

## Article

# Usefulness and Limitations of Anti-S IgG Assay in Detecting Previous SARS-Cov-2 Breakthrough Infection in Fully Vaccinated Healthcare Workers

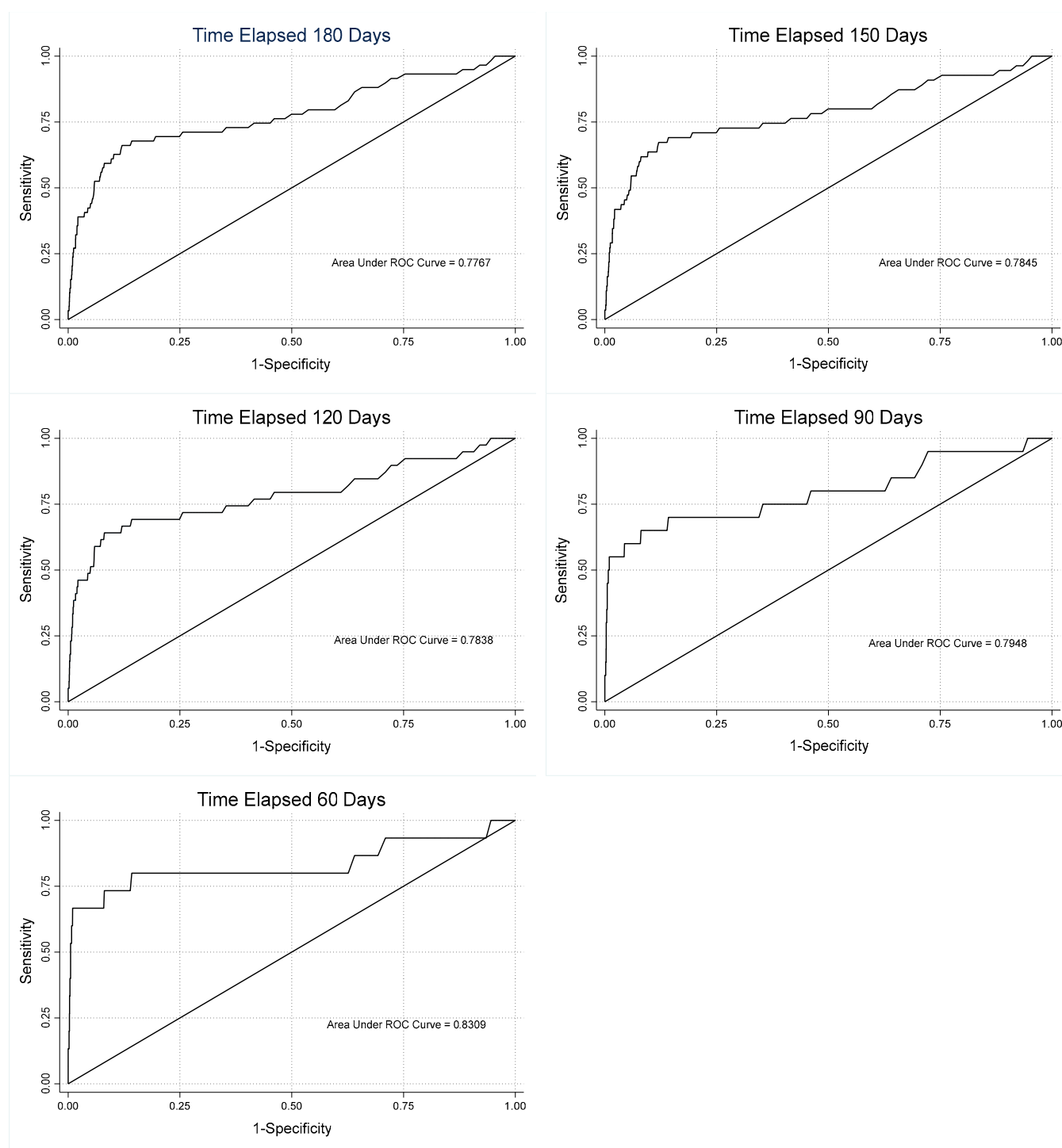
## SUPPLEMENTARY MATERIAL

**Table S1.** Optimal cut-off of anti-S titer to detect previous BI, as a function of the method used and time window preceding antibody assessment.

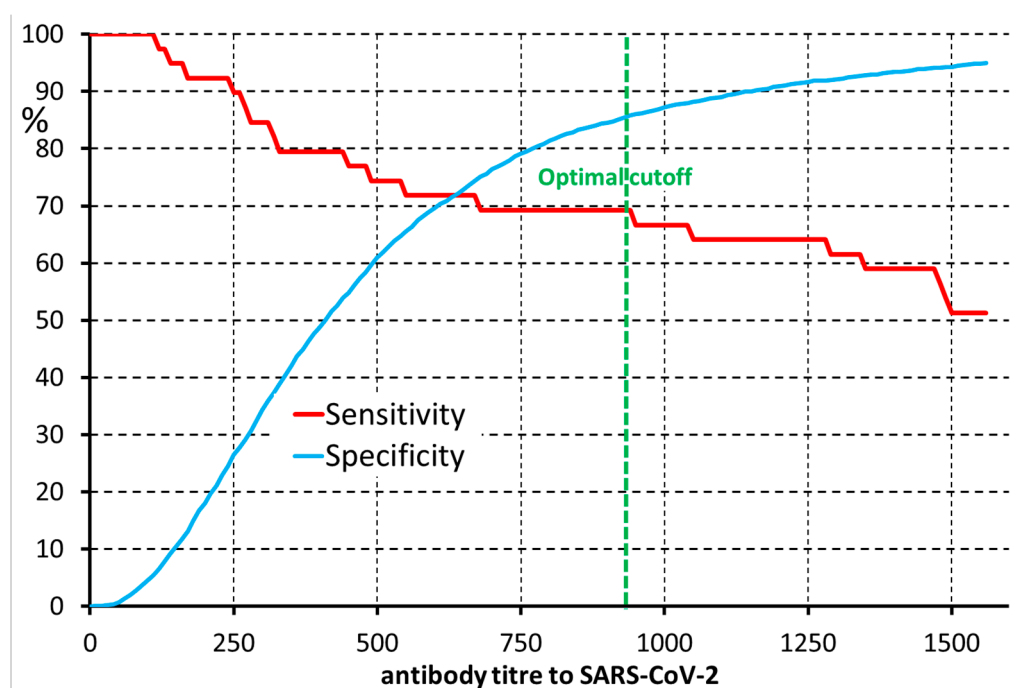
Time window preceding ab assessment	Method	Empirical optimal cutpoint	Sensitivity at cutpoint	Specificity at cutpoint	Area under ROC curve at cut point
180	Liu	935	0.68	0.86	0.77
	Youden	1035	0.66	0.88	0.77
	Near	935	0.68	0.86	0.77
150	Liu	935	0.69	0.86	0.77
	Youden	1035	0.67	0.88	0.78
	Near	935	0.69	0.86	0.77
120	Liu	935	0.69	0.86	0.78
	Youden	1275	0.64	0.92	0.78
	Near	935	0.69	0.86	0.78
90	Liu	935	0.70	0.86	0.78
	Youden	1275	0.65	0.92	0.78
	Near	935	0.70	0.86	0.78
60	Liu	935	0.80	0.86	0.83
	Youden	935	0.80	0.86	0.83
	Near	935	0.80	0.86	0.83

**Table S2.** Optimal cut-off of anti-S titer time elapsed since vaccination 2<sup>nd</sup> dose, as a function of the method used and time window preceding antibody assessment.

Time window preceding ab assessment	Method	Empirical optimal cutpoint	Sensitivity at cutpoint	Specificity at cutpoint	Area under ROC curve at cut point
6-193	Liu	935	0.62	0.84	0.73
	Youden	1035	0.55	0.91	0.73
	Near	935	0.62	0.84	0.73
194-264	Liu	1035	0.73	0.90	0.82
	Youden	1035	0.73	0.90	0.82
	Near	1035	0.73	0.90	0.82



**Figure S1.** ROC curves to predict BI in time windows of 180, 150, 120, 90, 60 days before antibody assessment.



**Figure S2.** Sensitivity and specificity of anti-S IgG in predicting BI in the 120 days preceding antibody assessment.