

Table 1a. Antibody Performance, Weeks 1 and 2 – IgM

IgM	Week 1			Week 2		
Sensitivity	0.33 (95% CI: 0.25 to 0.41)			0.73 (95% CI: 0.66 to 0.78)		
Specificity	0.98 (95% CI: 0.97 to 0.99)					
Outcome	Effect per 1,000 patients tested					
	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c
True positives (patients with COVID-19)	3 (3 to 4)	33 (25 to 41)	132 (100 to 164)	7 (7 to 8)	73 (66 to 78)	292 (264 to 312)
False negatives (patients incorrectly classified as not having COVID-19)	7 (6 to 7)	67 (59 to 75)	268 (236 to 300)	3 (2 to 3)	27 (22 to 34)	108 (88 to 136)
Quality of the evidence	12 studies, 919 patients ⊕⊕○○ LOW ^{d, e}			16 studies, 2309 patients ⊕⊕○○ LOW ^{d, e}		
	pre-test probability of 1% ^a		pre-test probability of 10% ^b		pre-test probability of 40% ^c	
True negatives (patients without COVID-19)	970 (960 to 980)		882 (873 to 891)		588 (582 to 594)	
False positives (patients incorrectly classified as having COVID-19)	20 (10 to 30)		18 (9 to 27)		12 (6 to 18)	
Quality of Evidence	21 studies, 7165 patients ⊕⊕⊕○ MODERATE ^d					

a. Typically seen in general population in areas that are not hotspots

b. Typically seen in general population in high risk populations

c. Typically seen in general population in exposed and nursing homes

d. The case-control design leads to a serious risk of bias

e. Unexplained inconsistency observed with considerably variable sensitivity. Sensitivity Ranges: C1: 0.06-0.62, C2: 0.33-1.00

Table 1b. Antibody Performance, Weeks 1 and 2 – IgG

IgG	Week 1			Week 2		
Sensitivity	0.23 (95% CI: 0.16 to 0.32)			0.68 (95% CI: 0.62 to 0.73)		
Specificity	0.99 (95% CI: 0.99 to 0.99)					
Outcome	Effect per 1,000 patients tested					
	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c
True positives (patients with COVID-19)	2 (2 to 3)	23 (16 to 32)	92 (64 to 128)	7 (6 to 7)	68 (62 to 73)	272 (248 to 292)
False negatives (patients incorrectly classified as not having COVID-19)	8 (7 to 8)	77 (68 to 84)	308 (272 to 336)	3 (3 to 4)	32 (27 to 38)	128 (108 to 152)
Quality of the evidence	13 studies, 1343 patients ⊕○○○ VERY LOW ^{d,e}			16 studies, 2708 patients ⊕⊕○○ LOW ^{d,e}		
	pre-test probability of 1% ^a		pre-test probability of 10% ^b		pre-test probability of 40% ^c	
True negatives (patients without COVID-19)	980 (980 to 980)		891 (891 to 891)		594 (594 to 594)	
False positives (patients incorrectly classified as having COVID-19)	10 (10 to 10)		9 (9 to 9)		6 (6 to 6)	
Quality of Evidence	25 studies, 11887 patients ⊕⊕⊕○ MODERATE ^d					

a. Typically seen in general population in areas that are not hotspots

b. Typically seen in general population in high risk populations

c. Typically seen in general population in exposed and nursing homes

d. The case-control design leads to a serious risk of bias

e. Unexplained inconsistency observed with considerably variable sensitivity. Sensitivity Ranges: C1: 0.00,0.69, C2: 0.27-0.91

Table 1c. Antibody Performance, Weeks 1 and 2 – IgA

IgA	Week 1			Week 2		
Sensitivity	0.63 (95% CI: 0.52 to 0.72)			0.96 (95% CI: 0.51 to 1.00)		
Specificity	0.96 (95% CI: 0.91 to 0.99)					
Outcome	Effect per 1,000 patients tested					
	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c
True positives (patients with COVID-19)	6 (5 to 7)	63 (52 to 72)	252 (208 to 288)	10 (5 to 10)	96 (51 to 100)	384 (204 to 400)
False negatives (patients incorrectly classified as not having COVID-19)	4 (3 to 5)	37 (28 to 48)	148 (112 to 192)	0 (0 to 5)	4 (0 to 49)	16 (0 to 196)
Quality of the evidence	2 studies, 91 patients ⊕⊕○○ LOW ^{d,e}			2 studies, 102 patients ⊕○○○ VERY LOW ^{d,e}		
	pre-test probability of 1% ^a		pre-test probability of 10% ^b		pre-test probability of 40% ^c	
True negatives (patients without COVID-19)	950 (901 to 980)		864 (819 to 891)		576 (546 to 594)	
False positives (patients incorrectly classified as having COVID-19)	40 (10 to 89)		36 (9 to 81)		24 (6 to 54)	
Quality of Evidence	4 studies, 760 patients ⊕⊕○○ LOW ^{d,e}					

a. Typically seen in general population in areas that are not hotspots

b. Typically seen in general population in high risk populations

c. Typically seen in general population in exposed and nursing homes

d. The case-control design leads to a serious risk of bias

e. Considering the Upper vs Lower limits of the sensitivity's confidence interval would lead to different clinical decisions

Table 1d. Antibody Performance, Weeks 1 and 2 – Total Antibodies

Total Antibodies	Week 1			Week 2		
Sensitivity	0.50 (95% CI: 0.32 to 0.69)			0.94 (95% CI: 0.84 to 0.98)		
Specificity	1.00 (95% CI: 0.99 to 1.00)					
Outcome	Effect per 1,000 patients tested					
	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c
True positives (patients with COVID-19)	5 (3 to 7)	50 (32 to 69)	200 (128 to 276)	9 (8 to 10)	94 (84 to 98)	376 (336 to 392)
False negatives (patients incorrectly classified as not having COVID-19)	5 (3 to 7)	50 (31 to 68)	200 (124 to 272)	1 (0 to 2)	6 (2 to 16)	24 (8 to 64)
Quality of the evidence	7 studies, 418 patients ⊕○○○ VERY LOW ^{d,e,f}			6 studies, 359 patients ⊕⊕○○ LOW ^{d,e}		
	pre-test probability of 1% ^a		pre-test probability of 10% ^b		pre-test probability of 40% ^c	
True negatives (patients without COVID-19)	990 (980 to 990)		900 (891 to 900)		600 (594 to 600)	
False positives (patients incorrectly classified as having COVID-19)	0 (0 to 10)		0 (0 to 9)		0 (0 to 6)	
Quality of Evidence	8 studies, 4521 patients ⊕⊕⊕○ MODERATE ^d					

a. Typically seen in general population in areas that are not hotspots

b. Typically seen in general population in high risk populations

c. Typically seen in general population in exposed and nursing homes

d. The case-control design leads to a serious risk of bias

e. Unexplained inconsistency observed with considerably variable sensitivity. Sensitivity Ranges: C1: 0.03-0.75, C2: 0.74-1.00

f. Considering the Upper vs Lower limits of the sensitivity's confidence interval would lead to different clinical decisions.

Table 1e. Antibody Performance, Weeks 1 and 2 – IgM or IgG

IgM or IgG	Week 1			Week 2		
Sensitivity	0.51 (95% CI: 0.42 to 0.59)			0.81 (95% CI: 0.77 to 0.84)		
Specificity	0.97 (95% CI: 0.95 to 0.98)					
Outcome	Effect per 1,000 patients tested					
	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c	pre-test probability of 1% ^a	pre-test probability of 10% ^b	pre-test probability of 40% ^c
True positives (patients with COVID-19)	5 (4 to 6)	51 (42 to 59)	204 (168 to 236)	8 (8 to 8)	81 (77 to 84)	324 (308 to 336)
False negatives (patients incorrectly classified as not having COVID-19)	5 (4 to 6)	49 (41 to 58)	196 (164 to 232)	2 (2 to 2)	19 (16 to 23)	76 (64 to 92)
Quality of the evidence	7 studies, 830 patients ⊕⊕○○ LOW ^{d,e}			7 studies, 1996 patients ⊕⊕○○ LOW ^{d,e}		
	pre-test probability of 1% ^a		pre-test probability of 10% ^b		pre-test probability of 40% ^c	
True negatives (patients without COVID-19)	960 (941 to 970)		873 (855 to 882)		582 (570 to 588)	
False positives (patients incorrectly classified as having COVID-19)	30 (20 to 50)		27 (18 to 45)		18 (12 to 30)	
Quality of Evidence	11 studies, 5660 patients ⊕⊕○○ LOW ^{d,e}					

a. Typically seen in general population in areas that are not hotspots

b. Typically seen in general population in high risk populations

c. Typically seen in general population in exposed and nursing homes

d. The case-control design leads to a serious risk of bias

e. Unexplained inconsistency observed with considerably variable sensitivity. Sensitivity Ranges: C1: 0.09-0.79, C2: 0.46-0.

IDSA Guidelines on the Diagnosis of COVID-19: Serological Testing

