Dear Editor-in-Chief, Drs. Bals and Tantisira,

On behalf of our colleagues and co-authors, we are submitting our recent work entitled “**Risk factors for the critical illness in SARS-CoV-2 infection: a multicenter retrospective cohort study**”, by Sijing Cheng MD et al., for possible publication in *Respiratory Research.*

Identification of the predictive risk factors for critical illness of COVID-19 may save many lives, therefore, we conducted a retrospective multi-center study of SARS-CoV-2 infection with 52 critical and 200 non-critical hospitalized viral RNA positive COVID-19 patients from 15 hospitals in 3 provinces of China. The top risk factors for critical illness identified in our study include SOFA score ≥2, age older than 60 years, dyspnea, and leukocytosis > 9.5 X109/L, after adjusting for confounding factors. LASSO logistic regression identified the best combination of risk factors as SOFA score, age, dyspnea, and leukocytosis. The AUROC values for the risk factors in predicting critical illness were 0.921 for SOFA score, 0.776 for age, 0.764 for dyspnea, 0.658 for leukocytosis, and 0.960 for the combination of the four risk factors. Our findings advocate the use of risk factors SOFA score ≥2, age > 60, dyspnea and leukocytosis > 9.5 X109/L on admission, alone or in combination, to determine the optimal management of the patients and health care resources.

Thank you for your consideration!

Sincerely,

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