

Variables		Cohort 1 (N=49)	Cohort 2 (N=51)	p-value
Age	Median (N [IQR])	53 (48-57)	52 (43-59)	0.73
Sex (N [%])	Male	38 (83)	37 (69)	0.10
	Female	8 (17)	17 (31)	
Race (N [%])	White	11 (24)	31 (57)	0.004
	Latino	17 (37)	8 (15)	
	Black	10 (22)	5 (9)	
	Native American	1 (2)	3 (6)	
	Asian	7 (15)	5 (9)	
	BMI (N [SD])	Mean	30.4 (27.8-35.5)	
Medical History (N [%])	Obesity	18 (39)	32 (59)	0.045
	Hypertension	21 (46)	11 (20)	0.007
	Hyperlipidemia	13 (28)	15 (28)	0.96
	Diabetes	18 (39)	14 (26)	0.16
	Asthma/COPD	3 (7)	8 (15)	0.19
	CAD	3 (7)	4 (7)	0.86
	CKD	6 (13)	5 (9)	0.55
	OSA	6 (13)	4 (7)	0.35
ECMO Location	Center #1	12 (26)	13 (24)	0.81
	Center #2	16 (35)	16 (30)	
	Center #3	9 (20)	10 (19)	
	Center #4	9 (20)	15 (28)	
	Transferred from Referral Hospital	27 (59)	44 (81)	
Ventilator Settings (Average [STD])	FiO2	89.0 (14.4)	92.1 (13.7)	0.28
	PEEP	13.7 (3.4)	12.4 (2.9)	0.046
	Respiratory Rate	25.9 (6.3)	23.8 (7.5)	0.17
	Tidal Volume	281.4 (181.7)	362.5 (101.5)	0.017
	Peak Pressure	34.2 (5.0)	32.2 (6.4)	0.24
	Plateau Pressure	30.0 (4.4)	29.8 (6.2)	0.88
Arterial Blood Gas (Average [STD])	pH	7.3 (0.1)	7.3 (0.1)	0.22
	PCO2	62.2 (15.9)	64.2 (20.6)	0.61
	PaO2	56.5 (14.7)	57.1 (18.6)	0.87
	P/F Ratio	72.3 (22.7)	72.2341 (28.7)	0.99
Novel Therapeutics (N [%])	Hydroxychloroquine +/- Azithromycin	9 (20)	14 (26)	0.45
	Remdesivir	31 (67)	28 (52)	0.12
	IL-6 Inhibitor	26 (57)	13 (24)	<0.001
	Convalescent Plasma	22 (48)	24 (44)	0.74
	Steroids	33 (72)	53 (98)	<0.001
	Total Steroid Days (median [IQR])	6 (0-10)	11 (10-14)	<0.001
Renal Failure	Need for Renal Replacement (N [%])	21 (46)	28 (52)	0.54
	Total Renal Replacement, days (Average [STD])	21.9 (16.0)	21.9 (15.8)	1
Transfusions (Average [SE])	Total Units	11 (4-18)	11 (5-22)	0.9
SOFA Score (Average [STD])	Prior to ECMO Cannulation	7 (6-8)	7 (2-8)	0.15
ICU Treatments (N [%])	Proned	41 (89)	48 (89)	0.97
	Paralyzed	42 (91)	49 (91)	0.92
	Vasopressor	33 (72)	35 (65)	0.46

Supplemental Table 1: Demographic, clinical, and ICU data for Cohort 1 and Cohort 2. BMI = body mass index; COPD = chronic obstructive pulmonary disease; CAD = coronary artery disease; CKD = chronic kidney disease; OSA = obstructive sleep apnea; SOFA = sequential organ failure assessment score