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Supplemental Table 1- Clinical characteristics of those with and without volume overload at Day 7 after ECMO Cannulation

		Volume Overload (n=32)	No Volume Overload (n=66)	p-value
Age		55.3 ± 16.0	54.6 ± 13.6	0.82
Weight (kg)		80.9 ± 22.2	89.8 ± 17.1	0.03
Gender				0.65
	Male	23 (71.9)	43 (65.2)	
	Female	9 (28.1)	23 (34.8)	
Race				0.16
	African American	15 (46.9)	29 (43.9)	
	Caucasian	14 (43.8)	36 (54.6)	
	Other	3 (9.4)	1 (1.5)	
Co-morbid conditions				
	CKD	13 (40.6)	22 (33.3)	0.51
	Diabetes	12 (37.5)	23 (34.9)	0.83
	Hypertension	17 (53.1)	42 (63.6)	0.38
	Heart Failure	11 (34.4)	31 (47.0)	0.28
	Coronary Disease	19 (59.4)	28 (42.4)	0.14
	CVA	4 (12.5)	3 (4.6)	0.21
	Cancer	7 (21.9)	6 (9.1)	0.11
ICU Type				0.82
	Cardiac	19 (59.4)	36 (54.6)	
	CT Surgical	10 (31.3)	22 (33.3)	
	Surgical	1 (3.1)	1 (1.5)	
	Medical	2 (6.2)	7 (10.6)	
Sepsis		3 (9.4)	10 (15.2)	0.54
Mechanical Ventilation		30 (93.8)	63 (95.5)	0.66
Vasoactive use prior to ECMO		29 (90.6)	51 (77.3)	0.16
Number of Vasoactives		2.1 ± 1.0	1.5 ± 1.1	0.01
Inotrope use		26 (81.2)	52 (78.8)	1.00
Number of Inotropes		1.3 ± 0.82	1.3 ± 0.90	0.85
Baseline serum Creatinine		1.1 ± 0.43	1.1 ± 0.41	0.52
AKI Prior to ECMO		17 (53.1)	28 (42.2)	0.40
Baseline pH		7.26 ± 0.16	7.29 ± 0.19	0.52
Baseline Serum Bicarbonate		19.5 ± 5.4	21.1 ± 6.5	0.25
APACHE		18.5 (13.5, 27.5)	18.5 (13, 24)	0.66
SOFA		8.5 (4.5, 11.5)	8 (6, 11)	0.85
ECMO Type				0.78
	VA	27 (84.4)	53 (80.3)	
	VV	5 (15.6)	13 (19.7)	

Data are presented as n(%), mean ± standard deviation, or median (interquartile range) as appropriate.
 CKD-Chronic Kidney Disease, CVA-Cerebral Vascular Accident, ICU-Intensive Care Unit

Supplemental Table 2-Clinical characteristics of those with and without RRT		RRT (n=48)	No RRT (n=50)	p-value
Age		54.9 ± 13.3	54.8 ± 15.4	0.97
Weight (kg)		90.4 ± 18.4	82.7 ± 18.6	0.04
Gender				0.77
	Male	33 (68.75)	33 (66.0)	
	Female	15 (31.25)	17 (34.0)	
Race				0.83
	African American	23 (47.9)	21 (42.0)	
	Caucasian	23 (47.9)	27 (54.0)	
	Other	2 (4.2)	2 (4.0)	
Co-morbid conditions				
	CKD	20 (41.7)	15 (30.0)	0.23
	Diabetes	17 (35.4)	18 (36.0)	0.95
	Hypertension	30 (62.5)	29 (58.0)	0.65
	Heart Failure	19 (39.6)	23 (46.0)	0.52
	Coronary Disease	28 (58.3)	19 (38.0)	0.04
	CVA	4 (8.3)	3 (6.0)	0.65
	Cancer	9 (18.75)	4 (8.0)	0.12
ICU Type				0.25
	Cardiac	29 (60.4)	26 (52)	
	CT Surgical	17 (35.4)	16 (32)	
	Surgical	0 (0)	2 (4)	
	Medical	2 (4.2)	6 (12)	
Sepsis		6 (12.5)	6 (12.0)	0.94
Mechanical Ventilation		46 (95.8)	47 (94.0)	0.68
Vasoactive use prior to ECMO		42 (87.5)	37 (74.0)	0.09
Number of Vasoactives		2.0 ± 1.2	1.4 ± 1.1	0.01
Inotrope use		39 (81.25)	39 (78.0)	0.69
Number of Inotropes		1.4 ± 0.9	1.3 ± 0.9	0.39
Baseline serum Creatinine		1.13 ± 0.38	1.06 ± 0.44	0.40
AKI Prior to ECMO		29 (60.4)	16 (32.0)	0.005
Baseline pH		7.28 ± 0.17	7.28 ± 0.19	1.00
Baseline Serum Bicarbonate		20.0 ± 5.8	21.0 ± 6.6	0.43
APACHE		22 (15.75, 30.25)	15.5 (12, 19)	0.004
SOFA		10 (6, 12.25)	7 (5, 9.75)	0.03
ECMO Type				0.34
	VA	41 (85.4)	39 (78.0)	
	VV	7 (14.6)	11 (22.0)	

Data are presented as n(%), mean ± standard deviation, or median (interquartile range) as appropriate. CKD-Chronic Kidney Disease, CVA-Cerebral Vascular Accident, ICU-Intensive Care Unit

Supplemental Table 3-Clinical characteristics of those with VA versus VV ECMO

		VA ECMO (n=80)	VV ECMO (n=18)	p-value
Age		55.5 ± 14.2	52.1 ± 15.2	0.36
Weight (kg)		87.8 ± 19.3	83.1 ± 19.3	0.36
Gender				0.16
	Male	51 (63.75)	15 (83.3)	
	Female	29 (36.25)	3 (16.7)	
Race				0.91
	African American	36 (45.0)	8 (44.4)	
	Caucasian	41 (51.25)	9 (50.0)	
	Other	3 (3.75)	1 (5.6)	
Co-morbid conditions				
	CKD	32 (40.0)	3 (16.7)	0.10
	Diabetes	30 (37.5)	5 (27.8)	0.60
	Hypertension	51 (63.75)	8 (44.4)	0.18
	Heart Failure	40 (50.0)	2 (11.1)	0.003
	Coronary Disease	43 (53.75)	4 (22.2)	0.02
	CVA	6 (7.5)	1 (5.6)	1.00
	Cancer	10 (12.5)	3 (16.7)	0.70
ICU Type				<0.001
	Cardiac	53 (66.25)	2 (11.1)	
	CT Surgical	26 (32.5)	6 (33.3)	
	Surgical	0 (0.0)	2 (11.1)	
	Medical	1 (1.25)	8 (44.4)	
Sepsis		11 (13.75)	2 (11.1)	1.00
Mechanical Ventilation		76 (95.0)	17 (94.4)	1.00
Vasoactive use prior to ECMO		67 (83.75)	13 (72.22)	0.31
Number of Vasoactives		1.8 ± 1.1	1.4 ± 1.2	0.17
Inotrope use		73 (91.25)	5 (27.8)	<0.001
Number of Inotropes		1.5 ± 0.76	0.50 ± 0.86	<0.001
Baseline serum Creatinine		1.1 ± 0.43	0.86 ± 0.23	0.01
AKI Prior to ECMO		39 (48.5)	6 (33.3)	0.30
Baseline pH		7.25 ± 0.17	7.34 ± 0.19	0.10
Baseline Serum Bicarbonate		19.6 ± 5.6	25.0 ± 6.8	0.006
APACHE		19 (13, 27)	16 (15, 21)	0.54
SOFA		9 (5, 12)	7.5 (3, 9)	0.05
Data are presented as n(%), mean ± standard deviation, or median (interquartile range) as appropriate. CKD-Chronic Kidney Disease, CVA-Cerebral Vascular Accident, ICU-Intensive Care Unit				

Supplemental Table 4 – Nephrotoxin Use Stratified by RRT Status

	RRT (n=48)	No RRT (n=50)	p-value
Any Nephrotoxin Use	39 (81.25)	41 (82)	0.92
ACEi/ARB	1 (2.1)	11 (22)	0.003
MRA	4 (8.3)	4 (8)	0.95
Diuretic	27 (56.25)	32 (64)	0.49
NSAID	1 (2.1)	5 (10)	0.16
Aminoglycoside	3 (6.25)	7 (14)	0.21
Amphotericin	1 (2.1)	3 (6)	0.33
Calcineurin Inhibitor	4 (8.3)	11 (22)	0.06
Contrast	23 (47.9)	20 (40)	0.43

Supplemental Table 5- Outcomes of those with and without Volume Overload at 7 Days after ECMO Cannulation

	Volume Overload (n=32)	No Volume Overload (n=66)	p-value
Length of ICU Stay	14.5 (6, 43)	25 (11, 47)	0.11
Length of Hospital Stay	15.5 (6, 45)	31 (16, 60)	0.03
AKI	30 (93.75)	53 (80.3)	0.13
CRRT	18 (56.3)	30 (45.5)	0.39
Duration of ECMO	5 (3, 6.5)	7 (4, 15)	0.03
Duration of CRRT	8 (4, 23) (n=18)	9 (2, 23) (n=30)	0.93
Serum Creatinine Day 90	1.6 ± 0.31 (n=4)	1.5 ± 0.80 (n=30)	0.92
Dialysis independence at 90 days	1 (5.6) (n=18)	9 (30.0) (n=30)	0.07
30 day mortality	19 (59.4)	22 (33.3)	0.02
60 day mortality	22 (68.8)	30 (45.5)	0.03
90 day mortality	23 (71.9)	31 (47.0)	0.03
Data are presented as n(%), mean ± standard deviation, or median (interquartile range) as appropriate.			
ICU- Intensive Care Unit; n/a -Not Applicable			

Supplemental Table 6- Outcomes of those with and without RRT

	RRT (n=48)	No RRT (n=50)	p-value
Length of ICU Stay	21 (8.5, 54)	23 (12, 33.75)	0.93
Length of Hospital Stay	27 (10, 60)	31 (16, 46.75)	0.65
Duration of ECMO	6.5 (4, 20.25)	5 (3, 9.75)	0.08
Duration of CRRT	9.5 (3.25, 23)	n/a	n/a
AKI		35 (70.0)	n/a
Serum Creatinine Day 90	1.5 (1.1, 1.6) (n=10)	1.4 (1.1, 1.6) (n=24)	0.96
Negative Cumulative Fluid Balance	17 (35.4)	21 (42.0)	0.50
Volume Overload	19 (39.6)	14 (28.0)	0.23
Dialysis independence at 90 days	7 (14.6)	n/a	n/a
30 day mortality	27 (56.3)	15 (30.0)	0.009
60 day mortality	32 (66.7)	21 (42.0)	0.014
90 day mortality	33 (68.8)	21 (42.0)	0.002
Data are presented as n(%), mean ± standard deviation, or median (interquartile range) as appropriate.			
ICU- Intensive Care Unit; n/a -Not Applicable			

Supplemental Table 7- Outcomes of those with VA versus VV ECMO

	VA ECMO (n=80)	VV ECMO (n=18)	p-value
Length of ICU Stay	21 (9, 46)	32 (22, 55)	0.04
Length of Hospital Stay	27 (10, 49)	39.5 (26, 65)	0.06
AKI	70 (87.5)	13 (72.2)	0.14
RRT	41 (51.25)	7 (38.9)	0.44
Duration of ECMO	5 (3, 10.5)	10.5 (5, 22)	0.02
Duration of CRRT	8 (3, 22) (n=41)	18 (2,24) (n=7)	0.45
Serum Creatinine Day 90	1.4 (1, 1.6) (n=27)	1.4 (1.1, 2.5) (n=7)	0.29
Dialysis independence at 90 days	7 (17.1) (n=41)	3 (42.9) (n=7)	0.15
30 day mortality	34 (42.5)	7 (38.9)	1.00
60 day mortality	43 (53.75)	9 (50.0)	0.80
90 day mortality	46 (57.5)	8 (44.4)	0.43
Data are presented as n(%), mean ± standard deviation, or median (interquartile range) as appropriate.			
ICU- Intensive Care Unit; n/a -Not Applicable			

Supplemental Table 8- APACHE scores by Volume and RRT Status

	Net Negative fluid balance	Neither negative or Positive	Fluid Overload	P value
Whole Cohort regardless of RRT status	16 (12, 21) (n=25)	19.5 (14, 25.5) (n=48)	18 (14, 29) (n=21)	0.242
Entire RRT Cohort (N=48)	20 (15, 30) (n=11)	21 (16.5, 28.5) (n=28)	29 (27, 34) (n=9)	0.264
CRRT started Prior to ECMO (N=11)	15 (15, 15) (n=1)	21 (20, 27) (n=9)	27 (27, 27) (n=1)	0.142
CRRT started After ECMO (n=37)	20 (15, 30) (n=10)	21 (13, 31) (n=19)	30.5 (21, 35) (n=8)	0.408
Never on CRRT (n=50)	13.5 (12, 19) (n=14)	17 (13, 20) (n=20)	15 (12.5, 18) (n=12)	0.463