Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Treating COVID-19 with NRICM101 and NRICM102 – Author's reply

We thank Chi-Kuei Hsu and colleagues for their interest in our paper [1]. They are concerned about confounding effects, in particular, of remdesivir, corticosteroids and interleukin-6 blockers. However, their comments suggest a misread of the indication of NRICM101 and NRICM102, the data, as well as the references being cited.

First and foremost, NRICM101 is indicated for the treatment of COVID-19 among those who do not require supplemental oxygen. While Hsu and colleagues argue that remdesivir and corticosteroids provide clinical benefit, it is wise to take careful note of the circumstances of the references being used. First, remdesivir is found unable to bring clinical improvement for hospitalized patients with moderate COVID-19 [2]. It resulted in the removal of remdesivir from the World Health Organization list in November 2021. Only months later was it advised for conditional use [1]. Second, use of corticosteroids for patients who do not require supplemental oxygen is **NOT** recommended, according to the COVID-19 Treatment Guidelines updated on August 8 2022, the same source which the authors refer to [3]. Latest research also finds that early use of corticosteroids is not associated with a decrease in transfer to intensive care or intubation [4]. Similarly, studies focusing on severe or critical cases which Hsu and colleagues base their critiques upon evidently do not apply. In short, the effect of remdesivir and corticosteroids can be reasonably disregarded since they lack clinical importance in non-severe patients.

The question regarding hospital admission of mild-to-moderate patients is a decontextualized one. We would like to remind Hsu and colleagues of the directive of Taiwan's Central Epidemic Command Center (CECC) throughout 2020, 2021 until the first quarter of 2022, which required hospitalization for COVID-19 patient regardless of the severity. During the data collection period, hospitalization remained universally mandatory. Nonetheless, we did exclude those admitted for other disease than COVID-19 as Figure 2 illustrates.

Hsu and colleagues point out that IL-6 inhibitor is more frequently used in the study group (NRICM102 plus usual care) than the control group (usual care). Unfortunately, they are mistaken about the distribution in two groups. On the contrary, it is 8.1% in the NRICM102 group and 20.3% in the usual care group, indicating decreased use of IL-6 blockers among NRICM102 users.

Hsu and colleagues raise two seemingly warranted issues regarding drug effectiveness for different variants and tolerability. It is worthy to note that existing anti-COVID-19 therapeutics, including remdesivir which Hsu and colleagues strongly recommend, are introduced long before the emergence of Omicron variant. In this context, they are no different than NRICM101 & NRICM102. Nevertheless, we have foreseen and discussed these important issues of viral evolution and adverse effects in the Article with supplementary information.

Finally, we cordially invite Hsu and colleagues to revisit our article and the supplementary files, where they will find answers to all their concerns.

Declarations of interest

None.

Data Availability

No data was used for the research described in the article.

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