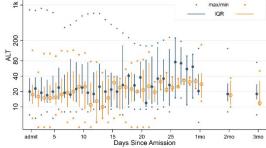
Supplementary Methods

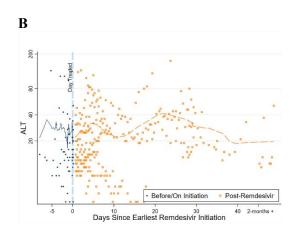
	applementary Methods			
outcome	exposure	method	model descriptions	report
binary	Era; inpatient vs outpatient; graft dysfunction; with or without remdesivir; with or without convalescent plasma; with or without dexamethasone	Fischer's Exact	n/a	proportion
continuous	same as above	Wilcoxon rank-sum	n/a	median, IQR
WHO severity scale at and during admission (continuous)	Era; graft dysfunction; with or without remdesivir; with or without convalescent plasma	Wilcoxon rank-sum	n/a	median, IQR
daily measures of WHO severity scale (longitudinal, ordinal)	graft dysfunction	multilevel ordinal logistic regression	includes patient-level random intercept, adjusting for severity at admission, interaction between graft dysfunction and days since admission (assuming proportional odds)	OR of interaction
daily measures of SCr, ALT, AST (if available, longitudinal, continuous)	with or without remdesivir; with or without convalescent plasma; with or without dexamethasone	mixed effects linear regression	includes patient-level random intercept, <u>days admitted</u> , a <u>days-since-treatment indicator</u> (0 denotes lab results drawn prior to or on the earliest date drug was administered, 1 or more how long was the data drawn since the earliest date same as the above); the coefficient of this days-since-treatment indicator would reflect the slope of lab values since treatment, aptly defined as interaction between the drug treatment and time. *Of note, the days-since-treatment indicator for lab values drawn from patients who were never treated with the drug would all be 0, and would be 0 for pre-treatment lab values for those who were treated in subsequent days.	mean change of days admitted for untreated; a linear combination of days-since-treatment plus days admitted for treated; p for interaction
daily measures proteinuria (if available, longitudinal, binary yes/no)	with or without remdesivir; with or without convalescent plasma	multilevel logistic regression	patient-level random intercept, days admitted, days- since-treatment indicator characterized as the above	linear combination of days-since- treatment plus days admitted
mortality	era	Fine and Gray competing- risks regression	unadjusted, with alive at discharge being the competing event, censored otherwise (i.e. still admitted)	sub-hazard ratio

length of stay	era; graft	Fine and	unadjusted, with death at discharge being the	sub-hazard
(i.e. discharge	dysfunction	Gray	competing event, censored otherwise (i.e. still	ratio
rate)		competing-	admitted)	
		risks		
		regression		

**Supplementary Figure 1: Trajectories of ALT For SOT Recipients Admitted to the Hospital** For COVID-19, Stratified by Remdesivir Use. S1A: distribution of ALT by time since admission, stratified by use/nonuse of remdesivir. S1B: lowess plot of change over time in ALT for patients who received remdesivir, by days before/after initiation of treatment. A

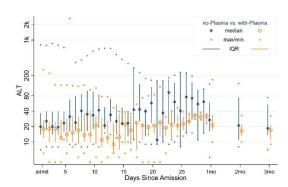


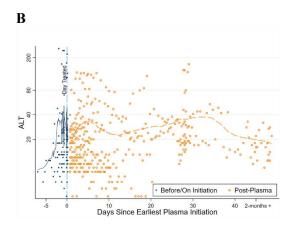




Supplementary Figure 2: Trajectories of ALT For SOT Recipients Admitted to the Hospital For COVID-19, Stratified by Use of Convalescent Plasma. S2A: distribution of ALT by time since admission, stratified by use/nonuse of convalescent plasma. S2B: lowess plot of change over time in ALT for patients who received convalescent plasma, by days before/after initiation of treatment.

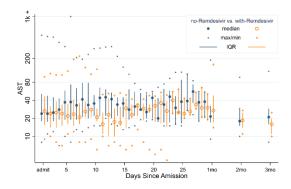
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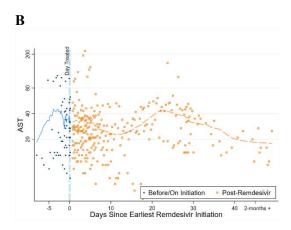




Supplementary Figure 3: Trajectories of AST For SOT Recipients Admitted to the Hospital For COVID-19, Stratified by Remdesivir Use. S3A: distribution of AST by time since admission, stratified by use/nonuse of remdesivir. S3B: lowess plot of change over time in AST for patients who received remdesivir, by days before/after initiation of treatment.

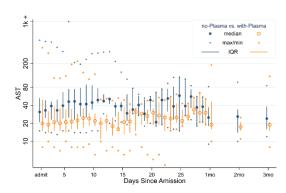
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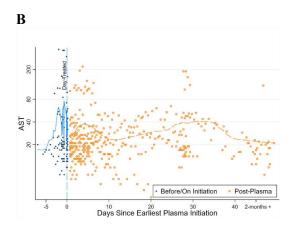




Supplementary Figure 4: Trajectories of AST For SOT Recipients Admitted to the Hospital For COVID-19, Stratified by Use of Convalescent Plasma. S4A: distribution of AST by time since admission, stratified by use/nonuse of convalescent plasma. S4B: lowess plot of change over time in AST for patients who received convalescent plasma, by days before/after initiation of treatment.

A





Supplementary Table 1: Complications, Laboratory Values, and Outcomes in Inpatients
Who Received Remdesivir Versus Inpatients Who Did Not.

did not receive remdesivir received rem

	did not receive remdesivir	received remdesivir	p-value
n	53	24	
highest WHO score achieved			< 0.001
mild, no O2	29 (54.7%)	0 (0.0%)	
mild, mask or nasal	18 (34.0%)	12 (50.0%)	
severe, non-invasive	3 (5.7%)	4 (16.7%)	
severe, intubated or ventilated	1 (1.9%)	3 (12.5%)	
ventilated, plus IVP, ECMO or CRRT	1 (1.9%)	2 (8.3%)	
death	1 (1.9%)	3 (12.5%)	
highest WHO score achieved, median (IQR)	3 (3, 4) (n=53)	5 (4, 6) (n=24)	< 0.001
highest WHO score achieved, mean (SD)	3.7 (1.0) (n=53)	5.2 (1.5) (n=24)	< 0.001
ventilated or intubated	3 (5.7%)	7 (29.2%)	0.008
CMV PCR result			0.43
negative	35 (66.0%)	17 (70.8%)	
positive	4 (7.5%)	4 (16.7%)	
n/a	14 (26.4%)	3 (12.5%)	
beta-D glucan			0.20
normal	31 (58.5%)	19 (79.2%)	
intermediate	0 (0.0%)	1 (4.2%)	
elevated	1 (1.9%)	3 (12.5%)	
n/a	21 (39.6%)	1 (4.2%)	
galactomannan category			1.0
negative < 0.5	31 (58.5%)	21 (87.5%)	
positive >=0.5	2 (3.8%)	2 (8.3%)	
n/a	20 (37.7%)	1 (4.2%)	
cryptococcal antigen			1.0
negative	23 (43.4%)	14 (58.3%)	
positive	1 (1.9%)	0 (0.0%)	
n/a	29 (54.7%)	10 (41.7%)	
Histoplasma antigen			1.0
1	22 (41.5%)	15 (62.5%)	
2	1 (1.9%)	0 (0.0%)	
n/a	30 (56.6%)	9 (37.5%)	
peak CRP, median (IQR)	5 (1, 10) (n=50)	7 (3, 10) (n=24)	0.24
peak IL-6 (before tocilizumab if given), median (IQR)	35 (11, 94) (n=40)	35 (19, 76) (n=21)	0.6
ALT (FU) elevation 2x ULN, new/persistent	3 (5.7%)	1 (4.2%)	1.0
ALT (FU) elevation 5x ULN, new/persistent	0 (0%)	0 (0%)	n/a
AST (FU) elevation 2x ULN, new/persistent	5 (9.4%)	2 (8.3%)	1.0
AST (FU) elevation 5x ULN, new/persistent	2 (3.8%)	0 (0.0%)	1.0
persistent AKI at follow up (>4wks)	3 (7.0%)	2 (11.8%)	0.6
	·	<del></del>	

change of SCr: last and baseline, mean (SD)	-0.0 (0.2) (n=43)	-0.2 (1.4) (n=17)	0.51
change of SCr: last and baseline, median			
(IQR)	0.1 (-0.1, 0.1) (n=43)	-0.1 (-0.3, -0.0) (n=17)	0.037
baseline proteinuria	13 (29.5%) (n=44)	8 (40.0%) (n=20)	0.57
PCrR ever higher than 0.2	16 (30.2%)	10 (41.7%)	0.44
significant increase (>=0.3) in PCrR between last		<u> </u>	
& first	3 (8.8%) (n=34)	3 (21.4%) (n=14)	0.34
acute cellular rejection at 90 days	1 (2.9%)	0 (0.0%)	1.0
antibody mediated rejection at 30 days	1 (1.9%)	0 (0.0%)	1.0
antibody mediated rejection at 60 days	1 (2.7%)	0 (0.0%)	1.0
antibody mediated rejection at 90 days	2 (5.9%)	0 (0.0%)	1.0
graft dysfunction	17 (32.1%)	8 (33.3%)	1.0
ICU	7 (13.2%)	10 (41.7%)	0.008
ARDS	0 (0.0%)	3 (12.5%)	0.028
septic shock	1 (1.9%)	2 (8.3%)	0.23
acute liver injury	4 (7.5%)	1 (4.2%)	1.00
myocarditis	0 (0.0%)	1 (4.2%)	0.31
encephalopathy	0 (0.0%)	1 (4.2%)	0.31
death	1 (1.9%)	3 (12.5%)	0.087

## Supplementary Table 2: Complications, Laboratory Values, and Outcomes in Inpatients Who Received Convalescent Plasma Versus Inpatients Who Did Not.

	did not receive convalescent plasma	received convalescent plasma	p-value
n	33	44	
highest WHO score achieved			0.9
mild, no O2	12 (36.4%)	17 (38.6%)	
mild, mask or nasal	14 (42.4%)	16 (36.4%)	
severe, non-invasive	4 (12.1%)	3 (6.8%)	
severe, intubated or ventilated	1 (3.0%)	3 (6.8%)	
ventilated, plus IVP, ECMO or CRRT	1 (3.0%)	2 (4.5%)	
death	1 (3.0%)	3 (6.8%)	
highest WHO score achieved, median (IQR)	4 (3, 4) (n=33)	4 (3, 5) (n=44)	0.9
highest WHO score achieved, mean (SD)	4.0 (1.2) (n=33)	4.2 (1.5) (n=44)	0.53
ventilated or intubated	2 (6.1%)	7 (15.9%)	0.50
CMV result			1.0
negative	20 (60.6%)	32 (72.7%)	
positive	3 (9.1%)	5 (11.4%)	
n/a	10 (30.3%)	7 (15.9%)	
beta-D glucan			0.8
normal	21 (63.6%)	29 (65.9%)	
intermediate	0 (0.0%)	1 (2.3%)	
elevated	1 (3.0%)	3 (6.8%)	
n/a	11 (33.3%)	11 (25.0%)	
galactomannan category			0.29
negative <0.5	20 (60.6%)	32 (72.7%)	
positive >=0.5	3 (9.1%)	1 (2.3%)	
n/a	10 (30.3%)	11 (25.0%)	
cryptococcal antigen			0.47
negative	17 (51.5%)	20 (45.5%)	
positive	1 (3.0%)	0 (0.0%)	
n/a	15 (45.5%)	24 (54.5%)	
Histoplasma antigen			0.45
1	16 (48.5%)	21 (47.7%)	
2	1 (3.0%)	0 (0.0%)	
n/a	16 (48.5%)	23 (52.3%)	
peak CRP, median (IQR)	7 (2, 11) (n=32)	5 (2, 9) (n=42)	0.6
peak IL-6 (before tocilizumab if given), median			
(IQR)	50 (13, 162) (n=27)	27 (12, 65) (n=34)	0.099
ALT (FU) elevation 2x ULN, new/persistent	0 (0.0%)	4 (9.1%)	0.13
ALT (FU) elevation 5x ULN, new/persistent	0 (0%)	0 (0%)	n/a
AST (FU) elevation 2x ULN, new/persistent	1 (3.0%)	6 (13.6%)	0.23

AST (FU) elevation 5x ULN, new/persistent	0 (0.0%)	2 (4.5%)	0.:
persistent AKI at follow up (>4wks)	2 (8.0%)	3 (8.6%)	1.0
change of SCr: last and baseline, mean (SD)	-0.0 (0.2) (n=25)	-0.1 (1.0) (n=35)	0.9
change of SCr: last and baseline, median (IQR)	0 (-0, 0) (n=25)	0 (-0, 0) (n=35)	0.7
baseline proteinuria	11 (42.3%) (n=26)	10 (26.3%) (n=38)	0.2
PCrR ever higher than 0.2	14 (42.4%)	12 (27.3%)	0.2
significant increase (>=0.3) in PCrR between last			
& first	1 (4.8%) (n=21)	5 (18.5%) (n=27)	0.2
acute cellular rejection at 90 days	0 (0.0%)	1 (5.9%)	0.4
antibody mediated rejection at 30 days	0 (0.0%)	1 (2.3%)	1.0
antibody mediated rejection at 60 days	0 (0.0%)	1 (4.8%)	0.4
antibody mediated rejection at 90 days	1 (4.2%)	1 (5.9%)	1.0
graft dysfunction as outcome (regardless of			
baseline)	8 (24.2%)	17 (38.6%)	0.2
ICU	7 (21.2%)	10 (22.7%)	1.0
complication, ARDS	0 (0.0%)	3 (6.8%)	0.2
septic shock	1 (3.0%)	2 (4.5%)	1.0
acute liver injury	2 (6.1%)	3 (6.8%)	1.0
myocarditis	1 (3.0%)	0 (0.0%)	0.4
encephalopathy	0 (0.0%)	1 (2.3%)	1.0
death	1 (3.0%)	3 (6.8%)	0.6

Supplementary Table 3: Complications, Laboratory Values, and Outcomes in Inpatients With Or Without Pre-Existing Graft Dysfunction Prior To Admission.

without graft with pre-existing the supplementary of the pre-existing of the supplementary of the supplementary of the supplementary Table 3: Complications, Laboratory Values, and Outcomes in Inpatients With Or Without Pre-Existing Graft Dysfunction Prior To Admission.

n         dysfunction         dysfunction         p-value           n         40         37         1           highest WHO score achieved mild, no O2         17 (42.5%)         12 (32.4%)         0.12           mild, mask or nasal severe, non-invasive severe, intubated or ventilated ventilated ventilated ventilated plus IVP, ECMO or CRRT 2 (5.0%)         1 (2.7%)         3 (8.1%)           severe, intubated or ventilated ventilated ventilated ventilated ventilated plus IVP, ECMO or CRRT 2 (5.0%)         1 (2.7%)         4 (10.8%)           highest WHO score achieved, median (IQR) 4 (3.4) (n=40)         4 (3.5) (n=37)         0.073           highest WHO score achieved, median (IQR) 4 (3.4) (n=40)         4 (3.5) (n=37)         0.033           cver ventilated ventilated ventilated 3 (7.5%)         7 (18.9%)         0.18           CMV PCR negative positive 4 (10.0%)         4 (10.0%)         4 (10.8%)         1.0           negative positive 4 (10.0%)         4 (10.8%)         24 (67.6%)         22 (2.2%)         8 (21.6%)         22 (2.2%)         8 (21.6%)         22 (2.2%)         8 (21.6%)         22 (2.2%)         8 (21.6%)         22 (2.2%)         8 (21.6%)         22 (2.2%)         8 (21.6%)         22 (2.2%)         8 (21.6%)         22 (2.2%)         12 (2.2%)         8 (21.6%)         22 (2.2%)         12 (2.2%)         8 (21.6%)         22 (2.2%) <th>· · ·</th> <th>without graft</th> <th>with pre-existing graft</th> <th></th>	· · ·	without graft	with pre-existing graft	
highest WHO score achieved mild, no O2		dysfunction	dysfunction	p-value
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		40	37	
mild, mask or nasal severe, non-invasive 2 (5.0%) 5 (13.5%) severe, intubated or ventilated ventilated, plus IVP, ECMO or CRRT death 0 (0.0%) 1 (2.7%) death 0 (0.0%) 1 (1.2%) highest WHO score achieved, median (IQR) 1 (3.4) (n=40) 1 (3.5) (n=37) 1 (0.033) highest WHO score achieved, mean (SD) 3 (7.5%) 7 (18.9%) 0 .18  CMV PCR 1 (1.0 %) 1 (1.	highest WHO score achieved			0.12
severe, non-invasive         2 (5.0%)         5 (13.5%)           severe, intubated or ventilated         1 (2.5%)         3 (8.1%)           ventilated, plus IVP, ECMO or CRRT         2 (5.0%)         1 (2.7%)           death         0 (0.0%)         4 (10.8%)           highest WHO score achieved, median (IQR)         4 (3, 4) (n=40)         4 (3, 5) (n=37)         0.073           highest WHO score achieved, mean (SD)         38 (1.0) (n=40)         4.5 (1.6) (n=37)         0.033           cver ventilated         3 (7.5%)         7 (18.9%)         0.18           CMV PCR         1.0         1.0         1.0           negative         27 (67.5%)         24 (67.6%)         24 (67.6%)           positive         4 (10.0%)         4 (10.8%)         4 (10.8%)           n/a         9 (22.5%)         8 (21.6%)         22 (2.2%)           intermediate         0 (0.0%)         1 (2.7%)         24 (64.6%)           intermediate         0 (0.0%)         1 (2.7%)         24 (64.9%)           elevated         1 (2.5%)         3 (8.1%)         1.0           n/a         12 (30.0%)         24 (64.9%)         0.11           galactomannan category         0 (0.0%)         1 (2.7%)         1.0           n/a	mild, no O2	17 (42.5%)	12 (32.4%)	
severe, intubated or ventilated ventilated, plus IVP, ECMO or CRRT death         1 (2.5%)         3 (8.1%)           ventilated, plus IVP, ECMO or CRRT death         2 (5.0%)         1 (2.7%)         4           highest WHO score achieved, median (IQR)         4 (3.4) (n=40)         4 (3.5) (n=37)         0.073           highest WHO score achieved, mean (SD)         3.8 (1.0) (n=40)         4.5 (1.6) (n=37)         0.033           ever ventilated         3 (7.5%)         7 (18.9%)         0.18           CMV PCR         1.0         1.0         1.0           negative positive         27 (67.5%)         24 (67.6%)         24 (67.6%)           positive positive         4 (10.0%)         4 (10.8%)         4 (10	mild, mask or nasal	18 (45.0%)	12 (32.4%)	
ventilated, plus IVP, ECMO or CRRT death         2 (5.0%)         1 (2.7%)           death         0 (0.0%)         4 (10.8%)           highest WHO score achieved, median (IQR)         4 (3, 4) (n=40)         4 (3, 5) (n=37)         0.073           highest WHO score achieved, mean (SD)         3.8 (1.0) (n=40)         4.5 (1.6) (n=37)         0.033           cever ventilated         3 (7.5%)         7 (18.9%)         0.18           CMV PCR         1.0         1.0           negative         27 (67.5%)         24 (67.6%)         1.0           positive         4 (10.0%)         4 (10.8%)         1.0           beta-D glucan         27 (67.5%)         23 (62.2%)         1.0           intermediate         0 (0.0%)         1 (2.7%)         2.2           elevated         1 (2.5%)         3 (8.1%)         2.2           n/a         12 (30.0%)         10 (27.0%)         2.2           galactomannan category         28 (70.0%)         24 (64.9%)         2.2           positive >-0.5         28 (70.0%)         24 (64.9%)         2.2           positive >>0.5         28 (70.0%)         24 (64.9%)         2.2           positive >>0.5         0 (0.0%)         1 (2.7%)         1.0           regative Po	severe, non-invasive	2 (5.0%)	5 (13.5%)	
death         0 (0.0%)         4 (10.8%)           highest WHO score achieved, median (IQR)         4 (3, 4) (n=40)         4 (3, 5) (n=37)         0.073           highest WHO score achieved, mean (SD)         3.8 (1.0) (n=40)         4.5 (1.6) (n=37)         0.033           ever ventilated         3 (7.5%)         7 (18.9%)         0.18           CMV PCR         1.0         1.0           negative         27 (67.5%)         24 (67.6%)         24 (67.6%)           positive         4 (10.0%)         4 (10.8%)         4 (10.8%)           n'a         9 (22.5%)         8 (21.6%)         2 (2.2%)           beta-D glucan         0.22         0.22         0.22           normal         27 (67.5%)         23 (62.2%)         0.22           intermediate         0 (0.0%)         1 (2.7%)         2 (2.2%)           intermediate         0 (0.0%)         1 (2.7%)         2 (2.2%)           n'a         12 (30.0%)         10 (27.0%)         0.11           galactomannan category         0 (0.0%)         4 (10.8%)         0.11           negative <0.5         28 (70.0%)         24 (64.9%)         0.0           positive >=0.5         0 (0.0%)         4 (10.8%)         1.0           regative <0.5	severe, intubated or ventilated	1 (2.5%)	3 (8.1%)	
highest WHO score achieved, median (IQR)         4 (3, 4) (n=40)         4 (3, 5) (n=37)         0.073           highest WHO score achieved, mean (SD)         3.8 (1.0) (n=40)         4.5 (1.6) (n=37)         0.033           ever ventilated         3 (7.5%)         7 (18.9%)         0.18           CMV PCR         1.0         1.0           negative positive         27 (67.5%)         24 (67.6%)         24 (67.6%)           positive positive         4 (10.0%)         4 (10.8%)         4 (10.8%)           n/a         9 (22.5%)         8 (21.6%)         22 (62.2%)           beta-D glucan pormal         27 (67.5%)         23 (62.2%)         23 (62.2%)           intermediate clevated         0 (0.0%)         1 (2.7%)         24 (64.9%)         24 (64.9%)         24 (64.9%)         24 (64.9%)         24 (64.9%)         24 (64.9%)         25 (62.2%)         26 (70.0%)         26 (70.0%)         27 (75.5%)         28 (70.0%)         24 (64.9%)         27 (75.5%)         28 (70.0%)         24 (64.9%)         28 (70.0%)         24 (64.9%)         28 (70.0%)         24 (64.9%)         28 (70.0%)         24 (64.9%)         28 (70.0%)         24 (64.9%)         28 (70.0%)         24 (64.9%)         28 (70.0%)         24 (64.9%)         28 (70.0%)         24 (64.9%)         28 (70.0%)         29 (75.0%)	ventilated, plus IVP, ECMO or CRRT	2 (5.0%)	1 (2.7%)	
highest WHO score achieved, mean (SD)         3.8 (1.0) (n=40)         4.5 (1.6) (n=37)         0.033           ever ventilated         3 (7.5%)         7 (18.9%)         0.18           CMV PCR         1.0           negative         27 (67.5%)         24 (67.6%)         positive           positive         4 (10.0%)         4 (10.8%)         positive           n/a         9 (22.5%)         8 (21.6%)         positive           beta-D glucan         0 (0.0%)         1 (2.7%)         celevated         1 (2.5%)         3 (8.1%)         positive           n/a         12 (30.0%)         10 (27.0%)         positive         0.11         positive <0.5	death	0 (0.0%)	4 (10.8%)	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	highest WHO score achieved, median (IQR)	4 (3, 4) (n=40)	4 (3, 5) (n=37)	0.073
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	highest WHO score achieved, mean (SD)	3.8 (1.0) (n=40)	4.5 (1.6) (n=37)	0.033
$\begin{array}{c ccccc} negative & 27 (67.5\%) & 24 (67.6\%) \\ positive & 4 (10.0\%) & 4 (10.8\%) \\ n/a & 9 (22.5\%) & 8 (21.6\%) \\ \hline \\ beta-D glucan & & & & & & & & \\ 0.22 \\ normal & 27 (67.5\%) & 23 (62.2\%) \\ intermediate & 0 (0.0\%) & 1 (2.7\%) \\ clevated & 1 (2.5\%) & 3 (8.1\%) \\ n/a & 12 (30.0\%) & 10 (27.0\%) \\ \hline \\ galactomannan category & & & & & \\ 0 (0.0\%) & 4 (10.8\%) \\ n/a & 12 (30.0\%) & 9 (24.3\%) \\ \hline \\ respitive < 0.5 & 28 (70.0\%) & 24 (64.9\%) \\ positive >= 0.5 & 0 (0.0\%) & 4 (10.8\%) \\ n/a & 12 (30.0\%) & 9 (24.3\%) \\ \hline \\ cryptococcal antigen & & & & \\ negative & 19 (47.5\%) & 18 (48.6\%) \\ positive & 0 (0.0\%) & 0 (0.0\%) \\ n/a & 21 (52.5\%) & 19 (51.4\%) \\ \hline \\ Histoplasma antigen & & & & \\ negative & 19 (47.5\%) & 18 (48.6\%) \\ positive & 0 (0.0\%) & 1 (2.7\%) \\ n/a & 21 (52.5\%) & 18 (48.6\%) \\ \hline \\ positive & 0 (0.0\%) & 1 (2.7\%) \\ n/a & 21 (52.5\%) & 18 (48.6\%) \\ \hline \\ positive & 0 (0.0\%) & 1 (2.7\%) \\ n/a & 21 (52.5\%) & 18 (48.6\%) \\ \hline \\ peak IL-6 (before tocilizumab if given), median (IQR) & 6 (3, 10) (n=37) & 5 (2, 10) (n=37) & 0.7 \\ \hline \\ ALT (FU) elevation 2x ULN, new/persistent & 1 (2.5\%) & 3 (8.1\%) & 0.35 \\ \hline \\ ALT (FU) elevation 5x ULN, new/persistent & 0 (0\%) & 0 (0\%) & n/a \\ \hline \\ AST (FU) elevation 2x ULN, new/persistent & 2 (5.0\%) & 5 (13.5\%) & 0.25 \\ \hline \end{array}$	ever ventilated	3 (7.5%)	7 (18.9%)	0.18
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	CMV PCR			1.0
$\begin{array}{c cccccc} n/a & 9 & (22.5\%) & 8 & (21.6\%) \\ \hline beta-D glucan & & & & & & & & & \\ normal & 27 & (67.5\%) & 23 & (62.2\%) & & & \\ intermediate & 0 & (0.0\%) & 1 & (2.7\%) & & & \\ elevated & 1 & (2.5\%) & 3 & (8.1\%) & & & \\ n/a & 12 & (30.0\%) & 10 & (27.0\%) & & & \\ galactomannan category & & & & & & \\ n/a & 12 & (30.0\%) & 24 & (64.9\%) & & \\ positive >= 0.5 & 0 & (0.0\%) & 4 & (10.8\%) & & \\ n/a & 12 & (30.0\%) & 9 & (24.3\%) & & & \\ \hline cryptococcal antigen & & & & & \\ n/a & 12 & (30.0\%) & 9 & (24.3\%) & & & \\ \hline cryptococcal antigen & & & & & \\ n/a & 12 & (30.0\%) & 0 & (0.0\%) & & \\ n/a & 21 & (52.5\%) & 19 & (51.4\%) & & & \\ \hline Histoplasma antigen & & & & & \\ n/a & 21 & (52.5\%) & 18 & (48.6\%) & & \\ positive & & & & & & \\ 0 & (0.0\%) & & & & & \\ 12 & (30.0\%) & & & & & \\ \hline cryptococcal antigen & & & & \\ n/a & & & & & & \\ \hline 19 & (47.5\%) & & & & & \\ 18 & (48.6\%) & & & & \\ \hline positive & & & & & \\ 0 & (0.0\%) & & & & & \\ \hline 19 & (47.5\%) & & & & & \\ \hline 18 & (48.6\%) & & & & \\ \hline positive & & & & & \\ 19 & (47.5\%) & & & & \\ \hline 18 & (48.6\%) & & & \\ \hline positive & & & & \\ \hline 10 & & & & & \\ \hline 10 & & & & & \\ \hline ALT (FU) elevation 2x ULN, new/persistent & 1 & (2.5\%) & 3 & (8.1\%) & 0.35 \\ \hline ALT (FU) elevation 2x ULN, new/persistent & 0 & (0\%) & 0 & (0\%) & n/a \\ \hline AST (FU) elevation 2x ULN, new/persistent & 0 & (0\%) & 5 & (13.5\%) & 0.25 \\ \hline \end{array}$	negative	27 (67.5%)	24 (67.6%)	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	positive	4 (10.0%)	4 (10.8%)	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	n/a	9 (22.5%)	8 (21.6%)	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	beta-D glucan			0.22
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		27 (67.5%)	23 (62.2%)	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	intermediate	0 (0.0%)	1 (2.7%)	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	elevated	1 (2.5%)	3 (8.1%)	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	n/a	12 (30.0%)	10 (27.0%)	
negative <0.5	galactomannan category			0.11
n/a     12 (30.0%)     9 (24.3%)       cryptococcal antigen     1.0       negative     19 (47.5%)     18 (48.6%)       positive     0 (0.0%)     0 (0.0%)       n/a     21 (52.5%)     19 (51.4%)       Histoplasma antigen     1.0       negative     19 (47.5%)     18 (48.6%)       positive     0 (0.0%)     1 (2.7%)       n/a     21 (52.5%)     18 (48.6%)       peak CRP, median (IQR)     6 (3, 10) (n=37)     5 (2, 10) (n=37)     0.7       peak IL-6 (before tocilizumab if given), median (IQR)     36 (16, 96) (n=30)     33 (10, 78) (n=31)     0.7       ALT (FU) elevation 2x ULN, new/persistent     1 (2.5%)     3 (8.1%)     0.35       ALT (FU) elevation 2x ULN, new/persistent     0 (0%)     0 (0%)     n/a       AST (FU) elevation 2x ULN, new/persistent     2 (5.0%)     5 (13.5%)     0.25	negative < 0.5	28 (70.0%)	24 (64.9%)	
cryptococcal antigen       1.0         negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       0 (0.0%)         n/a       21 (52.5%)       19 (51.4%)         Histoplasma antigen       1.0         negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       1 (2.7%)         n/a       21 (52.5%)       18 (48.6%)         peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	positive >=0.5	0 (0.0%)	4 (10.8%)	
negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       0 (0.0%)         n/a       21 (52.5%)       19 (51.4%)         Histoplasma antigen       1.0         negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       1 (2.7%)         n/a       21 (52.5%)       18 (48.6%)         peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	n/a	12 (30.0%)	9 (24.3%)	
negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       0 (0.0%)         n/a       21 (52.5%)       19 (51.4%)         Histoplasma antigen       1.0         negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       1 (2.7%)         n/a       21 (52.5%)       18 (48.6%)         peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	cryptococcal antigen	,		1.0
positive         0 (0.0%)         0 (0.0%)           n/a         21 (52.5%)         19 (51.4%)           Histoplasma antigen         1.0           negative         19 (47.5%)         18 (48.6%)           positive         0 (0.0%)         1 (2.7%)           n/a         21 (52.5%)         18 (48.6%)           peak CRP, median (IQR)         6 (3, 10) (n=37)         5 (2, 10) (n=37)         0.7           peak IL-6 (before tocilizumab if given), median (IQR)         36 (16, 96) (n=30)         33 (10, 78) (n=31)         0.7           ALT (FU) elevation 2x ULN, new/persistent         1 (2.5%)         3 (8.1%)         0.35           ALT (FU) elevation 5x ULN, new/persistent         0 (0%)         0 (0%)         n/a           AST (FU) elevation 2x ULN, new/persistent         2 (5.0%)         5 (13.5%)         0.25	• •	19 (47.5%)	18 (48.6%)	
n/a       21 (52.5%)       19 (51.4%)         Histoplasma antigen       1.0         negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       1 (2.7%)         n/a       21 (52.5%)       18 (48.6%)         peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	_	0 (0.0%)	, ,	
negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       1 (2.7%)         n/a       21 (52.5%)       18 (48.6%)         peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25		21 (52.5%)	19 (51.4%)	
negative       19 (47.5%)       18 (48.6%)         positive       0 (0.0%)       1 (2.7%)         n/a       21 (52.5%)       18 (48.6%)         peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	Histoplasma antigen	, , ,		1.0
positive       0 (0.0%)       1 (2.7%)         n/a       21 (52.5%)       18 (48.6%)         peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	-	19 (47.5%)	18 (48.6%)	
peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	positive	· ·	1 (2.7%)	
peak CRP, median (IQR)       6 (3, 10) (n=37)       5 (2, 10) (n=37)       0.7         peak IL-6 (before tocilizumab if given), median (IQR)       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	n/a	21 (52.5%)	18 (48.6%)	
peak IL-6 (before tocilizumab if given), median       36 (16, 96) (n=30)       33 (10, 78) (n=31)       0.7         ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	peak CRP, median (IQR)	` '	`	0.7
ALT (FU) elevation 2x ULN, new/persistent       1 (2.5%)       3 (8.1%)       0.35         ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25		( ) ) ( )		
ALT (FU) elevation 5x ULN, new/persistent       0 (0%)       0 (0%)       n/a         AST (FU) elevation 2x ULN, new/persistent       2 (5.0%)       5 (13.5%)       0.25	(IQR)	36 (16, 96) (n=30)	33 (10, 78) (n=31)	0.7
AST (FU) elevation 2x ULN, new/persistent 2 (5.0%) 5 (13.5%) 0.25	ALT (FU) elevation 2x ULN, new/persistent	1 (2.5%)	3 (8.1%)	0.35
	ALT (FU) elevation 5x ULN, new/persistent	0 (0%)	0 (0%)	n/a
AST (FU) elevation 5x ULN, new/persistent 0 (0.0%) 2 (5.4%) 0.23	AST (FU) elevation 2x ULN, new/persistent	2 (5.0%)	5 (13.5%)	0.25
	AST (FU) elevation 5x ULN, new/persistent	0 (0.0%)	2 (5.4%)	0.23

persistent AKI at follow up (>4wks)	2 (5.9%)	3 (11.5%)	0.6
change of SCr: last and baseline, mean (SD)	-0.1 (0.7) (n=34)	0.1 (0.8) (n=26)	0.34
	0.0 (-0.2, 0.1)		
change of SCr: last and baseline, median (IQR)	(n=34)	-0.0 (-0.3, 0.1) (n=26)	0.8
baseline proteinuria	9 (25.0%) (n=36)	12 (42.9%) (n=28)	0.18
PCrR ever higher than 0.2	10 (25.0%) (n=40)	16 (43.2%) (n=37)	0.1
significant increase (>=0.3) in PCrR between			
last & first	0 (0.0%) (n=23)	6 (24.0%) (n=25)	0.02
acute cellular rejection at 90 days	0 (0.0%)	1 (2.8%) (n=36)	0.47
antibody mediated rejection at 30 days	0 (0.0%)	1 (2.7%) (n=37)	0.48
antibody mediated rejection at 60 days	0 (0.0%)	1 (2.8%) (n=36)	0.47
antibody mediated rejection at 90 days	0 (0.0%)	2 (5.6%) (n=36)	0.22
graft dysfunction	1 (2.5%)	24 (64.9%)	<0.0
ICU	4 (10.0%)	13 (35.1%)	0.01
complication, ARDS	1 (2.5%)	2 (5.4%)	0.6
septic shock	1 (2.5%)	2 (5.4%)	0.6
acute liver injury	4 (10.0%)	1 (2.7%)	0.36
myocarditis	0 (0.0%)	1 (2.7%)	0.48
encephalopathy	0 (0.0%)	1 (2.7%)	0.48
death	0 (0.0%)	5 (13.5%)	0.02

## Supplementary Table 4: Infections at 0-7 Days, 8-30 Days, 31-60 Days, 61-90 Days After Inpatient Admission

	Era 1 $(3/1 - 5/31)$	Era 2 $(6/1 - 11/30)$	p-value
n	21	56	
co-infection, Days 0 – 7 after admission	4 (19.0%)	18 (32.1%)	0.40
bacterial	4 (19.0%)	11 (19.6%)	
viral	0 (0.0%)	7 (12.5%)	
fungal	1 (4.8%)	5 (8.9%)	

infection type, Days 0 – 7 after admission		
bloodstream infection	0 (0.0%)	1 (1.8%)
Clostridium difficile diarrhea	0 (0.0%)	1 (1.8%)
CMV viremia	0 (0.0%)	3 (5.4%)
CNS infection	0 (0.0%)	0 (0.0%)
EBV viremia	0 (0.0%)	3 (5.4%)
intra-abdominal abscess	0 (0.0%)	1 (1.8%)
invasive fungal infection	1 (4.8%)	4 (7.1%)
osteomyelitis	0 (0.0%)	1 (1.8%)
respiratory/lung	2 (9.5%)	6 (10.7%)
skin/soft tissue infection	1 (4.8%)	0 (0.0%)
UTI	2 (9.5%)	4 (7.1%)
Zoster	0 (0.0%)	1 (1.8%)

	Era 1 $(3/1 - 5/31)$	Era 2 (6/1 – 11/30)	p-value
n	21	56	
infections, Days 8 – 30 after admission	0 (0.0%)	8 (14.3%)	0.10
bacterial	0 (0.0%)	6 (10.7%)	
viral	0 (0.0%)	2 (3.6%)	
fungal	0 (0.0%)	1 (1.8%)	

infection type, Days 8 – 30 after admission		
bloodstream infection	0 (0.0%)	1 (1.8%)
Clostridium difficile diarrhea	0 (0.0%)	0 (0.0%)
CMV viremia	0 (0.0%)	2 (3.6%)
CNS infection	0 (0.0%)	1 (1.8%)
EBV viremia	0 (0.0%)	0 (0.0%)
intra-abdominal abscess	0 (0.0%)	0 (0.0%)
invasive fungal infection	0 (0.0%)	1 (1.8%)
osteomyelitis	0 (0.0%)	0 (0.0%)
respiratory	0 (0.0%)	3 (5.4%)
UTI	0 (0.0%)	3 (5.4%)
Zoster	0(0.0%)	0(0.0%)

	Era 1 (3/1/20 –	Era 2 (6/1/20 –	
	5/31/20)	11/30/20)	p-value
n	21	56	
infections, Days 31 – 60 after admission	0 (0.0%)	3 (5.5%)	0.56
bacterial	0 (0.0%)	1 (1.8%) (n=55)	
viral	0 (0.0%)	2 (5.5%) (n=55)	
fungal	0 (0.0%)	0 (0.0%) (n=55)	

infection type, Days 31 – 60 after admission		
bloodstream infection	0 (0.0%)	0 (0.0%)
Clostridium difficile diarrhea	0 (0.0%)	0 (0.0%)
CMV viremia	0 (0.0%)	2 (5.5%)
CNS Infection	0 (0.0%)	0 (0.0%)
EBV viremia	0 (0.0%)	0 (0.0%)
intra-abdominal abscess	0 (0.0%)	0 (0.0%)
invasive fungal infection	0 (0.0%)	0 (0.0%)
osteomyelitis	0 (0.0%)	0 (0.0%)
respiratory	0 (0.0%)	0 (0.0%)
skin/soft tissue infection	0 (0.0%)	0 (0.0%)
UTI	0 (0.0%)	1 (1.8%)
Zoster	0 (0.0%)	0 (0.0%)

	Era 1 (3/1/20 –		p-value
	5/31/20)	Era 2 (6/1 – 11/30/20)	_
n	21	56	
infections, Days 61 – 90 after admission	1 (4.8%)	1 (1.8%) (n=55)	0.48
bacterial	1 (4.8%)	1 (1.8%) (n=55)	
viral	0 (0.0%)	0 (0.0%) (n=55)	
fungal	0 (0.0%)	1 (1.8%) (n=55)	

infection type, Days 61 – 90 after admission			
bloodstream infection	0 (0.0%)	0 (0.0%)	
Clostridium difficile diarrhea	0 (0.0%)	0 (0.0%)	
CMV viremia	0 (0.0%)	0 (0.0%)	
CNS infection	0 (0.0%)	0 (0.0%)	
EBV viremia	0 (0.0%)	0 (0.0%)	
intra-abdominal abscess	0 (0.0%)	0 (0.0%)	
invasive fungal infection	0 (0.0%)	1 (1.8%)	
osteomyelitis	0 (0.0%)	0 (0.0%)	
respiratory	0 (0.0%)	1 (1.8%)	
skin/soft tissue infection	0 (0.0%)	0 (0.0%)	
UTI	1 (4.8%)	0 (0.0%)	
Zoster	0 (0.0%)	0 (0.0%)	