Peer Review File

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Reviewer A

The authors wrote an interesting manuscript about the correlation between laboratory findings and non-recovered patients with SARS-CoV-2. Important issues are present.

Comment 1: Firstly, the authors have not provided data about the patients' symptoms. I believe it is mandatory to correlate the symptoms to the laboratory findings.

Reply 1: Thanks for your suggestion. We have added patients' symptoms based on your suggestion, and the added content is shown in the red part of Table 1.
Changes in the text: Page 19

Table 1 The baseline characteristics of recovered and non-recovered patients with COVID-19

	Recovered group (n=28)	Non-recovered group (n=40)
Hospitalized time-Median (P25-P75)	12.5 (10.0-16.0)	13.0 (10.0-16.7)
City-No. (%)		
Changchun	20 (71.4)	26 (65.0)
Siping	8 (28.6)	14 (35.0)
Age-M (P25-P75)		
Female	41 (32-49)	46 (29-72)
Male	38 (26-47)	41 (26-58)
Age groups-No. (%)		
<30yr	8 (28.5)	13 (32.5)
30-49yr	15 (53.6)	11 (27.5)
50-69yr	4 (14.3)	9 (22.5)
≥70yr	1 (3.6)	7 (17.5)
Sex-No. (%)		
Female	17 (60.7)	20 (50.0)
Male	11 (39.3)	20 (50.0)
Contact category-No. (%)		
Imported cases	17 (60.7)	11 (27.5)
Primary cases	8 (28.6)	20 (50.0)
Secondary cases	3 (10.7)	9 (22.5)
Signs and symptoms-No. (%)		

Fever	25 (89.3)	33 (82.5)
Cough	22 (78.6)	30 (75.0)
Nasal congestion	3 (10.7)	5 (12.5)
Sneezing	1 (3.6)	1 (2.5)
Haemoptysis	1 (3.6)	0 (0.0)
Sore throat	0 (0.0)	4 (10.0)
Pleuritic chest pain	1 (3.6)	2 (5.0)
Fatigue	12 (42.9)	13 (32.5)
Myalgia	6 (21.4)	6 (15.0)
Headache	3 (10.7)	3 (7.5)
Dyspnoea	2 (7.1)	7 (17.5)
Diarrhoea	6 (21.4)	3 (7.5)
Chronic basic diseases-No. (%)		
Endocrine system disease	1 (3.6)	5 (12.5)
Cardiovascular disease	4 (14.3)	6 (15.0)
Cerebrovascular disease	2 (7.1)	5 (12.5)
Respiratory system disease	0 (0.0)	4 (10.0)
Malignancy	2 (7.1)	0 (0.0)
Digestive system disease	0 (0.0)	1 (2.5)

Comment 2: Secondly, the authors included in their study 68 people with SARS-CoV-2 infection between January 21, 2020, and February 21, 2020. The clinical outcomes were monitored until February 21, 2020. So, a person admitted to the hospital on February 20, 2020, has been collocated in the "non-recovered group", even if it has been hospitalized only for one day. I believe this is a critical bias. Please comment. An alternative could be to complete the follow-up of all patients and divided them into two groups depending on the length of the hospitalization.

Reply 2: Thanks for your suggestion. The epidemic is a short-term concentrated outbreak, with most cases concentrated between January and February. On the termination date of this study, the median length of hospitalized time in recovered patients (13.0 days) is still higher than that of non-recovered patients (12.5 days), with an interquartile range of 10.0-16.7 days. In addition, after tracking the outcome of the non-recovered patients, all patients were discharged before March 9. In order to provide useful prognostic factor from laboratory findings, we compare the laboratory data between recovered and non-recovered patients.
Changes in the text: Page 8, line 1-2
"The median hospitalized time were 12.5 days (IQR, 10.0-16.0) for recovered group and 13.0 days (IQR, 10.0-16.7) for non-recovered patients."

Comment 3: Other issues
- The authors wrote that "Ethics Committee of the First Hospital of XXX". It is not clear what XXX means.
- Some typos are present.

Reply 3: The original manuscript includes the content of this section. However, due to the blind review requirements of the magazine, this part of the content was omitted in the review version. We confirm that this part of the original document is correct.

Reviewer B

I believe that a study as such would have been more useful in the beginning of the pandemic, when severity markers for COVID-19 were not quite clear. The researchers had started enrolling patients in January 2020; I believe they could have enrolled more patients; it seems that the study is underpowered to detect prognostic tools to assess severity.

Reply: Although the sample size of the study was only 68 cases, it already accounts for two-thirds of all confirmed patients with COVID-19 in Jilin Province. As of September 30, 2020, the total number of patients in Jilin Province was only 157 （http://wsjkw.jl.gov.cn/xwzx/xwfb/202009/t20200930_7565660.html）. Therefore, the study has certain regional supplementary significance.

Main concerns
Comment 1: I don't agree with oxygen saturation at rest ≤93% to be a severity marker. The authors should have stuck to the other definitions of severity (respiratory frequency and PaO2/FiO2 ratio). Many patients with COPD or other lung diseases have an oxygen saturation ≤93% in the absence of infection or decompensation. These patients, if presenting with mild COVID-19, might have been classified as experiencing severe COVID-19.
Reply 1: Thank you. In the latest diagnosis and treatment guidelines for SARS-CoV-2 (version 8) issued by the Chinese National Health Committee (http://www.nhc.gov.cn/yzygj/s7653p/202008/0a7bdf12bd4b46e5bd28ca7f9a7f5e5a/files/a449a3e2e2c94d9a856d5faea2ff0f94.pdf), the diagnostic criteria for severe classification still include Pulse Oximeter Oxygen Saturation ≤ 93% and PaO2/FiO2 ≤ 300 mmHg. Therefore, we think it is feasible to retain these diagnostic criteria.

Comment 2: There is what I believe to be a typo in line 83: "We have applied to waive the informed consent of all subjects and obtained approval from the Ethics Committee of the First Hospital of XXX."

Reply 2: The original manuscript includes the content of this section. However, due to the blind review requirements of the magazine, this part of the content was omitted in the review version. We confirm that this part of the original document is correct.

Comment 3: The first two paragraphs of the introduction are common knowledge and should be either removed or rewritten. They don't add much to the study in case.

Reply 3: We have corrected it according to your request. We have corrected the introduction according to your request.

Changes in the text: Page 4, line 2-10.

Comment 4: The findings of the study are not consistent - eosinophil count has not been described as a marker of severity in other COVID-19 studies all around the world.

Reply 4: In the paragraph of "Haematological tests" (Page11, 13-24), we have compared the differences between this and other studies on eosinophils (ref 8, Clinical characteristics of 140 patients infected with SARS-CoV-2 in Wuhan, China), and the formation of the differences has a certain theoretical basis according to reference 9 named "Eosinophil Responses During COVID-19 Infections and Coronavirus Vaccination". In addition, other studies (Role of Eosinophils in the Diagnosis and Prognostic Evaluation of COVID-19) have also shown the importance of eosinophils in prognostic evaluation. Therefore, we have reason to believe that the test index has certain clinical significance in prediction.

Comment 5: The authors have not calculated a sample size for the study, which is probably underpowered.

Reply 4: Based on the actual outbreak of the disease, the number of patients in the study was 68. Taking into account your suggestions, we relabeled the sample size in the Table 2 and Figure 2 legend to facilitate understanding.

Changes in the text: Page 18, 21, 22

"Figure 2

Temporal trajectories of laboratory tests. (A) Neutrophils. (B) Lymphocytes. (C) Eosinophils. (D) Basophils. (E) Monocytes. (F) LIC. (G) Platelets count (H) Plateletcrit. (I) Mean platelet volume. (J) Red blood cells. (K) Hemoglobin. (L) Hematocrit. (M) High-sensitivity C-reactive protein. (N) Cardiac troponin I. (O)

Cholinesterase. (P) Alanine aminotransferase. Here, only the parameters that differed over time between the recovered group and the non-recovered group were presented. The gay dotted line represents the upper bound of RI whereas the purple dotted line represents the lower bound. R: the recovered group (*n*=28); NR: the non-recovered group (*n*=40). F: the reference intervals for females; M: the reference intervals for males."

Table 2 Laboratory findings of patients with COVID-19 at onset to hospital admission

Laboratory parameters	All patients *n*=68	Recovered group *n*=28	Non-recovered group *n*=40	P
White blood cell, ×10⁹/L; RI:3.90-9.50	5.15 (3.92-6.22)	5.10 (4.06-6.15)	5.24 (3.88-6.30)	0.860
Decrease	8/62 (12.9)	3/28 (10.7)	5/34 (14.7)	
Neutrophils, 10⁹/L; RI:1.80-6.30	3.47 (2.58-4.38)	3.40 (2.70-4.75)	3.49 (2.13-4.14)	0.761

Table 2 Laboratory findings of patients with COVID-19 at onset to hospital admission

Laboratory parameters	All patients *n*=68	Recovered group *n*=28	Non-recovered group *n*=40	P
Alanine aminotransferase, U/L; RI: 9.0-50.0 (M), 7.0-40.0 (F)	25.0 (16.0-43.0)	25.0 (19.0-40.0)	24.0 (16.0-46.0)	0.771
Increase	9/56 (16.1)	3/23 (13.0)	6/33 (18.2)	
γ-glutamyl transpeptidase, U/L; RI: 10.0-60.0 (M), 7.0-45.0 (F)	24.0 (15.0-38.5)	24.0 (17.3-37.0)	26.0 (15.0-43.3)	0.839
Increase	8/54 (14.8)	2/22 (9.1)	6/32 (18.8)	
Decrease	1/54 (1.9)	0/22 (0.0)	1/32 (3.1)	