

Table S1. Demographics of the research subjects.

		Inpatients								Outpatients									
		Uninfected				Infected				Uninfected			Infected						
		NPOP + Gargle Positive		NPOP Only Positive		Gargle Only Positive		NPOP + Gargle Positive		NPOP Only Positive		Gargle Only Positive							
Ct Values	Swab (mean ± SD)	-	24.59 ± 6.68	26.66 ± 6.63	32.39 ± 2.72	34.23 ± 2.38	-	-	-	20.13 ± 4.88	21.79 ± 4.87	32.39 ± 3.40	33.98 ± 3.39	-	-				
	Gargle (mean ± SD)	-	30.67 ± 4.91	31.55 ± 4.65	-	-	35.07 ± 1.64	34.18 ± 1.96	-	29.01 ± 4.77	29.70 ± 4.73	-	-	34.83 ± 2.28	35.69 ± 1.58				
Total (n, %)		16 (5.16%)	41 (13.23%)		6 (1.94%)		3 (0.97%)		85 (27.42%)		126 (40.65%)		22 (7.10%)		11 (3.55%)				
Age (mean ± SD)		32.44 ± 13.55	51.13 ± 14.49		51 ± 15.57		27.33 ± 4.51		33.4 ± 12.96		35.94 ± 13.08		32 ± 13.79		29.82 ± 7.39				
Age Groups (n, %)	<18	0 (0%)	0 (0%)		0 (0%)		0 (0%)		1 (1.18%)		2 (1.59%)		3 (13.64%)		1 (9.09%)				
	18-30	10 (62.50%)	4 (9.76%)		1 (16.67%)		2 (66.67%)		41 (48.24%)		57 (45.24%)		8 (36.36%)		6 (54.55%)				
	31-40	3 (18.75%)	7 (17.07%)		1 (16.67%)		1 (33.34%)		28 (32.94%)		32 (25.40%)		5 (22.73%)		3 (27.27%)				
	41-50	0 (0%)	5 (12.20%)		2 (33.33%)		0 (0%)		4 (4.71%)		18 (14.29%)		4 (18.18%)		1 (9.09%)				
	51-60	2 (12.50%)	12 (29.27%)		2 (33.33%)		0 (0%)		7 (8.24%)		10 (7.94%)		1 (4.55%)		0 (0%)				
	>60	1 (6.25%)	13 (31.71%)		0 (0%)		0 (0%)		4 (4.71%)		7 (5.56%)		1 (4.55%)		0 (0%)				
Gender (n, %)	F	8 (50%)	25 (60.98%)		5 (83.33%)		3 (100%)		28 (49.12%)		59 (46.83%)		8 (36.36%)		5 (45.45%)				
	M	8 (50%)	16 (39.02%)		1 (16.67%)		0 (0%)		57 (50.88%)		67 (53.17%)		14 (63.64%)		6 (54.55%)				
Symptoms	No of Symptoms (mean ± SD)	1.69 ± 2.5	4.85 ± 2.43		5 ± 1.79		3.67 ± 2.08		1.33 ± 1.61		3.06 ± 2.09		2.05 ± 1.94		1.64 ± 1.96				
	Asymptomatic (n, %)	9 (56.25%)			2 (4%)				37 (43.54%)				18 (11.32%)						
Comorbidities (n, %)	Hypertension	1 (6.25%)	13 (26%)				0 (0%)		4 (2.52%)										
	Chronic Heart Diseases	1 (6.25%)	11 (22%)				1 (1.18%)		2 (1.26%)										
	Chronic Lung Diseases	0 (0%)	0 (0%)				2 (2.35%)		2 (1.26%)										
	Chronic Liver Diseases	0 (0%)	3 (6%)				0 (0%)		0 (0%)										
	Diabetes Mellitus	0 (0%)	3 (6%)				0 (0%)		5 (3.14%)										

Table S2. (A) Comparison of detection of SARS-CoV-2 using NPOP swabs as specimen collection to previous qRT-PCR results. (B) Comparison of detection of SARS-CoV-2 using gargle as specimen collection to previous qRT-PCR results.

A

NPOP Swab	Previous Results		Total	k-coefficient
	Positive	Negative		
Positive	47	0	47	
Negative	6	13	19	
Total	53	16	66	

Effect size	Value	95% CI
Sensitivity	88.68%	77.42% to 94.71%
Specificity	100.00%	77.19% to 100%
Positive Predictive Value	100.00%	92.44% to 100%
Negative Predictive Value	68.42%	46.01% to 84.64%

B

Gargle	Previous Results		Total	k-coefficient
	Positive	Negative		
Positive	44	0	44	
Negative	9	13	22	
Total	53	13	66	

Effect size	Value	95% CI
Sensitivity	83.02%	70.77% to 90.80%
Specificity	100.00%	77.19% to 100%
Positive Predictive Value	100.00%	91.97% to 100%
Negative Predictive Value	59.09%	38.73% to 76.74%

Table S3. Preferences were collected after sample collection was done. 97.1% of the participants prefer to provide gargle specimens for diagnosis of COVID-19.

Hospital	Cohort	Preferences	
		NPOP Swab	Gargle
RSND	Inpatients	2	33
	Outpatients	7	113
RSDK	Inpatients	0	31
	Outpatients	0	124
Total		9	301
Percentage		2.90%	97.10%

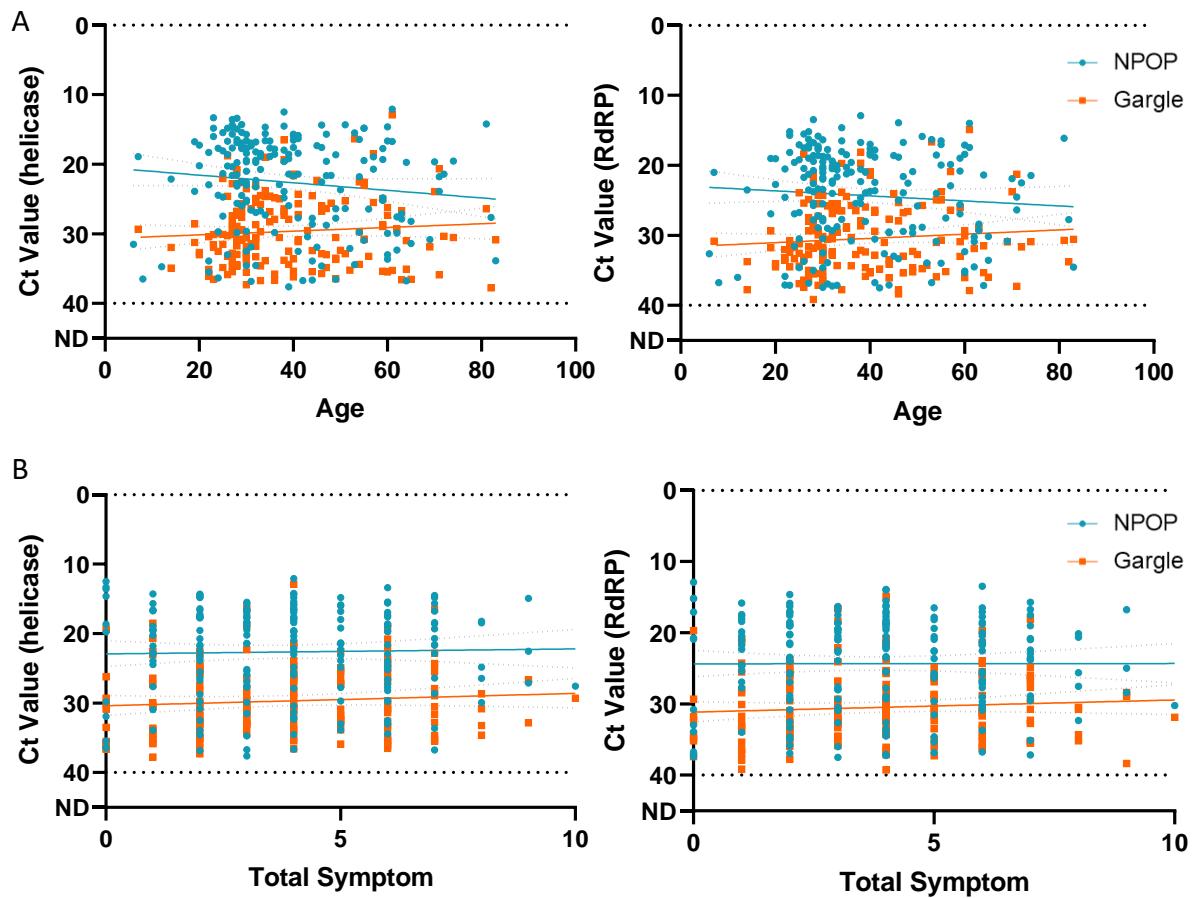


Figure S1. (A) Age does not correlate to the Ct values observed for both NPOP swab and gargle specimens, indicating viral load do not differ between younger and older populations. (B) Similarly, no correlation was found for total number of symptom and Ct values observed for both NPOP swab and gargle, indicating that symptom manifestation is not due to the viral load in patients.

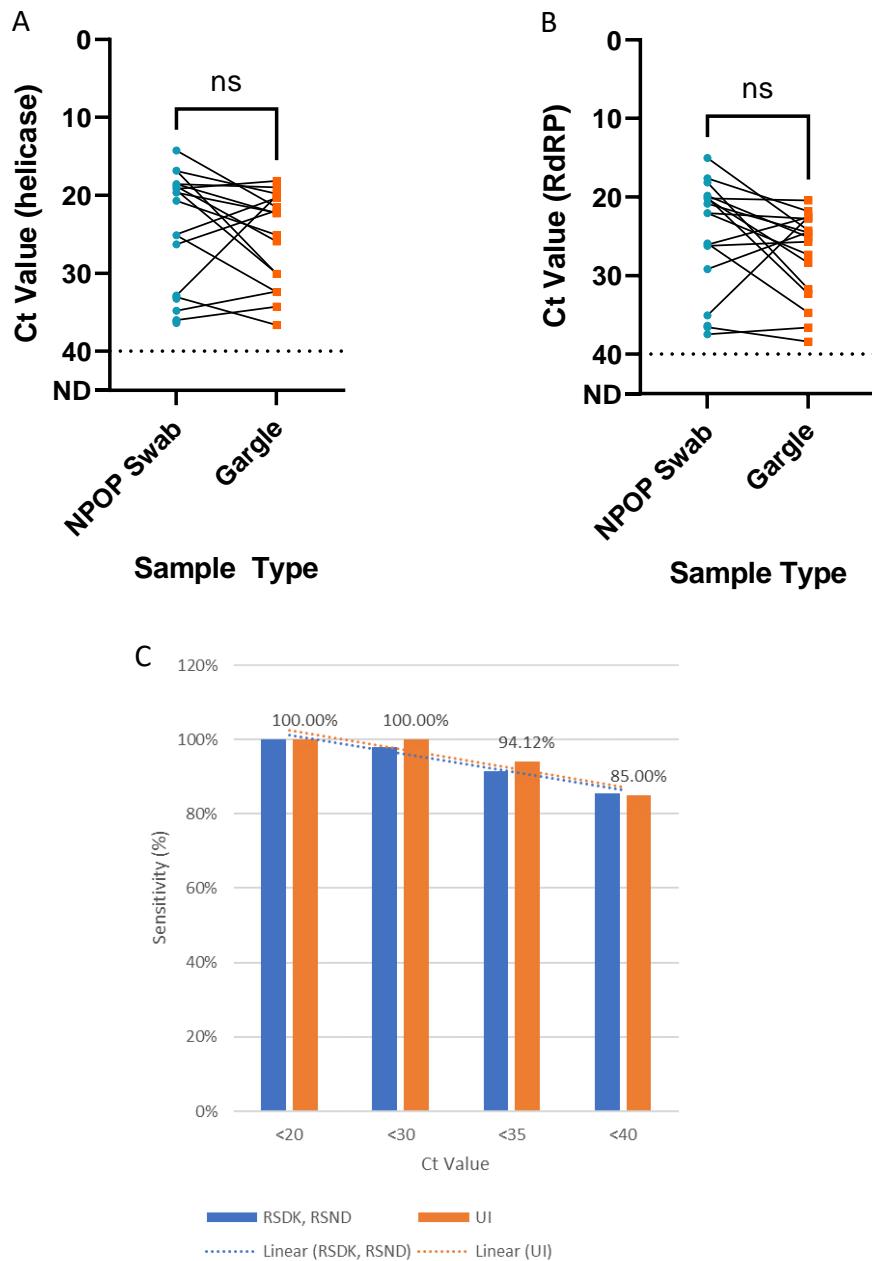


Figure S2. Validation by University of Indonesia found no significant difference was observed on Ct values between NPOP swabs and gargle specimens on helicase (A) and RdRP (B) target gene. (C) This resulted in a similar sensitivity performance across different Ct groups with sensitivity of 94.12% on Ct < 35.