

THE LANCET

Infectious Diseases

Supplementary appendix

This appendix formed part of the original submission. We post it as supplied by the authors.

Supplement to: Juthani PV, Gupta A, Borges KA, et al. Hospitalisation among vaccine breakthrough COVID-19 infections. *Lancet Infect Dis* 2021; published online Sept 7. [https://doi.org/10.1016/S1473-3099\(21\)00558-2](https://doi.org/10.1016/S1473-3099(21)00558-2).

A**Hospitalized with COVID-19 PCR+**

Total=969



- Unvaccinated (n=797)
- Partial course (1 dose of Pfizer or Moderna) (n=103)
- Completed course (2 doses of Pfizer or Moderna or 1 dose of Janssen) (n=15)
- Fully vaccinated (14 days after completed course) (n=54)

B**Fully Vaccinated Disease Severity**

Total=54



- Asymptomatic (n=25)
- Mild Disease (n=4)
- Moderate Disease (n=11)
- Severe/Critical Disease (n=14)

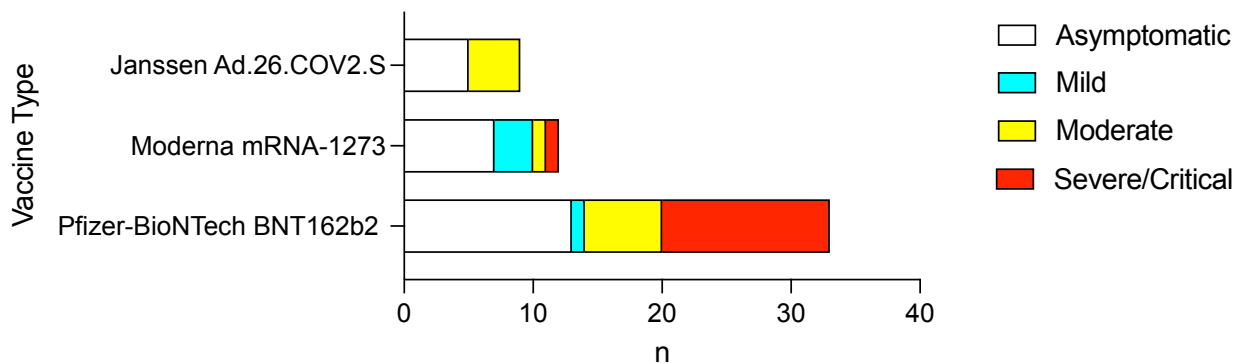
C**Disease Severity by Vaccine Type among Fully Vaccinated**

Figure: A) Classification of all patients admitted to YNHH between March 23, 2021 and July 1, 2021 who tested positive for a SARS-CoV-2 PCR test by their vaccination status.

B) Disease severity among hospitalized patients with positive SARS-CoV-2 PCR test considered to be fully vaccinated. Disease severity in the figure is denoted as asymptomatic, mild disease, moderate disease, and severe/critical disease based on the following: 1)

Asymptomatic: Individuals who test positive for SARS-CoV-2 using a virologic test (i.e., a nucleic acid amplification test or an antigen test) but who have no symptoms that are consistent with COVID-19. 2) Mild: Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain, nausea, vomiting, diarrhea, loss of taste and smell) but who do not have shortness of breath, dyspnea, or abnormal chest imaging. 3) Moderate: Individuals who show evidence of lower respiratory disease during clinical assessment or imaging and who have saturation of oxygen (SpO₂) ≥94% on room air at sea level. 4) Severe: Individuals who have SpO₂ <94% on room air at sea level, a ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO₂/FiO₂) <300 mm Hg, respiratory frequency >30 breaths/min, or lung infiltrates >50%. 5) Critical: Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction. C) Distribution of disease severity among fully vaccinated individuals by vaccine type.

Age	Gender	BMI	Vaccine type	COVID-19 severity	No. of days between final vaccine dose & symptom onset or positive COVID-19 test	Highest level of care	Highest vent. support	Inotrope support	Outcome	CV	Lung	Malign.	DM II	Immuno sup. agent
71	M	19.55	P	severe	47	non-ICU	2L NC	N	discharged	Y	Y	N	N	N
76	M	26.79	P	severe	18	non-ICU	4L NC	N	discharged	Y	Y	N	Y	Y
78	F	31.91	P	severe	79	non-ICU	2L NC	N	discharged	Y	N	N	Y	N
79	F	31.98	P	severe	55	non-ICU	3L NC	N	discharged	Y	N	Y	N	Y
81	F	39.55	P	severe	72	non-ICU	2L NC	N	discharged	Y	Y	N	Y	N
85	F	26.2	P	severe	52	non-ICU	4L NC	N	discharged	Y	N	N	N	N
85	M	21.35	P	severe	54	non-ICU	4L NC	N	deceased	N	Y	Y	Y	Y
90	F	21.46	P	severe	68	non-ICU	4L NC	N	discharged	Y	N	N	N	N
91	F	33.38	P	severe	87	non-ICU	2L NC	N	discharged	Y	N	N	N	N
95	M	26.2	P	severe	93	non-ICU	3L NC	N	discharged	Y	N	Y	Y	N
65	F	44.44	M	critical	26	ICU	NIPPV	N	deceased	Y	Y	N	Y	Y
76	M	19.53	P	critical	34	ICU	4L NC	Y	deceased	N	N	N	N	N
80	M	23.49	P	critical	70	ICU	HFNC	N	discharged	Y	Y	N	Y	N
84	M	26.91	P	critical	58	ICU	MV	Y	deceased	Y	Y	Y	N	N

Table: Demographics and comorbidities of patients fully vaccinated for SARS-CoV-2 who are hospitalised with a positive SARS-CoV-2

PCR test. Patients are listed in the order of worsening disease severity. BMI: body mass index. NC: nasal cannula. NIPPV: non-invasive positive pressure ventilation. HFNC: high flow nasal cannula. MV: mechanical ventilation. CV: history of coronary artery disease or congestive heart failure. Lung: history of lung disease. Malign: history of malignancy. DM II: history of diabetes mellitus type II. Immunosup. agent: outpatient immunosuppressive agent use. P: Pfizer-BioNTech BNT162b2, M: Moderna mRNA-1273.