Supplementary

s-Table 1. Binomial logistic regression analysis of factors associated with MAKE-30 in COVID-19 vs non-COVID-19 groups

| Characteristic | COVID-ARDS | | | | | | Non-COVID-19 ARDS | | | | | |
| | Univariate Analysis | | | Multivariate analysis | | | Univariate Analysis | | | Multivariate analysis | | |
	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value
Age	1.04	1.02–1.05	**<0.001**[*]	1.03	1.01–1.05	**0.004**	0.99	0.98–1.01	0.48			
Male	1.59	1.05–2.42	**0.027**[*]	1.50	0.92–2.49	0.107	0.89	0.53–1.50	0.67			
BMI	1	0.97–1.02	0.87				1.01	0.97–1.05	0.65			
Ethnicity			**0.01**[*]						0.22			
White	—	—		—	—		—	—				
Asian / Asian British	0.80	0.50–1.25		0.80	0.46–1.37	0.425	1.69	0.82–3.67				
Black / African / Caribbean	2.13	1.00–4.67		0.97	0.37–2.52	0.947	2.54	0.86–9.27				
Other	0.57	0.33–0.95		0.44	0.23–0.82	**0.011**	1.3	0.31–6.49				
Hypertension	2.11	1.42–3.15	**<0.001**[*]	1.20	0.72–2.00	0.477	1.15	0.65–2.07	0.63			
Diabetes mellitus	1.68	1.13–2.50	**0.011**[*]	1.74	1.05–2.88	**0.030**	0.98	0.52–1.87	0.95			
Obesity	0.79	0.54–1.15	0.22				1.51	0.88–2.66	0.14			
Asthma	0.79	0.44–1.38	0.41				0.84	0.32–2.27	0.72			
Ischemic heart disease	2.07	1.07–4.05	**0.031**[*]	0.89	0.38–2.02	0.779	1.08	0.53–2.26	0.84			
Cancer	0.89	0.33–2.22	0.81				1.84	0.95–3.73	0.073			
eGFR	0.95	0.94–0.96	**<0.001**[*]	0.95	0.94–0.97	**<0.001**	0.97	0.96–0.98	**<0.001**[*]	0.97	0.96–0.68	**<0.001**
White cell count	1.01	0.99–1.03	0.43				0.97	0.94–1.00	**0.029**[*]	0.98	0.95–1.01	0.194
Neutrophils	1.03	1.00–1.07	0.075				0.99	0.97–1.01	0.36			
Lymphocyte	1.03	0.98–1.21	0.27				0.91	0.72–1.14	0.41			
Monocytes	1.00	0.94–1.06	0.95				1.07	0.84–1.43	0.61			
Eosinophils	2.43	0.94–15.0	0.073				0.65	0.17–2.03	0.45			
Platelets	0.996	0.994–0.998	<0.001				0.998	0.996–1.00	0.051			
Albumin	0.95	0.91–0.99	**0.011**[*]	0.98	0.94–1.03	0.402	0.92	0.89–0.96	**<0.001**[*]	0.91	0.86–0.95	**<0.001**
Bilirubin	1.02	1.01–1.05	**0.002**[*]	1.03	1.01–1.06	**0.013**	1.03	1.01–1.05	**<0.001**[*]	1.03	1.01–1.05	**0.002**
CRP	1.003	1.001–1.005	<0.001				1.00	0.998–1.002	0.947			

[*] Variables associated with MAKE-30 in the univariable analysis and included in a backward multivariable model.
Abbreviations: BMI, body mass index; eGFR, estimated glomerular filtration rate; CRP, C-reactive protein.

s-Table 2. Binomial logistic regression analysis of factors associated with MAKE-90 in COVID-19 vs non-COVID-19 groups

| Characteristic | COVID-19 group | | | | | | Non-COVID-19 group | | | | | |
| | Univariate Analysis | | | Multivariate analysis | | | Univariate Analysis | | | Multivariate analysis | | |
	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value
Age	1.03	1.02–1.05	**<0.001**[*]	1.01	1.01–1.05	**0.006**	0.99	0.98–1.01	0.47			
Male	1.65	1.10–2.52	**0.016**[*]	1.63	1.00–2.72	0.054	0.85	0.50–1.44	0.55			
BMI	1	0.97–1.03	0.96				1	0.97–1.04	0.82			
Ethnicity			**0.011**[*]						0.17			
White	—	—					—	—				
Asian / Asian British	0.76	0.48–1.19		0.74	0.40–1.12	0.274	2	0.95–4.56				
Black / African / Caribbean	2.04	0.96–4.47		0.93	0.95–5.18	0.882	2.33	0.79–8.50				
Other	0.57	0.34–0.95		0.44	0.32–0.99	0.010	1.19	0.28–5.95				
Hypertension	2.02	1.36–3.00	**<0.001**[*]	1.11	0.76–1.95	0.695	1.2	0.67–2.18	0.54			
Diabetes mellitus	1.74	1.17–2.59	**0.006**[*]	1.89	1.25–3.24	**0.013**	1.07	0.56–2.07	0.84			
Obesity	0.83	0.57–1.21	0.34				1.31	0.75–2.30	0.34			
Asthma	0.83	0.46–1.44	0.51				0.96	0.36–2.70	0.94			
Ischemic heart disease	2.01	1.04–3.92	**0.039**[*]	0.85	0.46–2.11	0.698	1.47	0.70–3.25	0.31			
Cancer	0.87	0.32–2.16	0.76				1.63	0.84–3.31	0.15			
eGFR	0.95	0.94–0.96	**<0.001**[*]	0.95	0.94–0.96	**<0.001**	0.97	0.96–0.98	**<0.001**[*]	0.97	0.96–0.98	**<0.001**
White cell count	1.01	0.99–1.03	0.48				0.97	0.94–1.00	**0.046**[*]	0.98	0.95–1.01	0.249
Neutrophils	1.03	1.00–1.07	0.09				0.99	0.97–1.01	0.29			
Lymphocyte	1.03	0.98–1.20	0.29				0.92	0.73–1.17	0.5			
Monocytes	1.00	0.94–1.06	0.97				1.06	0.83–1.42	0.67			
Eosinophils	2.59	0.95–16.5	0.067				0.6	0.16–1.89	0.38			
Platelets	0.996	0.994–0.998	<0.001				0.998	0.997–1.00	0.087			
Albumin	0.95	0.91–0.99	**0.011**[*]	0.98	0.93–1.03	0.365	0.92	0.88–0.95	**<0.001**[*]	0.90	0.85–0.94	**<0.001**
Bilirubin	1.02	1.01–1.05	**0.003**[*]	1.03	1.01–1.06	**0.018**	1.03	1.01–1.05	**<0.001**[*]	1.03	1.01–1.05	**0.007**
CRP	1.003	1.001–1.005	<0.001				0.999	0.997–1.001	0.826			

[*] Variables associated with MAKE-90 in the univariable analysis and included in a backward multivariable model.
Abbreviations: BMI, body mass index; eGFR, estimated glomerular filtration rate; CRP, C-reactive protein.

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s-Table 3. Binomial logistic regression analysis of factors associated with MAKE-180 in COVID-19 vs non-COVID-19 groups

| Characteristic | COVID-19 group | | | | | | Non-COVID-19 group | | | | | |
| | Univariate Analysis | | | Multivariate analysis | | | Univariate Analysis | | | Multivariate analysis | | |
	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value
Age	1.04	1.02–1.06	**<0.001**[*]	1.04	1.01–1.06	**0.001**	1	0.98–1.02	>0.99			
Male	1.65	1.10–2.50	**0.016**[*]	1.64	1.00–2.74	0.051	0.96	0.56–1.64	0.89			
BMI	1	0.97–1.02	0.87				1	0.97–1.04	0.82			
Ethnicity			**0.026**[*]						0.38			
White	—	—		—	—		—	—				
Asian / Asian British	0.79	0.50–1.23		0.79	0.46–1.36	0.403	1.71	0.81–3.90				
Black / African / Caribbean	2.04	0.96–4.47		0.90	0.34–2.40	0.837	1.99	0.67–7.28				
Other	0.63	0.37–1.04		0.50	0.27–0.97	**0.029**	1.02	0.24–5.09				
Hypertension	1.93	1.30–2.87	**0.001**[*]	1.01	0.60–1.68	0.968	1.23	0.68–2.26	0.5			
Diabetes mellitus	1.74	1.17–2.58	**0.006**[*]	1.90	1.15–3.14	**0.013**	1.03	0.54–2.01	0.93			
Obesity	0.82	0.56–1.19	0.29				1.41	0.80–2.52	0.23			
Asthma	0.87	0.49–1.51	0.63				1.09	0.41–3.24	0.86			
Ischemic heart disease	1.95	1.01–3.80	**0.048**[*]	0.79	0.34–1.83	0.593	1.28	0.61–2.83	0.52			
Cancer	0.84	0.31–2.10	0.72				1.59	0.81–3.29	0.18			
eGFR	0.95	0.93–0.96	**<0.001**[*]	0.95	0.94–0.96	**<0.001**	0.97	0.96–0.98	**<0.001**[*]	0.97	0.95–0.98	**<0.001**
White cell count	1.01	0.99–1.03	0.54				0.97	0.94–1.00	**0.042**[*]	0.98	0.95–1.01	0.232
Neutrophils	1.03	0.99–1.07	0.12				0.99	0.96–1.00	0.21			
Lymphocyte	1.03	0.98–1.18	0.31				0.9	0.71–1.14	0.39			
Monocytes	1.00	0.94–1.05	>0.99				1.03	0.81–1.38	0.81			
Eosinophils	2.39	0.93–14.8	0.078				0.51	0.13–1.60	0.25			
Platelets	0.996	0.994–0.998	<0.001				0.998	0.997–1.00	0.078			
Albumin	0.95	0.92–0.99	**0.013**[*]	0.98	0.94–1.03	0.452	0.91	0.88–0.95	**<0.001**[*]	0.89	0.85–0.94	**<0.001**
Bilirubin	1.02	1.01–1.05	**0.003**[*]	1.03	1.01–1.06	**0.016**	1.03	1.01–1.05	**<0.001**[*]	1.03	1.01–1.05	**0.007**
CRP	1.003	1.001–1.004	0.001				0.999	0.997–1.001	0.53			

[*] Variables associated with MAKE-180 in the univariable analysis and included in a backward multivariable model.
Abbreviations: BMI, body mass index; eGFR, estimated glomerular filtration rate; CRP, C-reactive protein.

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s-Table 4. Comparisons between patients who received RRT and those who did not within 30 days in the COVID-19 group

Variables [*]	Overall (N=458)	No RRT (N=317)	RRT (N=141)	P-value
eGFR, ml/min per 1.73 m^2	84 [60-90]	90.0 [81-90]	54.0 [28-74]	<0.001
Mortality, (n, %)	138 (30%)	65 (21%)	73 (52%)	<0.001

Data is presented as median (IQR), unless otherwise stated.
[*] Data collected by 365 days from ICU admission.
Abbreviations: eGFR, estimated glomerular filtration rate, RRT, renal replacement therapy, CI, confidence interval.

s-Table 5. Comparisons between patients who received RRT and those who did not within 30 days in the non-COVID-19 group

Variables [*]	Overall (N=250)	No RRT (N=138)	RRT (N=112)	P-value
eGFR, ml/min per 1.73 m^2	63 [39-88]	79.0 [58-90]	36.0 [26-51]	<0.001
Mortality, (n, %)	128 (51%)	54 (39%)	74 (66%)	<0.001

Data is presented as median (IQR), unless otherwise stated.
[*] Data collected by 365 days from ICU admission.
Abbreviations: eGFR, estimated glomerular filtration rate, RRT, renal replacement therapy, CI, confidence interval.

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s-Table 6. Renal recovery of AKI patients at hospital discharge in both group

	Overall (N=398)	COVID-AKI (N=222)	Non-COVID AKI (N=176)	P-value[*]
Discharge 30 days				
Incomplete renal recovery	26 (6.5%)	17 (7.7%)	9 (5.1%)	1
Complete renal recovery	71 (17.8%)	47 (21.2%)	24 (13.6%)	
Discharge 90 days				
Incomplete renal recovery	61 (15.3%)	34 (15.3%)	27 (15.3%)	0.195
Complete renal recovery	129 (32.4%)	86 (38.7%)	43 (24.4%)	
Discharge 180 days				
Incomplete renal recovery	62 (15.6%)	35 (15.8%)	27 (15.3%)	0.208
Complete renal recovery	136 (34.2%)	91 (41.0%)	45 (25.6%)	

Data is presented as median (IQR), unless otherwise stated.
* p-values from the chi-squared test represent the differences between COVID-AKI vs non-COVID-AKI groups.
Abbreviations: AKI, acute kidney injury.

s-Table 7. Incidence of AKI and MAKE-365 across ARDS severity in COVID-19 group

	Overall (N=458)	Mild (N=39)	Moderate (N=209)	Severe (N=210)	P-value*
AKI Incidence	222 (49%)	15 (39%)	108 (52%)	99 (47%)	0.276
MAKE-365	178 (39%)	10 (26%)	87 (42%)	81 (39%)	0.17

Data presented as frequencies with percentages.
* p-values from Kruskal-Wallis test represent the differences in the incidence of AKI and MAKE-365 across ARDS severity in COVID-19 group.
Abbreviations: AKI, acute kidney injury, MAKE, major adverse kidney events.

s-Table 8. Incidence of AKI and MAKE-365 across ARDS Severity in non-COVID-19 group

	Overall (N=250)	Mild (N=41)	Moderate (N=98)	Severe (N=111)	P-value
AKI Incidence	176 (70%)	23 (56%)	67 (68%)	86 (78%)	0.032
MAKE-365	166 (66%)	22 (54%)	61 (62%)	83 (75%)	0.027

Data presented as frequencies with percentages.
* p-values from Kruskal-Wallis test represent the differences in the incidence of AKI and MAKE-365 across ARDS severity in non-COVID-19 group.
Abbreviations: AKI, acute kidney injury, MAKE, major adverse kidney events.

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s-Table 9. Incidence of MAKE among ARDS patients with only respiratory infection

	Overall (N=658)	COVID (N=458)	Non-COVID (N=200)	P-value
MAKE-30	280 (42.6%)	172 (37.6%)	108 (54.0%)	<0.001
MAKE-90	288 (43.8%)	175 (38.2%)	113 (56.5%)	<0.001
MAKE-180	297 (45.1%)	178 (38.9%)	119 (59.5%)	<0.001
MAKE-365	300 (45.6%)	178 (38.9%)	122 (61.0%)	<0.001

Data presented as frequencies with percentages.
* p-values from chi-squared test represent the differences of incidence of MAKEs outcome among ARDS patients with mainly respiratory infection in COVID-19 vs non-COVID-19 groups.
Abbreviations: MAKE, major adverse kidney events.