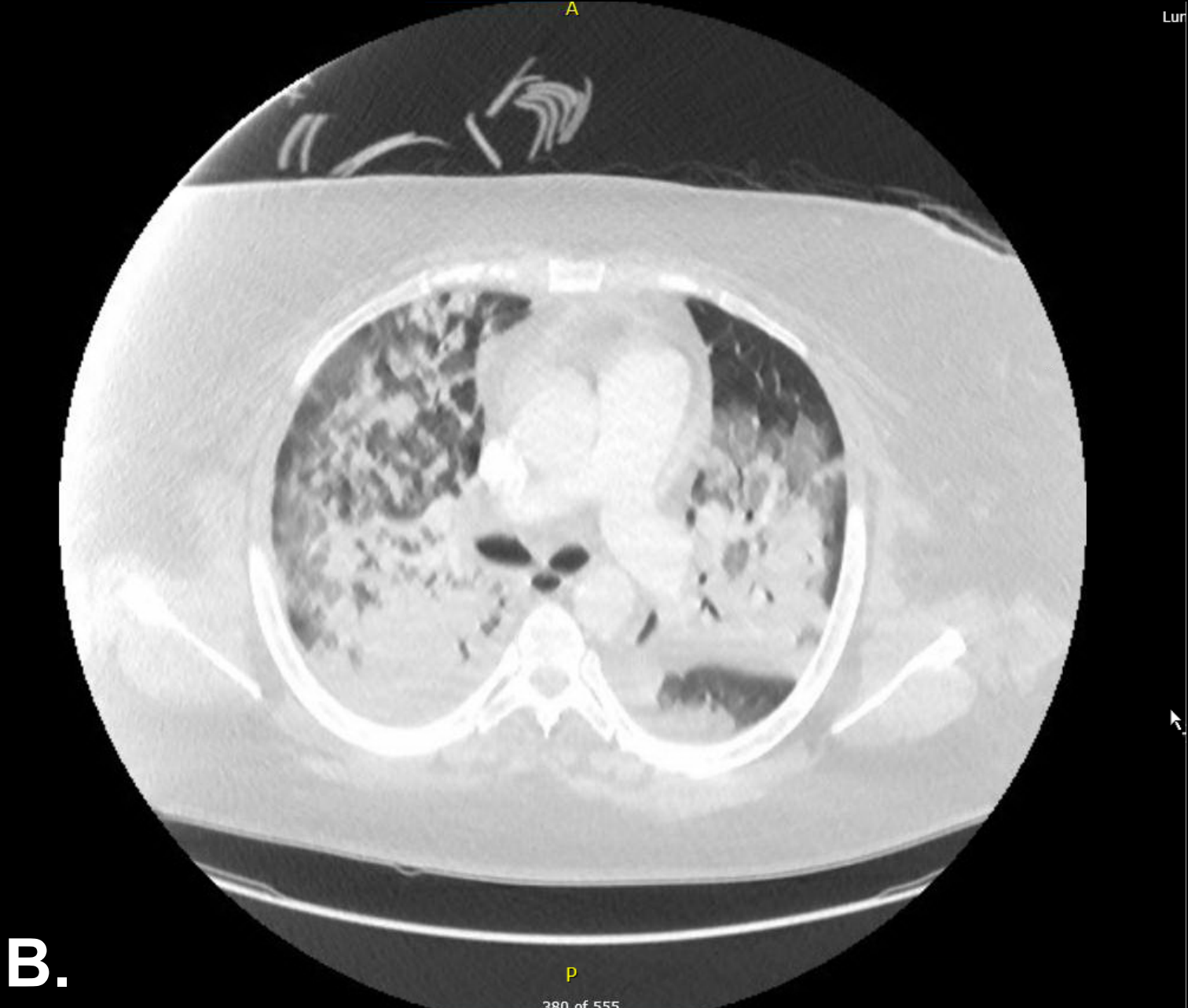
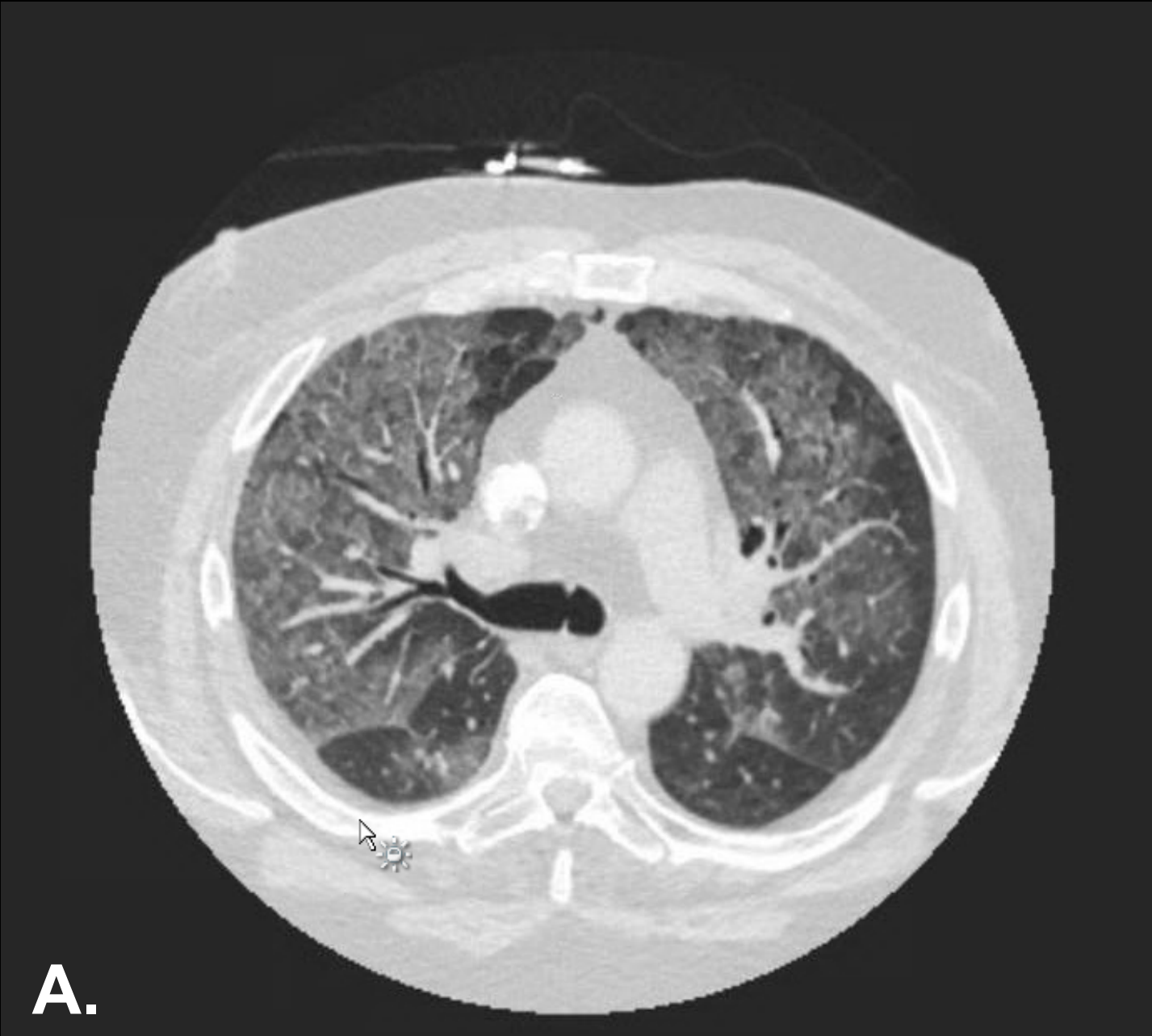


Figure E4.

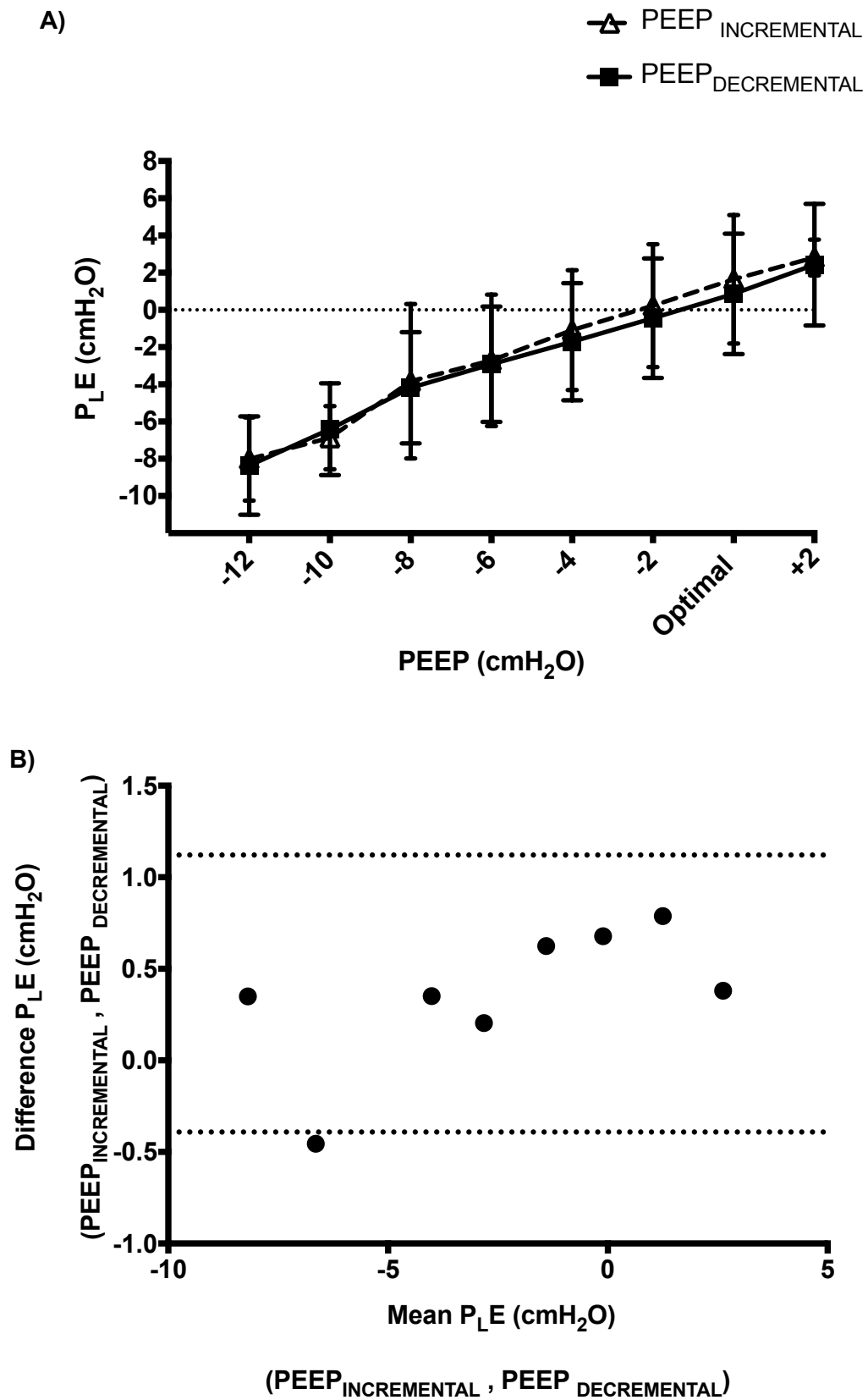
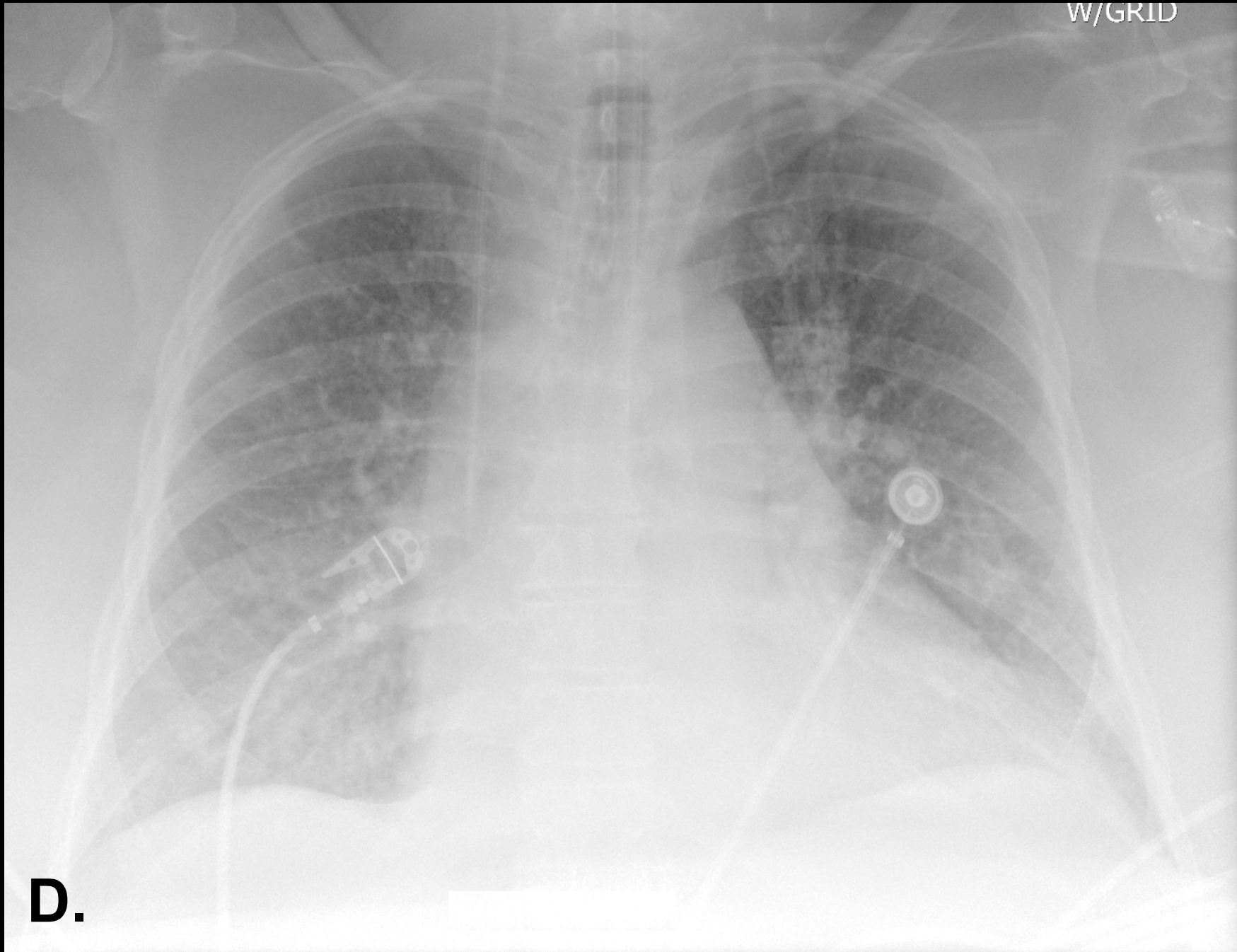
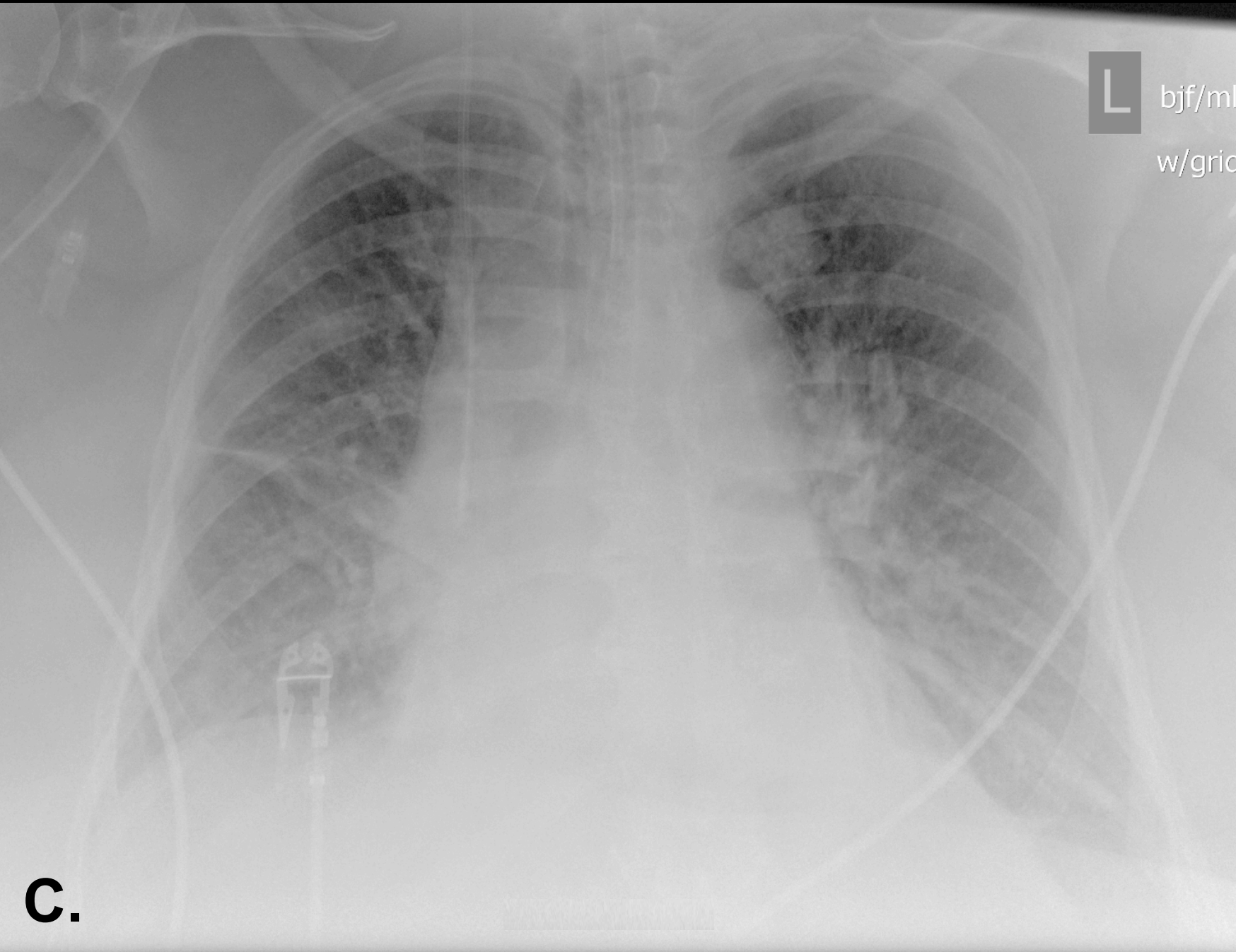
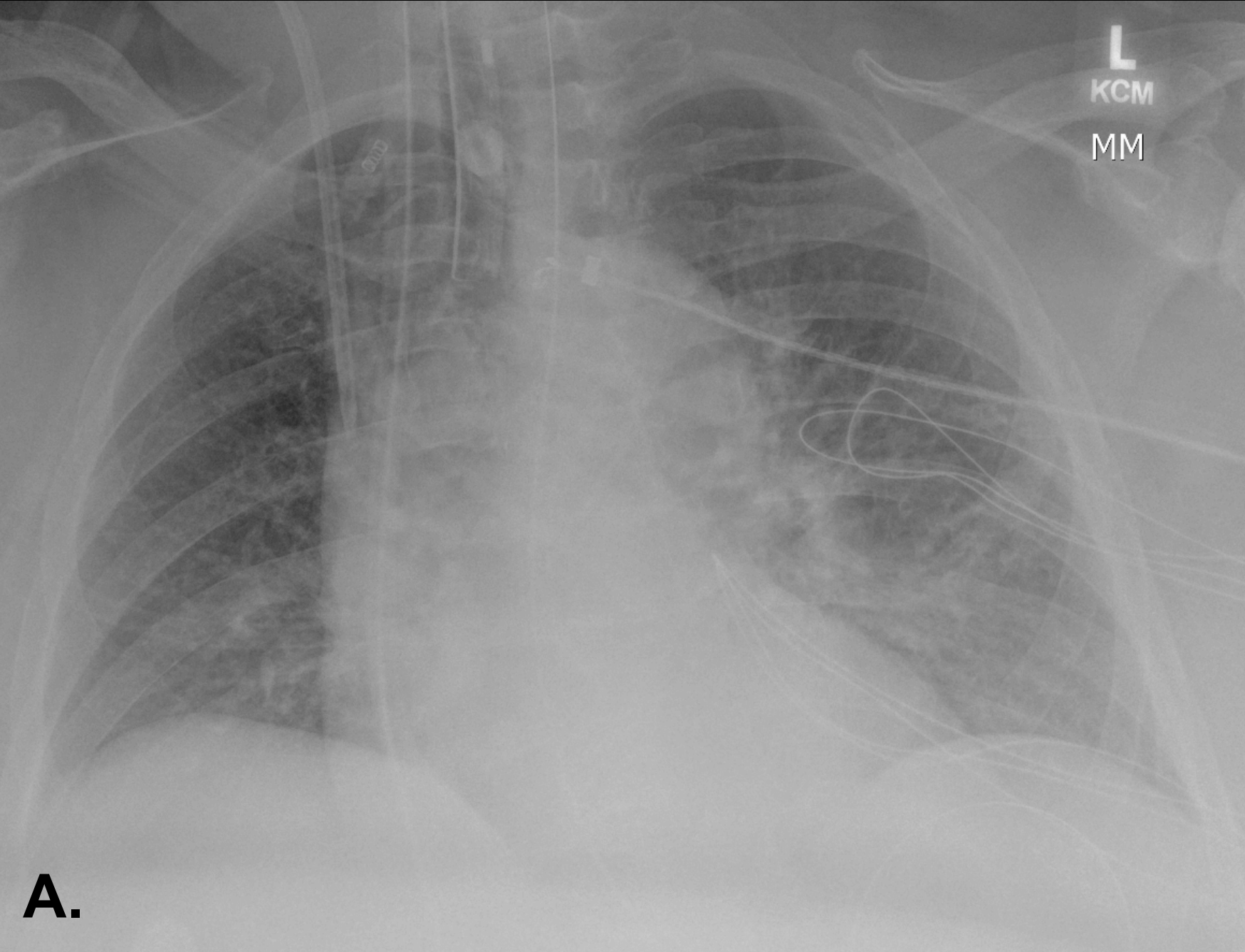


Figure E5.



Supplement Table E1. Baseline Characteristics of the Patients													
							*screening						
Patient	Gender	Age	BMI	BW	PBW	APACHE II	PaO ₂ /FiO ₂	MV	Admission	Cause of	ICU LOS	ICU	28 days
	F/M	y	Kg/m ²	kg	kg	score		days	Pathology	ARF	days	outcome	outcome
1	M	61	42	128	71	13	62	1	Knee surgery	Hypoxemia	16	Survived	Survived
2	F	68	60	161	56	23	164	1	Ankle surgery	Hypercapnia	9	Survived	Survived
3	M	62	66	191	66	21	135	0	Pneumonia	Hypercapnia	11	Survived	Survived
4	F	40	72	255	78	15	71	1	Soft tissue infection	Hypoxemia	13	Survived	Survived
5	F	66	62	165	55	34	285	2	Soft tissue infection	Mental Status	11	Died	Died
6	F	56	60	189	69	15	164	3	Abdominal surgery	Hypoxemia	10	Survived	Survived
7	F	52	78	199	52	12	76*	0	Acute on chronic respiratory failure	Hypoxemia	18	Survived	Died
8	M	70	46	133	66	31	85	4	Pneumonia	Hypoxemia and Hypercapnia	16	Died	Died
9	M	69	48	136	64	42	55	1	Acute on chronic respiratory failure	Hypoxemia and Hypercapnia	23	Survived	Survived
10	F	29	59	130	42	26	93	1	Pneumonia	Hypoxemia	11	Survived	Survived
11	M	35	54	148	61	13	140	1	Pneumonia	Hypoxemia	7	Survived	Survived
12	M	41	42	154	85	20	270	1	Soft tissue infection	Intubated for surgery	8	Survived	Survived
13	F	56	65	172	55	21	148	1	Femur surgery	Intubated for surgery	7	Survived	Survived
14	F	30	67	184	57	19	278	0	Soft tissue infection	Mental Status	5	Survived	Survived
Mean or Median	8 F	53	59	167	63	20.5	150*	1	-	-	11	12S / 2D	11S / 3D
SEM or interquartile range	-	3.9	2.9	9.3	2.9	[12-42]	22.7	[0- 4]	-	-	[5-23]	-	-

* N=12. At screening, arterial blood gas was not available for patient 7, the value represents SPO₂ at room air. BMI= Body Mass Index; BW= Body weight; PBW= Predicted body weight; APACHE II= Acute Physiology and Chronic Health Evaluation II; MV= Mechanical Ventilation; ICU= Intensive Care Unit; LOS= Length of Stay; ARF= Acute Respiratory Failure.

Supplement Table E2: Chest X-Ray Scoring		
N=14	Pre-study	Post-study
Rib count, n	9.9 ± 0.3	10.6 ± 0.2 *
Overinflation, n (%)	0 (0)	1 (7.1)
Edema, n (%)	4 (28.6)	2 (14.3)
Atelectasis, n (%):		
Absence	3 (21.4)	3 (21.4)
Reduction/ Resolution	-	11 (78.6)
Pneumothorax, n (%)	0 (0)	0 (0)

Table E2.

Rib Count is expressed as Mean±SEM. * p<0.05 Delta Mean [95%CI] :0.7 [0.2;1.1]