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Supplementary appendix 2

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Supplementary appendix

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Table S1: Definitions

Term	Definition
Symptoms suggestive of COVID-19	An acute respiratory illness with fever and cough with onset within the preceding 10 days.
High-risk exposure	<p>Any of the following:</p> <ol style="list-style-type: none"> 1. Performed a respiratory Aerosol Generating Procedure (AGP) without ANY of the following – N95 mask, eye/face protection, gloves. 2. If the patient’s respiratory tract secretions, or saliva came in contact with non-intact skin 3. Anyone in close proximity (within 1 meter) of the confirmed case without mask (BOTH case and contact) for a duration of more than 15 minutes. 4. Household contact of a known positive case.
Previous SARS-CoV-2 infection	Presence of a positive microbiological test for SARS-CoV-2 (RT-PCR, CB-NAAT or rapid antigen test) more than 90 days prior to the current RT-PCR
Level of occupational exposure	
COVID-19 areas	Part of the normal chain of care for suspected and proven COVID-19 patients (eg. testing facility, emergency wards, holding wards for COVID-19 suspects pending test results and dedicated COVID-19 wards/ICUs/laboratories). Employees working here wear personal protective equipment (PPE) that include coverall, N-95 mask, goggles/face shield, gloves and shoe-covers.
Non-COVID-19 areas	All other parts of the institute including wards/ICUs meant for the care of non-COVID-19 diseases, administrative and residential areas. Patients are admitted in non-COVID-19 wards/ICUs after testing negative for SARS-CoV-2 by RT-PCR or CB-NAAT. The detection of a COVID-19 patient or employee in non-COVID-19 areas requires immediate isolation of the case in a COVID-19 area, tracing of contacts and decontamination. Employees working here wear varying levels of PPE.

Table S2: Participant characteristics of the unmatched population

	Symptomatic SARS-CoV-2 RT-PCR positive participants (n =1617)	Symptomatic SARS-CoV-2 RT-PCR negative participants (n =1097)	P value	Unvaccinated participants (n =1282)	Participants vaccinated with only 1 dose of BBV152 (n =679)	P value (one dose vs. unvaccinated)	Participants vaccinated with 2 doses of BBV152 (n=753)	P value (two vs. unvaccinated)
Age, years								
<30 years	573 (35.4)	494 (45.0)	<0.0001	532 (41.5)	290 (42.7)	0.44	245 (32.5)	<0.0001
31-40 years	531 (32.8)	363 (33.1)		426 (33.2)	222 (32.7)		246 (32.7)	
41-50 years	315 (19.5)	161 (14.7)		215 (16.8)	109 (16.1)		152 (20.2)	
51-60 years	174 (10.8)	72 (6.6)		90 (7.0)	55 (8.1)		101 (13.4)	
61-70 years	18 (1.1)	6 (0.5)		14 (1.1)	3		7 (0.9)	
>70 years	6 (0.4)	1 (0.1)		5 (0.4)	0		2 (0.3)	
Gender								
Female	685 (42.4)	506 (46.1)	0.054	580 (45.2)	332 (48.9)	0.13	279 (37.1)	<0.0001
Male	932 (57.6)	591 (53.9)		702 (54.8)	347 (51.1)		474 (62.9)	
Previous SARS-CoV-2 infection	48 (3.0)	119 (10.8)	<0.0001	76 (5.9)	47 (6.9)	0.38	44 (5.8)	0.99
Occupational exposure								
Works in COVID-19 area	243 (15.0)	176 (16.0)	0.48	219 (17.1)	96 (14.1)	0.093	104 (13.8)	0.052
Works in non-COVID-19 area	1374 (85.0)	921 (84.0)		1063 (82.9)	583 (85.9)		649 (86.2)	
10 day period of testing								
April 15–April 25	852 (52.7)	465 (42.4)	<0.001	680 (53.0)	303 (44.6)	0.0018	334 (44.4)	<0.0001
April 26–May 5	624 (38.6)	407 (37.1)		454 (35.4)	287 (42.3)		290 (38.5)	
May 6-May 15	141 (8.7)	225 (20.5)		148 (11.5)	89 (13.1)		129 (17.1)	
Vaccination Status								
Vaccinated with only one dose of BBV152	399 (24.7)	280 (25.5)	<0.0001					
Vaccinated with two doses of BBV152	394 (24.3)	359 (32.7)						
Unvaccinated	824 (60.0)	458 (41.8)						
Data are n(%).								

Table S3: Estimated vaccine effectiveness against laboratory confirmed symptomatic SARS-CoV-2 infection of the unmatched population

	Symptomatic SARS-CoV-2 RT-PCR positive	Symptomatic SARS-CoV-2 RT-PCR negative	Unadjusted OR (95% CI)	Unadjusted p value	Adjusted OR (95% CI)*	Adjusted p value*	Vaccine effectiveness (95% CI)
Unvaccinated	824	458	1 (ref)	..	1 (ref)
Only one dose of BBV152							
Tested at least 7 days after first dose	359	244	0.82 (0.67-0.99)	0.047	0.86 (0.70-1.06)	0.16	14 (-6 to 30)
Tested less than 7 days after first dose	40	36	0.62 (0.39-0.98)	0.042	0.57 (0.36-0.92)	0.020	43 (8 to 64)
Tested at least 21 days after 1st dose	181	115	0.87(0.67-1.13)	0.31	0.95(0.72-1.25)	0.71	5 (-25 to 28)
Two doses of BBV152							
Tested at least 14 days after second dose	319	298	0.59 (0.49-0.72)	<0.0001	0.56 (0.45-0.68)	<0.0001	44 (32 to 55)
Tested less than 14 days after second dose	75	61	0.68 (0.48-0.98)	0.037	0.69 (0.48-1.00)	0.052	31 (0 to 52)
Tested at least 28 days after second dose	205	196	0.58 (0.47-0.73)	<0.0001	0.57 (0.45-0.73)	<0.0001	43 (27 to 55)
Tested at least 42 days after second dose	73	94	0.43 (0.31-0.60)	<0.0001	0.45 (0.31-0.64)	<0.0001	55 (36 to 69)
Two doses of BBV152 with second dose at least 14 days before testing, by 10-day period of testing							
April 15–April 25	155	102	0.78 (0.58-1.04)	0.094	0.65 (0.47-0.89)	0.0067	35 (11 to 53)
April 26–May 5	128	118	0.49 (0.36-0.67)	<0.0001	0.45 (0.32-0.63)	<0.0001	55 (37 to 68)
May 6-May 15	36	78	0.66 (0.39-1.10)	0.11	0.61 (0.35-1.04)	0.068	39 (-4 to 65)
Unvaccinated, by 10-day period of testing							
April 15–April 25	450	230					
April 26–May 5	313	141					
May 6-May 15	61	87					
Female participants							
Two doses of BBV152 with second dose at least 14 days before testing	107	121	0.49 (0.36-0.67)	<0.0001	0.44 (0.32-0.62)	<0.0001	56 (38 to 68)
Unvaccinated	372	208					
Males							
Two doses of BBV152 with second dose at least 14 days before testing	212	177	0.66 (0.51-0.85)	0.0014	0.61 (0.47-0.81)	0.0004	39 (19 to 53)
Unvaccinated	452	250					
Excluding those with previous SARS-CoV-2 infection							
Two doses of BBV152 with second dose at least 14 days before testing	315	268	0.61 (0.49-0.74)	<0.0001	0.58 (0.47-0.71)	<0.0001	42 (29 to 53)
Unvaccinated	796	410					
Data are n unless otherwise stated. OR= odds ratio.							
* Adjusted for age, gender, previous SARS-CoV-2 infection, occupational exposure and 10-day period of testing.							