

Supplementary Table S1: STARD checklist

Section & Topic	No	Item	Reported on page #
TITLE OR ABSTRACT			
	1	Identification as a study of diagnostic accuracy using at least one measure of accuracy (such as sensitivity, specificity, predictive values, or AUC)	2
ABSTRACT			
	2	Structured summary of study design, methods, results, and conclusions (for specific guidance, see STARD for Abstracts)	2
INTRODUCTION			
	3	Scientific and clinical background, including the intended use and clinical role of the index test	4
	4	Study objectives and hypotheses	5
METHODS			
<i>Study design</i>	5	Whether data collection was planned before the index test and reference standard were performed (prospective study) or after (retrospective study)	5
<i>Participants</i>	6	Eligibility criteria	5
	7	On what basis potentially eligible participants were identified (such as symptoms, results from previous tests, inclusion in registry)	5
	8	Where and when potentially eligible participants were identified (setting, location and dates)	5
	9	Whether participants formed a consecutive, random or convenience series	5
<i>Test methods</i>	10a	Index test, in sufficient detail to allow replication	5
	10b	Reference standard, in sufficient detail to allow replication	6
	11	Rationale for choosing the reference standard (if alternatives exist)	6
	12a	Definition of and rationale for test positivity cut-offs or result categories of the index test, distinguishing pre-specified from exploratory	6
	12b	Definition of and rationale for test positivity cut-offs or result categories of the reference standard, distinguishing pre-specified from exploratory	6
	13a	Whether clinical information and reference standard results were available to the performers/readers of the index test	6
	13b	Whether clinical information and index test results were available to the assessors of the reference standard	6
<i>Analysis</i>	14	Methods for estimating or comparing measures of diagnostic accuracy	6
	15	How indeterminate index test or reference standard results were handled	6

	16	How missing data on the index test and reference standard were handled	6
	17	Any analyses of variability in diagnostic accuracy, distinguishing pre-specified from exploratory	7
	18	Intended sample size and how it was determined	Not applicable
RESULTS			
<i>Participants</i>	19	Flow of participants, using a diagram	Not applicable
	20	Baseline demographic and clinical characteristics of participants	5
	21a	Distribution of severity of disease in those with the target condition	Not applicable
	21b	Distribution of alternative diagnoses in those without the target condition	Not applicable
	22	Time interval and any clinical interventions between index test and reference standard	Not applicable
<i>Test results</i>	23	Cross tabulation of the index test results (or their distribution) by the results of the reference standard	7
	24	Estimates of diagnostic accuracy and their precision (such as 95% confidence intervals)	Not applicable
	25	Any adverse events from performing the index test or the reference standard	Not applicable
DISCUSSION			
	26	Study limitations, including sources of potential bias, statistical uncertainty, and generalisability	11
	27	Implications for practice, including the intended use and clinical role of the index test	11
OTHER INFORMATION			
	28	Registration number and name of registry	7
	29	Where the full study protocol can be accessed	Not applicable
	30	Sources of funding and other support; role of funders	Not applicable

Supplementary Table S2: First positive RT-PCR cycle threshold counts and Antigen cut-off indexes of samples from RT-PCR positive cases in our real-world population.

Patient	Collection date	Roche RT-PCR (Ct Count)		GeneXpert RT-PCR (Ct Count)		SARS-CoV-2 Antigen (COI) *	Days post-first positive RT-PCR
		ORF gene	E gene	N gene	E gene		
Negative for SARS-CoV-2 Antigen							
A	4/8/2021	33.27	35.43				
	21/8/2021					< 1.0	17
	22/8/2021					< 1.0	18
	25/8/2021					< 1.0	21
	29/8/2021					< 1.0	25
B	14/8/2021	34.28	37.03				
	25/8/2021					< 1.0	9
C	1/9/2021	23.31	23.76				
	25/9/2021					< 1.0	24
D	20/9/2021					< 1.0	0
	20/9/2021			33	31		
E	3/9/2021	27.73	28.84				
	17/9/2021					< 1.0	14
	27/9/2021					< 1.0	24
F	8/9/2021			35	35		
	15/9/2021					< 1.0	7
G	8/9/2021			21	18		

	26/9/2021					< 1.0	18
Positive for SARS-CoV-2 Antigen							
H	26/9/2021	23.53	23.87				
	28/9/2021					15.7	2
I	23/9/2021			19	16		
	27/9/2021					208	4
J	20/9/2021			24	21		
	20/9/2021					34.7	0
K	20/9/2021	27.64	28.01				
	20/9/2021					< 1.0	0
	27/9/2021					5314	7
L	26/9/2021	28.77	29.43				
	28/9/2021					2.68	2

* - The Cut-off Index of all Negative antigen tests are <1.0 and exact values not displayed.

Abbreviations: Ct: Cycle Threshold Count, COI: Cut-off index