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Supplemental Table 1. Pathogens removed by Seraph 100

Pathogens and heparin binding sepsis mediators	Single Pass Binding (%)
Bacteria^a	
MRSA	92
<i>K. pneumoniae</i> (CRE)	99.9
<i>K. pneumoniae</i>	37
<i>E. coli</i> (CRE)	99.9
<i>E. coli</i>	99.7
<i>S. pneumoniae</i>	53
<i>E. faecalis</i>	99.0
<i>E. faecalis</i> (VRE)	91
<i>E. faecium</i>	56
<i>A. baumannii</i>	79
<i>S. epidermidis</i>	58
Methicilin resistant <i>S. epidermidis</i>	66
<i>S. pyogenes</i>	76
<i>Serratia marcescens</i>	73
Viruses	
Ebola ^b	(39-99)
Zika ^a	87
Adenovirus ^a	62
Cytomegalovirus (CMV) ^a	79
Fungi	
<i>C. albicans</i> ^b	36

^aSeffer, Malin-Theres, et al. "Heparin 2.0: a new approach to the infection crisis." Blood Purification 50.1 (2021): 28-34.

^bExThera Medical Internal Reports

Supplemental Table 2. Subjects enrolled by study site

Study Site	Control	Seraph 100
Advent Health	0	4
Baylor Scott & White	0	5
Hattiesburg Clinic	13	18
Institute of ECMO Development	6	7
University of Mississippi	0	5
UT Health Southwestern	2	0
Los Angeles VA Medical Center	30	8
Southeast Georgia Health System	26	30
Eisenhower Army Medical Center	0	2

Supplemental Table 3. Baseline patient characteristics

	Treatment (N = 86)	Control (N = 92)	P value
Age, Median (IQR)	61 (49-70)	65.5 (57.5-72.5)	0.008
Sex (%) ^a			0.833
Male	75.3	73.9	
Female	24.7	26.1	
Race/Ethnicity (%)			0.461
NH White	50.0	45.7	
NH Black	26.7	20.7	
Hispanic	11.6	16.3	
Other	11.6	17.4	
BMI, Median (IQR) ^b	32.9 (28.3-38.5)	32.3 (27.6-38.8)	0.279
APACHE II, Median (IQR)	14 (9-20)	16 (12-21.5)	0.066
Charlson Comorbidity Index, Median (IQR)	2.5 (1-4)	4 (2-5)	0.002
Diabetes (%)	32.6	48.9	0.027
Invasive Mechanical Ventilation (%)	75.6	73.9	0.798
Kidney Replacement Therapy (%)	64.0	27.2	<0.001
COVID Treatments			
Remdesivir (%)	84.9	71.7	0.034
Corticosteroids (%)	98.8	87.0	0.002
Mortality (%)	45.4	60.9	0.038

NH= Non-Hispanic; PI= Pacific Islander; IQR = Interquartile Range

^aMissing information for 1 subject

^bMissing information for 2 subjects

Supplemental Table 4. Negative binomial models for the outcome of pressor-free days in the first 28 days

	Model 1			Model 2			Model 3			Model 4 ^a			Model 5		
	IRR	95% CI	P	IRR	95% CI	P	IRR	95% CI	P	IRR	95% CI	P	IRR	95% CI	P
Treatment															
Control	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Seraph 100	1.30	1.00-1.69	0.048	1.24	0.96-1.62	0.104	1.25	0.96-1.62	0.099	1.20	0.91-1.56	0.200	1.26	0.97-1.63	0.080
Age (per year)				0.99	0.98-1.00	0.013	0.99	0.98-1.00	0.010	0.99	0.98-1.00	0.033	0.99	0.98-1.00	0.049
Sex															
Female				Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Male				1.03	0.77-1.39	0.820	1.02	0.75-1.37	0.916	0.96	0.71-1.31	0.800	0.92	0.69-1.23	0.610
Race/Ethnicity															
NH White				Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
NH Black				0.83	0.60-1.16	0.271	0.83	0.60-1.16	0.273	0.85	0.61-1.17	0.320	0.87	0.64-1.18	0.369
Hispanic				1.04	0.68-1.59	0.840	1.03	0.67-1.57	0.890	1.10	0.72-1.70	0.655	1.09	0.73-1.63	0.684
Other				1.16	0.81-1.65	0.431	1.12	0.78-1.62	0.531	1.12	0.78-1.62	0.533	1.15	0.82-1.62	0.424
BMI (per 1 point increase)							0.99	0.98-1.01	0.505	1.00	0.98-1.01	0.554	1.00	0.98-1.01	0.564
APACHE II (per 1 point increase)										0.99	0.96-1.01	0.194	0.99	0.97-1.02	0.587
Invasive Mechanical Ventilation													0.68	0.51-0.91	0.010
Remdesivir													1.33	1.01-1.74	0.042
Corticosteroids													0.93	0.54-1.60	0.800
Model fit statistics															
AIC		744.7001			745.7744			747.3326			747.6882			742.3988	
BIC		752.455			766.4541			770.5973			773.5379			776.0034	

