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.

	n	Infection with B.1.1.7 variant	n	Infection with a non-B.1.1.7 variant	p value
Date of first positive PCR swab	30	Dec 3–20, 2020	30	Oct 10–Dec 20, 2020	..
Age (years)	30	77 (59–88)	30	79 (59–87)	0·976
Sex	30	..	30	..	0·436
Male	..	15 (50%)	..	18 (60%)	..
Female	..	15 (50%)	..	12 (40%)	..
Number of comorbidities	30	2 (1–3)	30	2 (1–3)	0·845
White ethnicity (%)	30	26 (87%)	30	30 (100%)	0·112
NEWS2*	30	..	30	..	..
At presentation	..	4 (2–7)	..	2·5 (1–6)	0·135
Maximum value	..	6 (4–8)	..	5 (3–9)	0·345
Respiratory rate oxygenation index	..	..	..	..	..
At presentation	30	20 (15–26)	30	24 (15–27)	0·371
At maximum F_iO_2	25	15 (11–21)	26	18 (13–26)	0·341
Sequential Organ Failure Assessment score	30	..	30	..	..
At presentation	..	3·0 (2–7)	..	3·5 (2–6)	0·858
At maximum F_iO_2	..	5·5 (2–7)	..	5·0 (2–7)	0·566
4C Mortality Score	30	..	30	..	..
At presentation	..	12·0 (9·0–14·8)	..	10·5 (9·0–14·0)	0·568
At maximum F_iO_2	..	12·5 (8·3–14·0)	..	11·5 (9·0–13·0)	0·463
Maximum ventilatory support received	30	..	30	..	0·265
Mechanical ventilation	..	3 (10%)	..	1 (3%)	..
Non-invasive ventilation	..	0 (0%)	..	1 (3%)	..
Standard oxygen therapy	..	18 (60%)	..	14 (47%)	..
No supplemental oxygen required	..	9 (30%)	..	14 (47%)	..
Treatment	..	..	..	..	..
Dexamethasone	18	13 (72%)	24	10 (42%)	0·049
Remdesivir	14	2 (14%)	22	1 (5%)	0·547
Anticoagulation	24	4 (17%)	30	8 (27%)	0·380
Tocilizumab	28	1 (4%)	28	0 (0%)	1·000
28-day mortality (%, 95% CI)	28	9 (32·1%, 17·9–50·7)	29	6 (20·7%, 9·8–38·4)	0·326
Patients with a severe clinical outcome†	30	11 (37%)	30	8 (27%)	0·405

Data are n (%) or median (IQR), unless otherwise stated. F_iO_2=fraction of inspired oxygen. NEWS=National Early Warning Score. *The NEWS2 score was not calculated at maximum F_iO_2. †A severe clinical outcome was defined as a WHO scale score by day 14 after symptom onset or the first positive SARS-CoV-2 PCR of at least 6 or death within 28 days.

Table: **Demographics and outcomes of cases of SARS-CoV-2 infection with B.1.1.7 variant compared with non-B.1.1.7 variants**

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treatments, and vaccinations. For the purposes of future case-control studies, we estimate post-hoc that a sample size of 234 patients in each group is required to detect an effect size of 11·4% in 28-day mortality for a baseline mortality in the control group of 20·7% at 80% power with 5% significance. We believe the jury is still out on whether B.1.1.7 infections are associated with increased mortality, with more time and data required.

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1 Frampton D, Rampling T, Cross A, et al. Genomic characteristics and clinical effect of the emergent SARS-CoV-2 B.1.1.7 lineage in London, UK: a whole-genome sequencing and hospital-based cohort study. *Lancet Infect Dis* 2021; published online April 12. https://doi.org/10.1016/S1473-3099(21)00170-5.

2 Challen R, Brooks-Pollock E, Read JM, Dyson L, Tsaneva-Atanasova K, Danon L. Risk of mortality in patients infected with SARS-CoV-2 variant of concern 202012/1: matched cohort study. *BMJ* 2021; **372:** n579.

3 Davies NG, Jarvis CI, Edmunds WJ, Jewell NP, Diaz-Ordaz K, Keogh RH. Increased mortality in community-tested cases of SARS-CoV-2 lineage B.1.1.7. *Nature* 2021; **593:** 270–74.

Two-test or three-test strategy for routine asymptomatic testing during air travel?

I read with interest the Article by Mathew V Kiang and colleagues,[1] who did a simulation study evaluating the effectiveness of five routine asymptomatic testing strategies for airline travel in reducing SARS-CoV-2 transmission, both at the passenger and the population level. These testing strategies were: (1) RT-PCR within 3 days of departure, (2) RT-PCR within 3 days of departure and 5 days after arrival, (3) rapid antigen test (RAT) on the day of travel, (4) RAT on the day of travel and RT-PCR 5 days after arrival, and (5) RT-PCR 5 days after arrival. 5-day quarantine periods were included in strategies 2 and 4. The testing strategies were based on either one or two tests. Single-test strategies were not as effective as two-test strategies, showing percentage reductions of 32–42%. Of the two-test strategies, a strategy using pre-arrival RT-PCR performed better than a strategy using pre-arrival RAT in reducing SARS-CoV-2 transmission (70% *vs* 63%).

The authors simulated two strategies that used RATs (strategies 3 and 4). However, given high variations in the sensitivities and specificities of the available RATs (with some having significantly lower sensitivity

than RT-PCR),[1–3] it would have been informative if Kiang and colleagues had included one more two-test strategy in their simulation model—ie, RT-PCR within 3 days of departure plus RAT on the day of travel—as many asymptomatic, infectious travellers could easily be filtered out by the additional RT-PCR test owing its high sensitivity.

Kiang and colleagues missed inclusion of a three-test strategy, which could help to further reduce transmission. This strategy could include three tests, one each done before departure, on the day of departure, and after arrival, with a RAT used on the day of departure. Different countries have their own post-arrival testing policies, some including three tests done post-arrival by RT-PCR. One such example is the policy adopted by Bahrain, which has first testing at the airport on arrival, second on day 5 after arrival, and third on day 10 after arrival. Considering variations in individual country's policies and use of more than two tests on numerous occasions, it seems logical to compare transmission reduction with a two-test versus a three-test strategy. In the three-test strategy, a RAT would be done at the airport to minimise psychological fear and apprehension in fellow travellers. A recent survey based on a structured questionnaire on behavioural changes in air passengers indicated that preventive measures pertaining to infectious diseases taken at the airport are perceived important by passengers.[4]

Altogether, routine asymptomatic testing during air travel seems to be a promising solution for reducing SARS-CoV-2 transmission, as undocumented infections have been implicated in modulating the virus' pandemic potential.[5] However, proper guidelines in this regard need preparation after careful consideration.

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1 Kiang MV, Chin ET, Huynh BQ, et al. Routine asymptomatic testing strategies for airline travel during the COVID-19 pandemic: a simulation study. *Lancet Infect Dis* 2021; published online March 22. https://doi.org/10.1016/S1473-3099(21)00134-1.

2 Peeling RW, Olliaro PL, Boeras DI, Fongwen N. Scaling up COVID-19 rapid antigen tests: promises and challenges. *Lancet Infect Dis* 2021; published online Feb 23. https://doi.org/10.1016/S1473-3099(21)00048-7.

3 Lambert-Niclot S, Cuffel A, Le Pape S, et al. Evaluation of a rapid diagnostic assay for detection of SARS-CoV-2 antigen in nasopharyngeal swabs. *J Clin Microbiol* 2020; **58:** e00977-20.

4 Song K-H, Choi S. A study on the behavioral change of passengers on sustainable air transport after COVID-19. *Sustainability* 2020; **12:** 9207

5 Li R, Pei S, Chen B, et al. Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV-2). *Science* 2020; **368:** 489–93.