

**Supplementary table 1. Serum cytokines profile of patients with COVID-19**

	All patients (n=21)	severe cases (n=11)	moderate cases (n=10)	P value	Normal range
IL-1 $\beta$ , pg/mL	5.0 (5.0-5.0)	5.0 (5.0-5.0)	5.0 (5.0-5.0)	0.40	<5
increased, n/N (%)	1/16 (6.3%)	1/9 (11.1%)	0/7 (0.0%)	1.00	
IL-2R, U/mL	827.5 (455.3- 1301.8)	1270.0 (879.0- 1425.0)	453.0 (308.5- 456.0)	0.000	223- 710
increased, n/N (%)	9/16 (56.3%)	8/9 (88.9%)	1/7 (14.3%)	0.009	
IL-6, pg/mL	26.6 (7.5-43.4)	41.5 (24.8-114.2)	15.3 (6.2-29.5)	0.040	<7
increased, n/N (%)	13/16 (81.3%)	8/9 (88.9%)	5/7 (71.4%)	0.55	
IL-8, pg/mL	18.4 (10.9-49.4)	34.9 (17.7-48.9)	11.0 (6.4-34.6)	0.22	<62
increased, n/N (%)	3/16 (18.8%)	2/9 (22.2%)	1/7 (14.3%)	1.00	
IL-10, pg/mL	9.5 (6.6-11.0)	10.8 (9.7-11.8)	5.0 (5.0-8.2)	0.001	<9.1
increased, n/N (%)	9/16 (56.3%)	7/9 (77.8%)	2/7 (28.6%)	0.12	
TNF- $\alpha$ , pg/mL	9.5 (7.2-10.5)	10.5 (10.0-11.2)	7.3 (6.2-8.8)	0.023	<8.1
increased, n/N (%)	11/16 (68.8%)	8/9 (88.9%)	3/7 (42.9%)	0.11	
>10 pg/mL, n/N (%)	7/16 (43.8%)	7/9 (77.8%)	0/7 (0.0%)	0.003	

Abbreviations: COVID-19, Coronavirus Disease 2019; IQR, interquartile range; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2. Data are median (IQR) or n/N (%), where N is the total number of patients with available data. p values comparing severe cases and moderate cases are from  $\chi^2$ , Fisher's exact test, or unpaired 2-sided Student's t test.

**Supplementary table 2. Complications and Treatments of patients with COVID-19**

	No. (%)			P Value
	Total (n =21)	Severe cases (n =11)	Moderate cases (n =10)	
Death	4 (19.0%)	4 (36.4 %)	0 (0.0%)	0.09
Acute respiratory distress syndrome, n/N	6/10 (60.0%)	6/6 (100.0%)	0/4 (0.0%)	0.005
Respiratory failure, n/N	5/10 (50.0%)	5/6 (83.3%)	0/4 (0.0%)	0.048
Acute cardiac injury	2/21 (9.5%)	1 (9.1%)	1 (10.0%)	1.000
Hypoxic encephalopathy	2 (9.5%)	2 (18.2%)	0 (0.0%)	0.476
Shock	1 (4.8%)	1 (9.1%)	0 (0.0%)	1.000
Acute kidney injury	2 (9.5%)	2 (18.2%)	0 (0.0%)	0.476
Secondary infection	3 (14.3%)	3 (27.3%)	0 (0.0%)	0.214
Acute liver injury	1 (4.8%)	1 (9.1%)	0 (0.0%)	1.000
<b>Treatment</b>				
Antiviral therapy	17 (81.0%)	7 (63.6%)	10 (100%)	0.09
Glucocorticoid therapy	21 (100.0%)	11 (100.0%)	10 (100%)	NA
Dosage, mg	40.0 (40.0-40.0)	40.0 (40.0-80.0)	40.0 (40.0-40.0)	0.20
Duration of steroid use, days	5.0 (4.0-7.0)	6.0 (5.0-7.5)	4.0 (3.3-5.0)	0.21
Antibiotics	21 (100.0%)	11 (100.0%)	10 (100.0%)	NA
Moxifloxacin	15 (71.4%)	7 (63.6%)	8 (80.0%)	0.635
Cephalosporin	13 (61.9%)	7 (63.6%)	6 (60.0%)	1.000
Carbapenems	7 (33.3%)	4 (36.4%)	3 (30.0%)	1.000
Linezolid	4 (19.0%)	4 (36.4%)	0 (0.0%)	0.09
Intravenous immunoglobulin therapy	14 (66.7%)	7 (63.6%)	7 (70.0%)	1.000
Interferon inhalation	5 (23.8%)	1 (9.1%)	4 (40.0%)	0.149
Oxygen treatment	21 (100%)	11 (100%)	10 (100%)	NA
Mechanical ventilation	9 (42.9%)	9 (81.8%)	0 (0.0%)	0.000
ECMO	1 (4.8%)	1 (9.1%)	0 (0.0%)	1.000

Abbreviations: COVID-19, Coronavirus Disease 2019; ECMO, extracorporeal membrane oxygenation, IQR, interquartile range; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2. Data are median (IQR) or n (%), or n/N (%), where N is the total number of patients with available data. p values comparing severe cases and moderate cases are from  $\chi^2$ , Fisher's exact test, or unpaired 2-sided Student's t test.

STROBE Statement—Checklist of items that should be included in reports of *cohort studies*

	Item No	Recommendation	Page No.
<b>Title and abstract</b>	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	1
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	2
<b>Introduction</b>			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	4
Objectives	3	State specific objectives, including any prespecified hypotheses	4
<b>Methods</b>			
Study design	4	Present key elements of study design early in the paper	14
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	14
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	14
		(b) For matched studies, give matching criteria and number of exposed and unexposed	14
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	14-17
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	17
Bias	9	Describe any efforts to address potential sources of bias	14
Study size	10	Explain how the study size was arrived at	14
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	17
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	17
		(b) Describe any methods used to examine subgroups and interactions	17
		(c) Explain how missing data were addressed	17
		(d) If applicable, explain how loss to follow-up was addressed	NA
		(e) Describe any sensitivity analyses	NA
<b>Results</b>			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	14
		(b) Give reasons for non-participation at each stage	14
		(c) Consider use of a flow diagram	NA
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	5
		(b) Indicate number of participants with missing data for each variable of interest	5-8
		(c) Summarise follow-up time (eg, average and total amount)	5, Table 1

Outcome data	15*	Report numbers of outcome events or summary measures over time	5-8
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	NA
		(b) Report category boundaries when continuous variables were categorized	Table1-3
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	5-8
<b>Discussion</b>			
Key results	18	Summarise key results with reference to study objectives	9-13
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	12
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	12
Generalisability	21	Discuss the generalisability (external validity) of the study results	9-13
<b>Other information</b>			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	2

\*Give information separately for exposed and unexposed groups.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at <http://www.strobe-statement.org>.