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Reply to: “Current smoking is not associated with COVID-19”

Janice M. Leung^{1,2}, Chen Xi Yang¹ and Don D. Sin^{1,2}

Affiliations: ¹Centre for Heart Lung Innovation, University of British Columbia, Vancouver, BC, Canada. ²Division of Respiratory Medicine, Dept of Medicine, St Paul’s Hospital, Vancouver, BC, Canada.

Correspondence: Don D. Sin, Division of Respiratory Medicine, Dept of Medicine, St. Paul’s Hospital, 1081 Burrard Street, Vancouver, BC V6Z1Y6, Canada. E-mail: Don.Sin@hli.ubc.ca

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Smoking and COPD are risk factors for severe COVID-19 <https://bit.ly/2KJxAbp>

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From the authors:

Like M. Rossato and co-workers, we too have been struck by the relative underrepresentation of current smokers in cohorts of coronavirus disease 2019 (COVID-19) patients, particularly in light of our recent findings that the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) receptor angiotensin-converting enzyme II (ACE-2) is upregulated in the airway epithelium of this population [1]. China [2], Italy (as reported by M. Rossato and co-workers), and now New York City [3] have all reported current smoking rates below those of their respective general populations. The reason for this is a mystery. One possible explanation is misclassification of smoking status owing to under-reporting of smoking in these cohorts. Another is that smokers may be taking medications that may offer some protection against COVID-19 (e.g. certain inhalers). It should be noted that severe COVID-19 preferentially targets the older population (>65 years) with comorbidities, in whom smoking rates are approximately 3–5 fold lower than that in the general population. Thus, the background smoking rates in the severe COVID-19 susceptible subgroups may be much lower than the general smoking rates of the population. Notwithstanding these issues, we should be extraordinarily cautious about the messaging surrounding smoking and COVID-19, especially in these fraught times where misinformation is commonly amplified in a vacuum of rigorous evidence [4, 5]. We are unaware of any evidence to date that demonstrates that smoking is protective against COVID-19. In fact, although current smoking has not been found to be a major risk factor for COVID-19, COPD patients appear to have worse outcomes upon contracting the virus with an almost threefold odds ratio of dying, needing mechanical ventilation, or being admitted to an intensive care unit [6]. As many of our COPD patients in this pandemic fit an unfavourable demographic profile – elderly, male, and with cardiovascular comorbidities – we would continue to recommend exercising caution in protecting them from COVID-19.