Supplementary Material

Supplemental Methods

Collection and qualification of convalescent plasma units

Donor criteria

Inclusion criteria for individuals donating convalescent plasma were: (1) prior laboratory confirmed SARS-CoV-2 or documented physician diagnosis; (2) at least 18 years of age; (3) weight >110 pounds; (4) subjective good health; (5) reported resolution of COVID-19 related symptom at least 14 days prior to enrollment; (6) fulfillment of New York Blood Center criteria for blood donation (https://www.nybc.org/donate-blood/become-donor/can-i-donate-blood/); (7) hemoglobin > 12.5 g/dL for females and >13.0 g/dL for males; (8) negative SARS-CoV-2 test on nasopharyngeal swab using an EUA-approved PCR-based assay; and (9) positive anti-SARS-CoV-2 antibody test against the spike trimer at 1:400 dilution as described below. Exclusion criteria included all the standard exclusions required for blood donation as per New York Blood Center Criteria (https://www.nybc.org/donate-blood/become-donor/can-i-donate-blood/). Each convalescent plasma unit was derived from a single donor, each of whom donated between one to four units by apheresis.

Antibody Measurement

The SARS-CoV-2 spike trimer was coated on 96-well ELISA plates at a concentration of 200 ng/well at 4°C overnight and unbound proteins were then removed by washing with PBS, followed by blocking with PBS/3% nonfat dry milk, as described (23). Plasma samples were serially diluted in PBS with Tween 20 (PBST; 0.1% Tween-20 in PBS) + 10% fetal calf serum (FCS) at 1:400 replicate

dilutions into wells of the coated plate, which was incubated at 37 °C for 1 h, followed by washing 6 times with PBST. Peroxidase AffiniPure goat anti-human IgG (H+L) antibody (1:3,000 dilution; Thermo Fisher Scientific) was subsequently added to each well and incubated for 1 h at 37 °C, washed and tetramethylbenzidine substrate (Sigma-Aldrich) was added and the reaction was stopped using 1 M of sulfuric acid. Absorbance was measured at 450 nm and expressed as an optical density or OD_{450} value. Prior validation studies established a cutoff OD_{450} value for positivity, resulting in >99% specificity in samples obtained from the pre-COVID-19 era. This assay was approved for use by the New York State Department of Health prior to the availability of commercial anti-SARS-CoV-2 antibody assays.

Measurement of neutralizing anti-SARS-CoV-2 antibody titers

Virus neutralization tests (NT) were performed using SARS-CoV-2 strain 2019-nCoV/USA-WA1-2020 (provided by Rocky Mountain Laboratories, MT, USA). Test plasma was heat inactivated (30 min, 56 ^{o}C) before being two-fold serially diluted in Dulbecco's Modified Eagle Media (DMEM), starting at a 1:20 dilution. The diluted plasma (50 microliter) was mixed with virus (100 $TCID_{50}$, 50 microliter) and incubated for 1 hour at 37^{o}C. The plasma-virus mix was then added to a Vero E6 cell monolayer (ATCC CRL-1586; Multiplicity of Infection (MOI) = 0.01) and incubated (1.5 hours, 37^{o}C, 5% CO_2), before the inoculum was replaced by DMEM supplemented with 1% fetal calf serum. Culture supernatant was removed after 48 hours of incubation (37^{o}C, 5% CO_2) and virus growth determined using quantitative real-time reverse transcription-polymerase chain reaction (Triplex CII-SARS-CoV-2 rRT-PCR Test, EUA200510). The highest plasma dilution that prevented virus growth (cycle threshold [ct] <30) was rated as neutralization titer.

SARS-COV-2 genomic sequencing

Extracts of nasopharyngeal swab samples positive for SARS-CoV-2 RNA using the Triplex CII-SARS-CoV-2 rRT-PCR assay were reverse transcribed for Illumina sequencing using the Kapa HyperPlus kit (Roche) employing enzymatic fragmentation to about 300 bp average size. Prior to sequencing (Ilumina NextSeq 550, 150 cycles single-read sequencing) SARS-CoV-2 sequences were enriched through hybridization to biotinylated myBaits Expert Virus-SARS-CoV-2 baits (Daicel Arbor Biosciences). The biotinylated oligonucleotides were captured by streptavidin beads, washed, and amplified through 14 cycles of PCR with Illumina sequencing primers. Raw reads (5-28 million/barcoded sample) were quality filtered and mapped to the NCBI SARS-CoV-2 reference sequence NC_045512 (6-11 million mapped reads per sample).

Statistical Analysis

The trial was analyzed by comparing patients randomized to convalescent plasma versus control plasma, with patients randomized to control plasma serving as the reference group. The primary outcome was analyzed using a one-sided Mann-Whitney test for an alternative hypothesis favoring the convalescent plasma arm (a “go” decision in this proof-of-concept phase 2 trial). To assess the magnitude of clinical effects, an odds ratio for improved clinical status on the modified ordinal scale was estimated under the proportional odds model. An odds ratio >1.0 would indicate improved clinical status on the ordinal scale among patients randomized to convalescent plasma versus control plasma. Post-hoc analyses of the primary outcome were also performed using a multivariable

proportional odds model including age, sex, and duration of illness at baseline, prognostic factors imbalanced between treatment groups after randomization.

To evaluate the association between treatment group and time-to-clinical improvement, time-to-discontinuation of supplemental oxygen, and time-to-hospital discharge, we used Fine and Gray regression models (considering death as a competing risk) to estimate sub-hazard ratios and the cumulative incidence of clinical improvement as a function of time. For analyses of in-hospital and 28-day mortality, we estimated odds ratios using logistic regression models and estimated survival at 28 days using the Kaplan-Meier method. Fine and Gray and logistic regression models were performed both unadjusted and adjusted for age, sex, and duration of illness.

Sensitivity analyses for the primary outcome and mortality at 28-days included the per-protocol population and populations in which patients without definitive determination of clinical status at 28-days (those whose clinical status was carried forward in the primary outcome analysis) were treated as deceased, and another in which the last available clinical status was carried forward for patients with ≥14 days of follow-up, and patients with <14 days of follow-up were considered deceased.

Pre-specified subgroups in analyses of the primary outcome were defined according to level of respiratory support at randomization (no supplemental oxygen, supplemental oxygen [including high-flow oxygen therapy and noninvasive ventilation], IMV or ECMO) and

symptom duration at randomization (≤7 days, > 7 days) (21). Post hoc subgroup analyses were also performed according to study site (New York City vs. Rio de Janeiro), age, sex, concomitant treatment with corticosteroids, and by titers of neutralizing anti-SARS-CoV-2 antibody in infused convalescent plasma units.

For the initial primary outcome of time-to-clinical-improvement, the intended sample size was 129 participants. However, after the primary outcome was amended to clinical status at day 28, the sample size was re-calculated. This calculation was based on blinded pooled data of day 28 outcomes from an interim analysis by the data safety and monitoring board (July 2nd, 2020) and an odds ratio of 1.7 under a proportional odds assumption. With a 2:1 randomization ratio and a total sample size of 219 participants (146 in the convalescent plasma arm versus 73 in the control arm), we determined that a one-sided Mann-Whitney test at a level of 15% would have 82% power to detect an odds ratio of 1.7. At the time the primary outcome was amended, a recent trial of remdesivir reported an odds ratio of 1.50 with 95% confidence interval (CI) of 1.18–1.91 (18). As this overlapped our assumed odds ratio, we increased enrollment to a total of 219 participants across all clinical sites.

Continuous variables are reported as medians (interquartile ranges) and categorical variables are summarized as counts and percentages. Between group differences are reported using point estimates (odds ratio or hazard ratio), with 95% confidence intervals and p-values. The p-value for the Mann-Whitney test in the primary outcome analysis (“go vs. “no-go” decision) is one-

sided. All other p-values including those associated with point estimates are 2-sided and without adjustment for multiple comparisons. Analyses were performed using SAS, version 9.4 (SAS Institute, Cary, NC, USA).

Supplemental Results

Table S1: Primary outcome analysis among patients who received convalescent plasma versus control plasma (per-protocol population)

Primary outcome, clinical status at 28-days, n (%)	Convalescent Plasma N=147	Control Plasma N=72	OR (95% CI)	P-value	Adjusted[a] OR (95% CI)	P-value
1 and 2: Not hospitalized	105 (71.4)	47 (65.3)	1.49 (0.83-2.68)	0.19	1.43 (0.76-2.71)	0.27
3: Hospitalized, not requiring supplemental oxygen	3 (2.0)	2 (2.8)				
4: Hospitalized, requiring supplemental oxygen	7 (4.8)	1 (1.4)				
5: Hospitalized, requiring high-flow oxygen therapy or noninvasive mechanical ventilation	1 (0.7)	0 (0.0)				
6: Hospitalized, requiring IMV, ECMO, or both	12 (8.2)	4 (5.6)				
7: Dead	19 (12.9)	18 (25.0)				

Abbreviations: CI: confidence interval, ECMO: extracorporeal membrane oxygenation, HR: hazard ratio, IMV: invasive mechanical ventilation, IQR: interquartile range, OR: odds ratio.

Legend: [a]Adjusted for age (continuous variable), sex, and duration of symptoms at baseline (symptom duration unknown for 6 patients).

Table S2: Primary outcome analysis among patients randomized to convalescent plasma versus control plasma (intention-to-treat population), with 8 patients with clinical status carried forward considered deceased

Primary outcome, clinical status at 28-days, n (%)	Convalescent Plasma N=150	Control Plasma N=73	OR (95% CI)	P-value	Adjusted[a] OR (95% CI)	P-value
1 and 2: Not hospitalized	102 (68)	46 (63)	1.38 (0.78-2.45)	0.280	1.30 (0.70-2.39)	0.404
3: Hospitalized, not requiring supplemental oxygen	3 (2)	2 (3)				
4: Hospitalized, requiring supplemental oxygen	7 (5)	1 (1)				
5: Hospitalized, requiring high-flow oxygen therapy or noninvasive mechanical ventilation	1 (1)	0 (0)				
6: Hospitalized, requiring IMV, ECMO, or both	12 (8)	4 (5)				
7: Dead	25 (17)	20 (27)				

Abbreviations: CI: confidence interval, ECMO: extracorporeal membrane oxygenation, IMV: invasive mechanical ventilation

Legend: [a]Adjusted for age (continuous variable), sex, and duration of symptoms at baseline (symptom duration unknown for 6 patients).

Table S3: Primary outcome analysis among patients randomized to convalescent plasma versus control plasma (intention-to-treat population), with the last observation carried forward for 3 patients with ≥14 days of follow-up; remaining 5 with <14 days of follow-up considered deceased

Primary outcome, clinical status at 28-days, n (%)	Convalescent Plasma N=150	Control Plasma N=73	OR (95% CI)	P-value	Adjusted[a] OR (95% CI)	P-value
1 and 2: Not hospitalized	104 (69)	47 (64)	1.39 (0.78-2.47)	0.280	1.31 (0.70-2.44)	0.394
3: Hospitalized, not requiring supplemental oxygen	3 (2)	2 (3)				
4: Hospitalized, requiring supplemental oxygen	7 (5)	1 (1)				
5: Hospitalized, requiring high-flow oxygen therapy or noninvasive mechanical ventilation	1 (1)	0 (0)				
6: Hospitalized, requiring IMV, ECMO, or both	12 (8)	4 (5)				
7: Dead	23 (15)	19 (26)				

Abbreviations: CI: confidence interval, ECMO: extracorporeal membrane oxygenation, IMV: invasive mechanical ventilation

Legend: [a]Adjusted for age (continuous variable), sex, and duration of symptoms at baseline (symptom duration unknown for 6 patients).

Table S4: Mortality at 28-days among patients randomized to convalescent plasma versus control plasma (intention-to-treat population), with 8 patients with clinical status carried forward considered deceased

Vital status at day 28, n (%)	Convalescent Plasma N=150	Control Plasma N=73	OR (95% CI)	P-value	Adjusted[a] OR (95% CI)	P-value
Dead	25 (17)	20 (27)	0.53 (0.27-1.04)	0.075	0.56 (0.27-1.17)	0.120
Alive	125 (83)	53 (73)				

Abbreviations: CI: confidence interval

Legend: [a]Adjusted for age (continuous variable), sex, and duration of symptoms at baseline (symptom duration unknown for 6 patients).

Table S5: Mortality at 28-days among patients randomized to convalescent plasma versus control plasma (intention-to-treat population), with the last observation carried forward for 3 patients with ≥14 days of follow-up; remaining 5 with <14 days of follow-up considered deceased

Vital status at day 28, n (%)	Convalescent Plasma N=150	Control Plasma N=73	OR (95% CI)	P-value	Adjusted[a] OR (95% CI)	P-value
Dead	23 (15)	19 (26)	0.515 (0.26-1.02)	0.068	0.53 (0.24-1.14)	0.101
Alive	127 (85)	54 (74)				

Abbreviations: CI: confidence interval

Legend: [a]Adjusted for age (continuous variable), sex, and duration of symptoms at baseline (symptom duration unknown for 6 patients).

Table S6: Primary outcome analysis among patients randomized to convalescent plasma versus control plasma (intention-to-treat population) according to level of respiratory support at baseline

Primary outcome, clinical status at 28-days, n (%)	Convalescent Plasma			Control Plasma			Odds Ratio (95% CI)		
	IMV or ECMO N=17	Supplemental oxygen, HFO, NIV N=125	No supplemental oxygen N=5	IMV or ECMO N=11	Supplemental oxygen, HFO, NIV N=57	No supplemental oxygen N=5	IMV or ECMO	Supplemental oxygen, HFO, NIV	No supplemental oxygen
1 and 2: Not hospitalized	4 (23.5)	98 (78.4)	4 (80.0)	2 (18.2)	42 (73.7)	4 (80.0)	2.18 (0.51-9.29)	1.38 (0.68-2.82)	1.28 (0.06-27.91)
3: Hospitalized, not requiring supplemental oxygen	2 (11.8)	0 (0.0)	1 (20.0)	1 (9.1)	1 (1.8)	0 (0.0)	**Adjusted[a] Odds Ratio (95% CI)**		
4: Hospitalized, requiring supplemental oxygen	1 (5.9)	5 (4.0)	0 (0.0)	1 (9.1)	0 (0.0)	0 (0.0)	IMV or ECMO	Supplemental Oxygen, HFO, NIV	No supplemental oxygen
5: Hospitalized, requiring high-flow oxygen therapy or noninvasive mechanical ventilation	0 (0.0)	1 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1.622 (0.35-7.63)	1.38 (0.65-2.91)	Not calculable
6: Hospitalized, requiring IMV, ECMO, or both	4 (23.5)	8 (6.4)	0 (0.0)	0 (0.0)	4 (7.0)	0 (0.0)			
7. Dead	6 (35.3)	13 (10.4)	0 (0.0)	7 (63.6)	10 (17.5)	1 (20.0)			

Abbreviations: CI: confidence interval, HFO: high-flow oxygen therapy, NIV: non-invasive mechanical ventilation, ECMO: extracorporeal membrane oxygenation, IMV: invasive mechanical ventilation

Legend: [a]Adjusted for age and sex

Table S7: Primary outcome analysis among patients randomized to convalescent plasma versus control plasma (intention-to-treat population) according to duration of symptoms at baseline

Primary outcome, clinical status at 28-days, n (%)	Convalescent Plasma		Control Plasma		Odds Ratio (95% CI)	
	Symptoms >7 days N=110	Symptoms ≤7 days N=37	Symptoms >7 days N=51	Symptoms ≤7 days N=19	Symptoms >7 days	Symptoms ≤7 days
1 and 2: Not hospitalized	81 (73.6)	26 (70.3)	37 (72.5)	10 (52.6)	1.20 (0.58-2.49)	1.92 (0.64-5.81)
3: Hospitalized, not requiring supplemental oxygen	3 (2.7)	0 (0.0)	1 (2.0)	1 (5.3)	**Adjusted[a] Odds Ratio (95% CI)**	
4: Hospitalized, requiring supplemental oxygen	5 (4.5)	1 (2.7)	1 (20.0)	0 (0.0)	1.25 (0.58-2.69)	1.69 (0.53-5.42)
5: Hospitalized, requiring high-flow oxygen therapy or noninvasive mechanical ventilation	1 (0.9)	0 (0.0)	0 (0.0)	0 (0.0)		
6: Hospitalized, requiring IMV, ECMO, or both	8 (7.3)	3 (8.1)	1 (2.0)	3 (15.8)		
7. Dead	12 (10.9)	7 (18.9)	11 (21.6)	5 (26.3)		

Abbreviations: CI: confidence interval, ECMO: extracorporeal membrane oxygenation, IMV: invasive mechanical ventilation

Legend: [a]Adjusted for age and sex

Table S8: All and transfusion-related adverse events in patients receiving convalescent and control plasma

Adverse event, n (%)	Convalescent Plasma N=147	Control Plasma N=72
Any adverse event	96 (65.3)	40 (55.6)
Grade 1	38 (25.9)	17 (23.6)
Grade 2	61 (41.5)	23 (31.9)
Grade 3	27 (18.4)	17 (23.6)
Grade 4	26 (17.7)	15 (20.8)
Death	19 (12.9)	18 (25.0)
Transfusion-related adverse event[a]	4 (2.7)	3 (4.2)

Legend: [a]Considered 'definitely' or 'probably' associated with plasma infusion.

Table S9: Description of transfusion-related adverse events

Treatment Group	Description of event(s)
Convalescent plasma: Patient A	Worsening anemia
Convalescent plasma: Patient B	Urticaria
Convalescent plasma: Patient C	Transfusion-associated circulatory overload Hypersensitivity-attributed skin rash
Convalescent plasma: Patient D	Transfusion-associated circulatory overload
Control plasma: Patient E	Possible febrile non-hemolytic transfusion reaction Urticaria
Control plasma: Patient F	Worsening anemia
Control plasma: Patient G	Transfusion-associated circulatory overload

Table S10: All adverse events, stratified by organ system

All Adverse Events		**Convalescent Plasma N=147**		**Control Plasma N=72**	
		N	**%**	**N**	**%**
Any Adverse Event		96	65.3	40	55.6
Cardiovascular	any cardiovascular event	39	26.5	24	33.3
	miscellaneous arrhythmia	10	6.8	5	6.9
	atrial fibrillation	3	2.0	1	1.4
	bradycardia	6	4.1	4	5.6
	undifferentiated shock	5	3.4	3	4.2
	cardiac arrest	1	0.7	3	4.2
	congestive heart failure	4	2.7	2	2.8
	extremity edema	4	2.7	1	1.4
	elevated cardiac troponin	1	0.7	0	0.0
	hypertension	10	6.8	3	4.2
	hypotension	8	5.4	6	8.3
	transfusion-associated circulatory overload	2	1.4	1	1.4
	right ventricular dysfunction	1	0.7	0	0.0
	septic shock	4	2.7	4	5.6
	cardiogenic shock	0	0.0	1	1.4
	myocarditis	1	0.7	0	0.0
Endocrine	any endocrine event	9	6.1	4	5.6
	diabetic ketoacidosis	2	1.4	0	0.0
	hyperglycemia	4	2.7	2	2.8
	hypoglycemia	3	2.0	1	1.4
	miscellaneous endocrine event	0	0.0	2	2.8
Gastrointestinal/hepatic	any gastrointestinal/hepatic event	43	29.3	15	20.8
	abdominal pain	4	2.7	3	4.2
	gastrointestinal bleeding	0	0.0	3	4.2

	pneumoperitoneum	1	0.7	0	0.0
	diarrhea	9	6.1	3	4.2
	dysphagia	2	1.4	1	1.4
	elevated liver function tests	6	4.1	3	4.2
	vomiting	5	3.4	1	1.4
	miscellaneous gastrointestinal/hepatic event	24	16.3	8	11.1
Hematologic	any hematologic event	27	18.4	12	16.7
	epistaxis	2	1.4	2	2.8
	catheter-associated bleeding	2	1.4	0	0.0
	anemia	12	8.2	7	9.7
	venous thrombosis	4	2.7	2	2.8
	arterial thrombosis	0	0.0	1	1.4
	suspected pulmonary embolism	2	1.4	0	0.0
	confirmed pulmonary embolism	2	1.4	0	0.0
	elevated d-dimer	2	1.4	0	0.0
	miscellaneous hematologic event	2	1.4	0	0.0
	leukocytosis	8	5.4	2	2.8
	hemolysis	1	0.7	0	0.0
	leukopenia	1	0.7	1	1.4
	thrombocytosis	2	1.4	0	0.0
	thrombocytopenia	4	2.7	1	1.4
	disseminated intravascular coagulation	1	0.7	0	0.0
Infectious	any infectious event	29	19.7	15	20.8
	bacteremia	3	2.0	1	1.4
	pneumonia -- bacterial	16	10.9	7	9.7
	pneumonia -- unknown	4	2.7	4	5.6
	Candida infection without bacteremia	3	2.0	1	1.4
	Cytomegalovirus viremia	0	0.0	1	1.4
	ventilator-associated pneumonia	2	1.4	2	2.8
	urinary tract infection	3	2.0	2	2.8
	elevated procalcitonin	1	0.7	0	0.0

	indwelling line infection	1	0.7	0	0.0
	miscellaneous infectious event	3	2.0	1	1.4
	Gastrointestinal infection	1	0.7	1	1.4
Inflammatory	any inflammatory event	6	4.1	3	4.2
	elevated serum/plasma inflammatory marker	2	1.4	1	1.4
	fever not attributable to plasma	4	2.7	0	0.0
	fever attributable to plasma	0	0.0	1	1.4
	hypothermia	0	0.0	1	1.4
Miscellaneous Adverse Event	any miscellaneous event	5	3.4	0	0.0
	fatigue	1	0.7	0	0.0
	conjunctivitis	2	1.4	0	0.0
	poor appetite	1	0.7	0	0.0
	vaginal pain	1	0.7	0	0.0
	dizziness	1	0.7	0	0.0
	pain (non-specific)	1	0.7	0	0.0
Musculoskeletal/Dermatologic	any musculoskeletal/dermatologic event	7	4.8	5	6.9
	rhabdomyolysis	2	1.4	1	1.4
	skin ulcer	1	0.7	1	1.4
	urticaria	1	0.7	1	1.4
	miscellaneous muscular or dermal	1	0.7	2	2.8
	facial swelling unrelated to plasma	1	0.7	0	0.0
	hypersensitivity skin rash related to plasma	1	0.7	0	0.0
Pulmonary	any pulmonary event	33	22.4	19	26.4
	acute respiratory failure	24	16.3	16	22.2
	hypoxemia without respiratory failure	1	0.7	2	2.8
	cough	1	0.7	1	1.4
	miscellaneous pulmonary event	2	1.4	1	1.4
	pleural effusion	5	3.4	2	2.8
	dyspnea	0	0.0	1	1.4
	lung atelectasis	1	0.7	0	0.0
	pneumothorax	3	2.0	0	0.0

	pneumomediastinum	2	1.4	0	0.0
	worsening lung opacities on imaging	2	1.4	0	0.0
	respiratory tract hemorrhage	0	0.0	1	1.4
	bronchospasm	2	1.4	0	0.0
renal / metabolic	any renal/metabolic event	32	21.8	18	25.0
	acute kidney injury	14	9.5	7	9.7
	ketoacidosis	1	0.7	0	0.0
	metabolic acidosis	0	0.0	1	1.4
	hematuria	1	0.7	2	2.8
	hyperkalemia	7	4.8	0	0.0
	hypernatremia	6	4.1	5	6.9
	hypokalemia	7	4.8	1	1.4
	hypocalcemia	1	0.7	1	1.4
	miscellaneous renal/metabolic event	2	1.4	2	2.8
	hyponatremia	3	2.0	1	1.4
vascular	any vascular event	1	0.7	0	0.0
	distal extremity ischemia	1	0.7	0	0.0

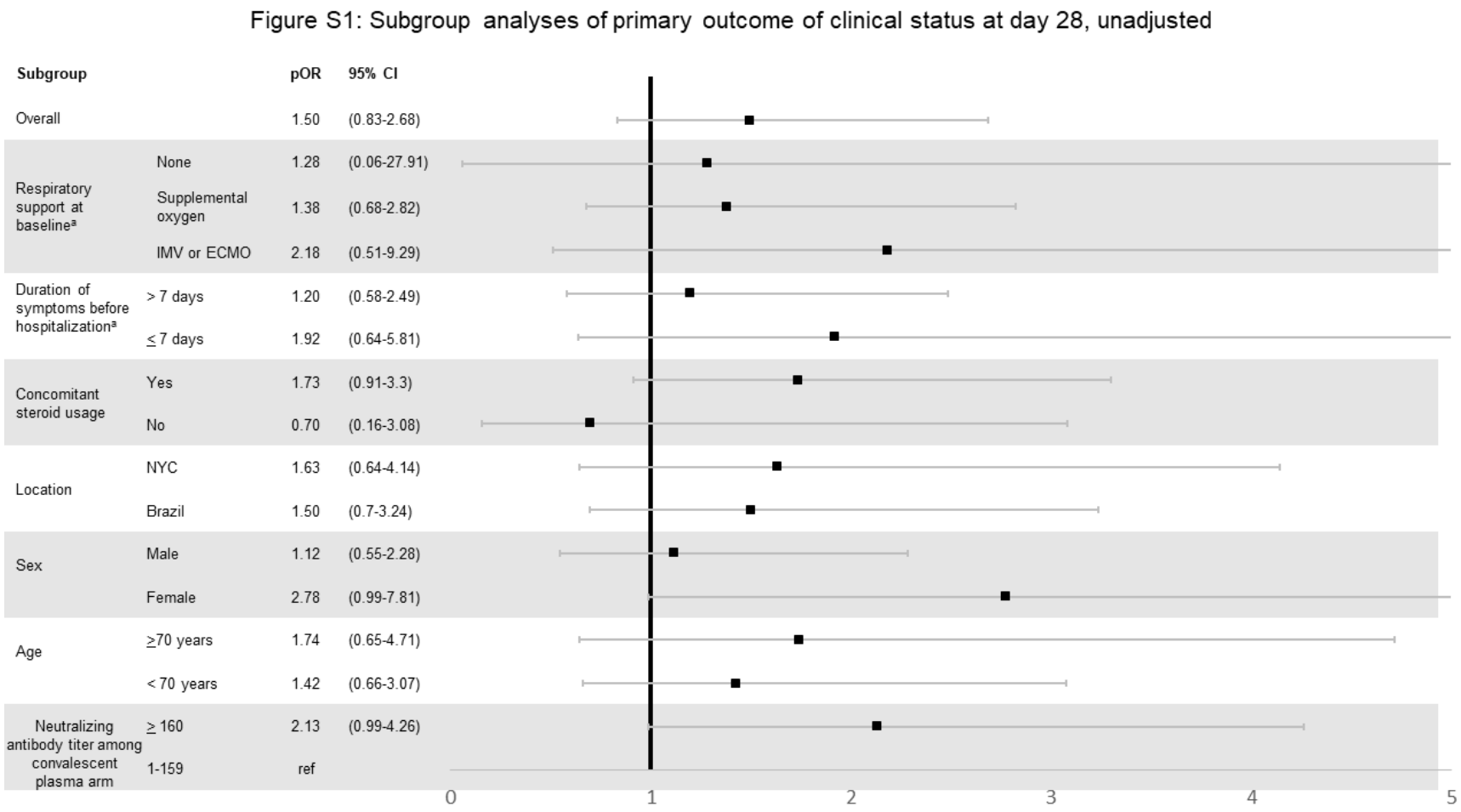
Table S11: Serious adverse events

Serious adverse event	Convalescent plasma N=147	Control plasma N=72
Patients with ≥1 serious adverse event reported - any organ system[a]	39 (26.5)	26 (36.1)
Patients with ≥1 serious cardiovascular adverse event	16 (10.9)	12 (16.7)
Patients with ≥1 serious pulmonary adverse event reported	24 (16.3)	16 (22.2)
Patients with ≥1 serious renal/metabolic adverse event reported	7 (4.8)	5 (6.9)
Patients with ≥1 serious infectious adverse event reported	5 (3.4)	10 (13.9)
Patients with ≥1 serious hematologic adverse event reported	6 (4.1)	0 (0.0)
Patients with ≥1 serious inflammatory adverse event reported	1 (0.7)	0 (0.0)
Patients with ≥1 serious gastrointestinal/hepatic adverse event reported	0 (0.0)	1 (1.4)

Legend: [a]Patients may have had >1 serious adverse event across different organ systems

Supplemental Figures

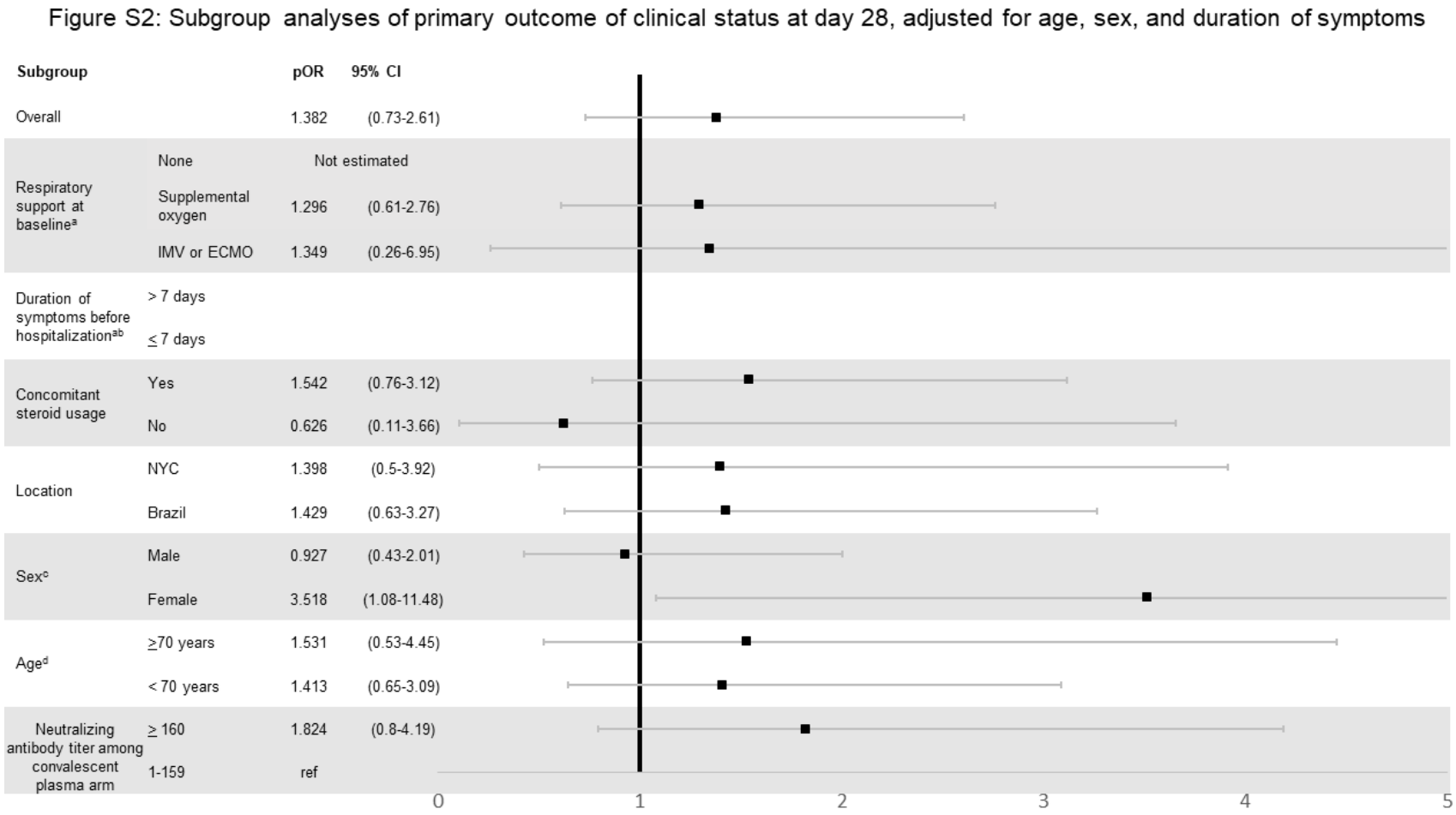
Figure S1



Abbreviations: pOR: proportional odds ratio, IMV: invasive mechanical ventilation, ECMO: extracorporeal membrane oxygenation, NYC: New York City

Legend: [a]Pre-specified subgroups

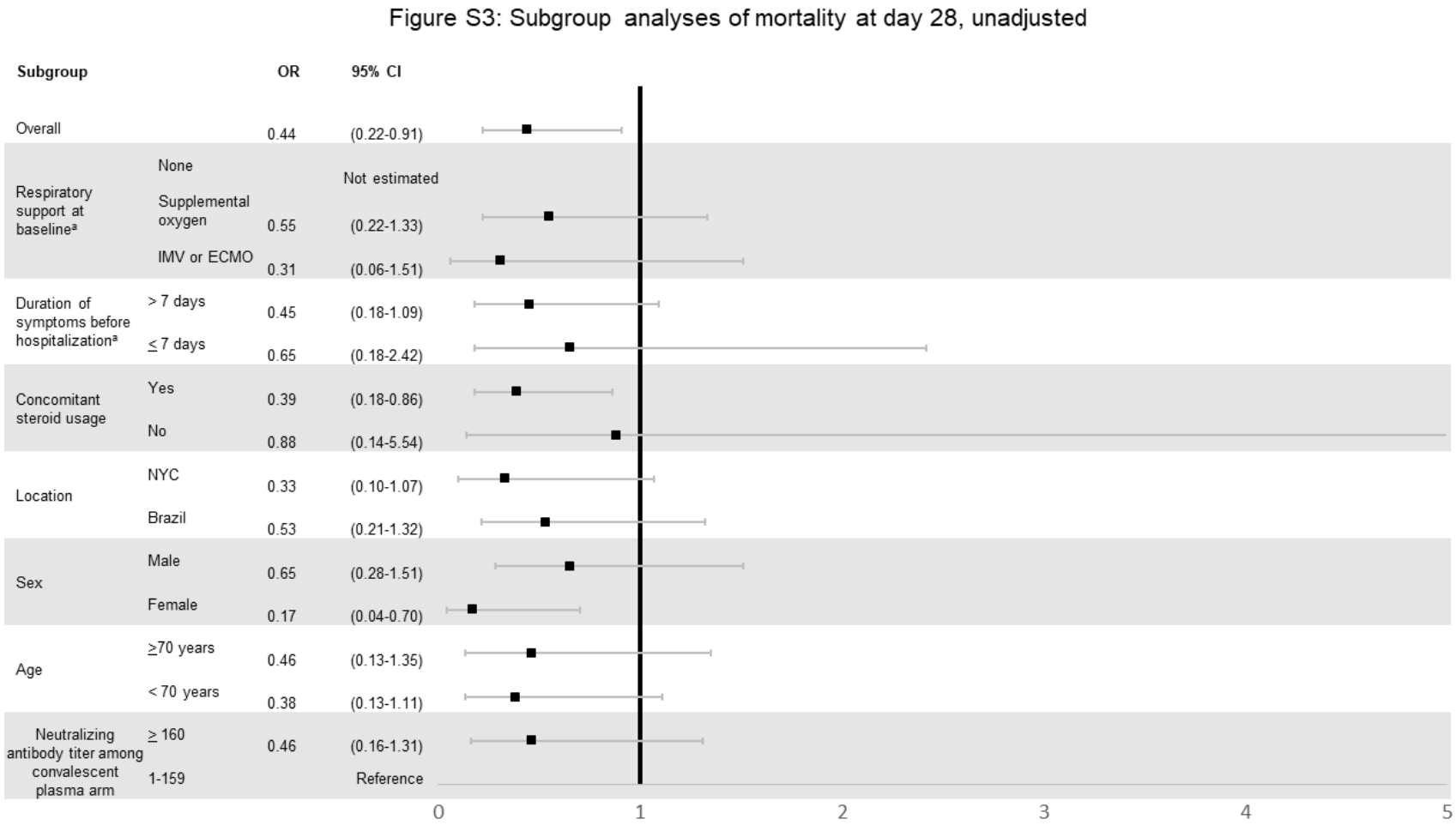
Figure S2



Abbreviations: pOR: proportional odds ratio, IMV: invasive mechanical ventilation, ECMO: extracorporeal membrane oxygenation, NYC: New York City

Legend: [a]Pre-specified subgroups, [b]Age- and sex-adjusted estimate presented in Figure 4, [c]Adjusted for age and duration of symptoms, [d]Adjusted for sex and duration of symptoms. pOR > 1 associated with improved 28 day clinical status with convalescent plasma.

Figure S3



Abbreviations: OR: odds ratio, IMV: invasive mechanical ventilation, ECMO: extracorporeal membrane oxygenation, NYC: New York City

Legend: [a]Pre-specified subgroups. OR <1 indicates lower 28-day mortality in convalescent plasma group compared to control plasma group.