

Adjustment of Interval between Doses of COVID-19 Vaccine: A Concern for Cancerous Patients

Dear Editor,

The main issue is still COVID-19. Cancerous patients are a subset of people who are vulnerable to COVID-19. Cancer patients, like the general public, are advised to get vaccinated. The additional booster is generally recommended because cancer patients have a low baseline immune status. Another intriguing topic is the alteration of the time between COVID-19 vaccine doses. Another interesting idea used in some settings is the alternative approach.^[1] There are a few suggested alternatives, such as abbreviated and extended intervals. According to a pooled analysis by Voysey *et al.*, two doses of ChAdOx1 nCoV-19 were consistent with results reported in the trials' interim analysis, and they indicate the vaccine's efficacy, with outcomes varying by dose interval in the trials.^[2] Voysey *et al.* concluded that a 3-month dose interval could be preferable than a program with a short dose interval to protect the largest percentage of the population as soon as feasible when supplies are limited.^[2] After receiving a second dosage, it might further enhance protection.^[2]

When vaccines are scarce, a recurring policy debate is whether to vaccinate more people with the first dose and postpone the second dose or to stick with the recommended 2-dose series that has been shown to be effective in clinical trials.^[3] Moghadas *et al.* found no obvious benefit to delaying the second dose of Pfizer–BioNTech vaccines in terms of infection prevention unless the effectiveness of the first dose did not deteriorate over time.^[3] Moghadas *et al.* emphasize the importance of assessing the characteristics and persistence of vaccine-induced protection after the first dose to select the best time window between the two doses.^[3] The production and distribution of the COVID-19 vaccine have been slower than anticipated, according to a different Silva *et al.* research, impeding efforts to halt the current pandemic.^[4] The majority of COVID-19 vaccines now in use, according to Silva *et al.*, have a suggested delivery schedule that calls for two doses spaced 3–4 weeks apart.^[4] Silva *et al.* found that the delay is reliant on the vaccine mechanism of action and first-dose efficacy while epistemic difficulties apply to the interpretation of simulation outcomes.^[4]

The effects on public health of delaying the second dosage of the BNT162b2 or mRNA-1273 COVID-19 vaccination were examined by Romero-Brufau *et al.*^[5] Romero-Brufau *et al.*'s analysis suggests that a delayed second dose vaccination strategy could, under some conditions, result in reduced mortality over time.^[5] However, the initial dose's faster waning of immunity, which typically lasts between 2 and 4 months, gave rise to a competing alternative idea for shorter optimal dosing. According to Liu *et al.*, longer dosing intervals of more

than 6 months may reduce COVID-19 mortality. According to Liu *et al.*, some factors, such as the quick waning of first-dose induced immunity and higher immunological escape through the emergence of variants of concern,^[6] could significantly reduce optimal dosage interval.

Rather than prioritizing the most contagious individuals, Català *et al.* stated that immunizing vulnerable populations early will reduce total death, hospital admission, and public health limitations.^[7] According to Català *et al.*,^[7] the time between doses should be based on the anticipated availability of the vaccine and the efficacy of the first dose, with 3-month intervals being preferred over shorter intervals in the majority of practical circumstances. Modifying the interval between doses of the vaccine may be seen as a way to promote increased immune response. However, the majority of clinical evidence available is from general healthy vaccine recipients. There is still a scarcity of data for cancer patients. This is an intriguing topic for further investigation.

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Conflicts of interest

There are no conflicts of interest.

Beuy Joob^{1,2}, Viroj Wiwanitkit³

¹Sanitation 1 Academic Center, Bangkok, Thailand, ²Sanitation Academic Consultant, Modane, France, ³Research Center, Chandigarh University, Mohali, Punjab, India

Address for correspondence: Dr. Beuy Joob, Sanitation 1 Academic Center, Bangkok, Thailand. E-mail: beuyjoob@hotmail.com

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