COVID-19 Correlates Immunogenicity Analysis Report

COVID-19 Prevention Network (CoVPN) Biostatistics Team

March 08, 2021

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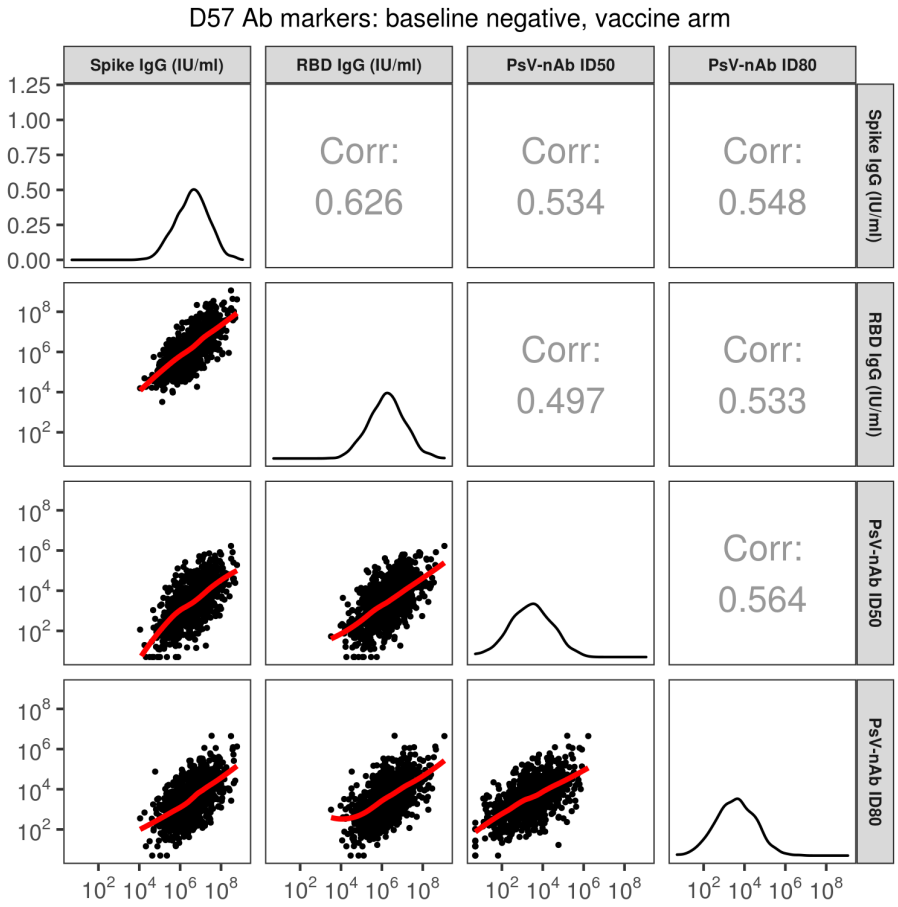

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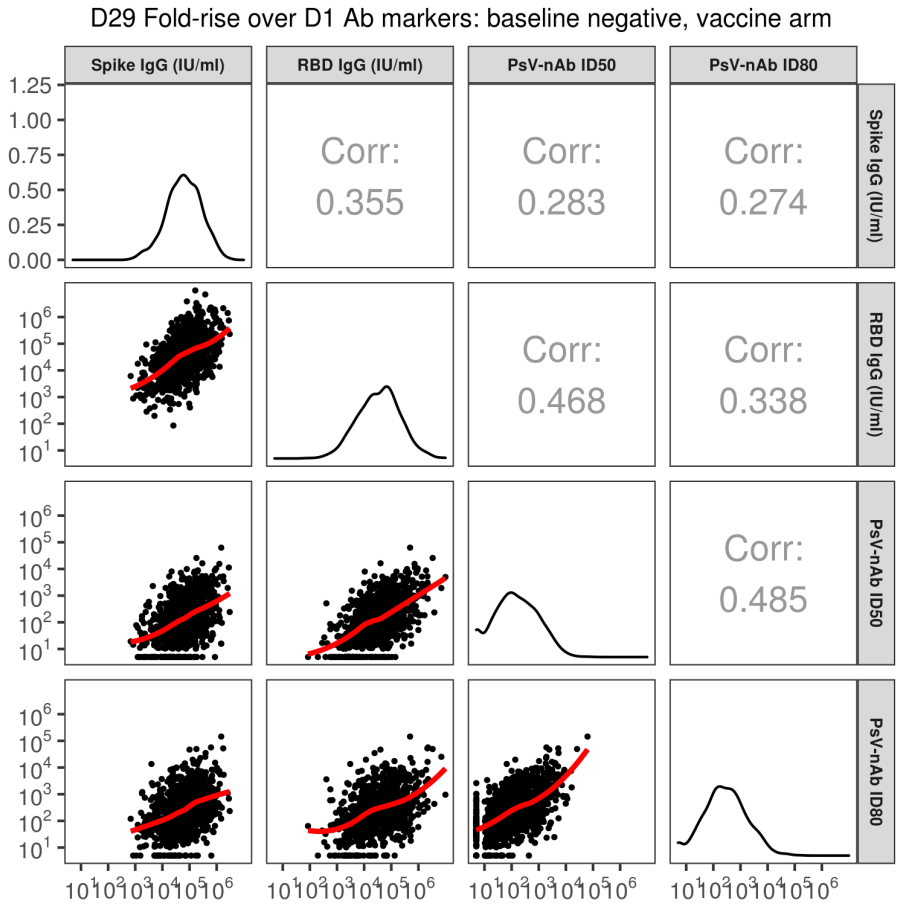

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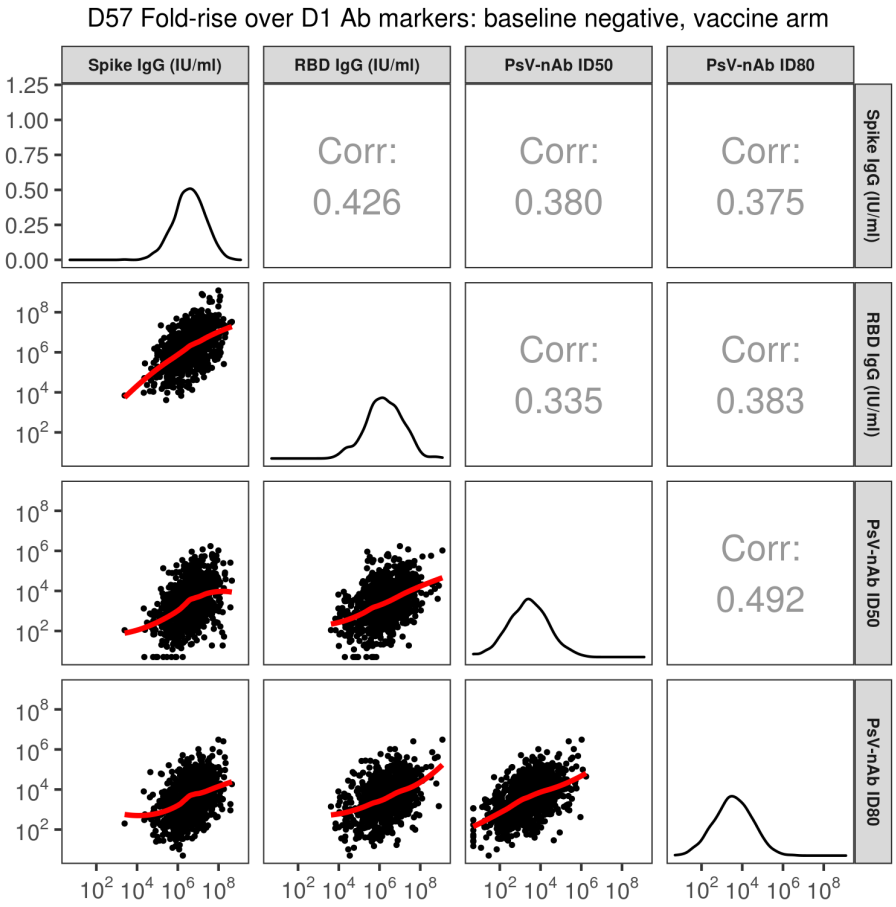

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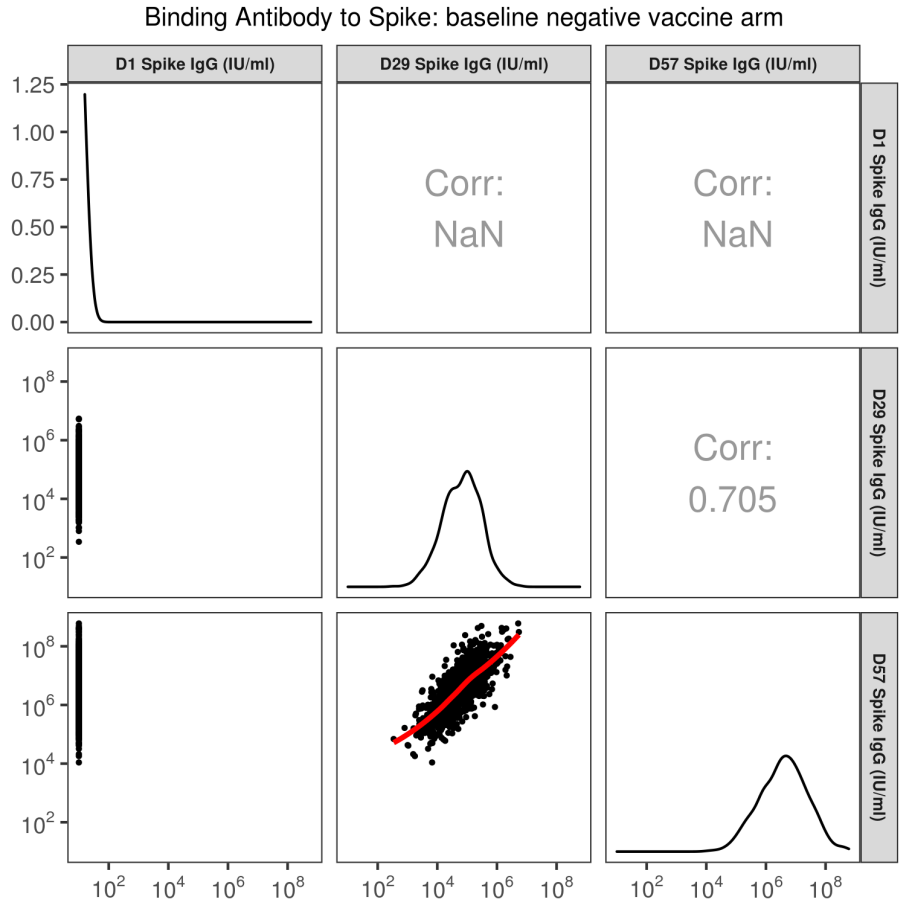

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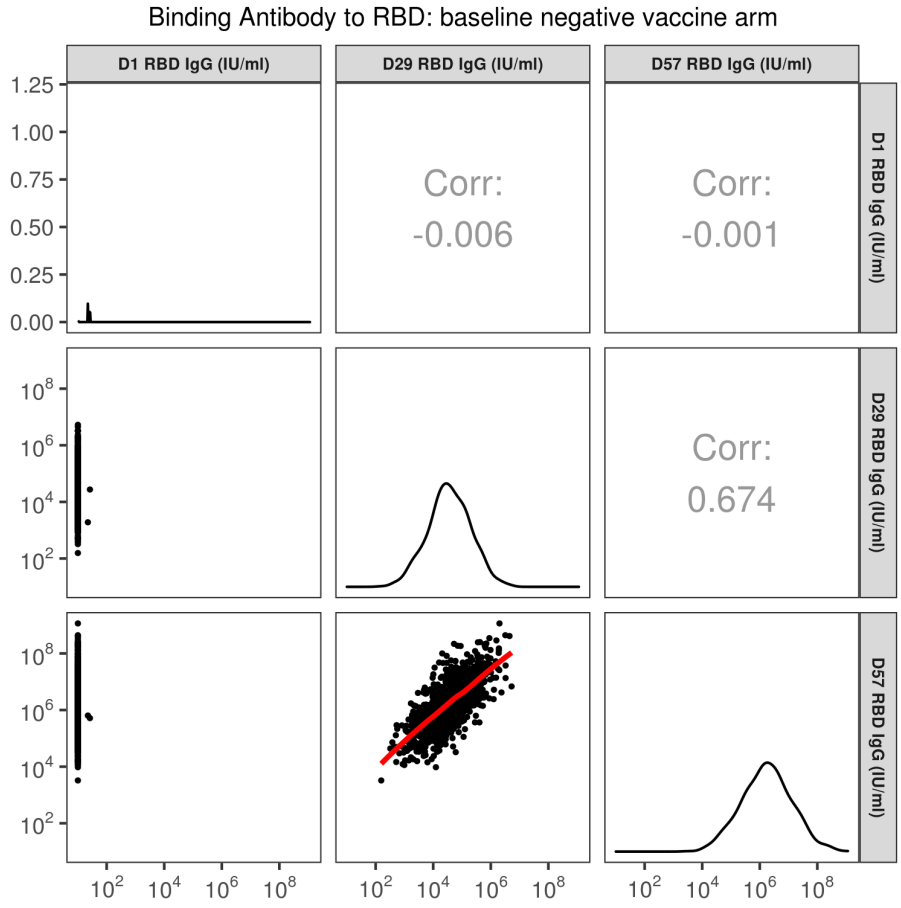

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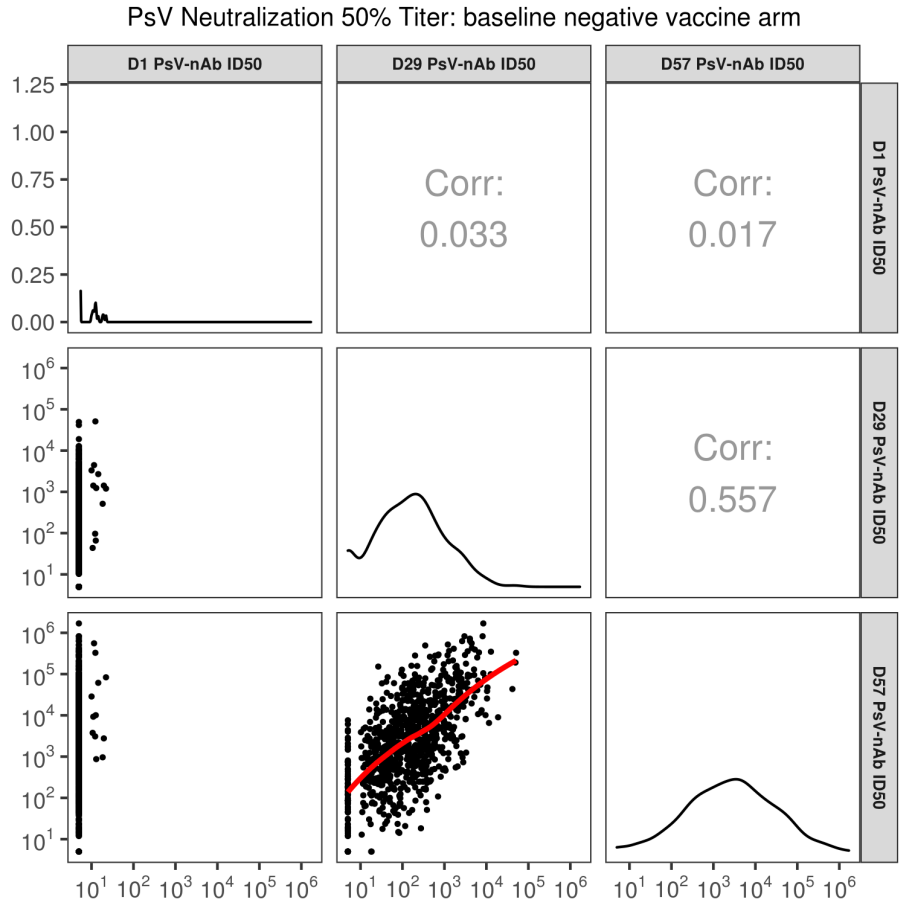

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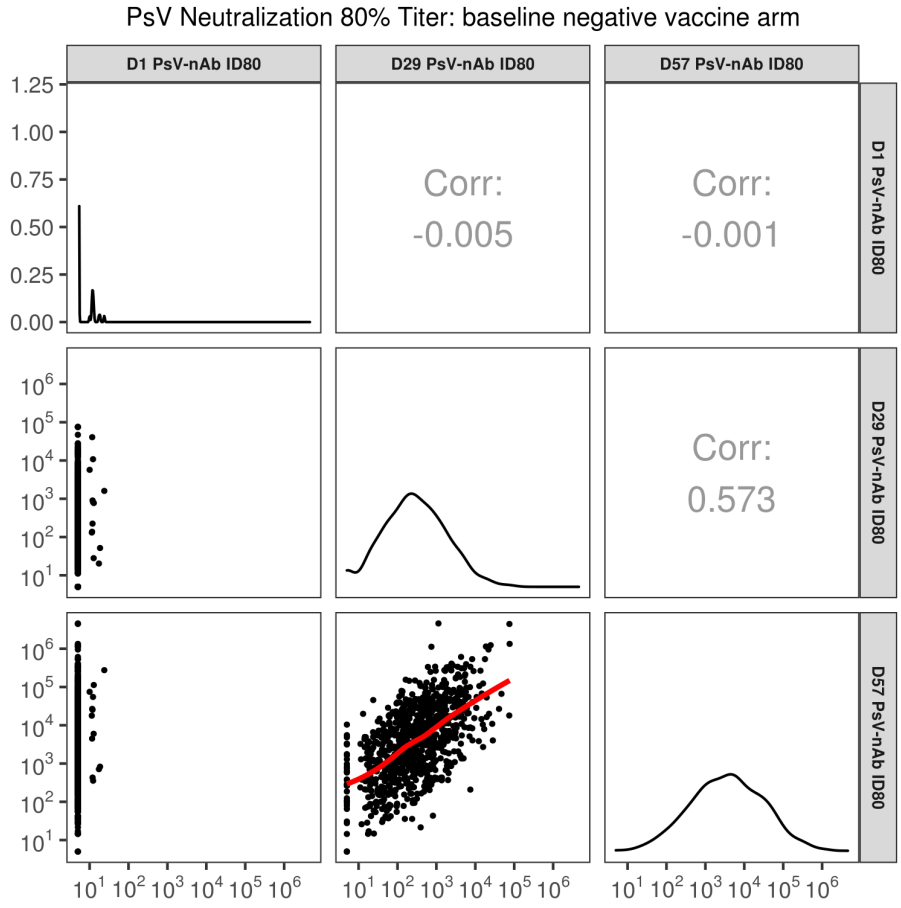

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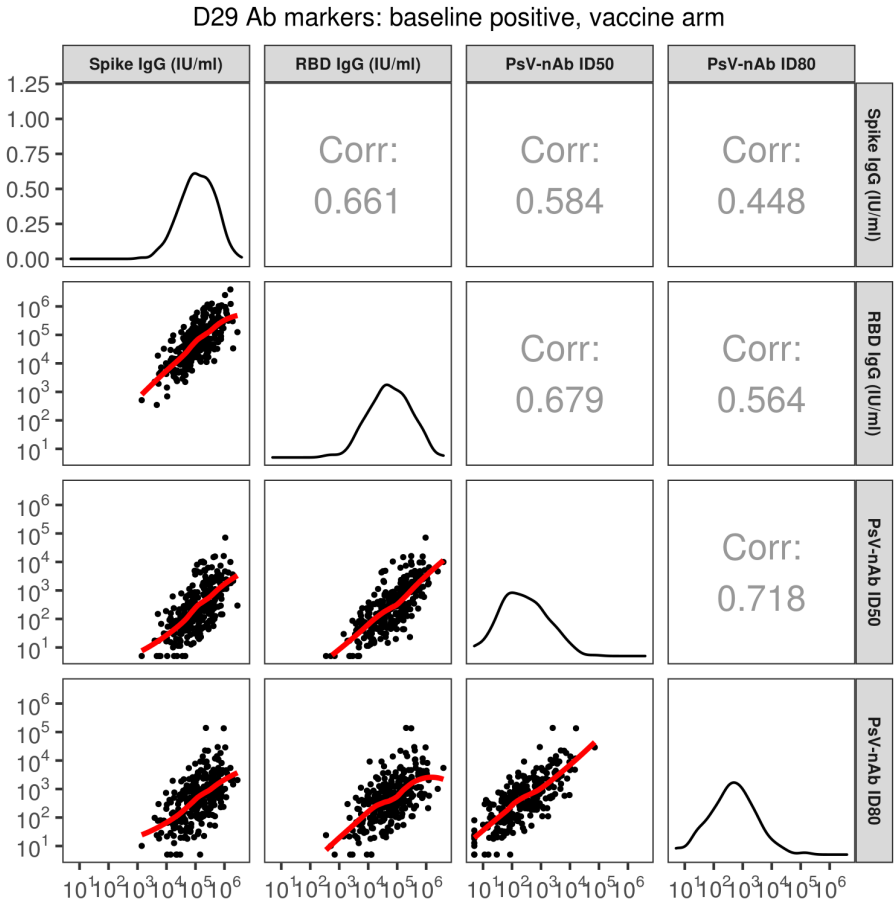

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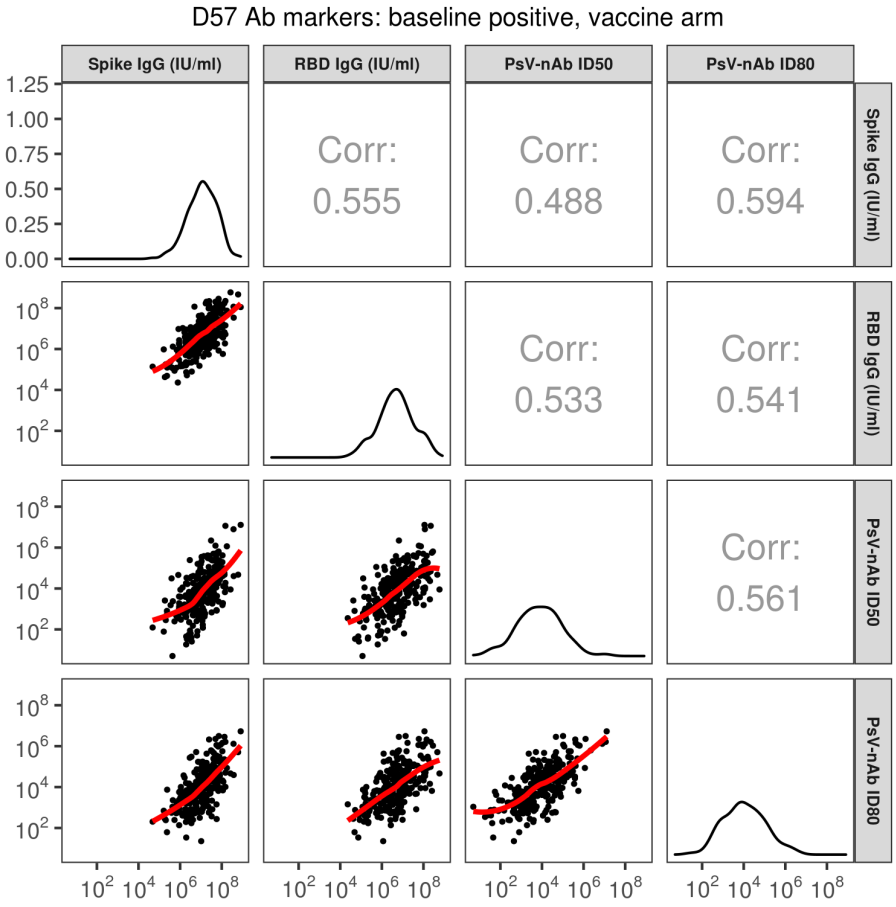

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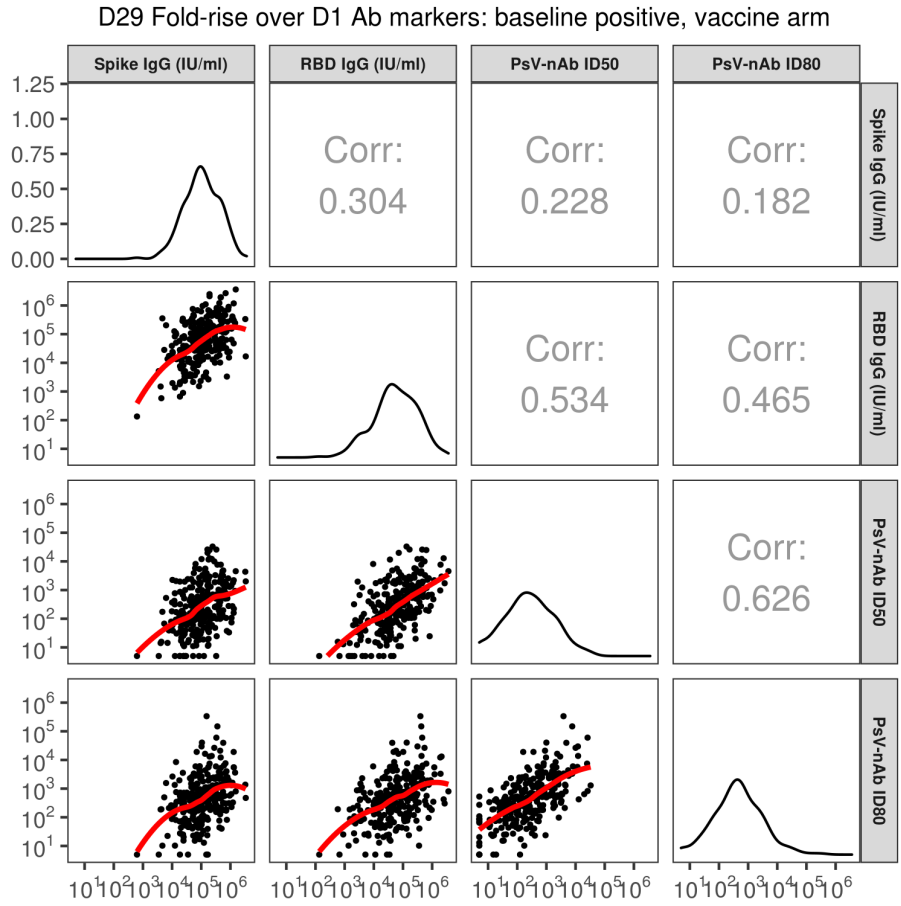

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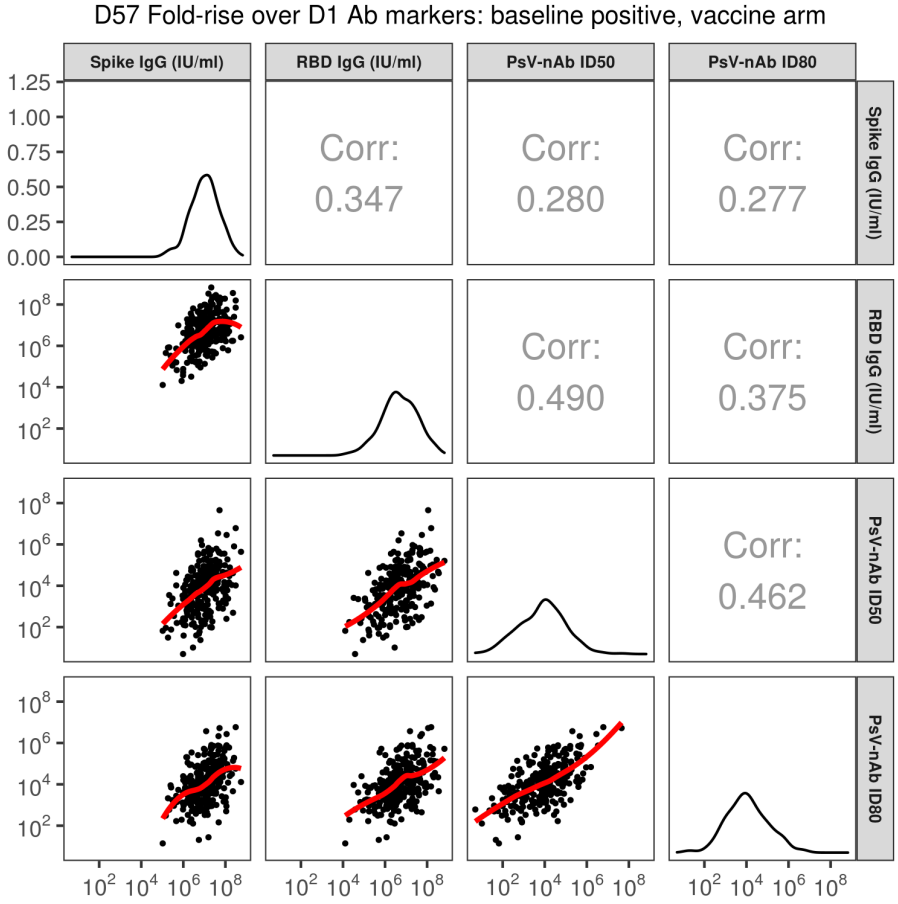

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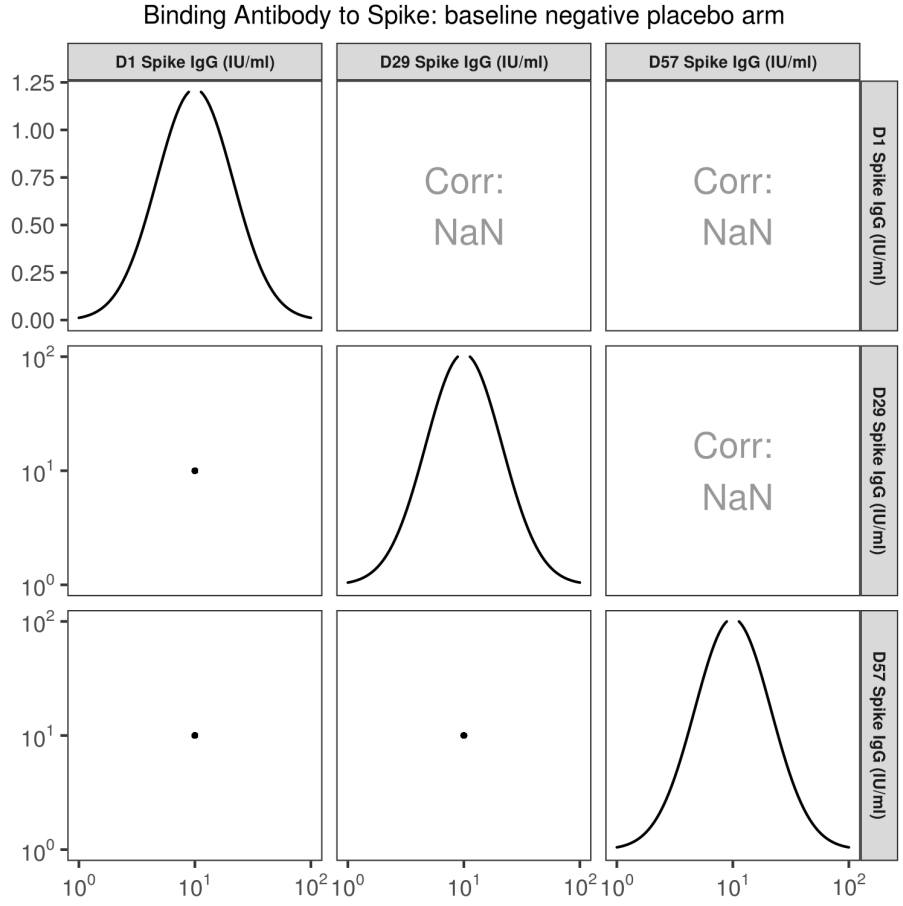

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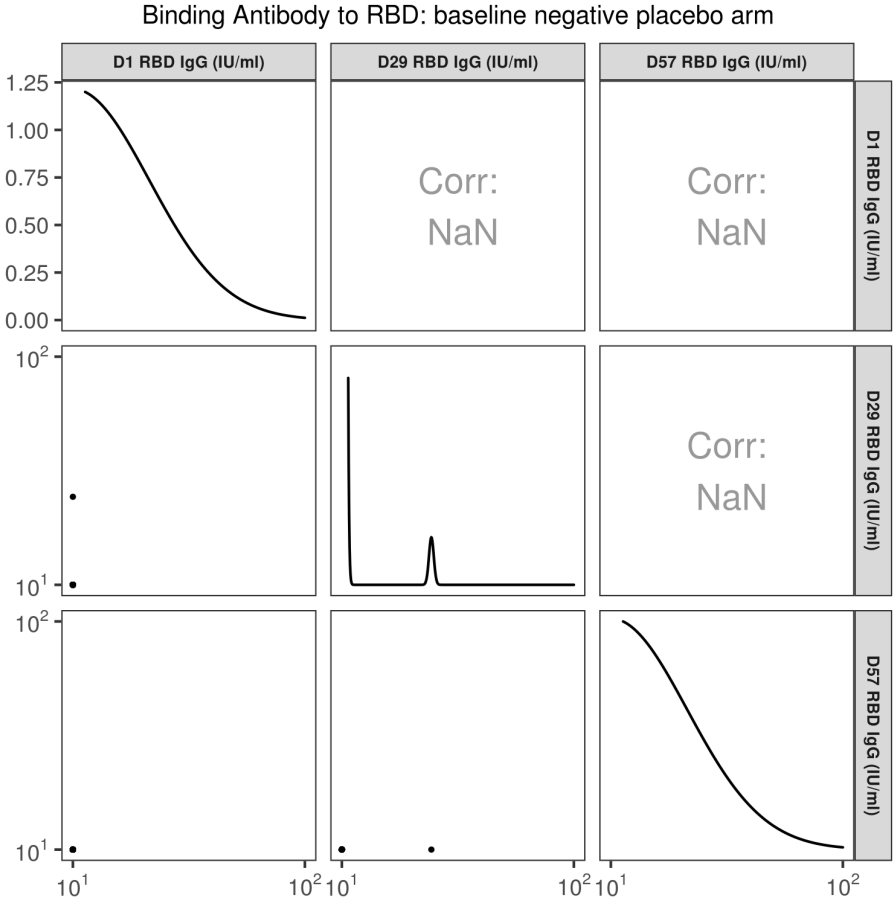

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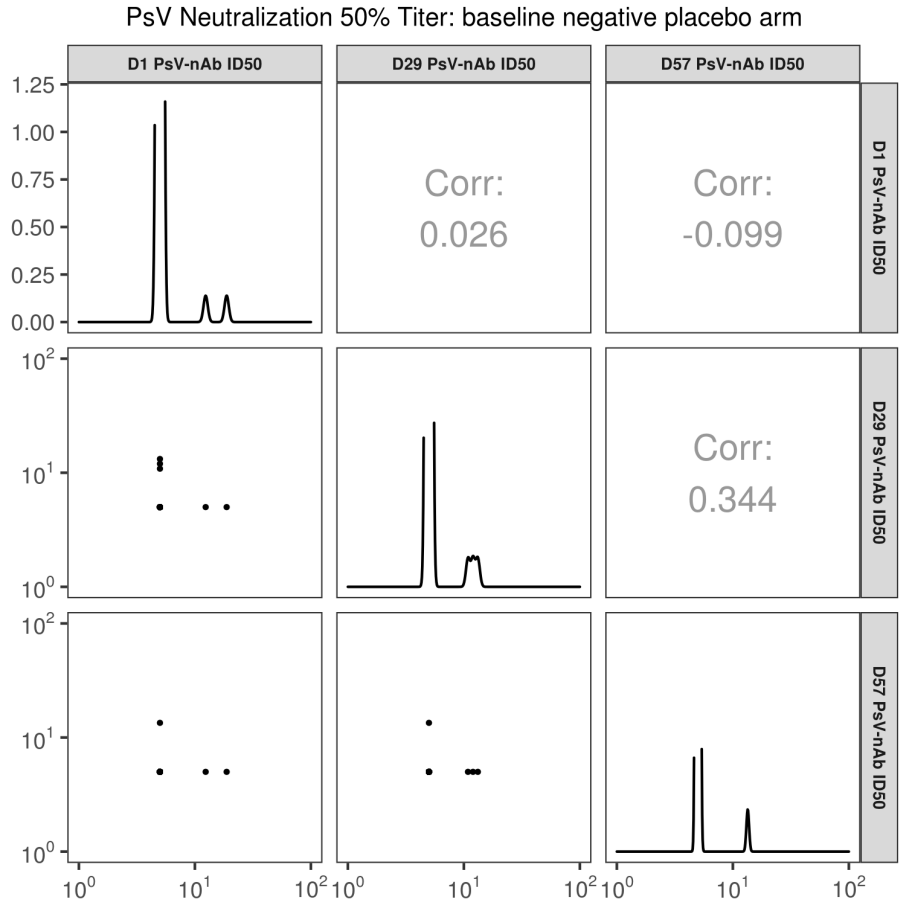

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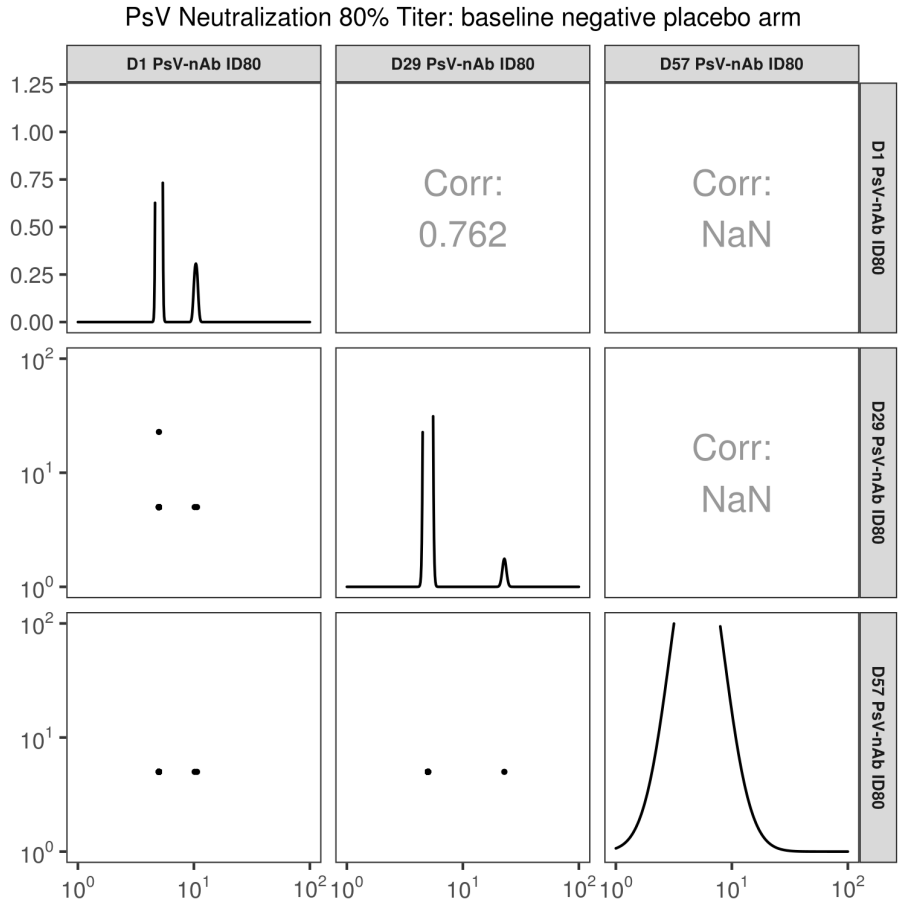

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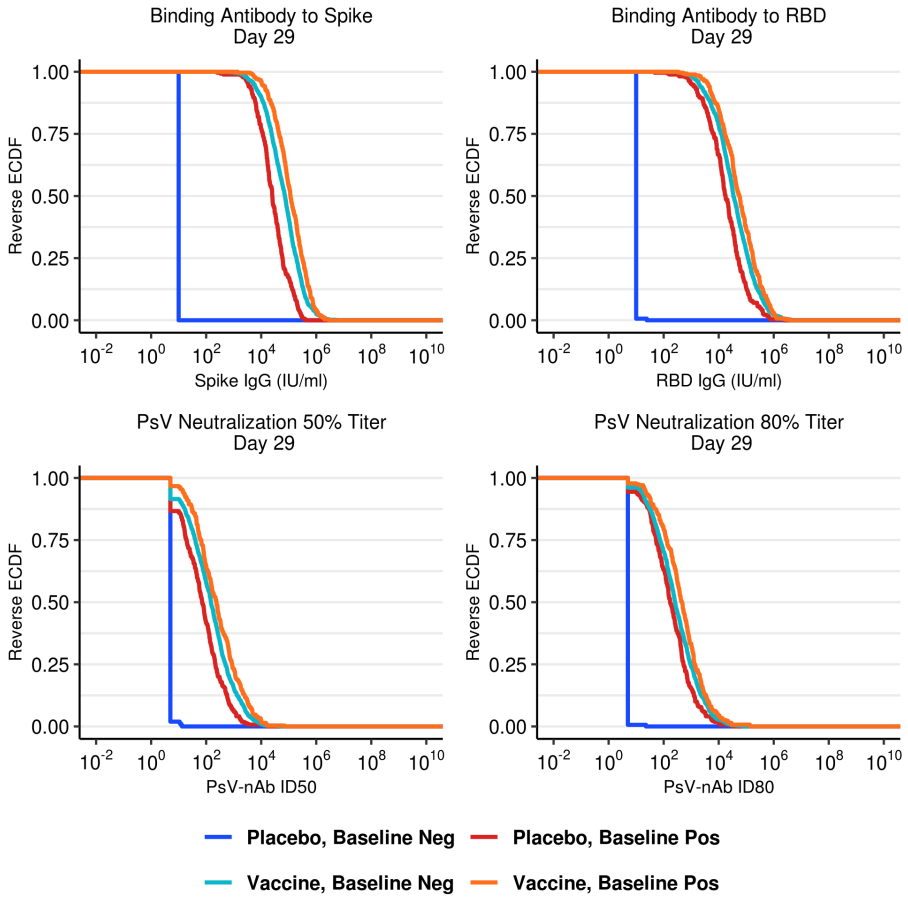

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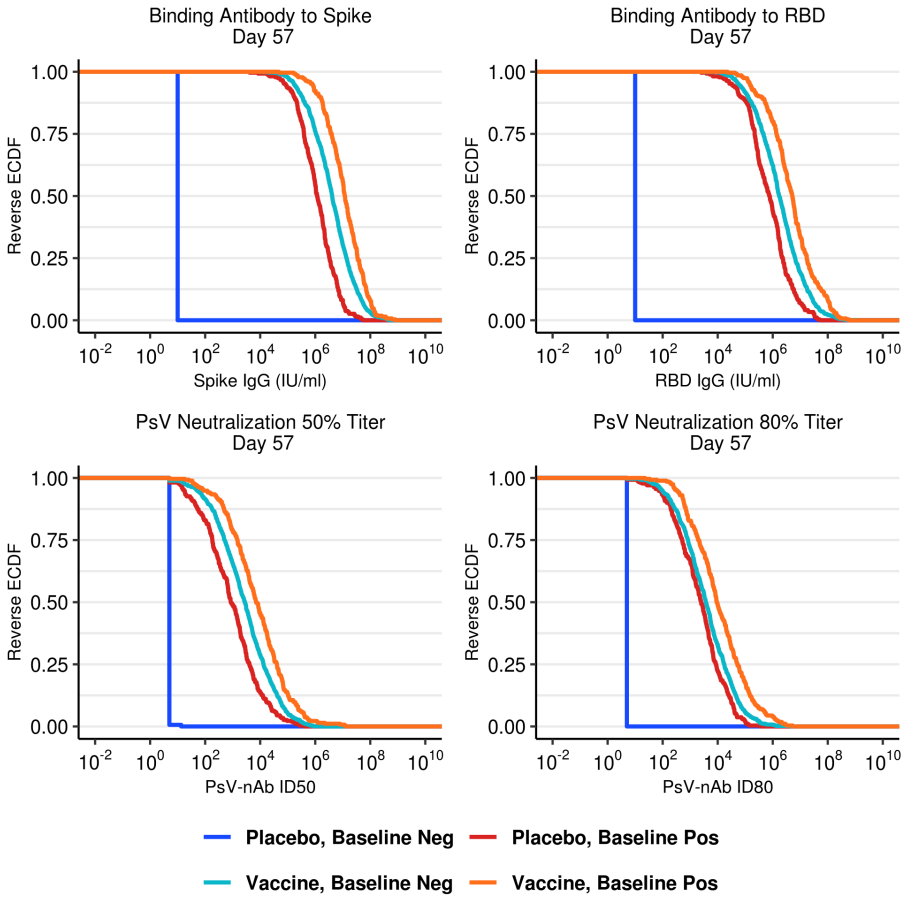

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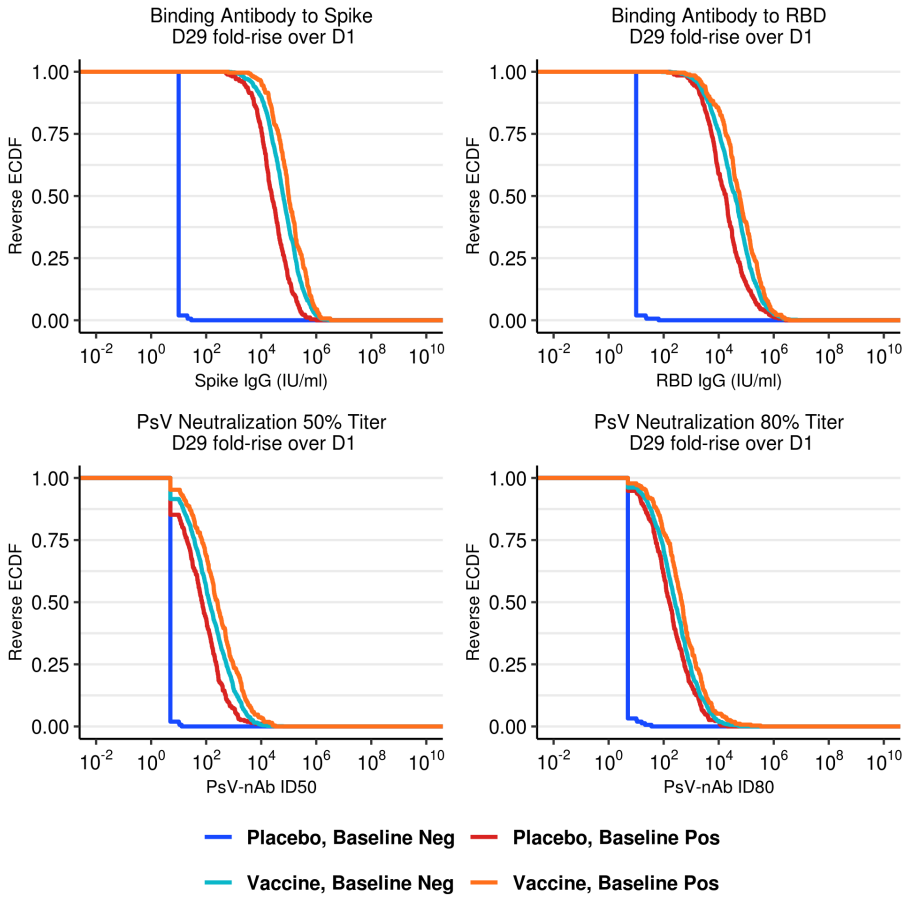

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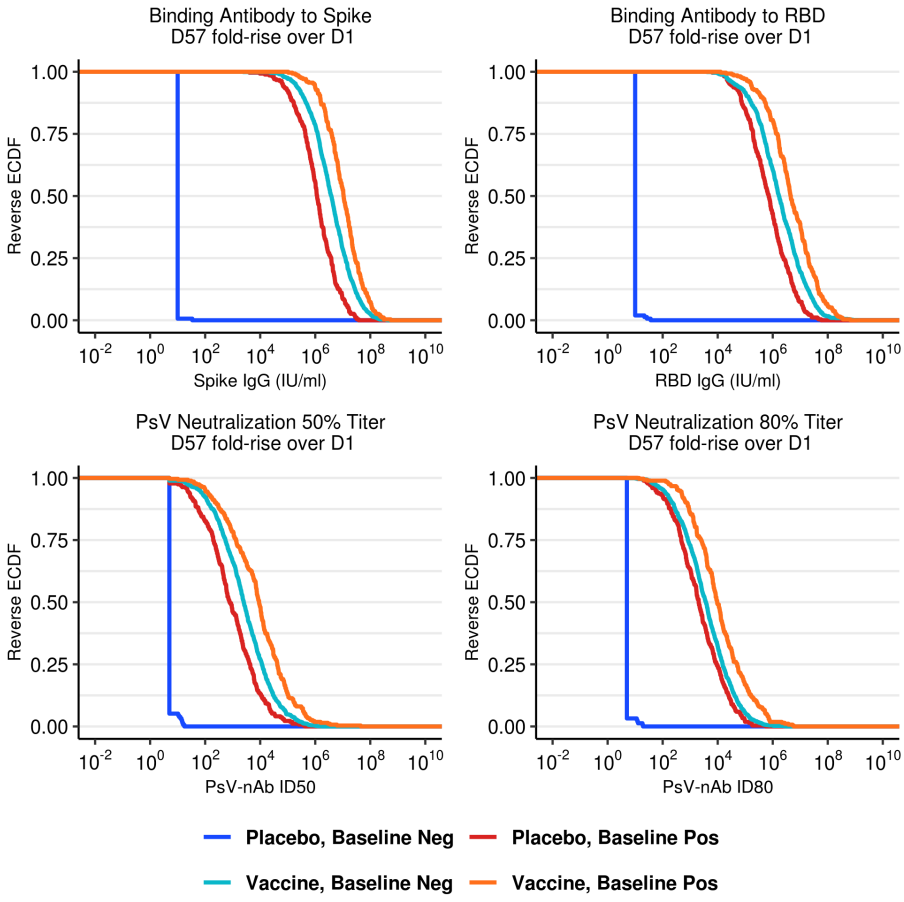

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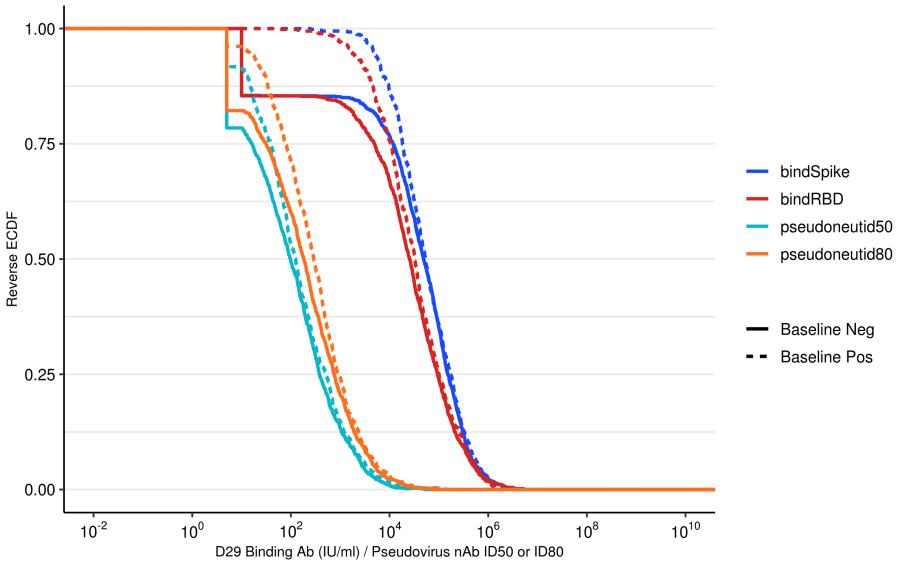

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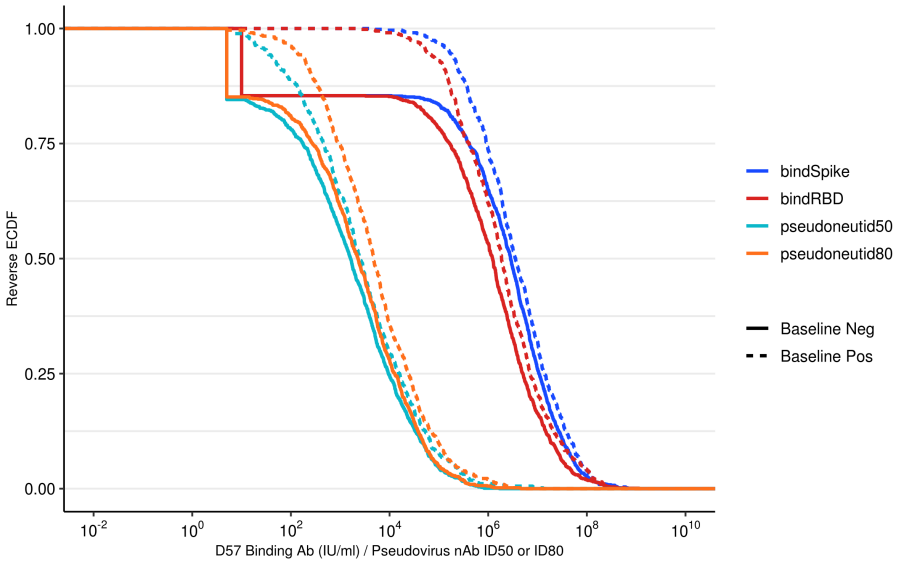

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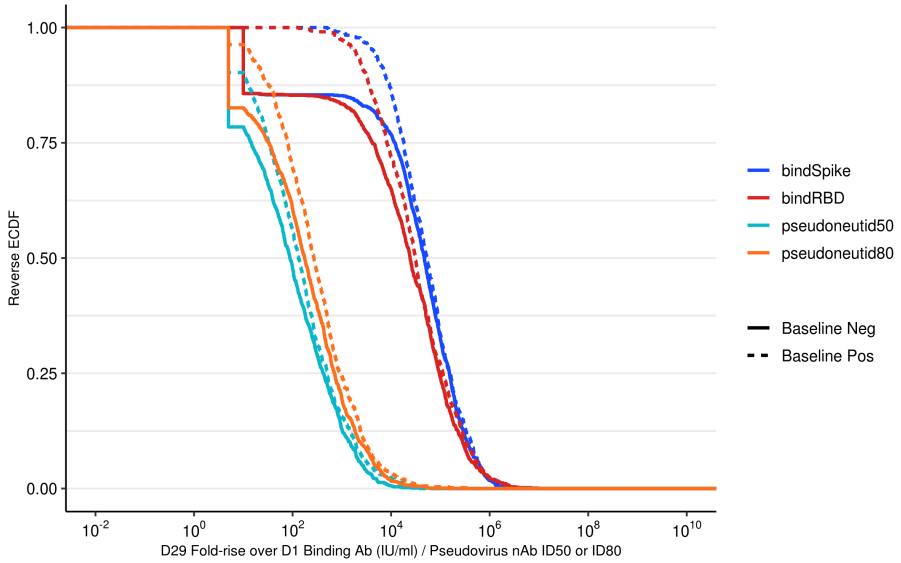

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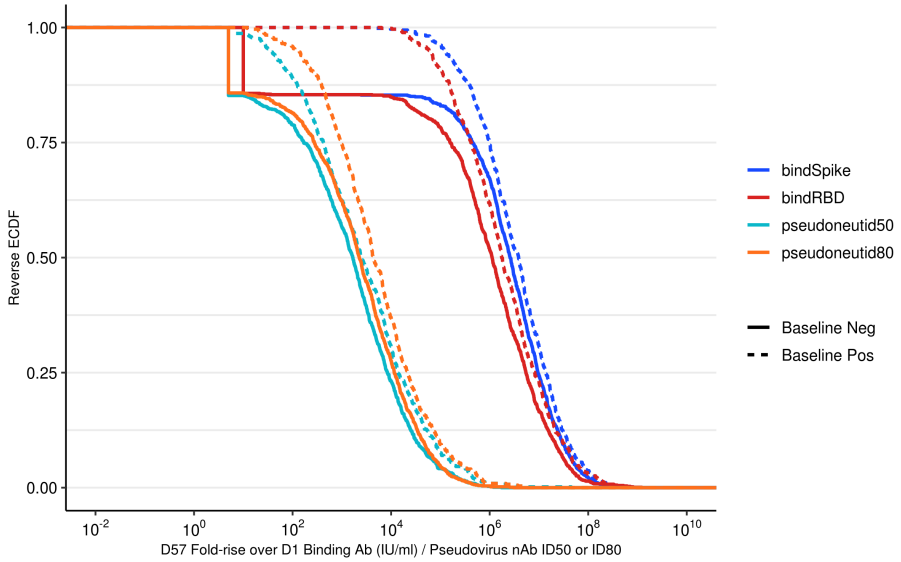

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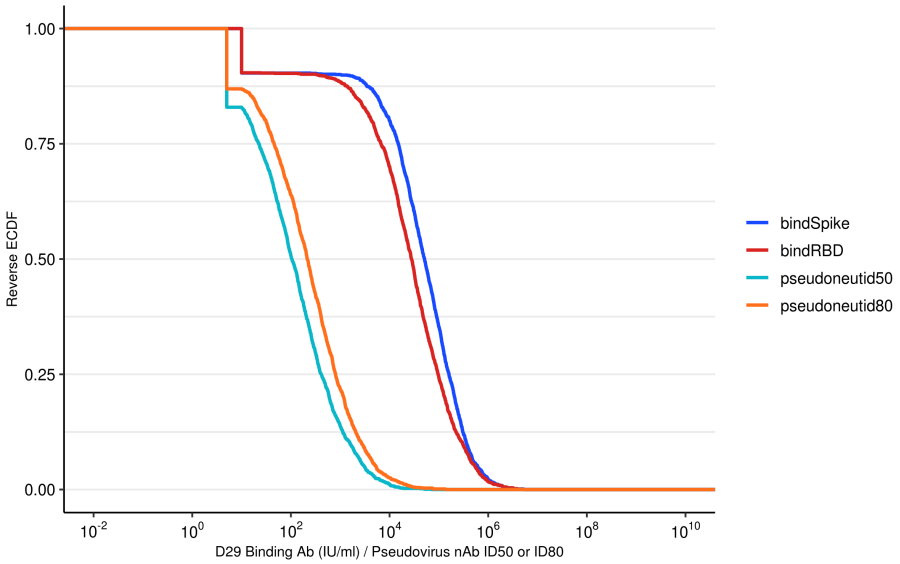

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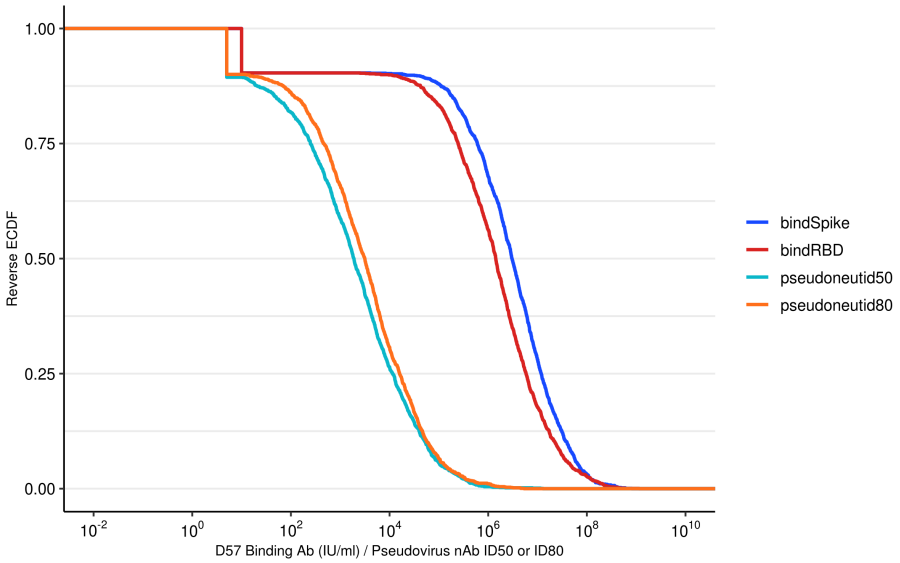

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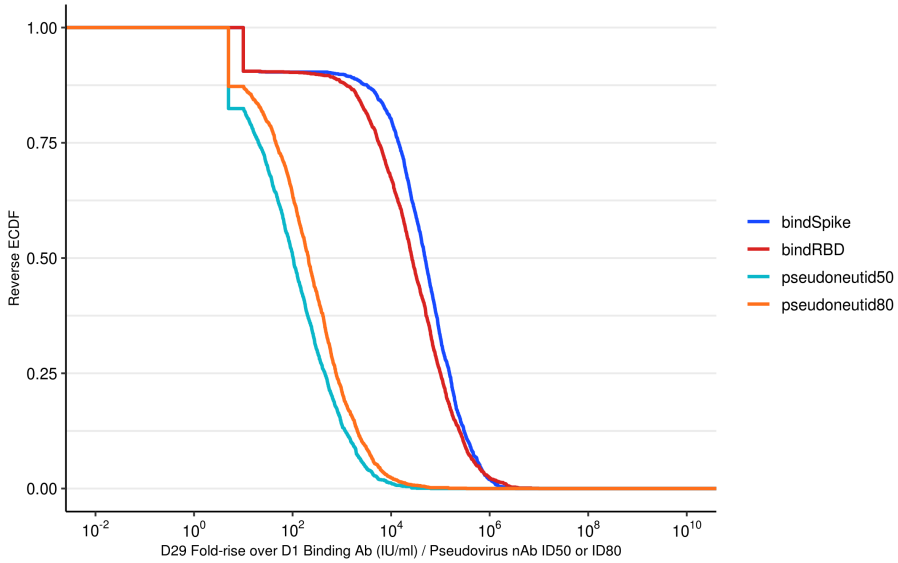

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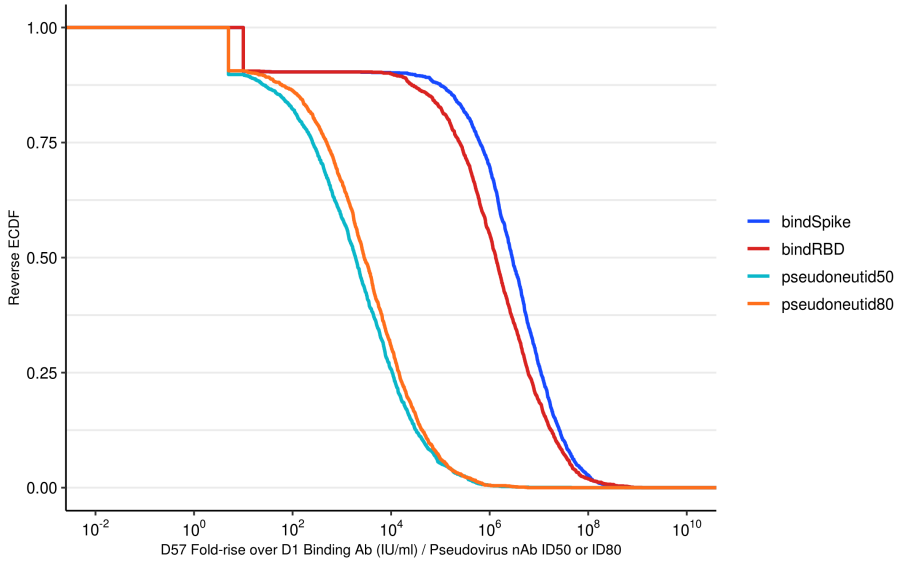

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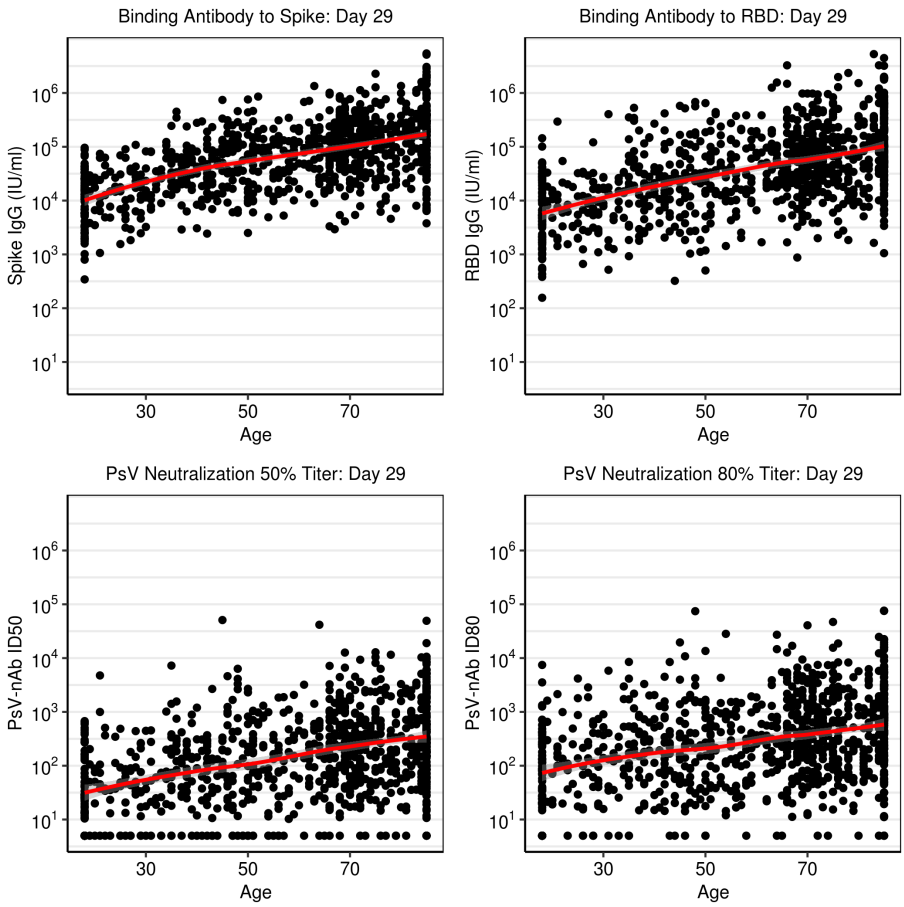

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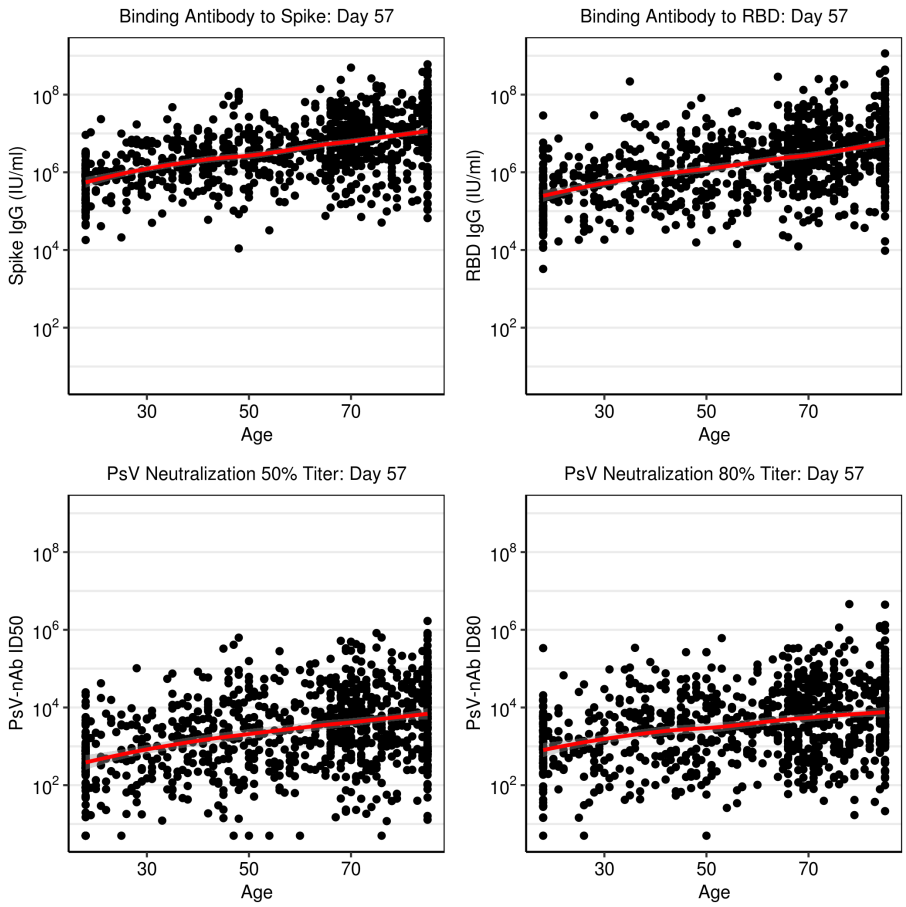

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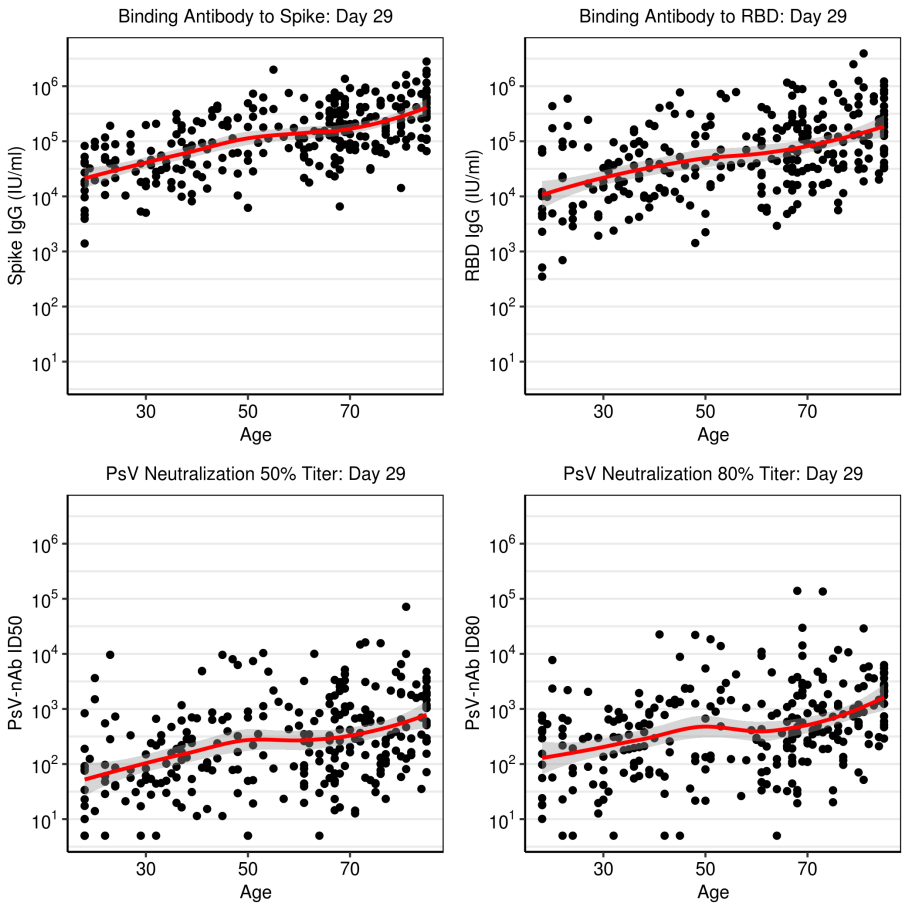

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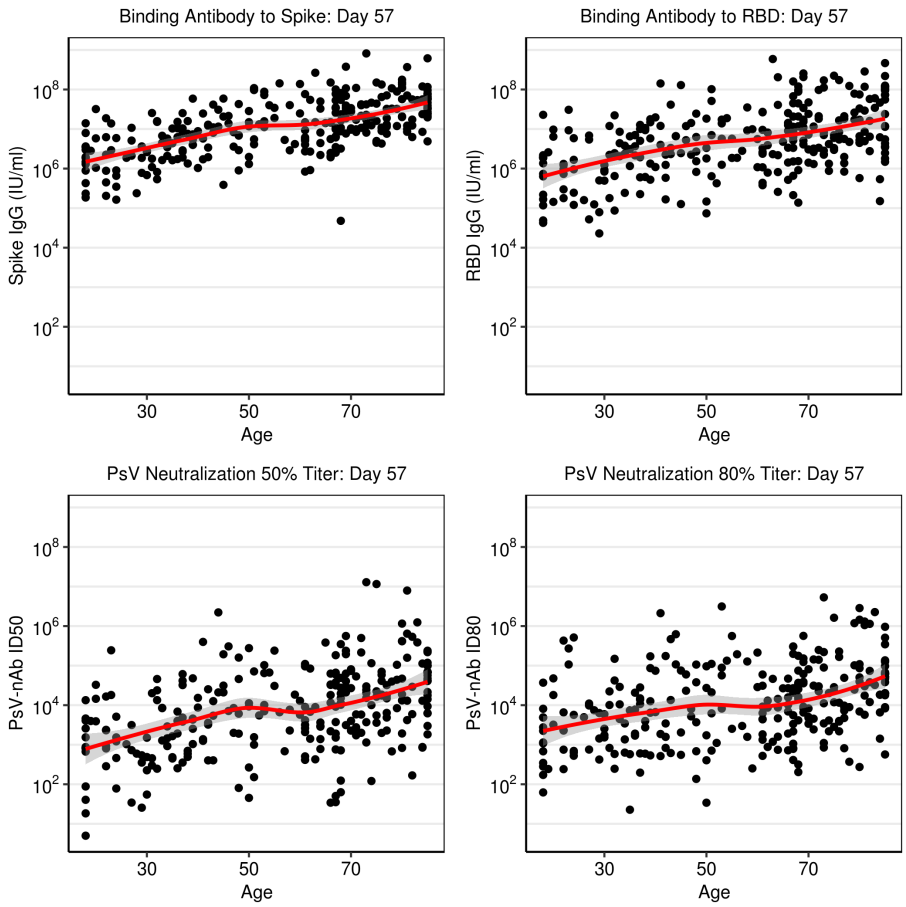

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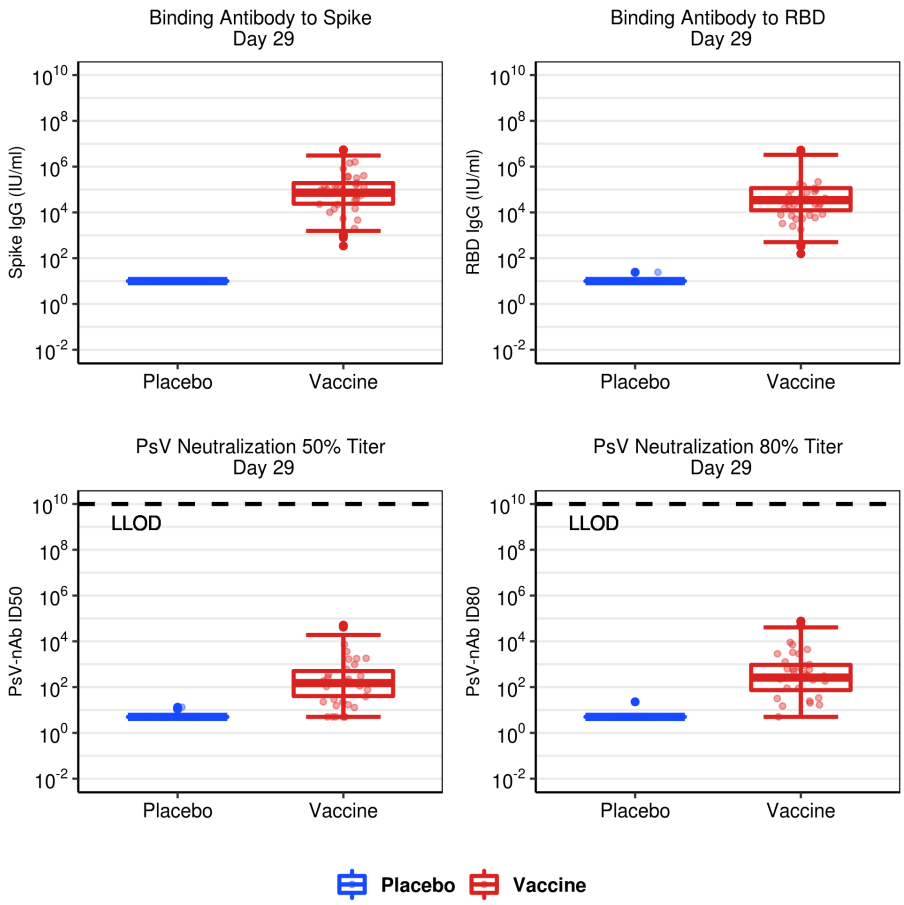

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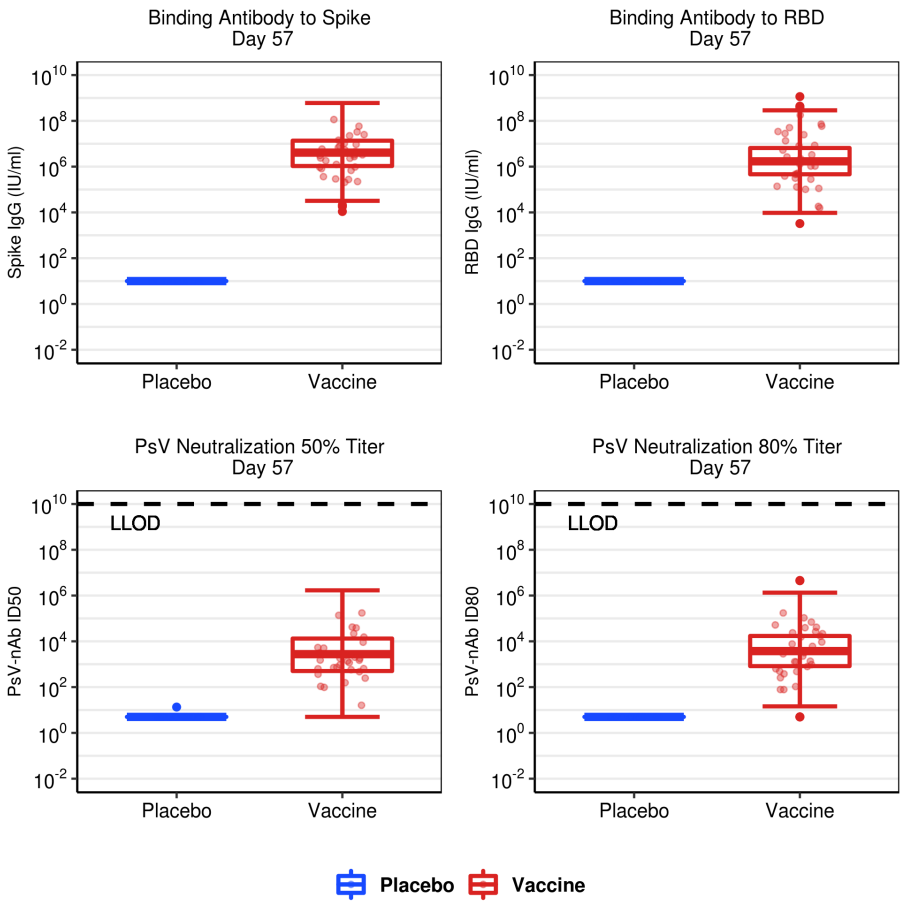

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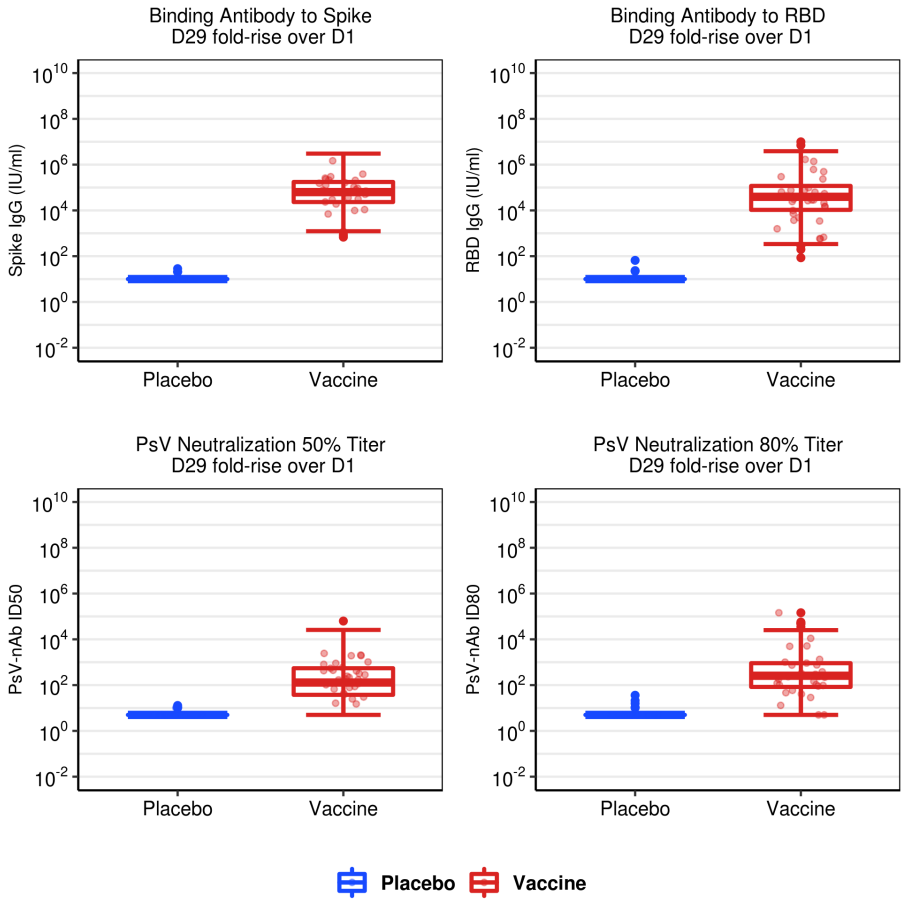

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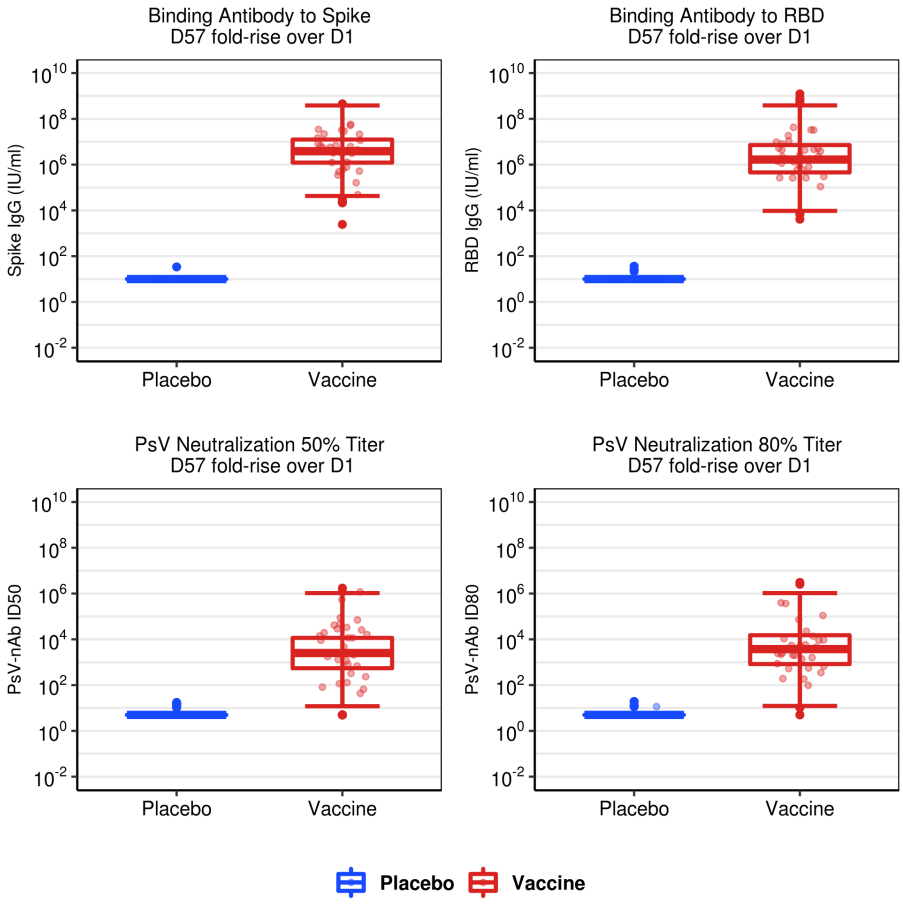

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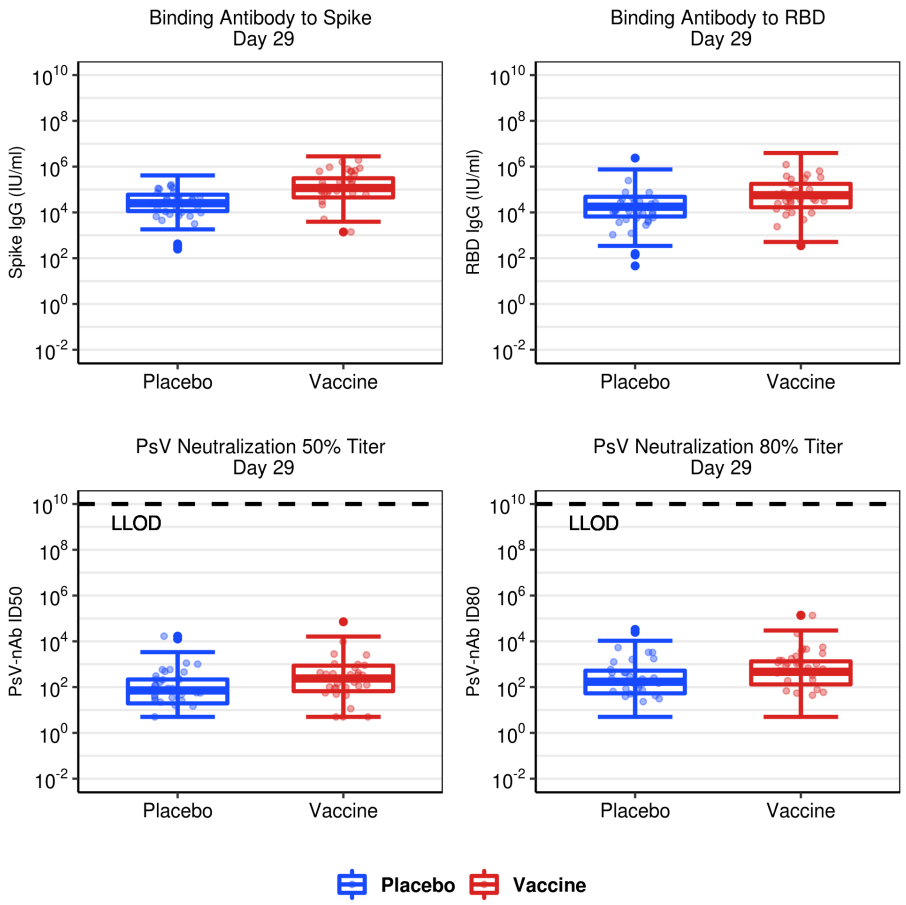

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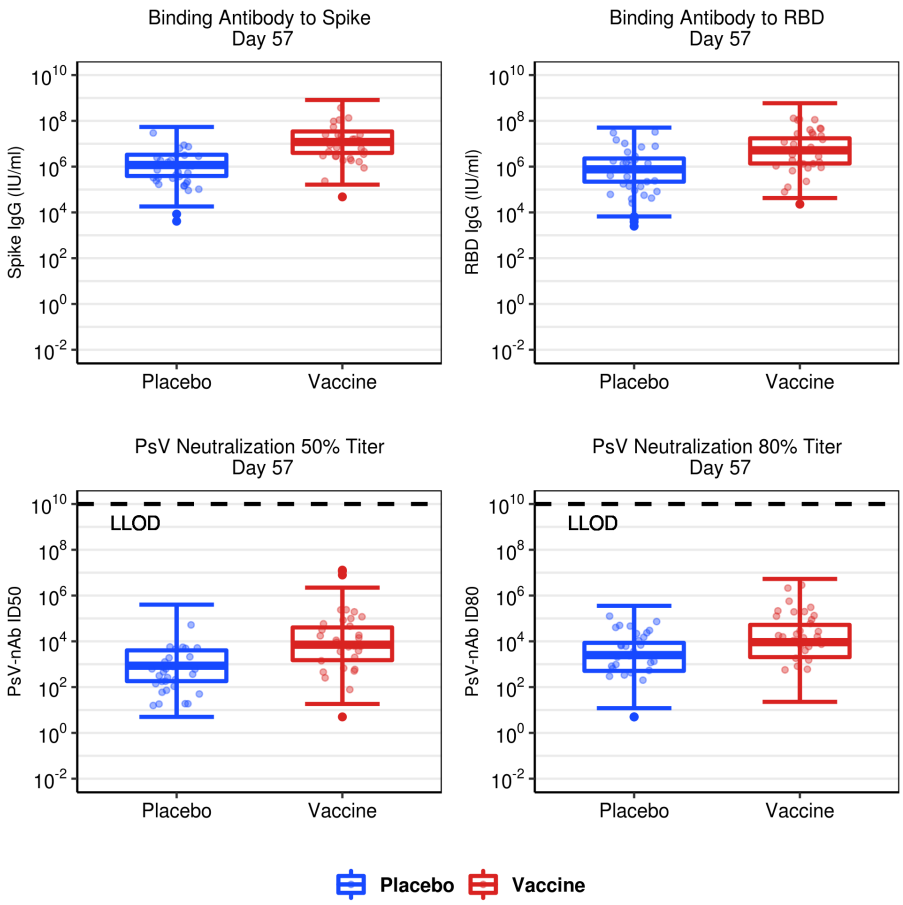
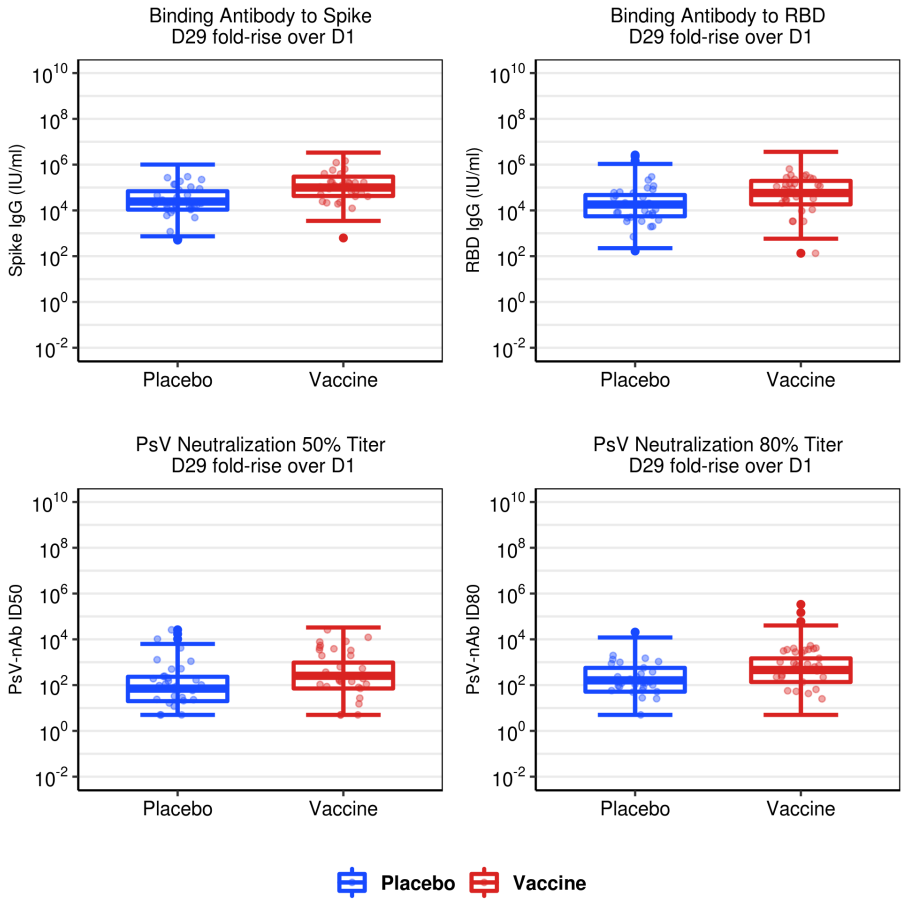


Figure 1.37: (Mock data) Boxplots of D57 Ab markers: baseline positive vaccine + placebo arms



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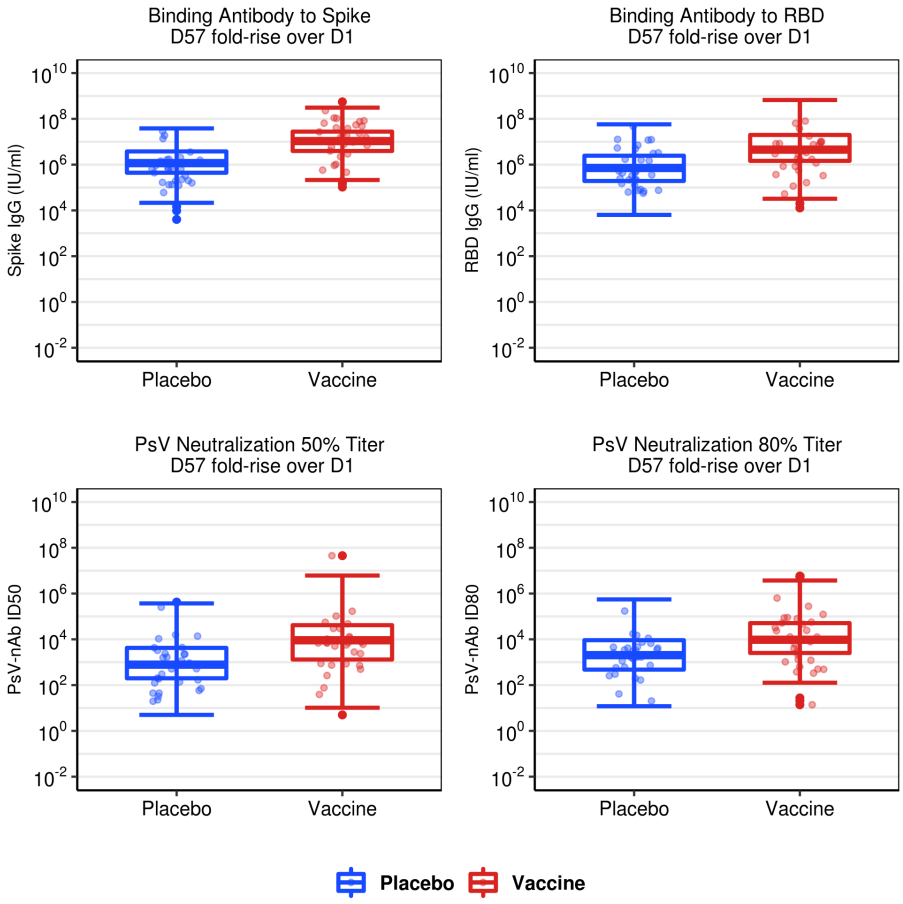

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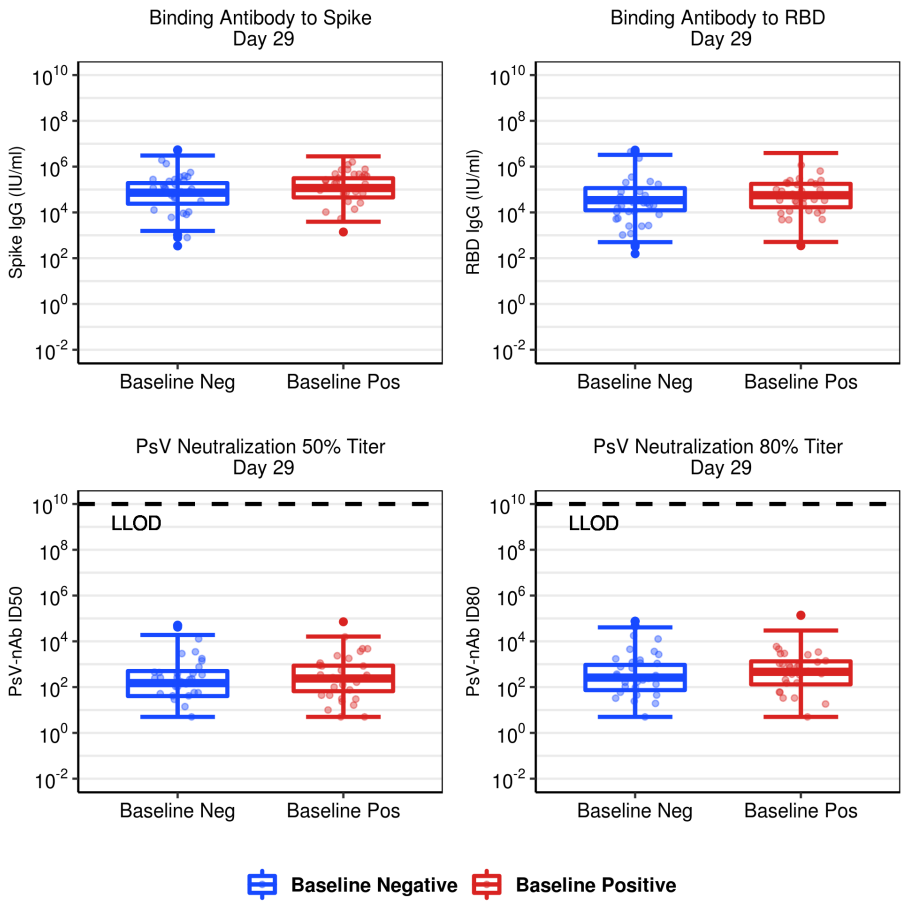
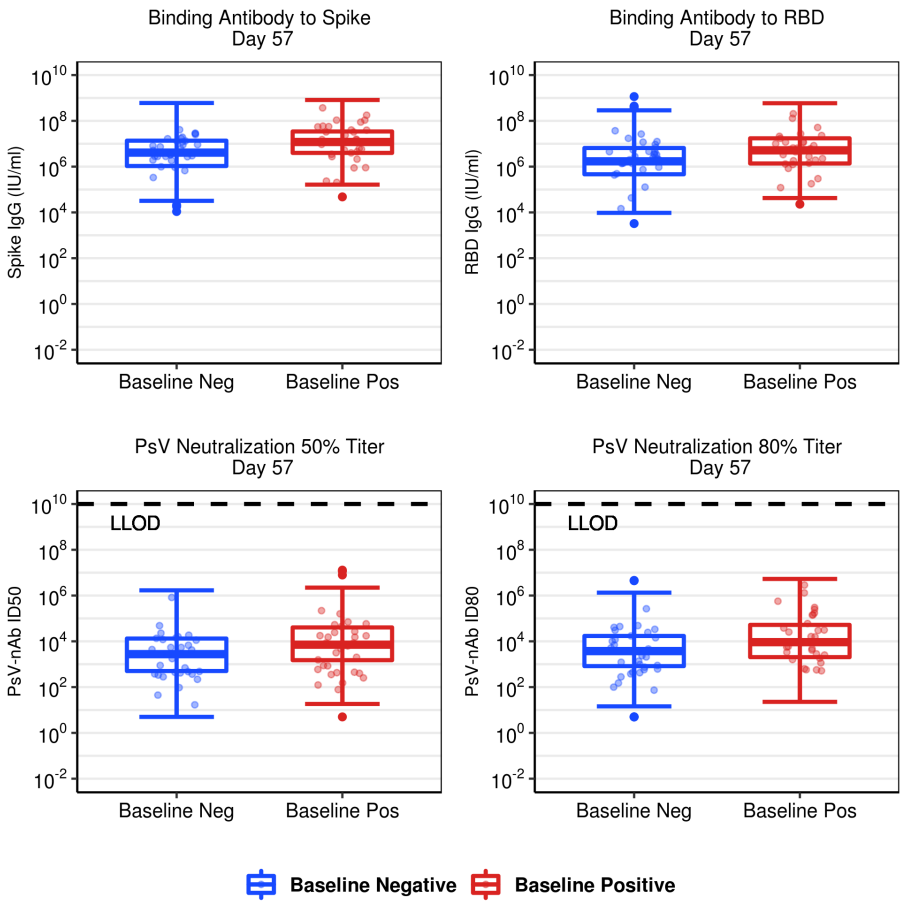


Figure 1.40: (Mock data) Boxplots of D29 Ab markers: baseline positive + negative vaccine arm



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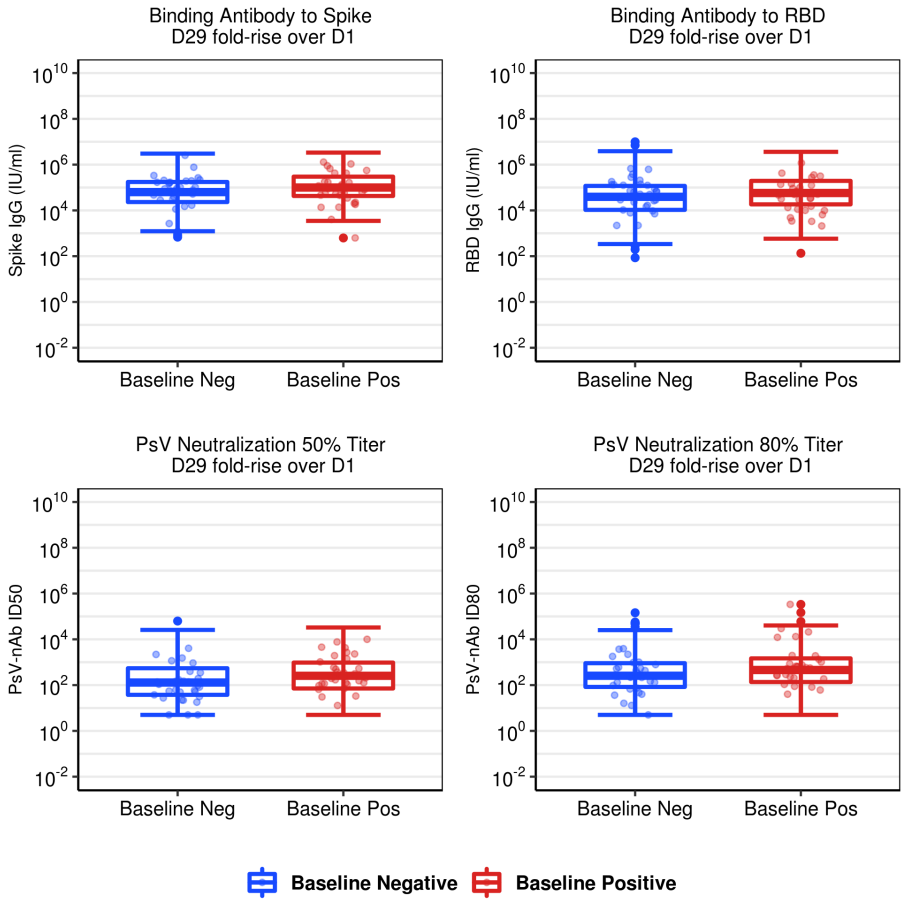

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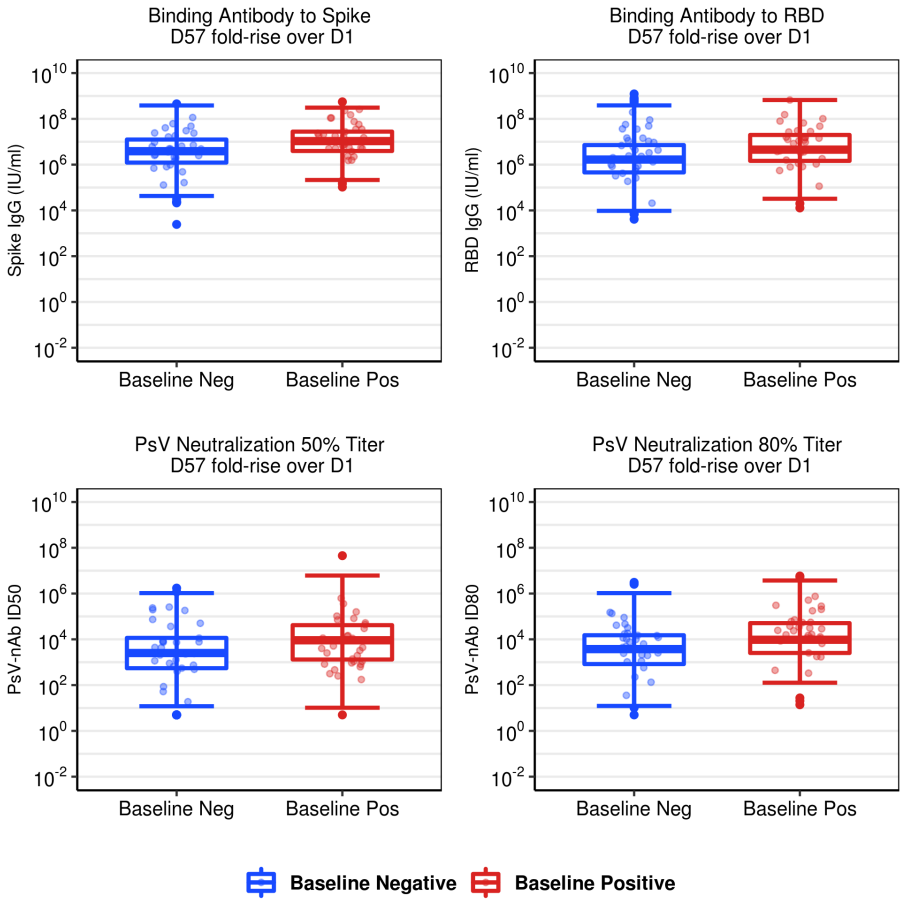

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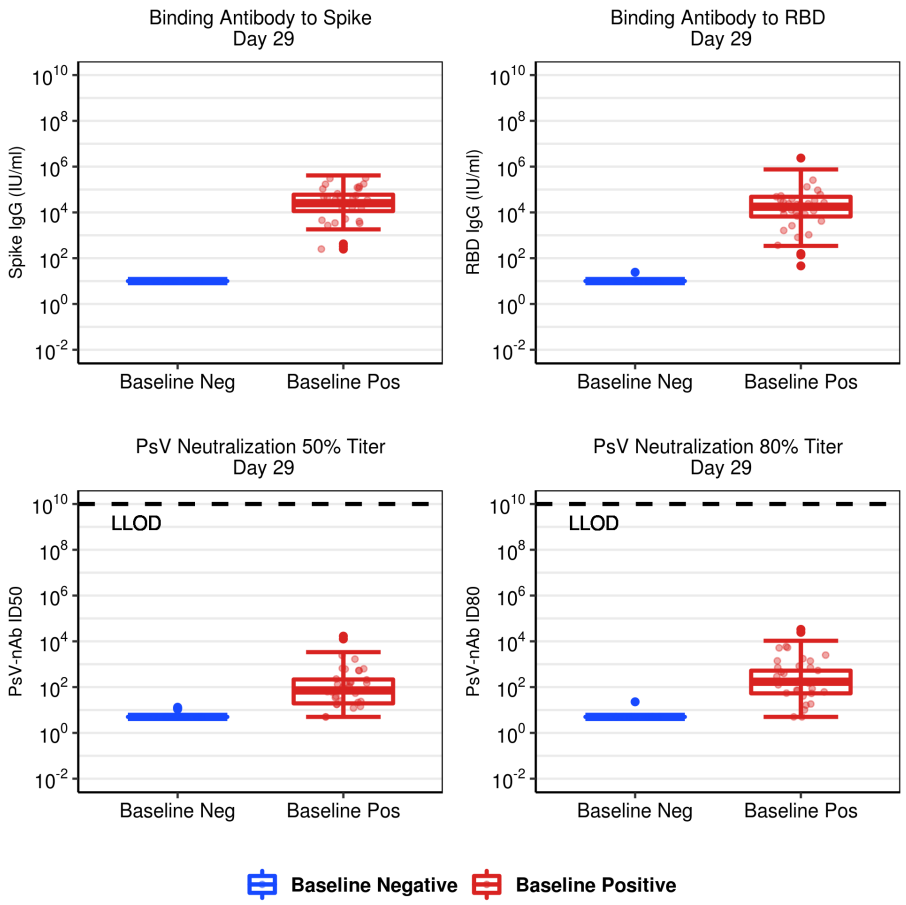
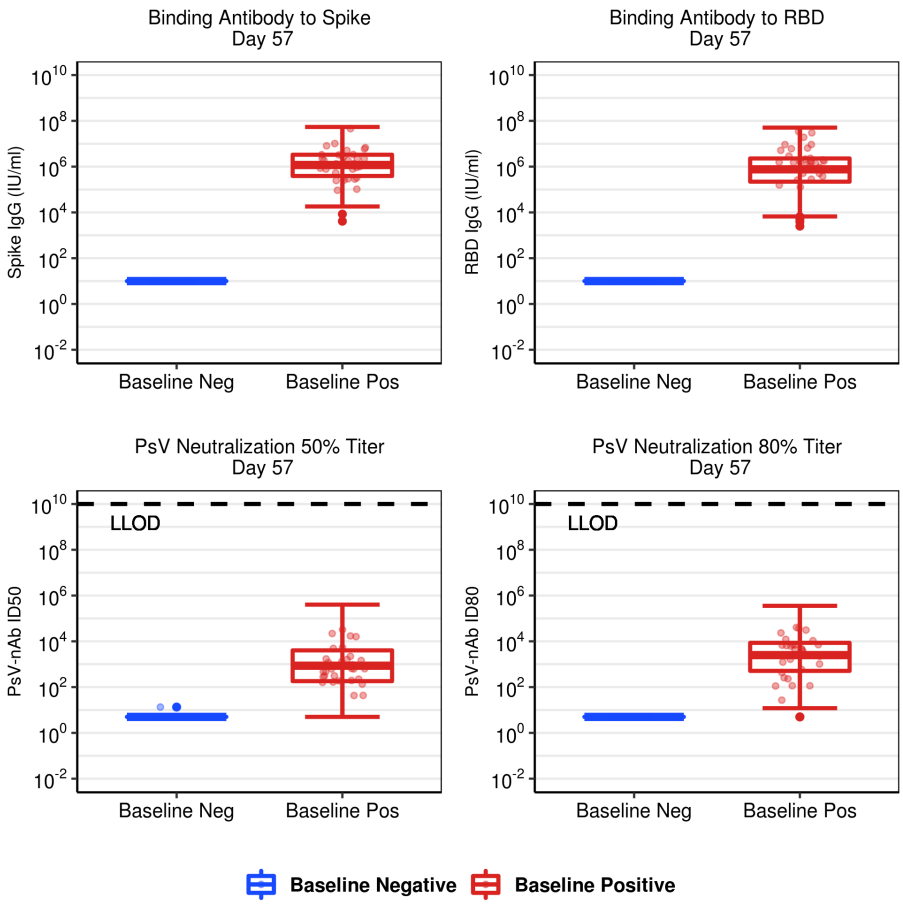


Figure 1.44: (Mock data) Boxplots of D29 Ab markers: baseline positive + negative placebo arm



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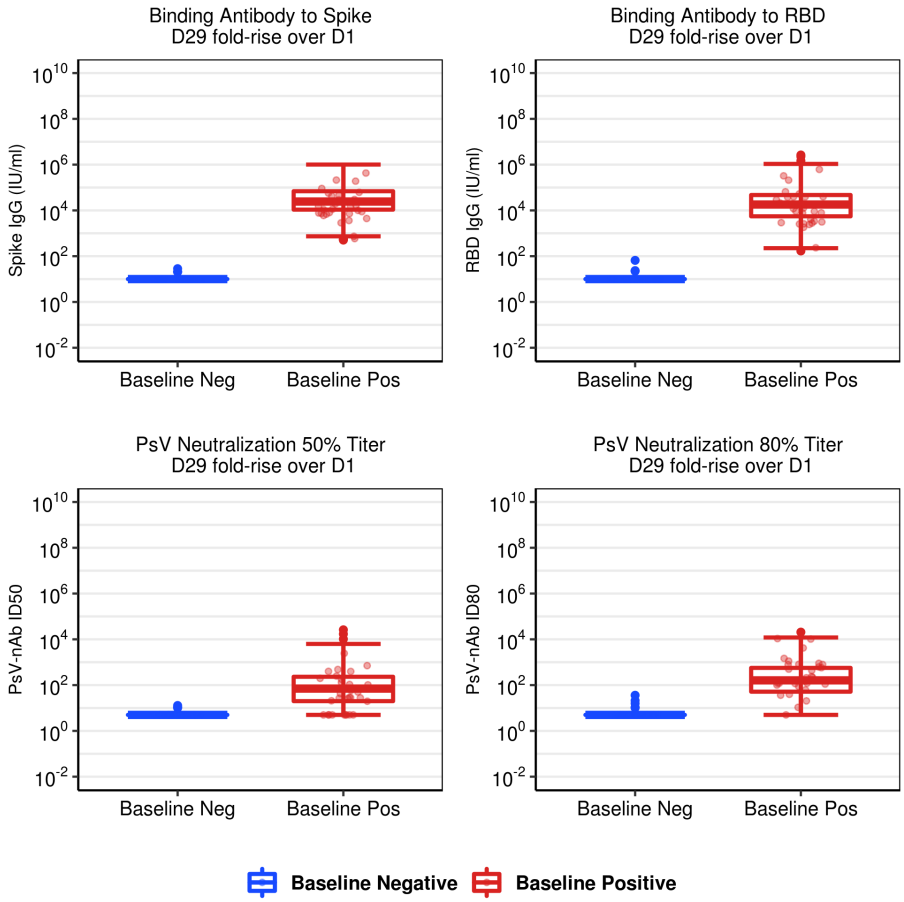

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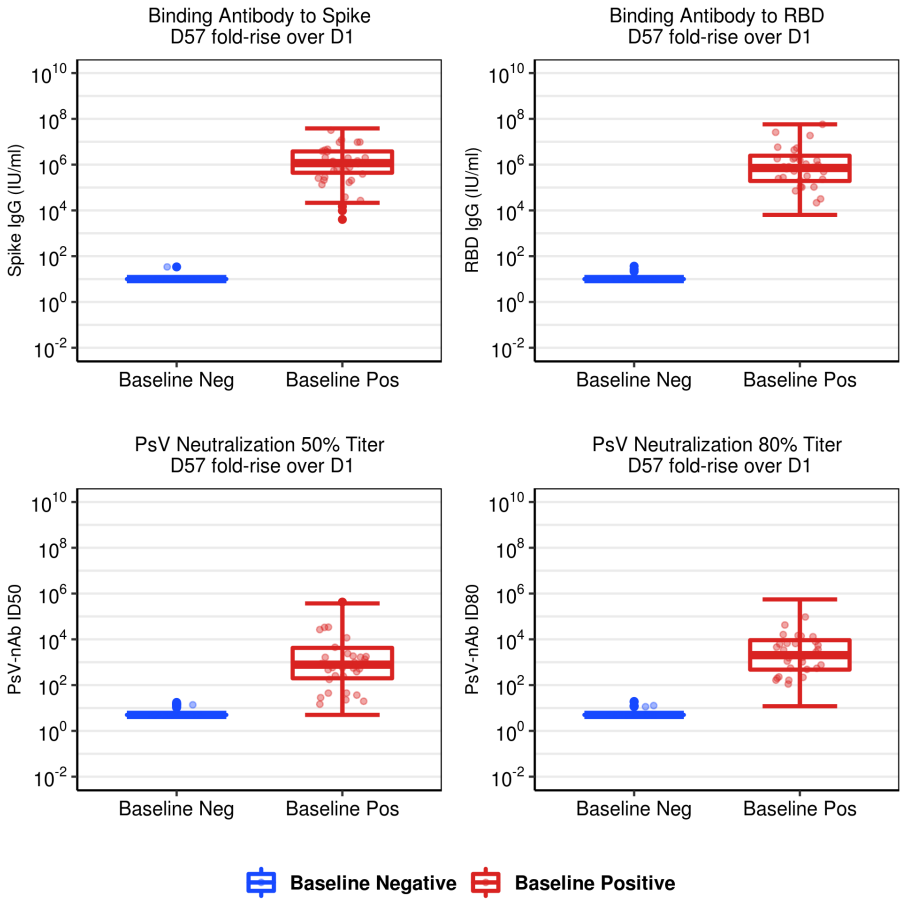

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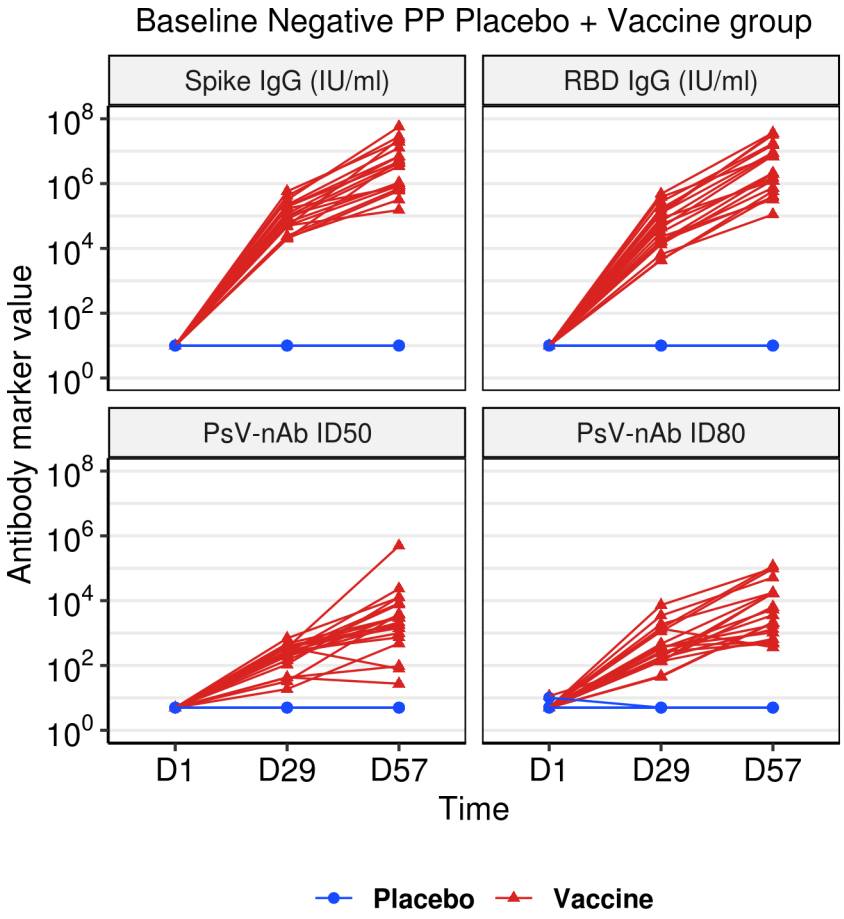

Figure 1.48: (Mock data) Spaghetti plots of Ab markers over time: baseline negative vaccine + placebo arm

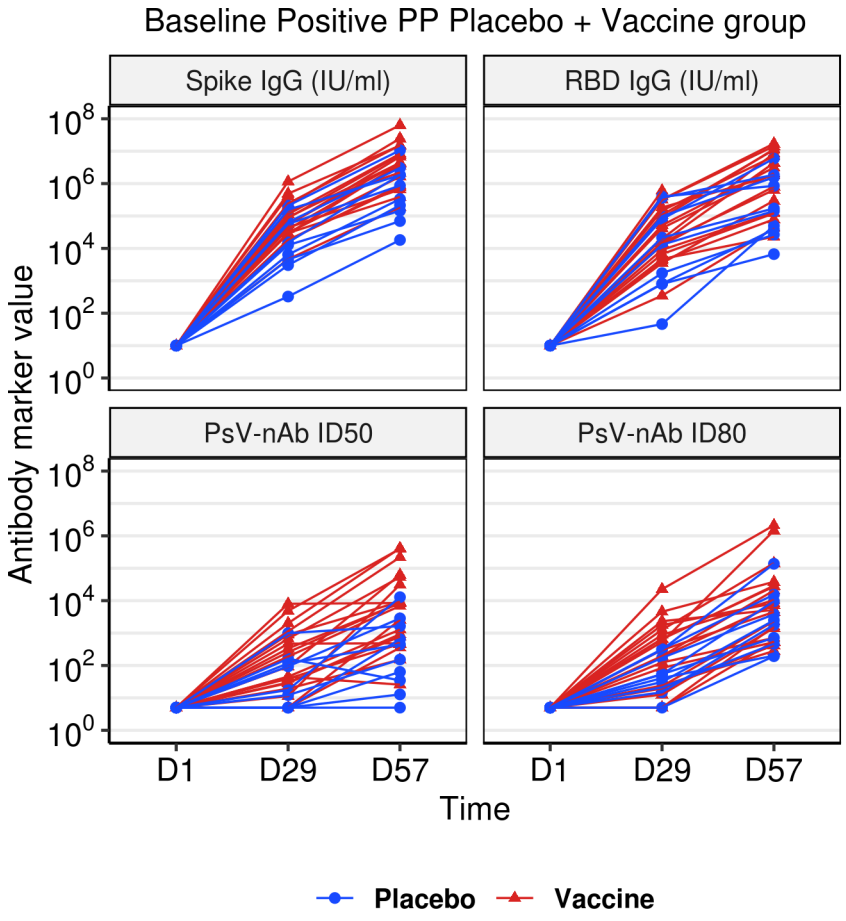

Figure 1.49: (Mock data) Spaghetti plots of Ab markers over time: baseline positive vaccine + placebo arm

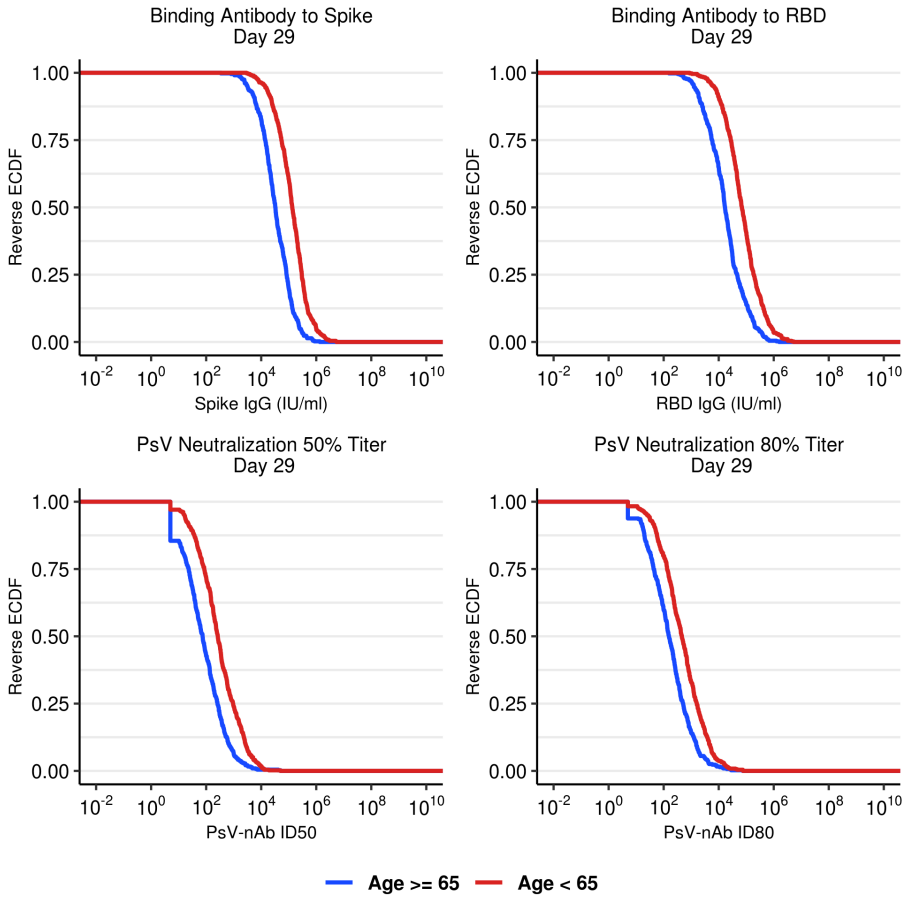

Figure 1.50: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by age groups.

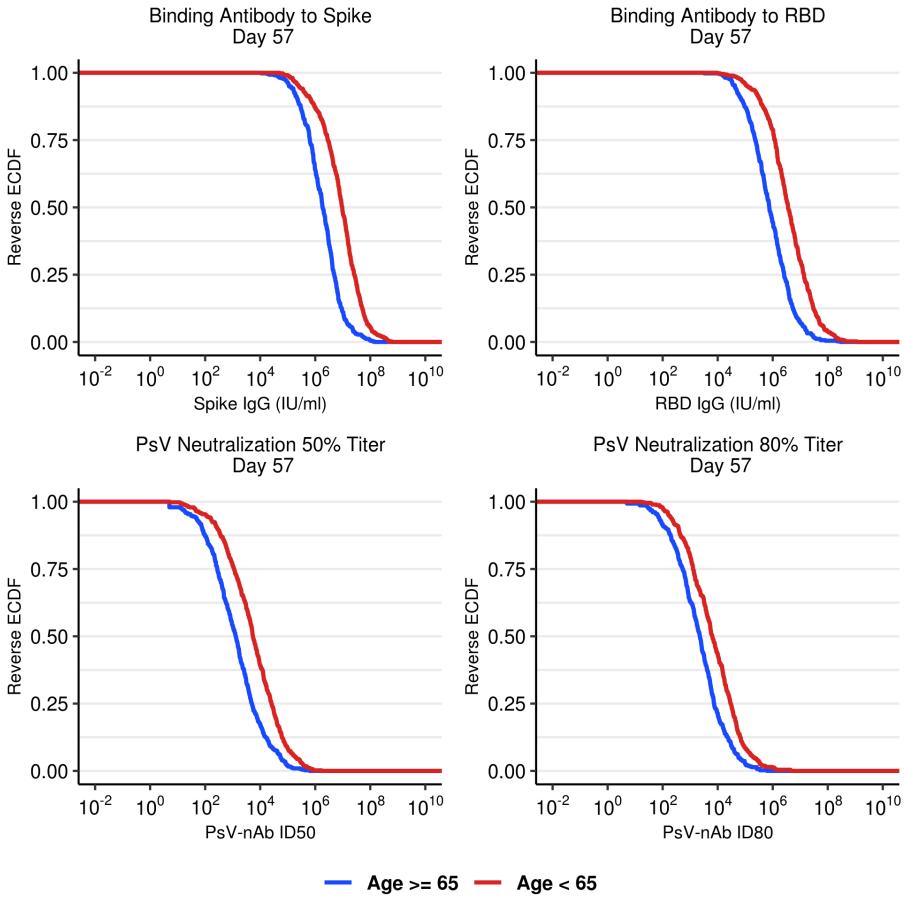

Figure 1.51: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by age groups.

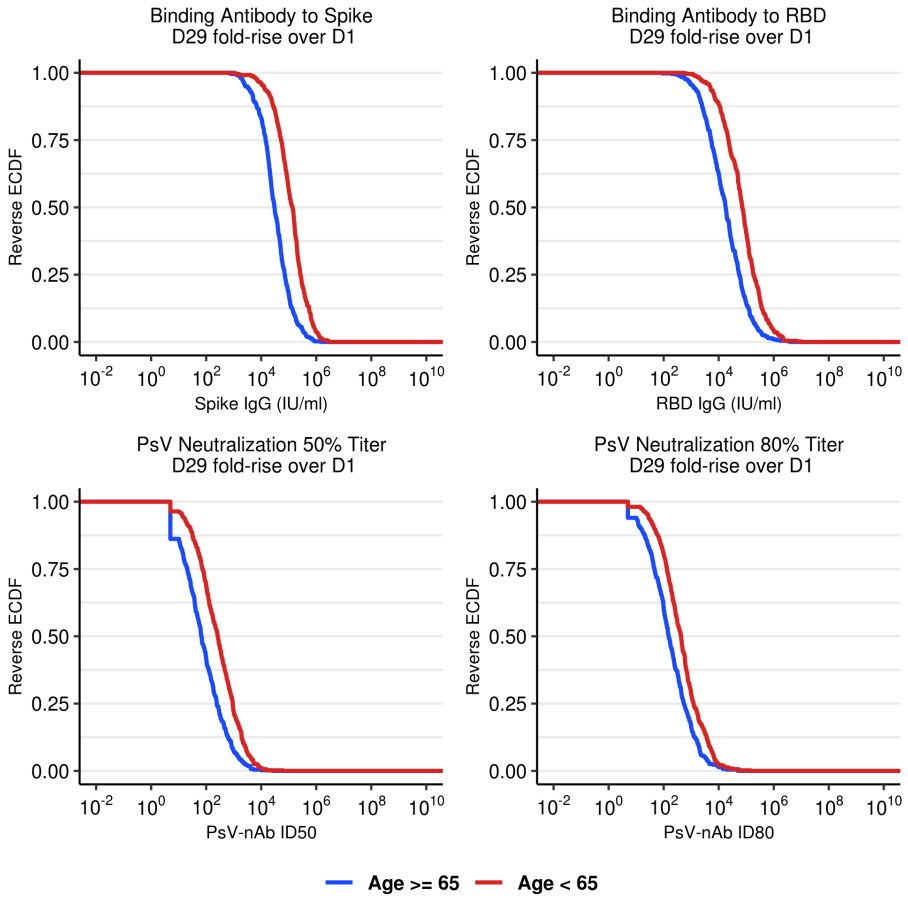

Figure 1.52: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age groups.

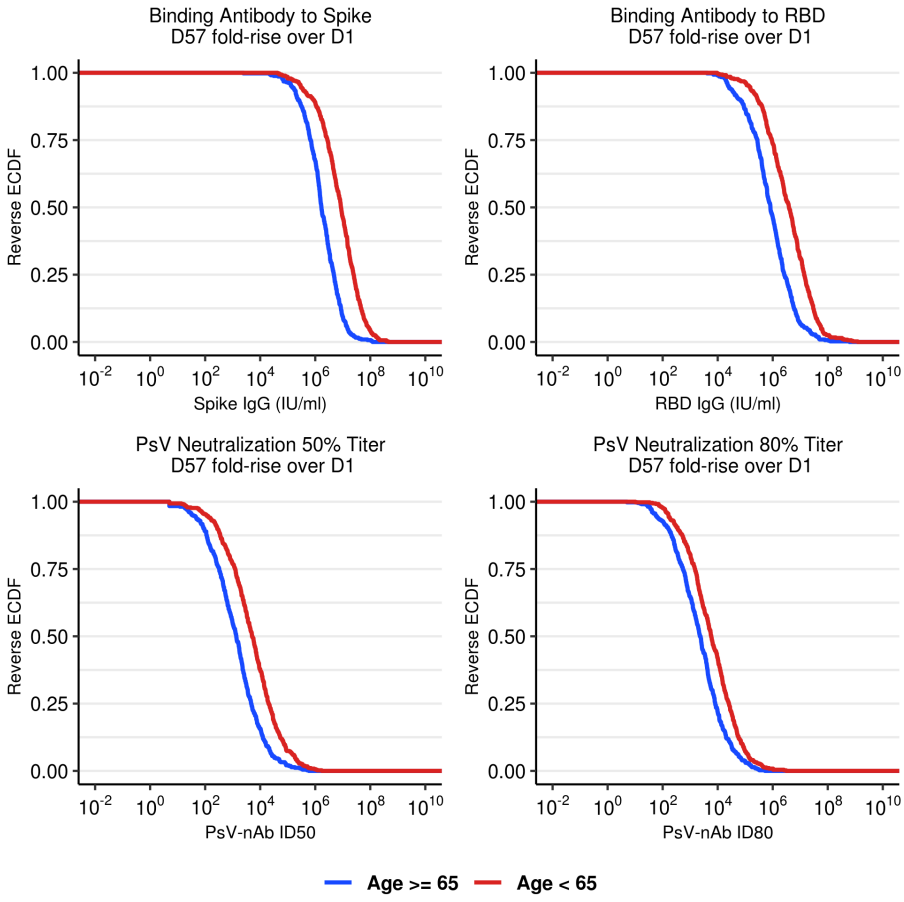

Figure 1.53: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by age groups.

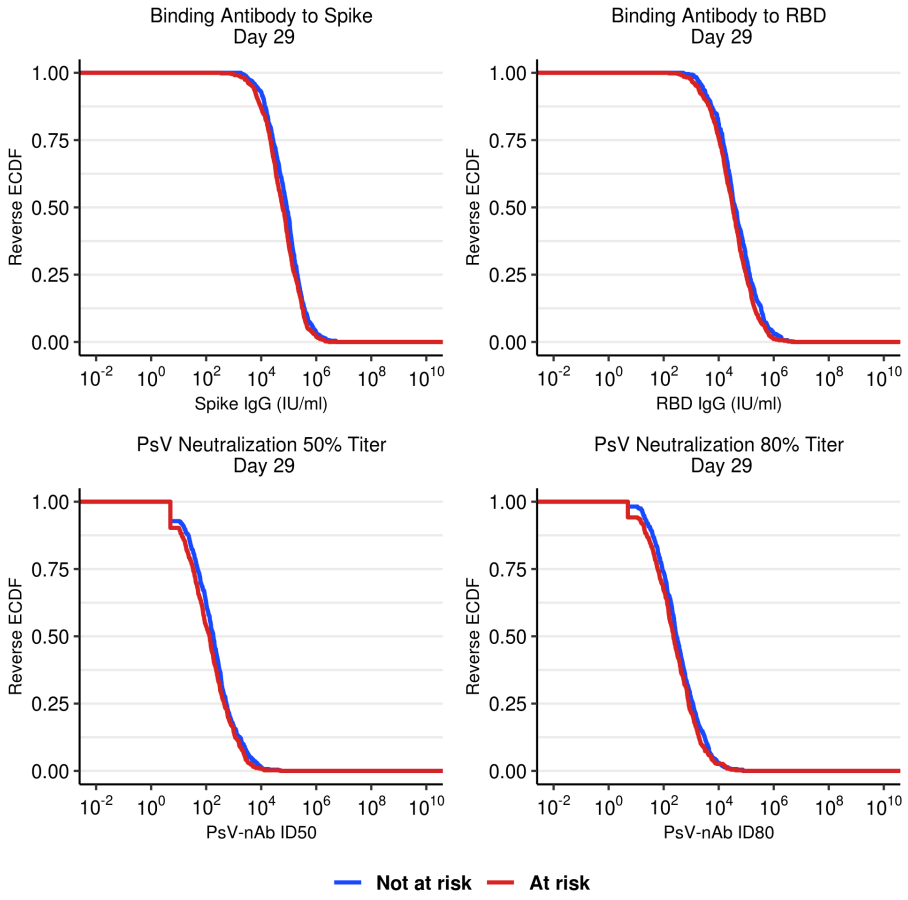

Figure 1.54: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by high-risk condition.

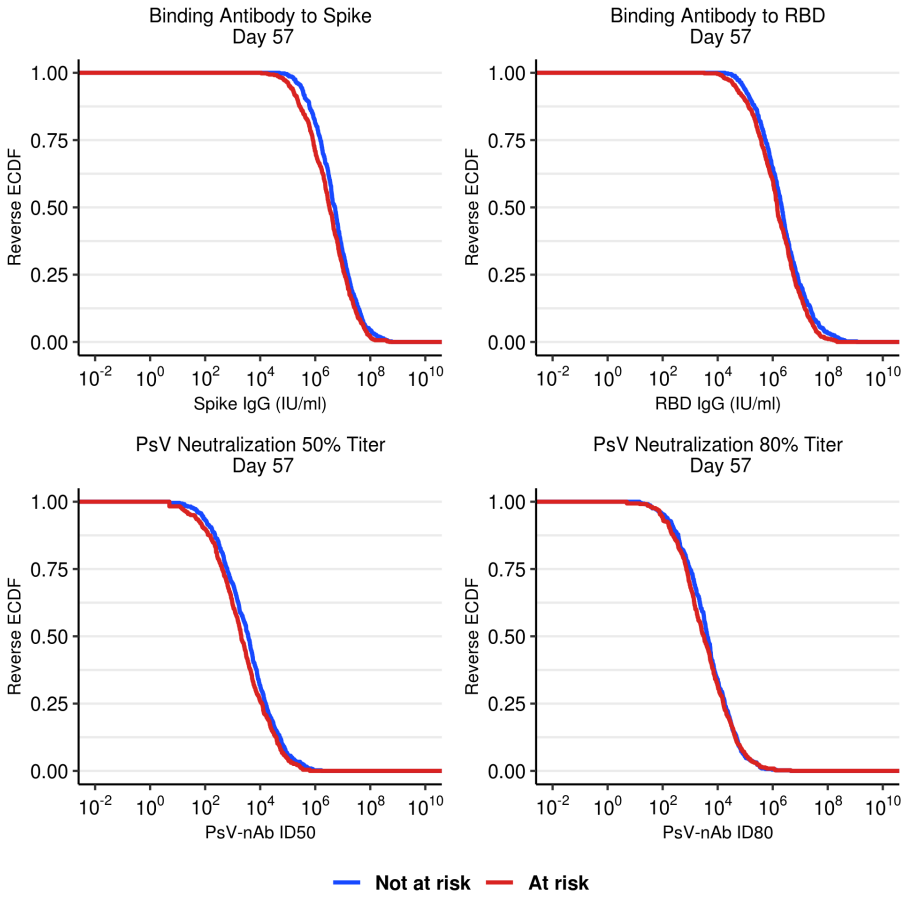

Figure 1.55: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by high-risk condition.

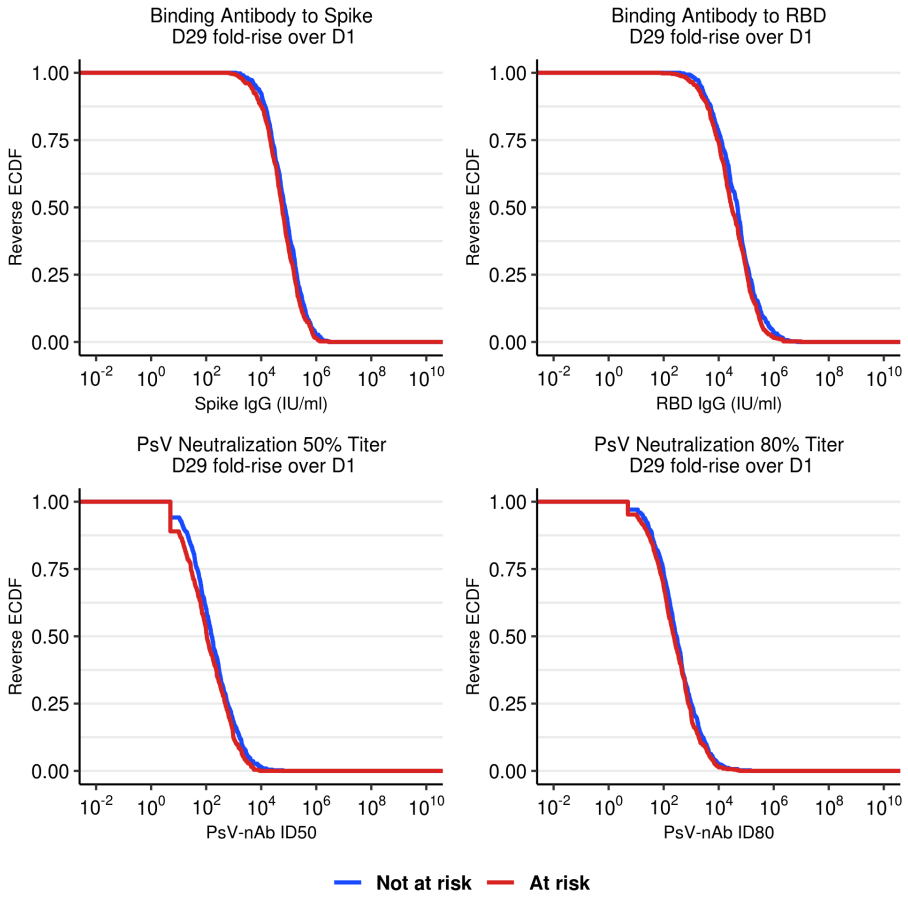

Figure 1.56: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by high-risk condition.

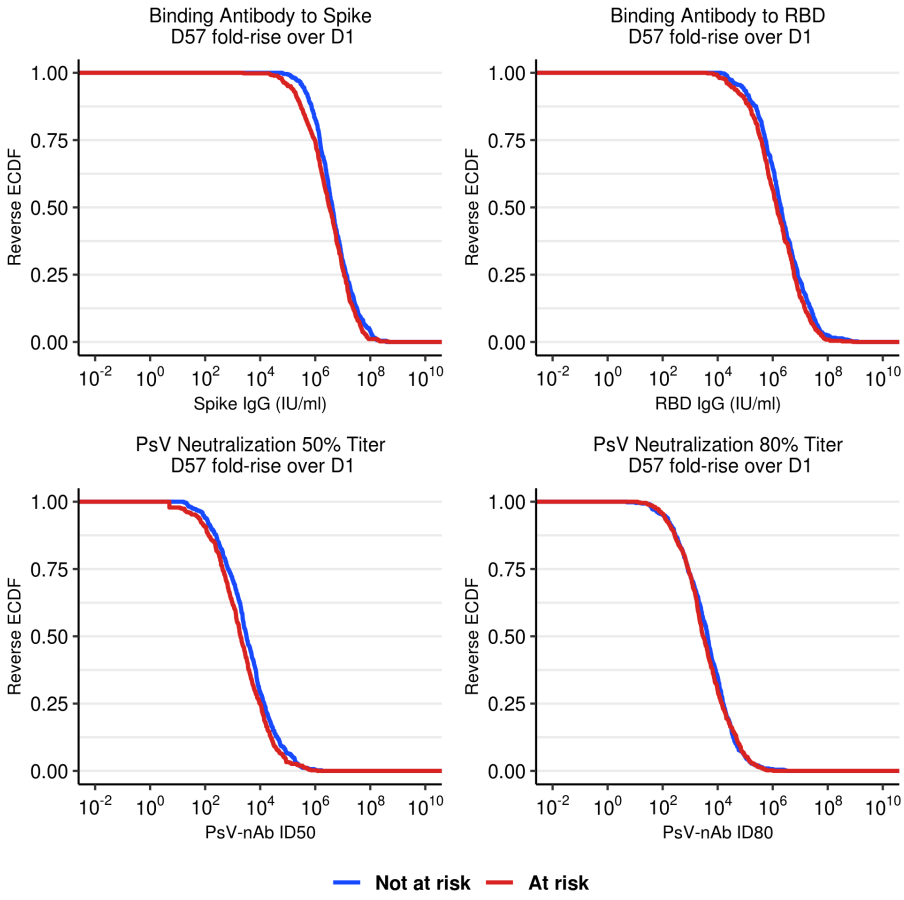

Figure 1.57: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by high-risk condition.

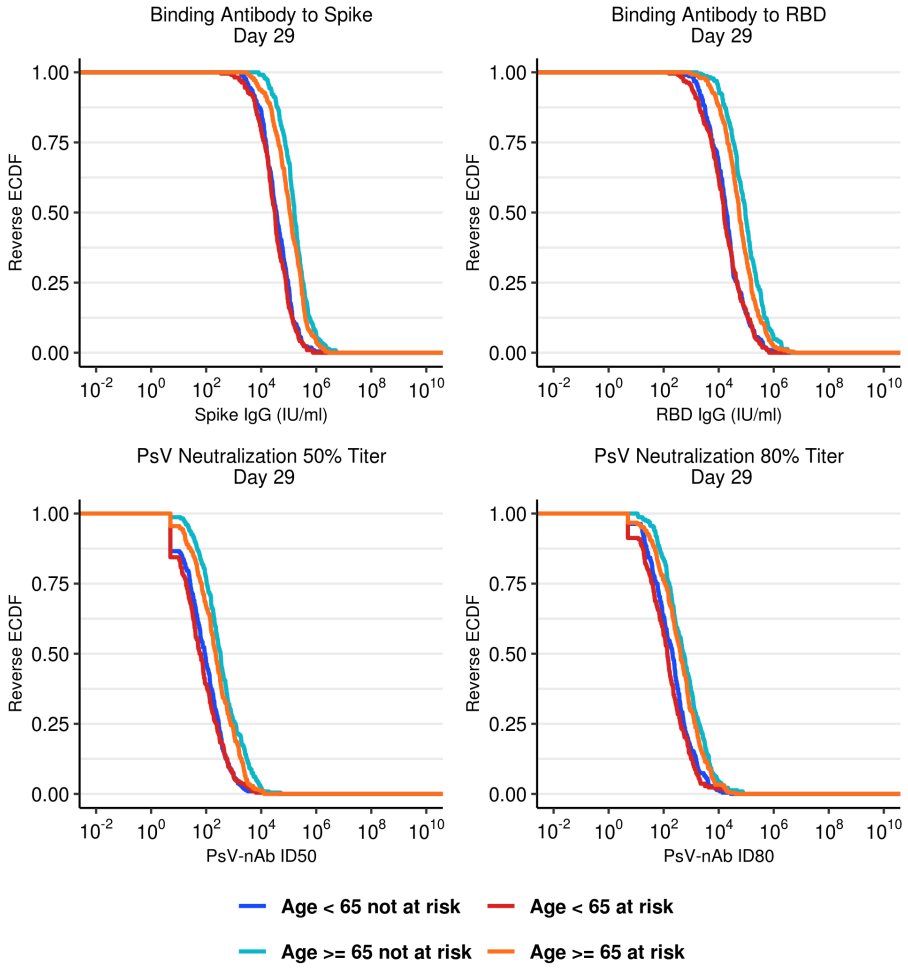

Figure 1.58: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and high-risk condition.

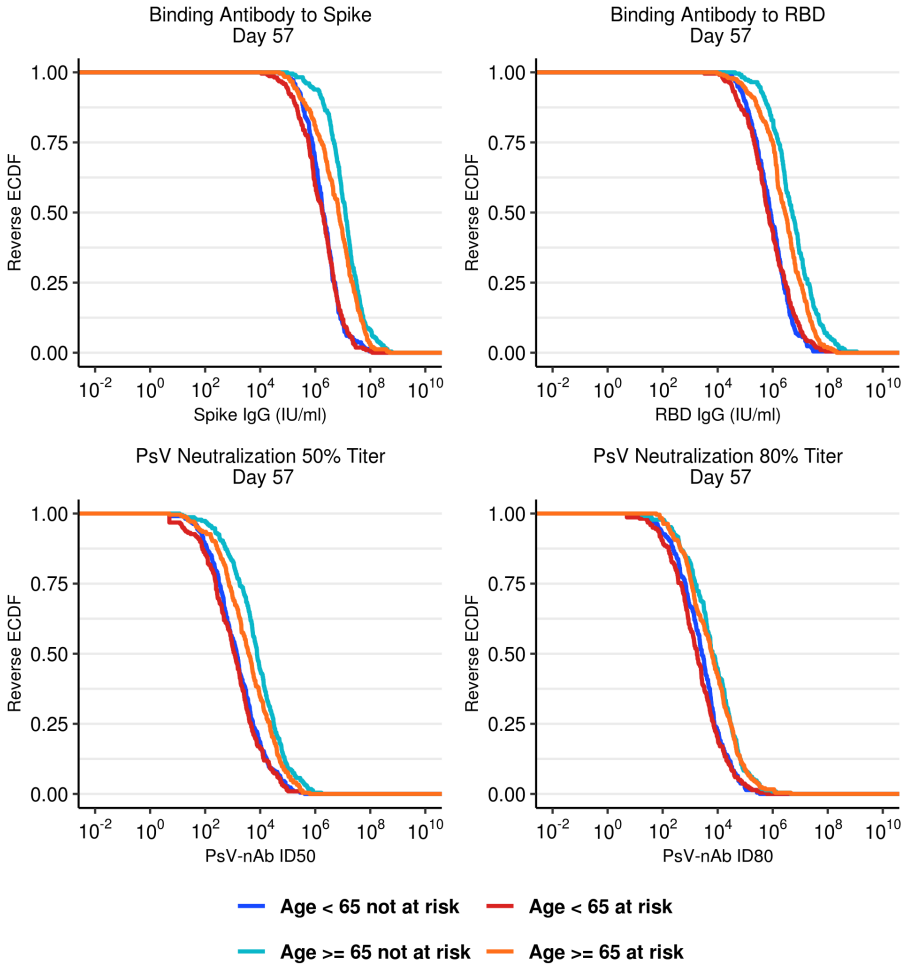

Figure 1.59: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by age and high-risk condition.

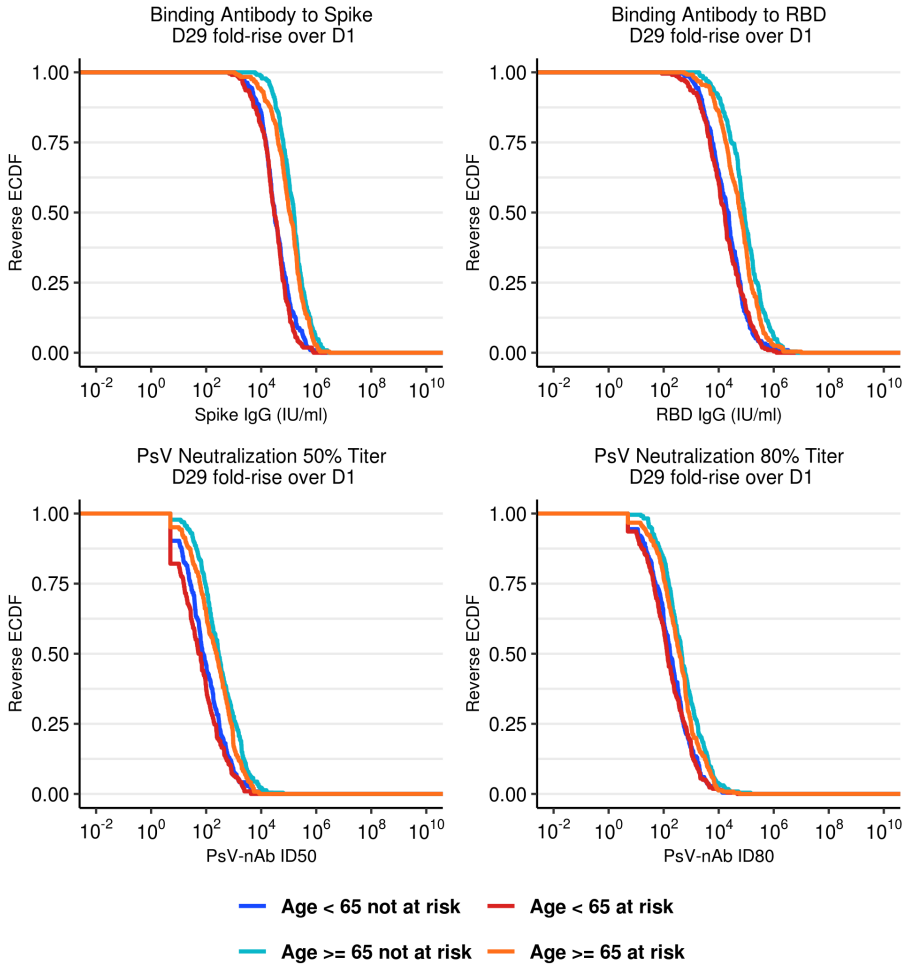

Figure 1.60: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and high-risk condition.

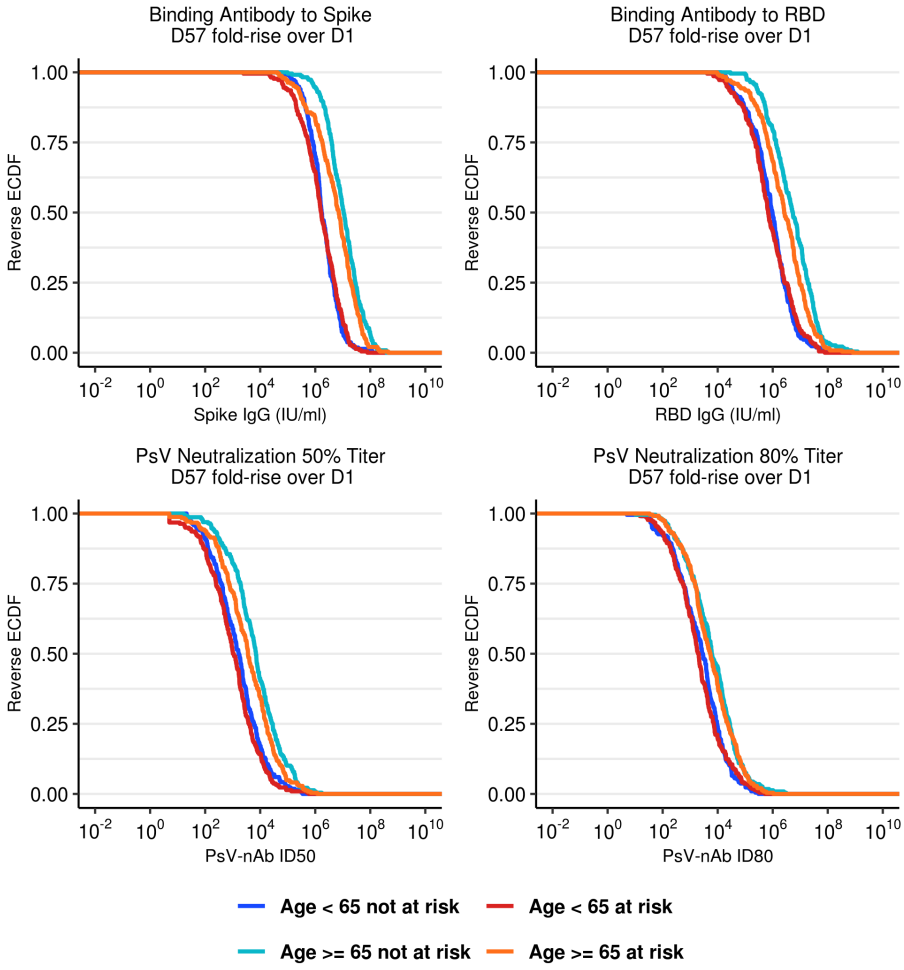

Figure 1.61: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and high-risk condition.

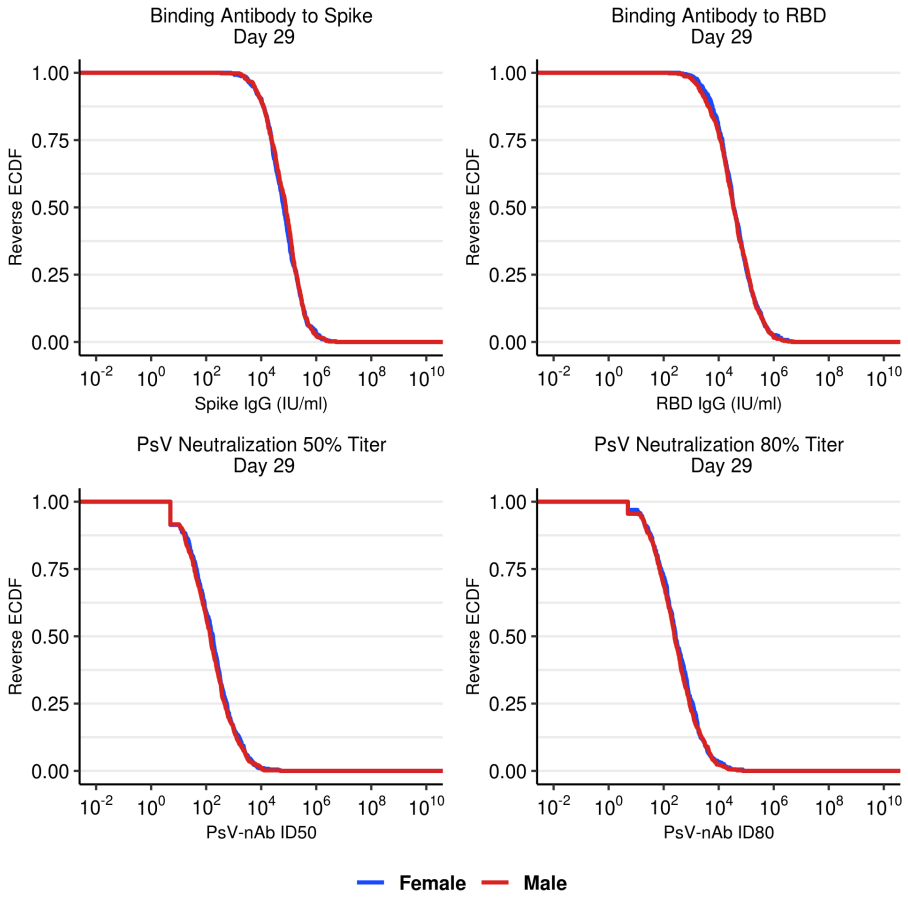

Figure 1.62: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by sex assigned at birth.

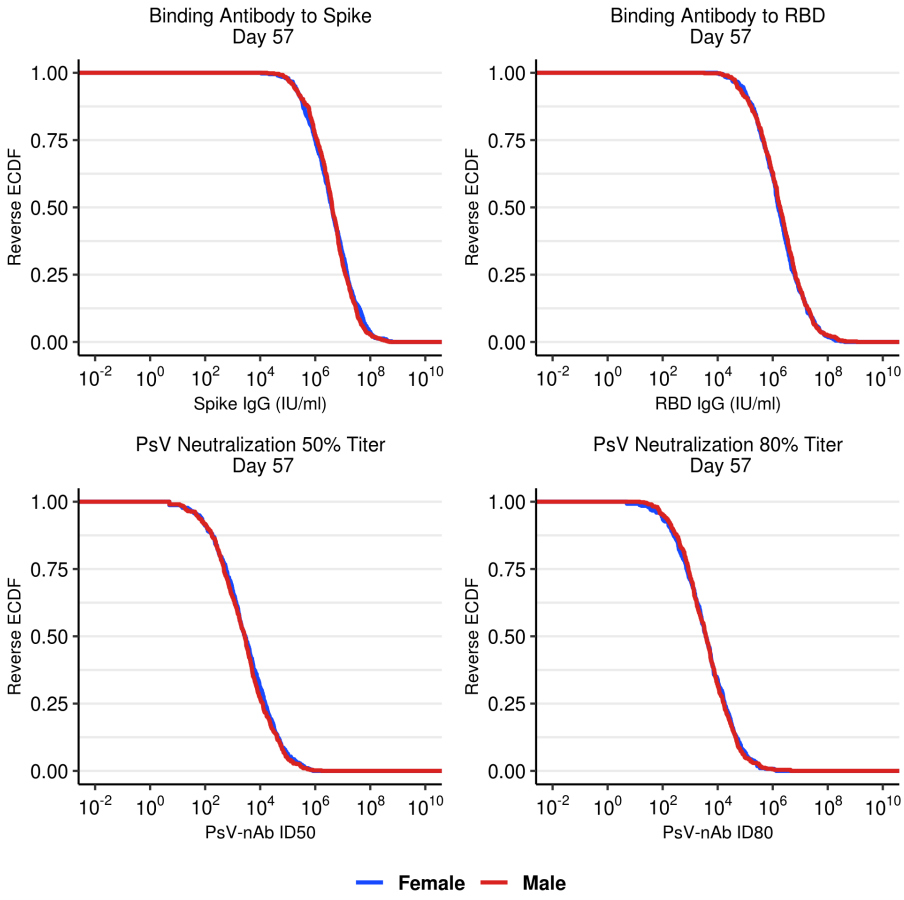

Figure 1.63: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by sex assigned at birth.

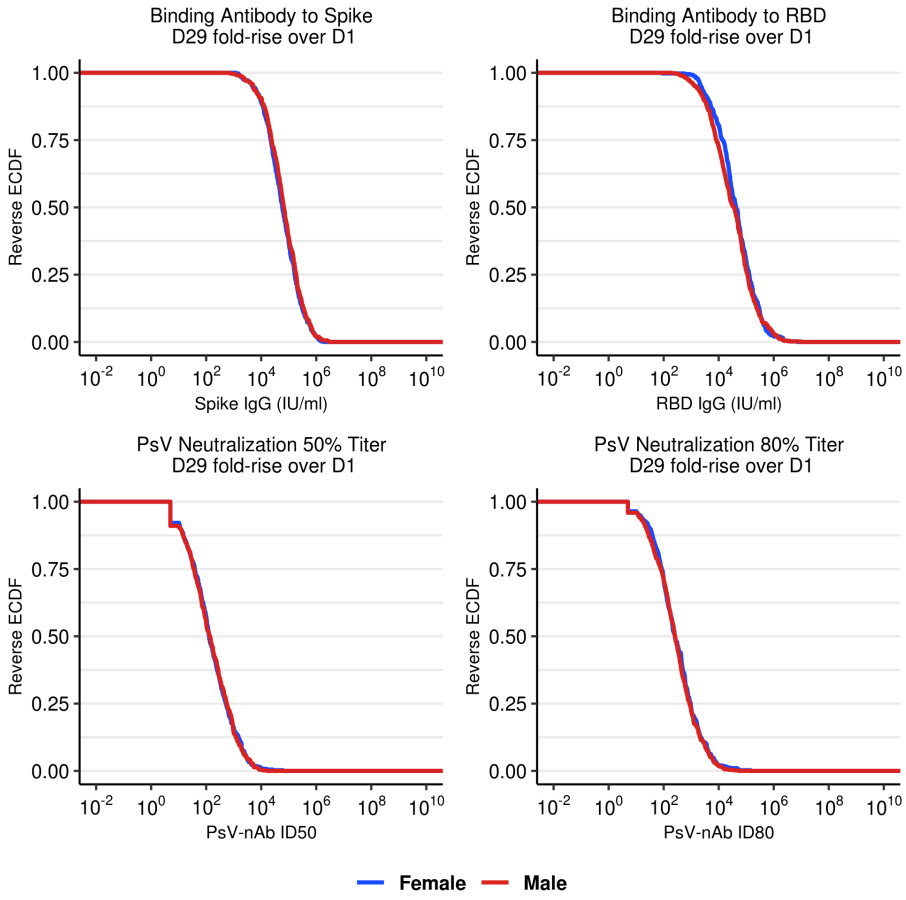

Figure 1.64: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by sex assigned at birth.

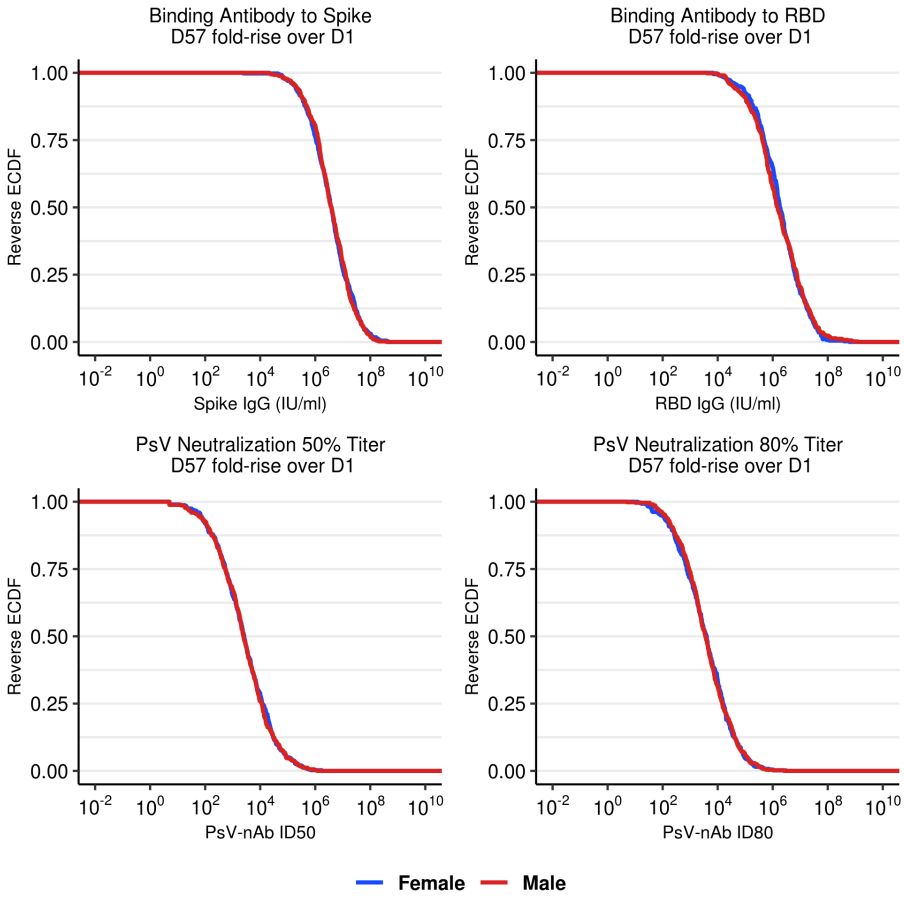

Figure 1.65: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by sex assigned at birth.

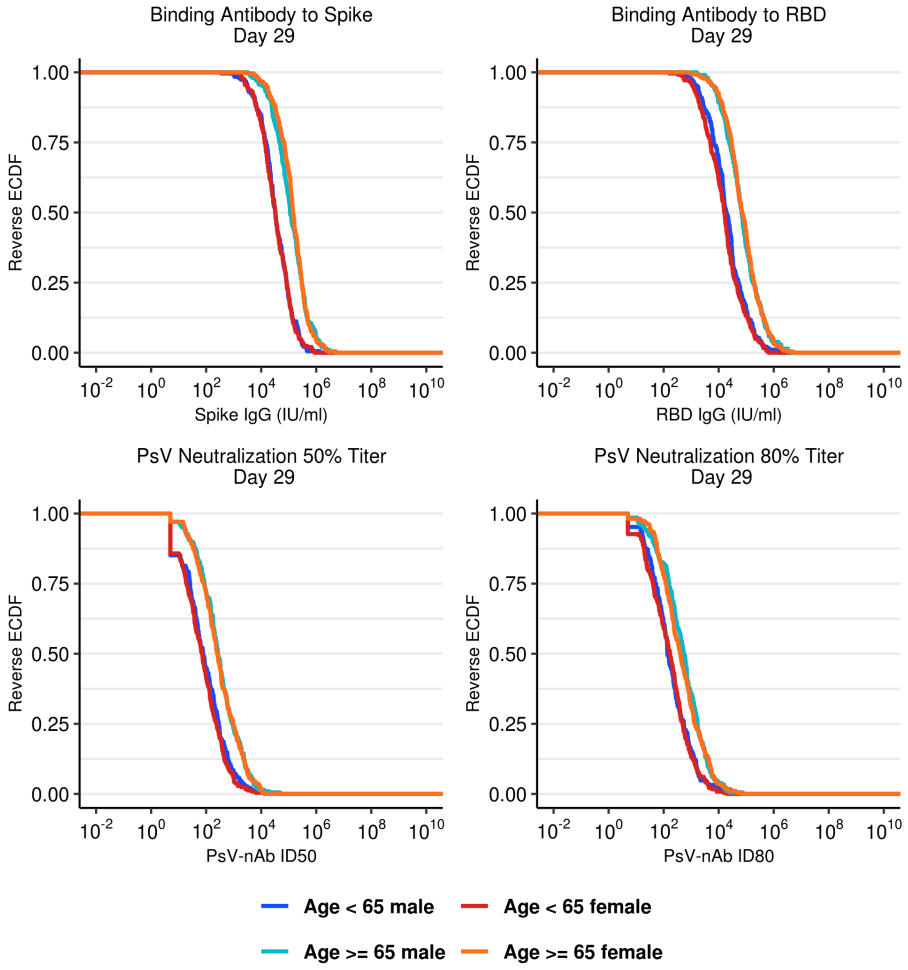

Figure 1.66: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

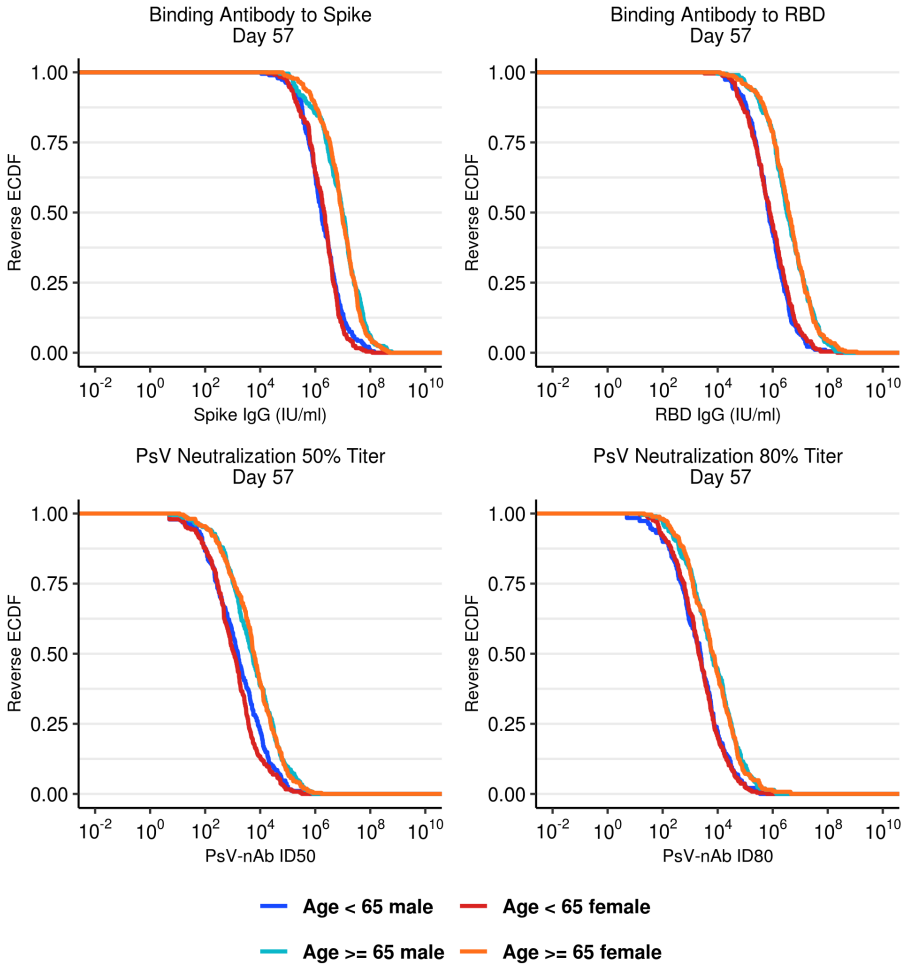

Figure 1.67: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

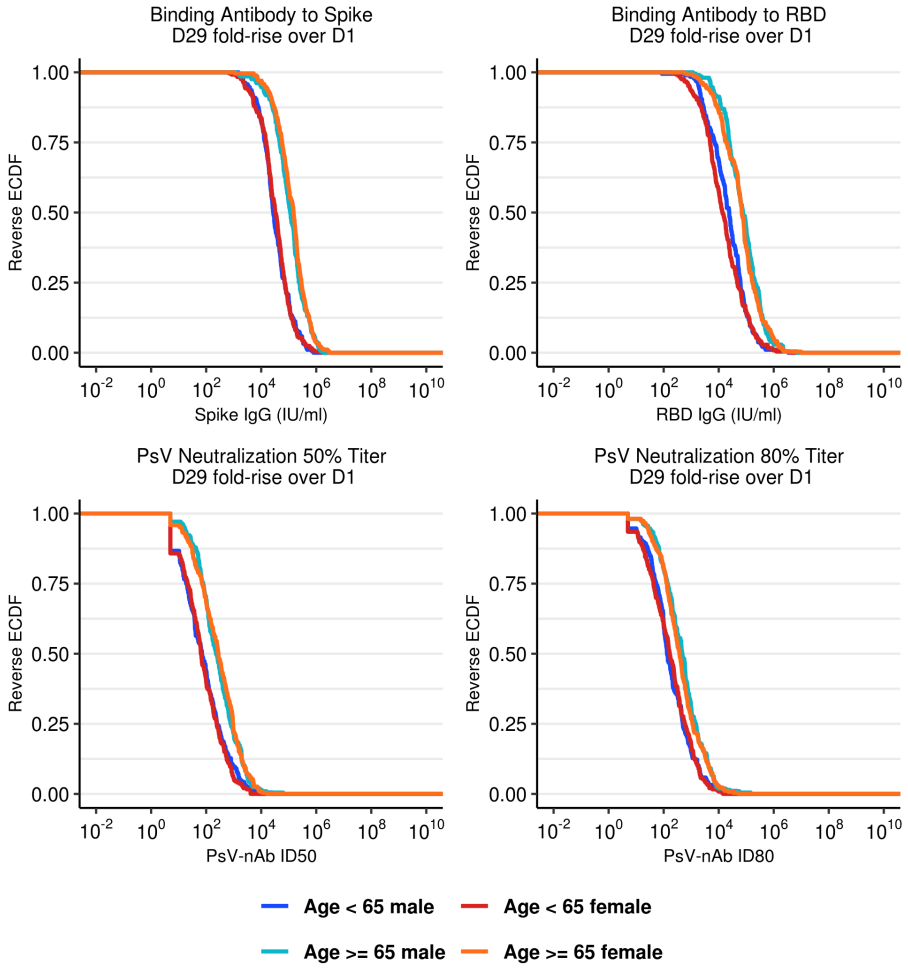

Figure 1.68: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

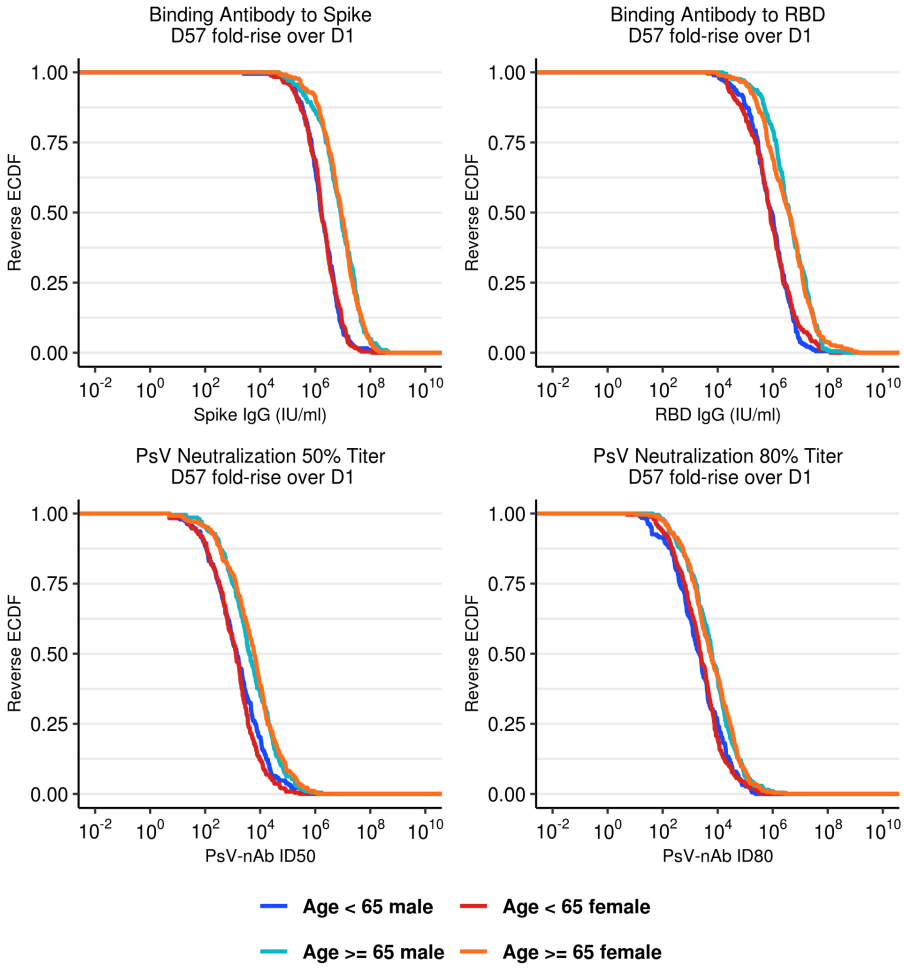

Figure 1.69: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and sex at birth.

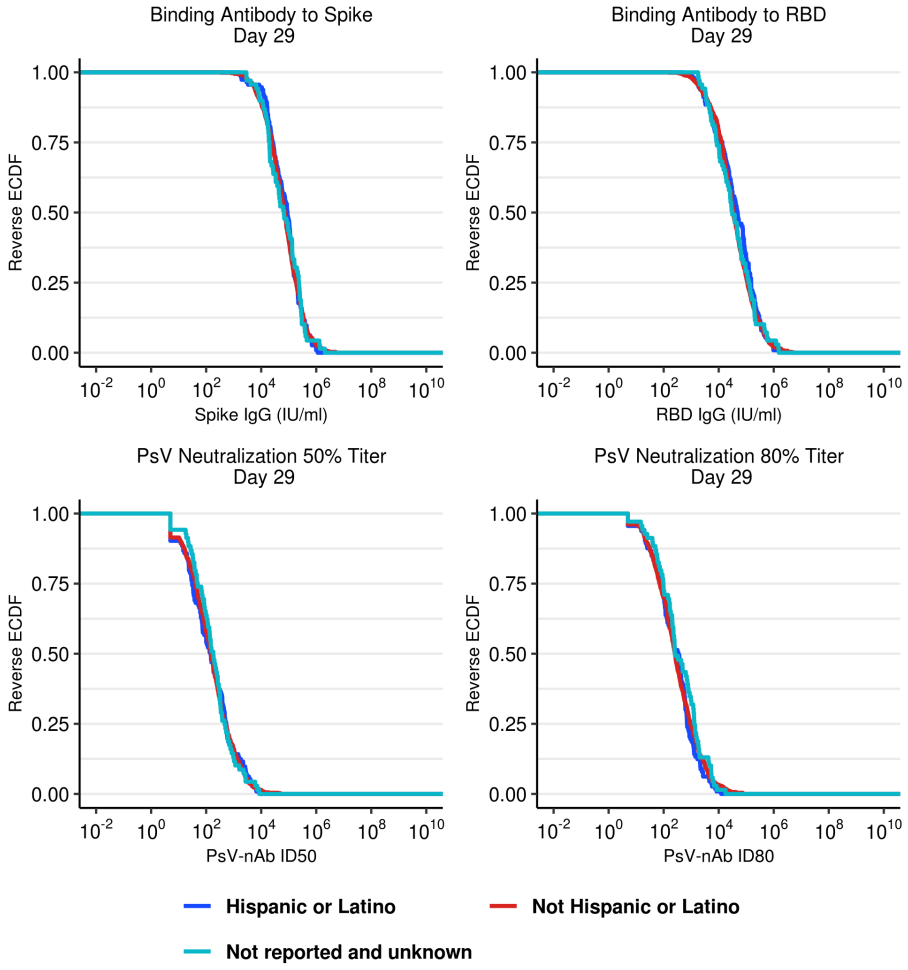

Figure 1.70: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by ethnicity.

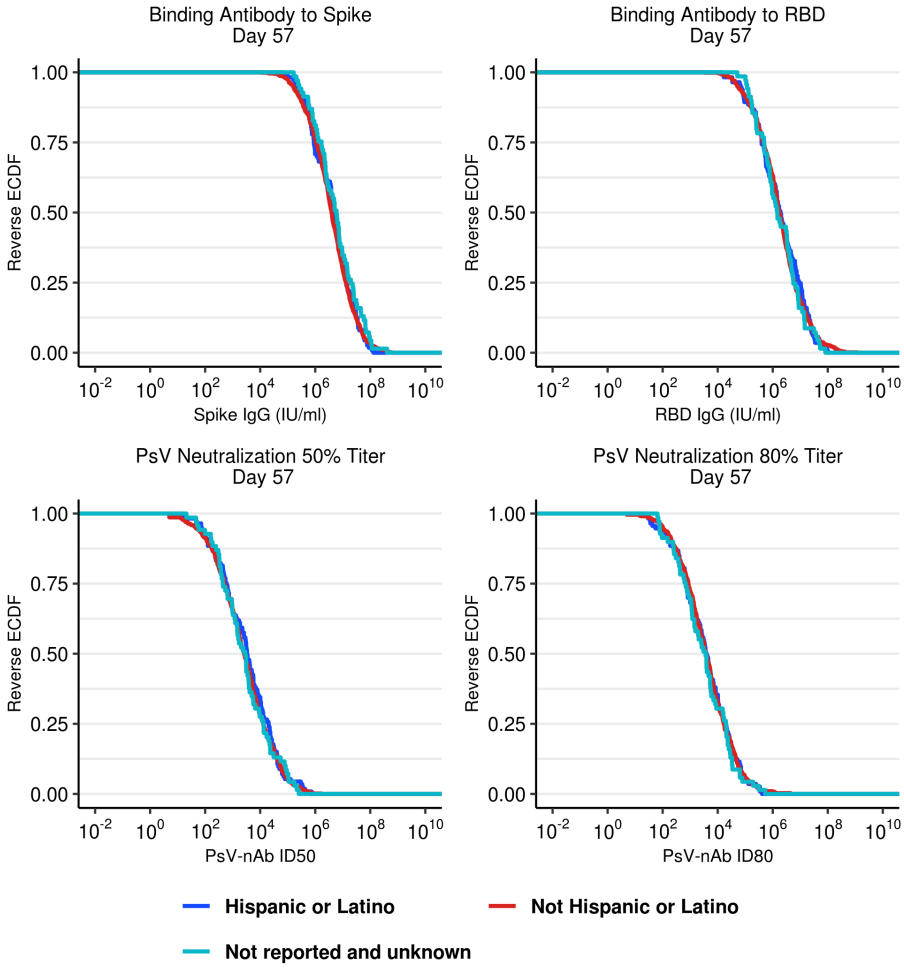

Figure 1.71: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by ethnicity.

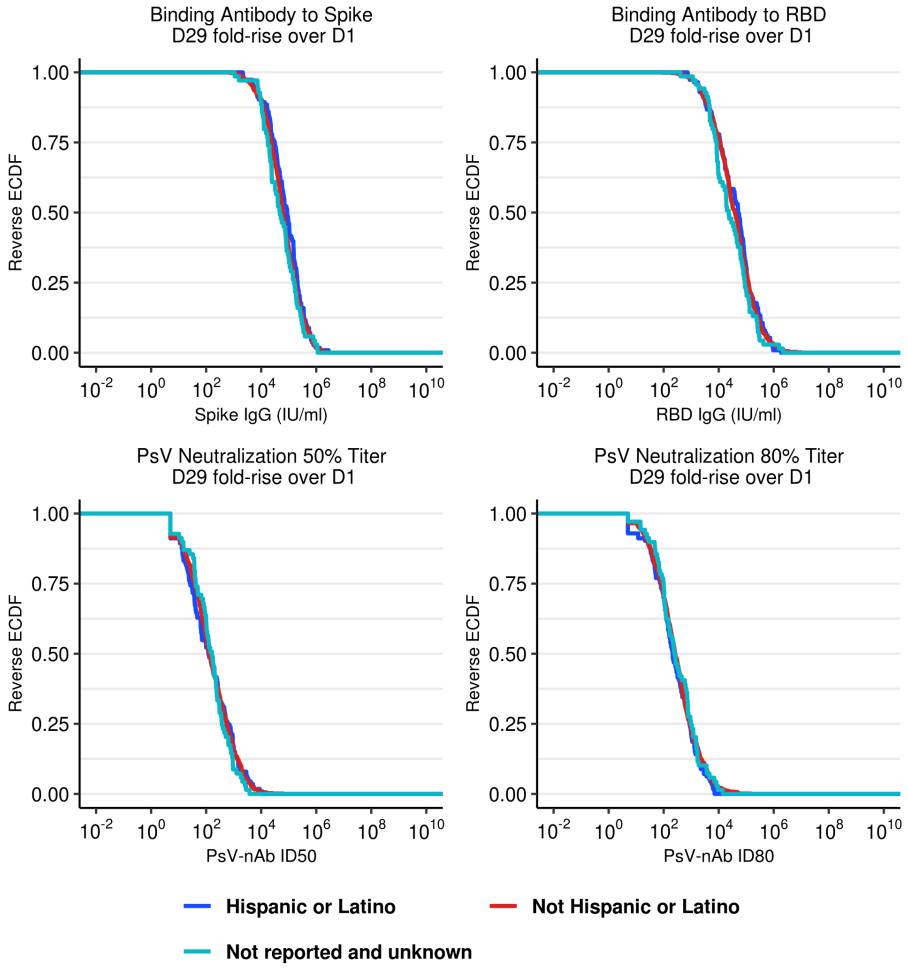

Figure 1.72: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by ethnicity.

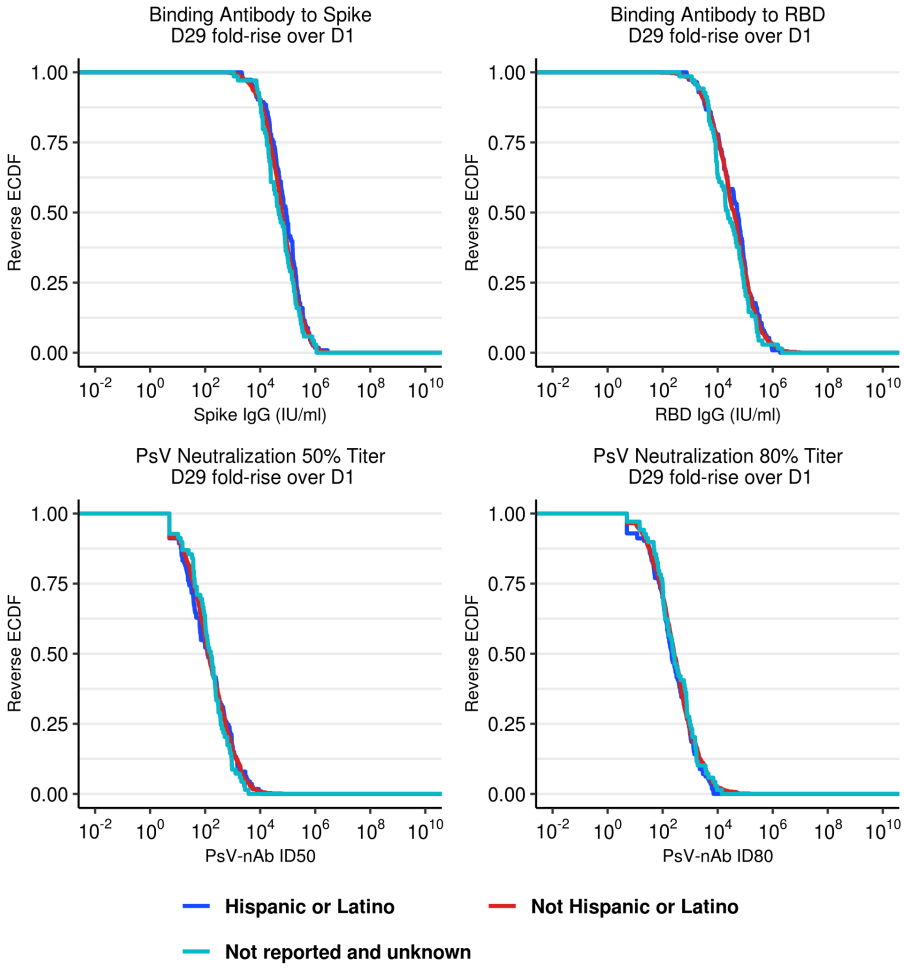

Figure 1.73: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by ethnicity.

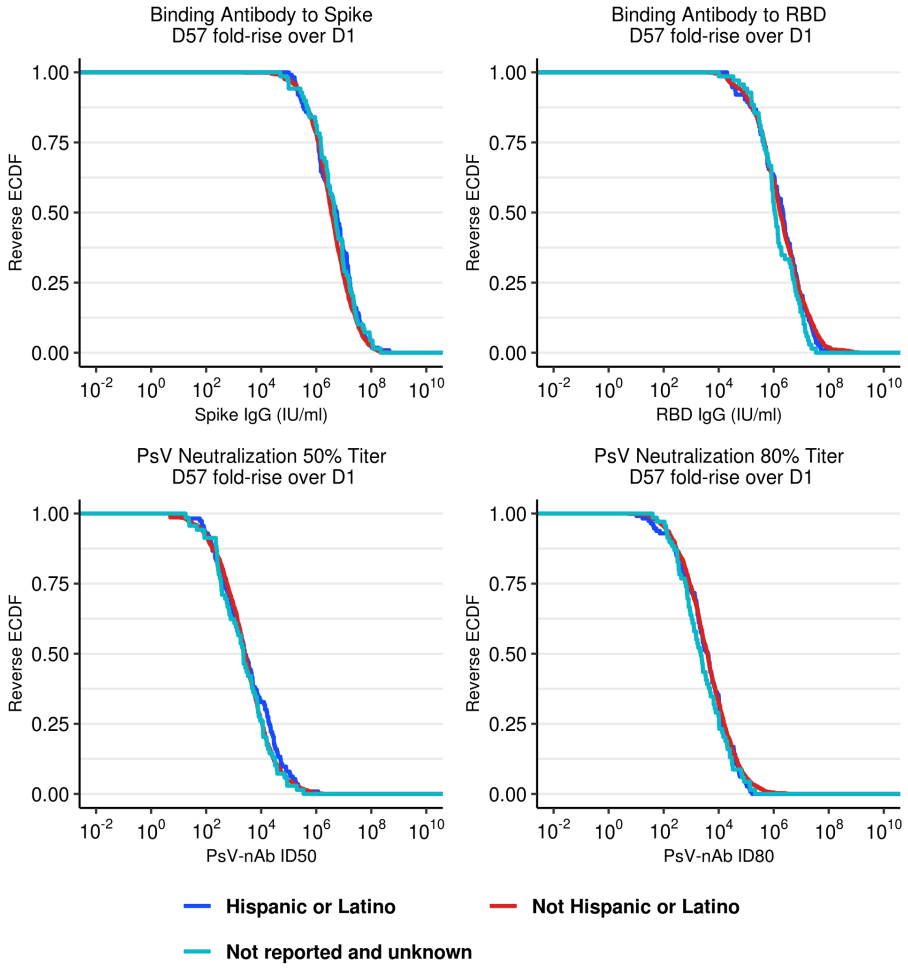

Figure 1.74: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by ethnicity.

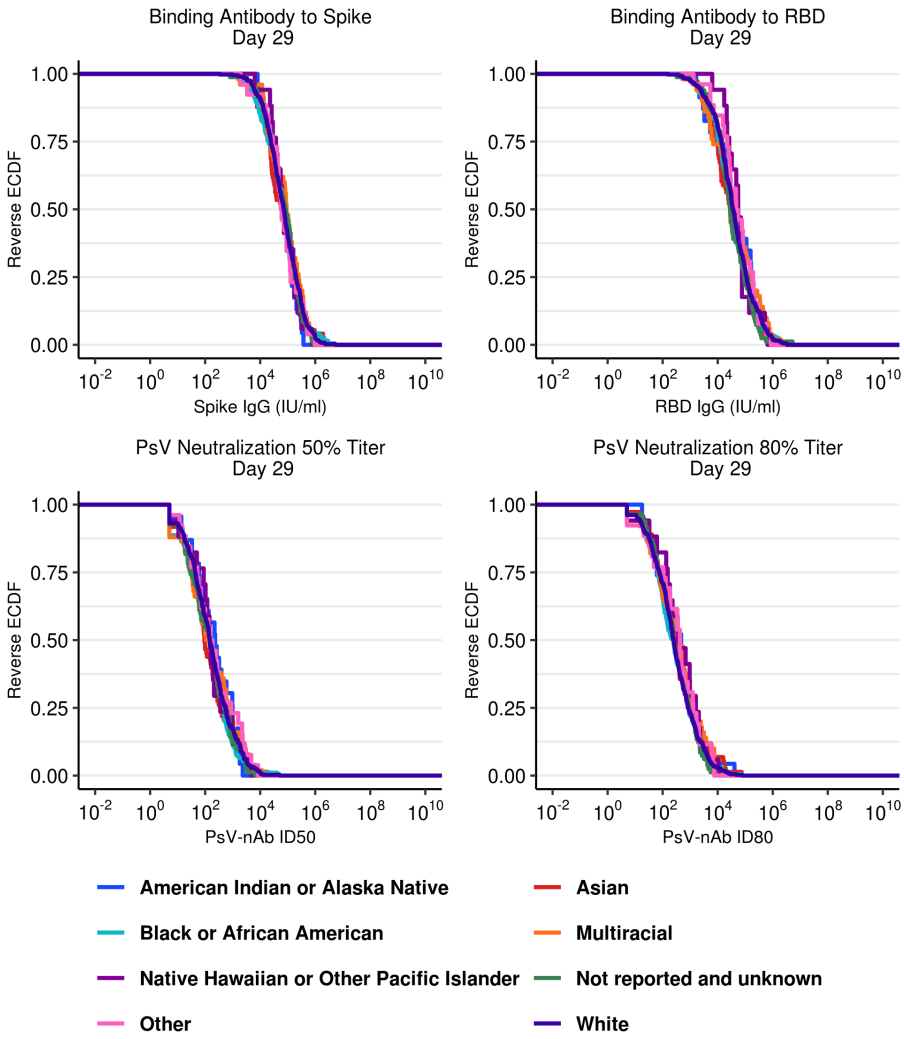

Figure 1.75: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by race.

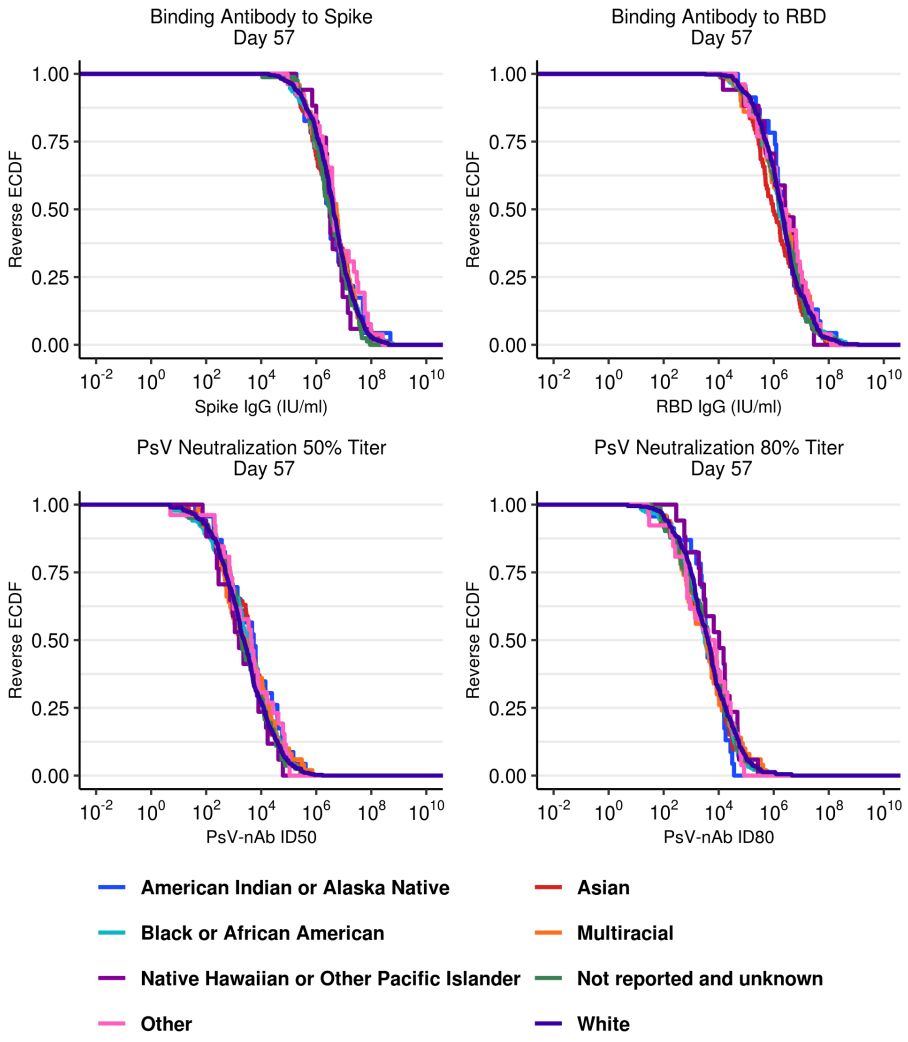

Figure 1.76: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by race.

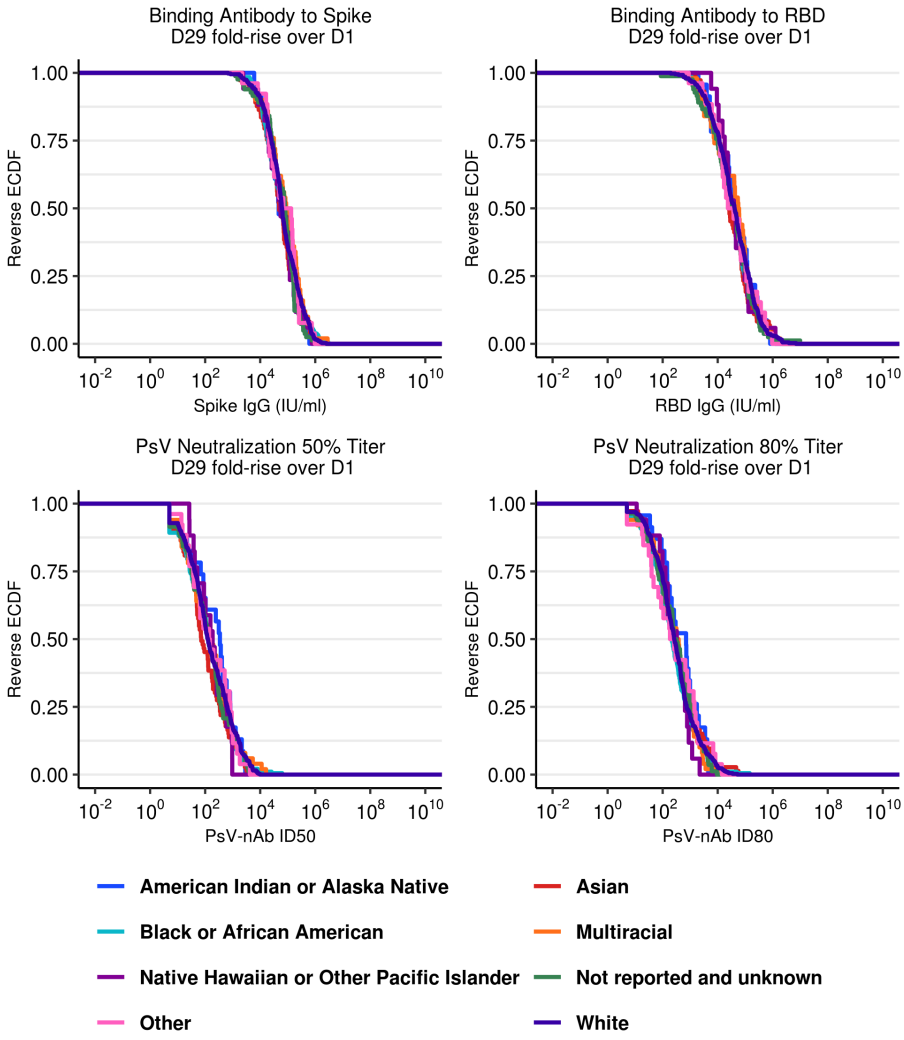

Figure 1.77: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by race.

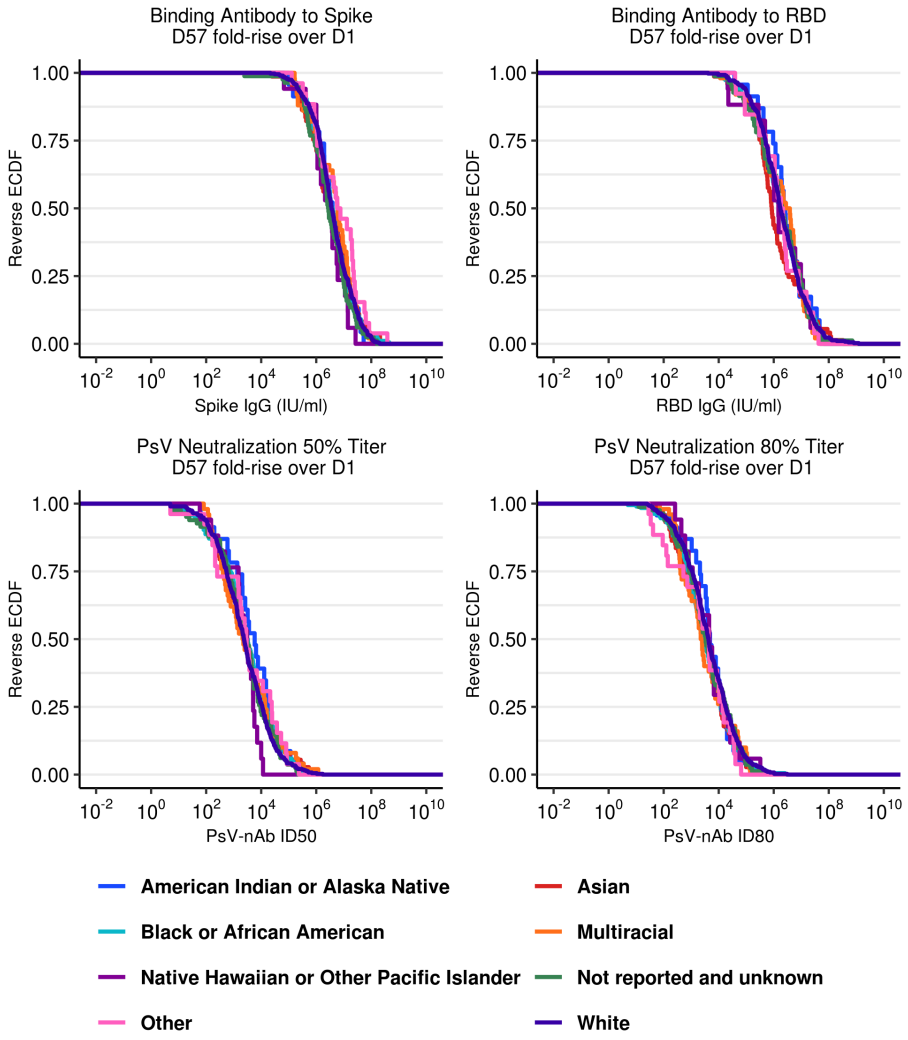

Figure 1.78: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by race.

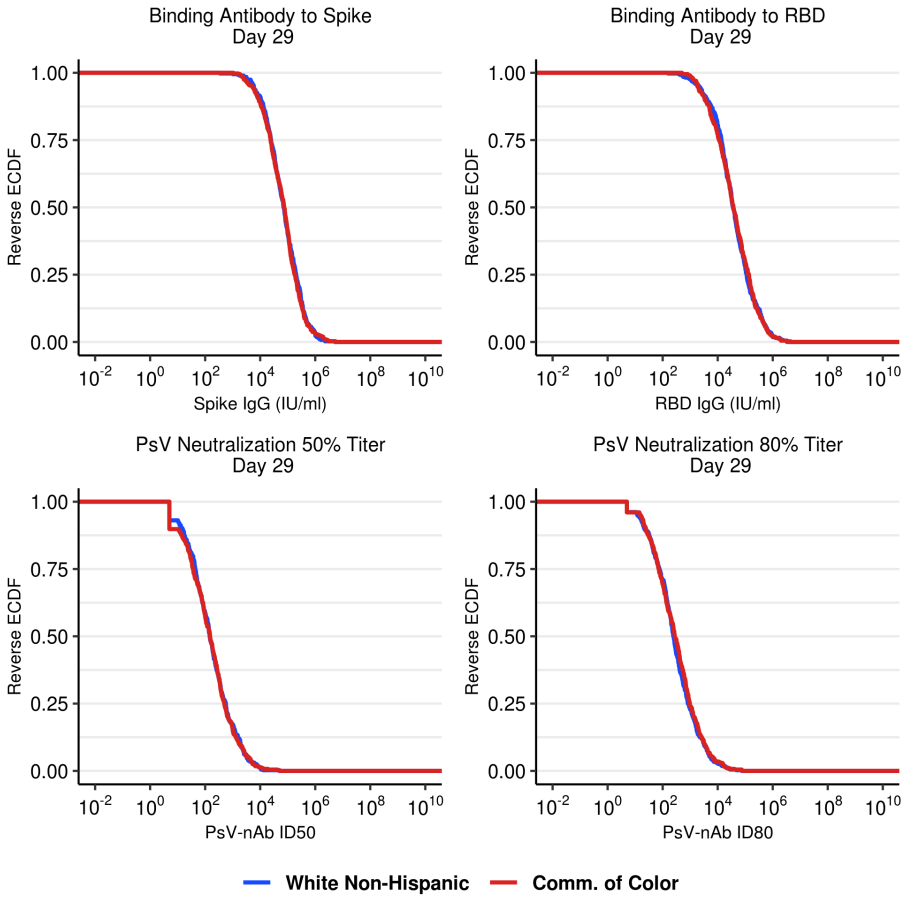

Figure 1.79: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group.

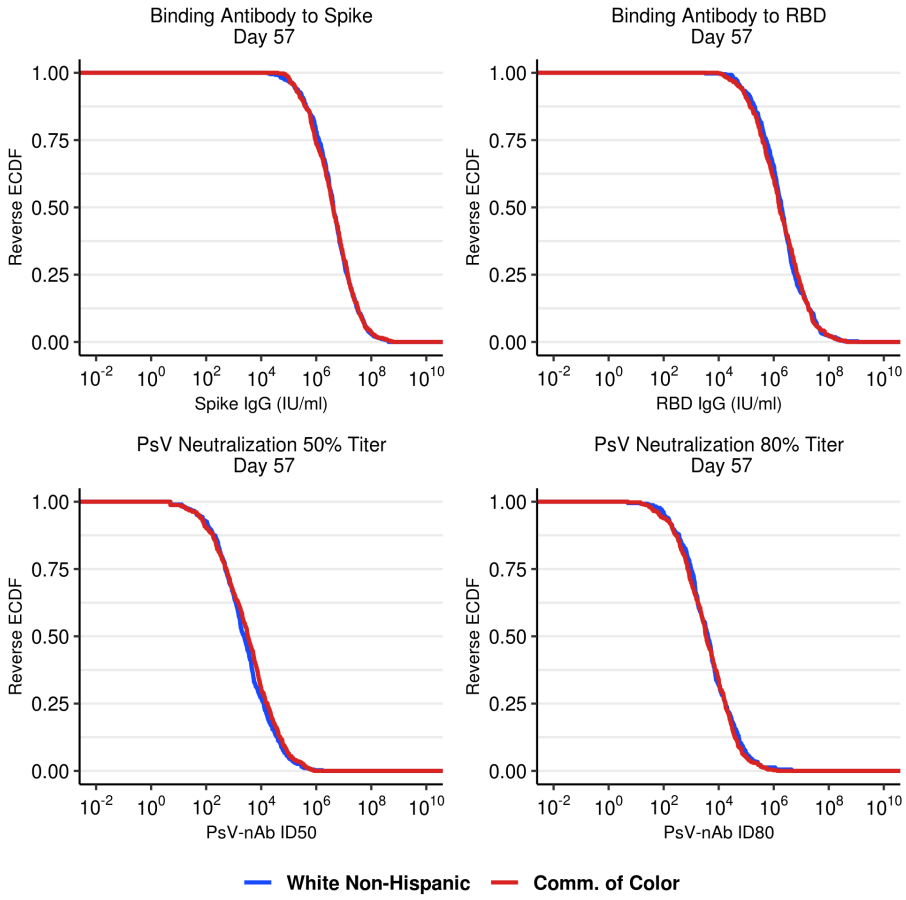

Figure 1.80: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group.

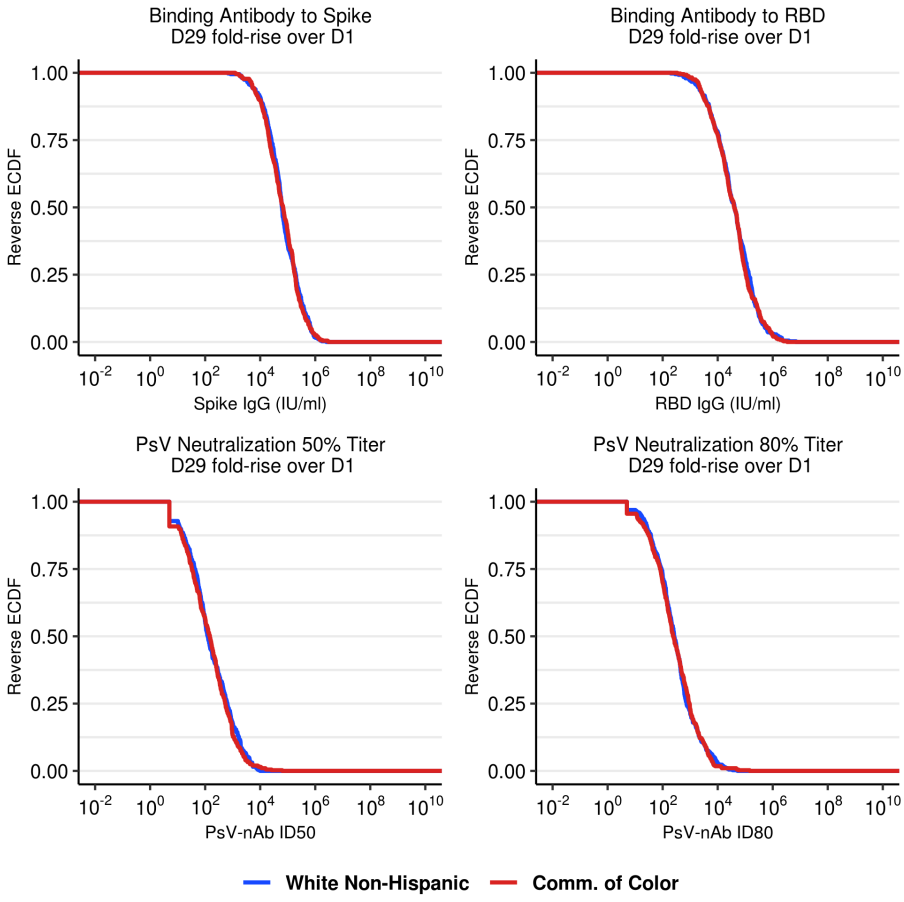

Figure 1.81: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group.

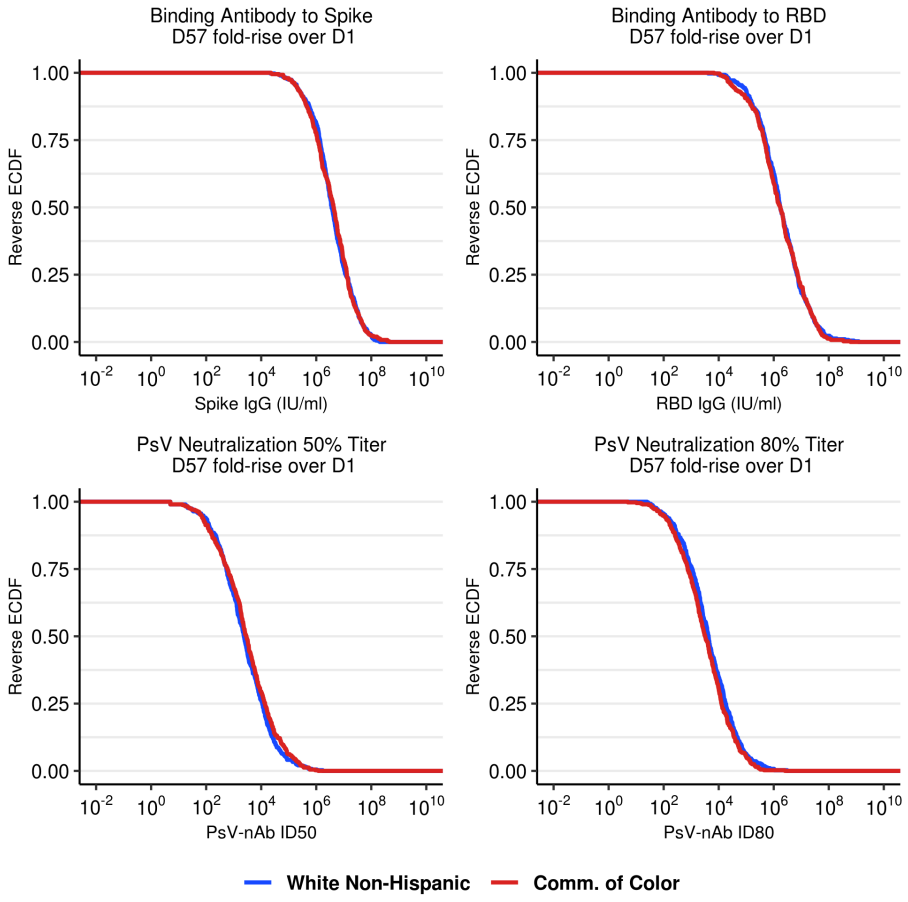

Figure 1.82: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group.

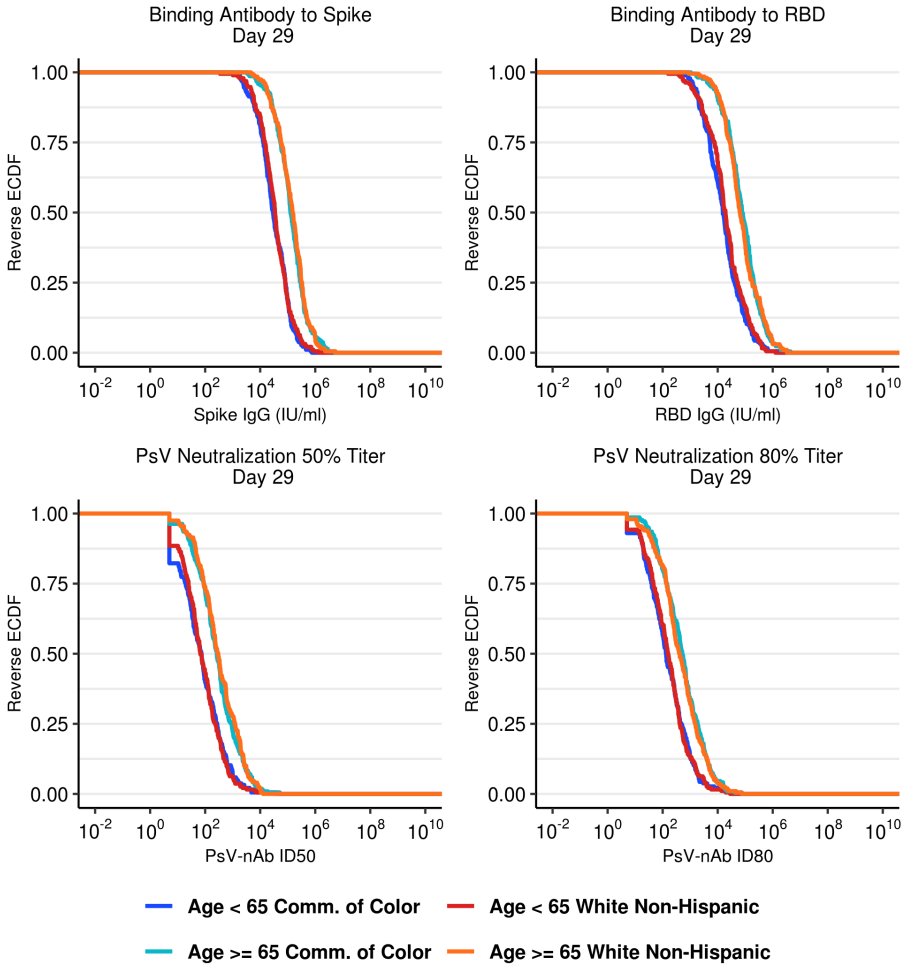

Figure 1.83: (Mock data) RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group.

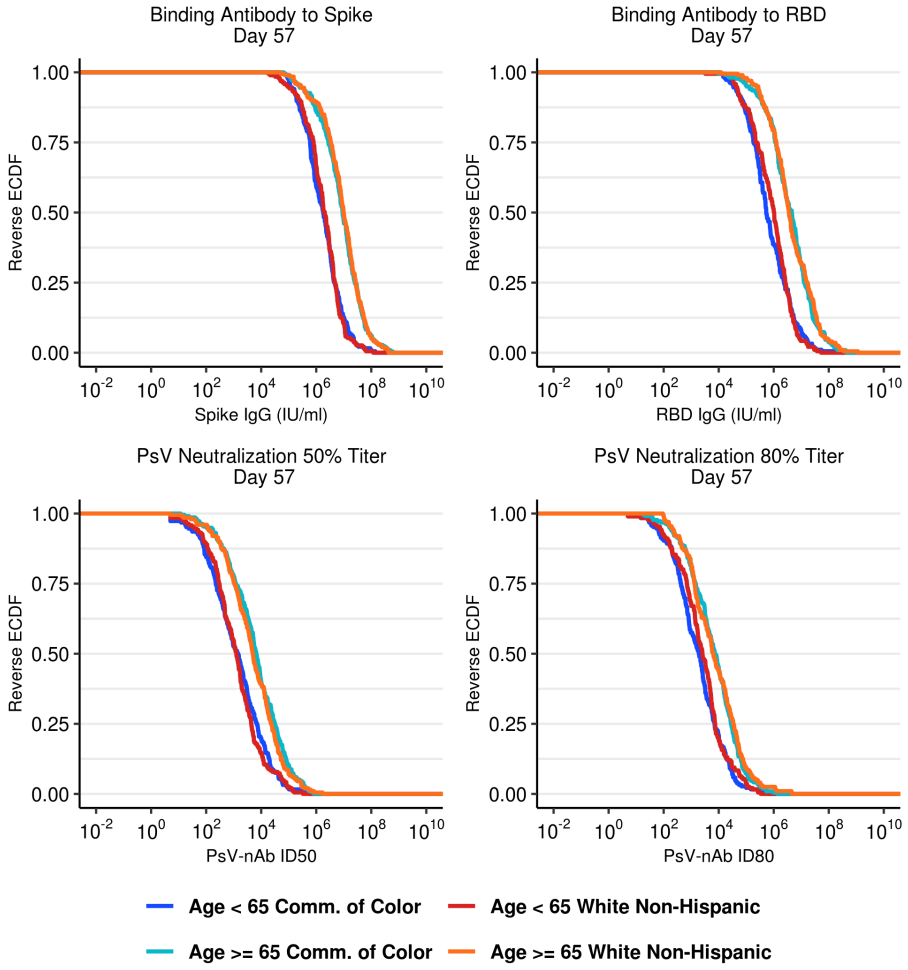

Figure 1.84: (Mock data) RCDF plots for D57 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group.

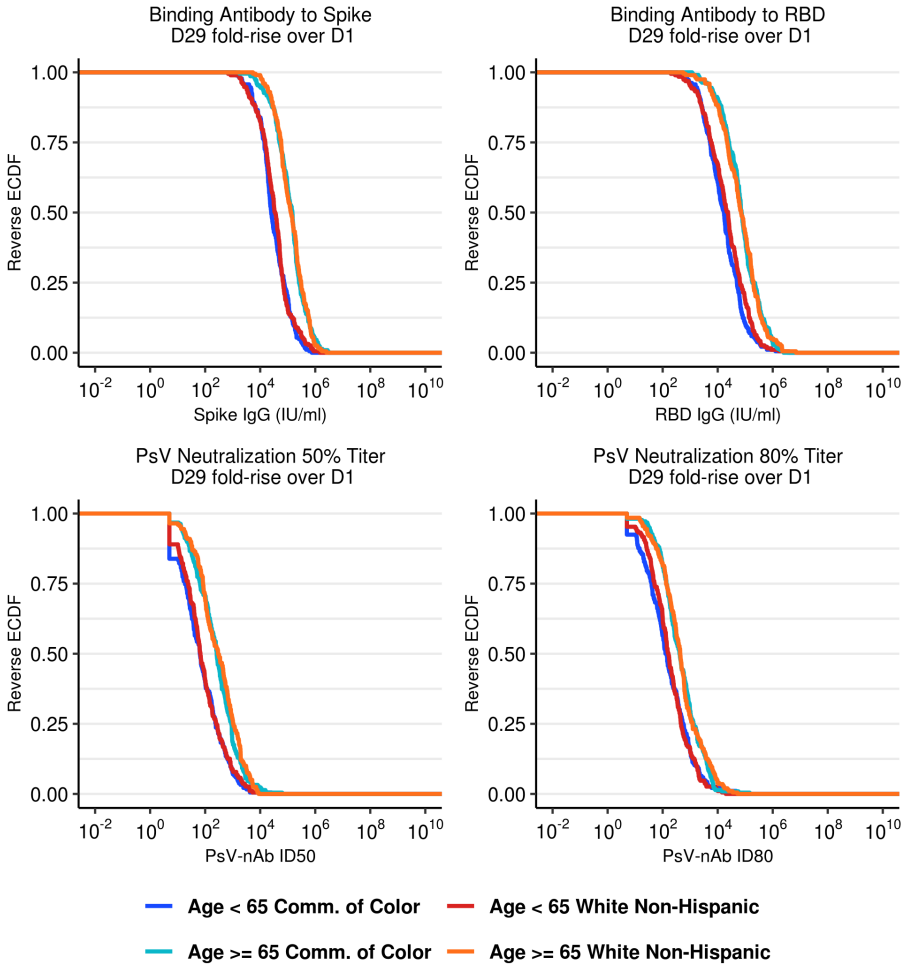

Figure 1.85: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group.

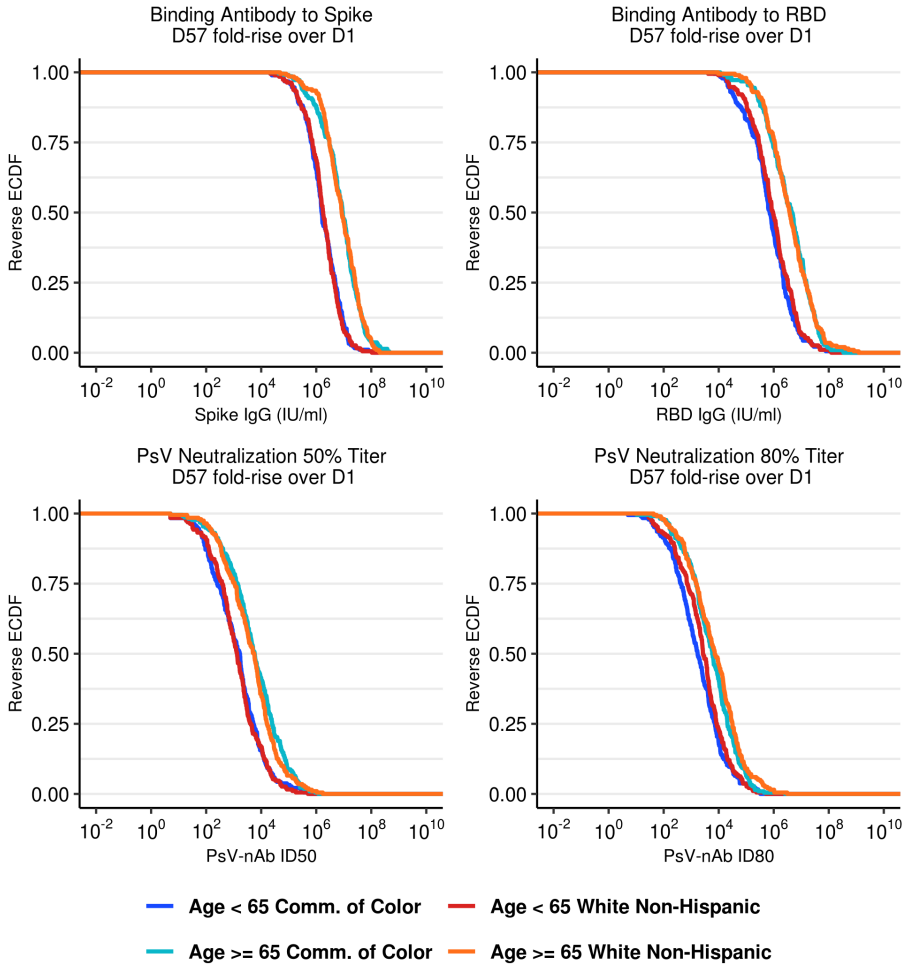

Figure 1.86: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group.

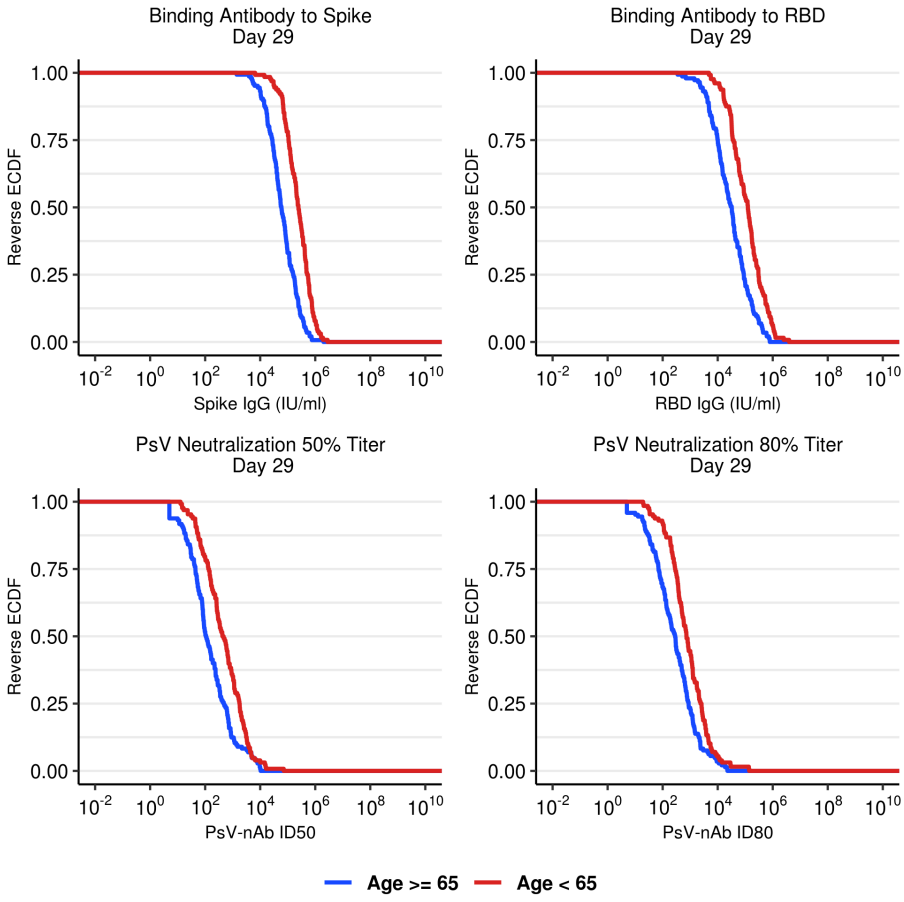

Figure 1.87: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by age groups.

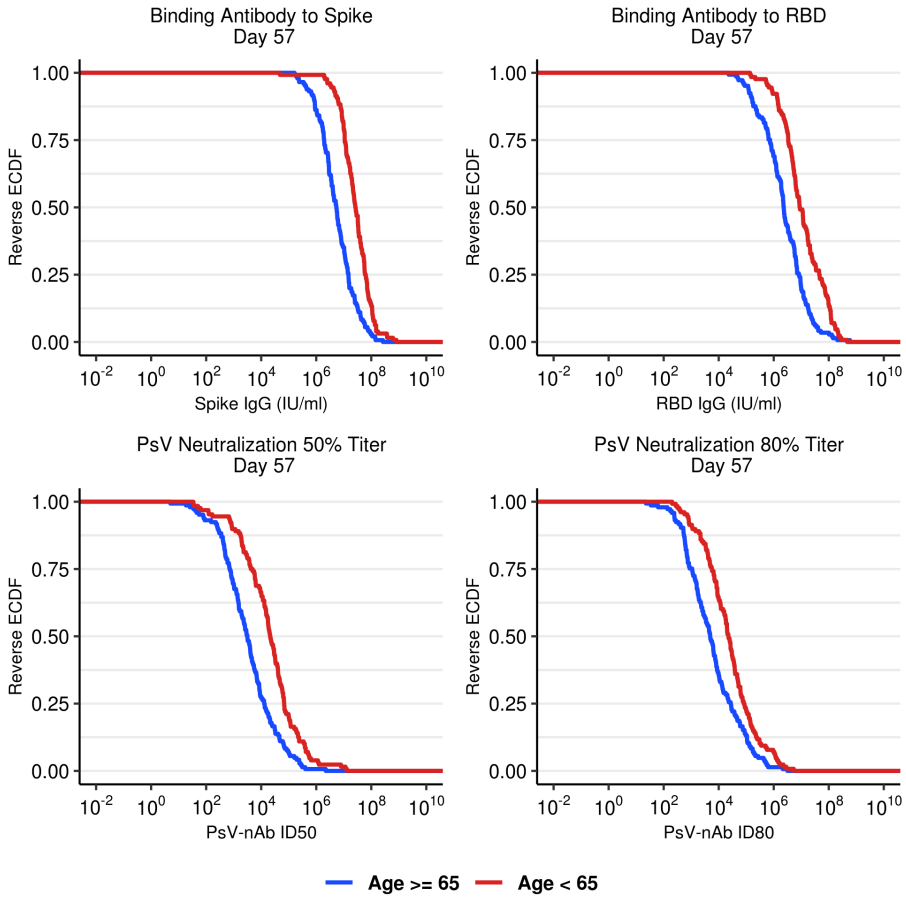

Figure 1.88: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by age groups.

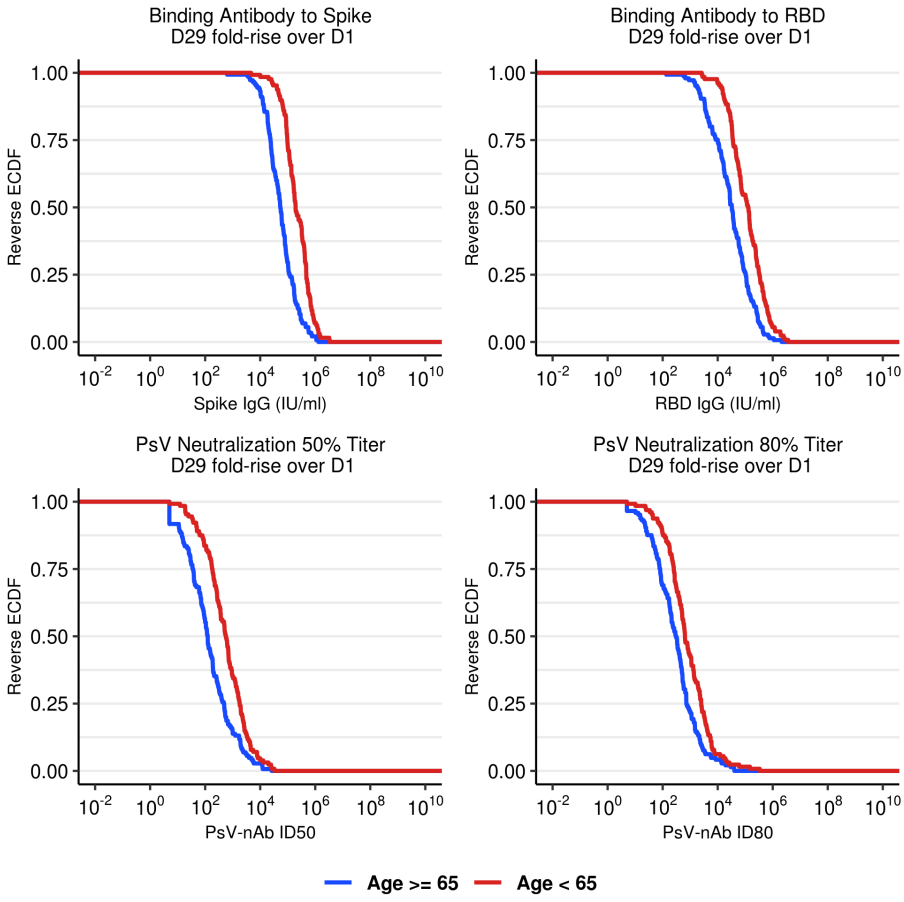

Figure 1.89: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age groups.

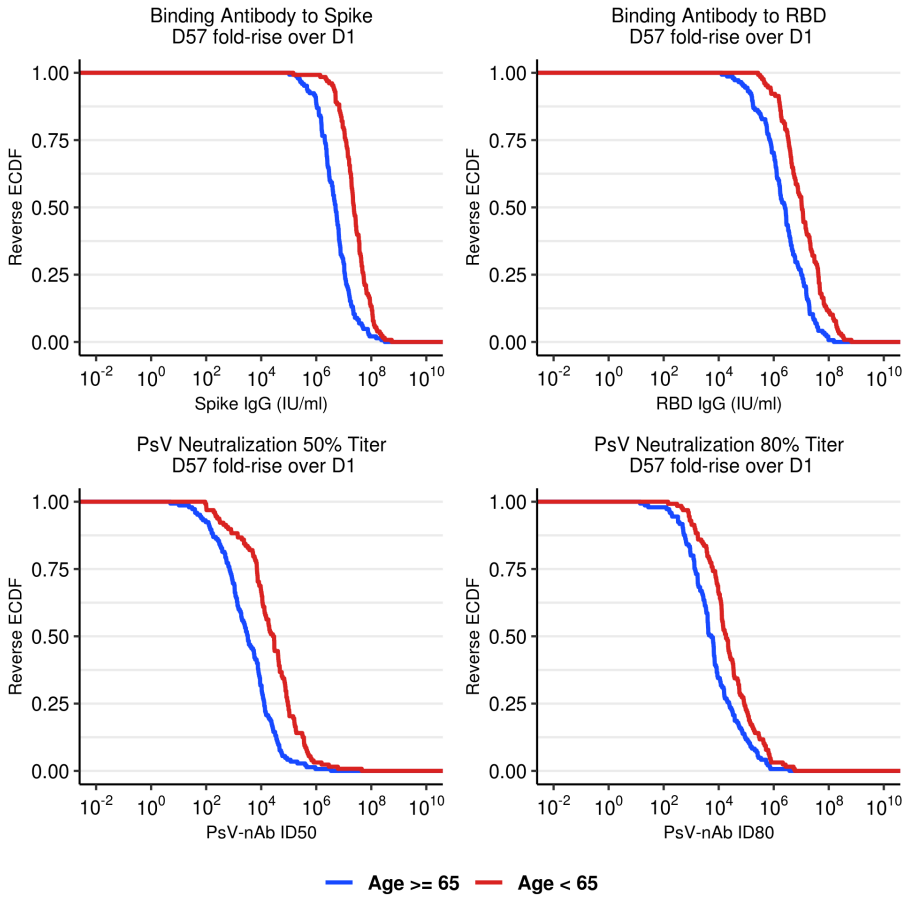

Figure 1.90: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by age groups.

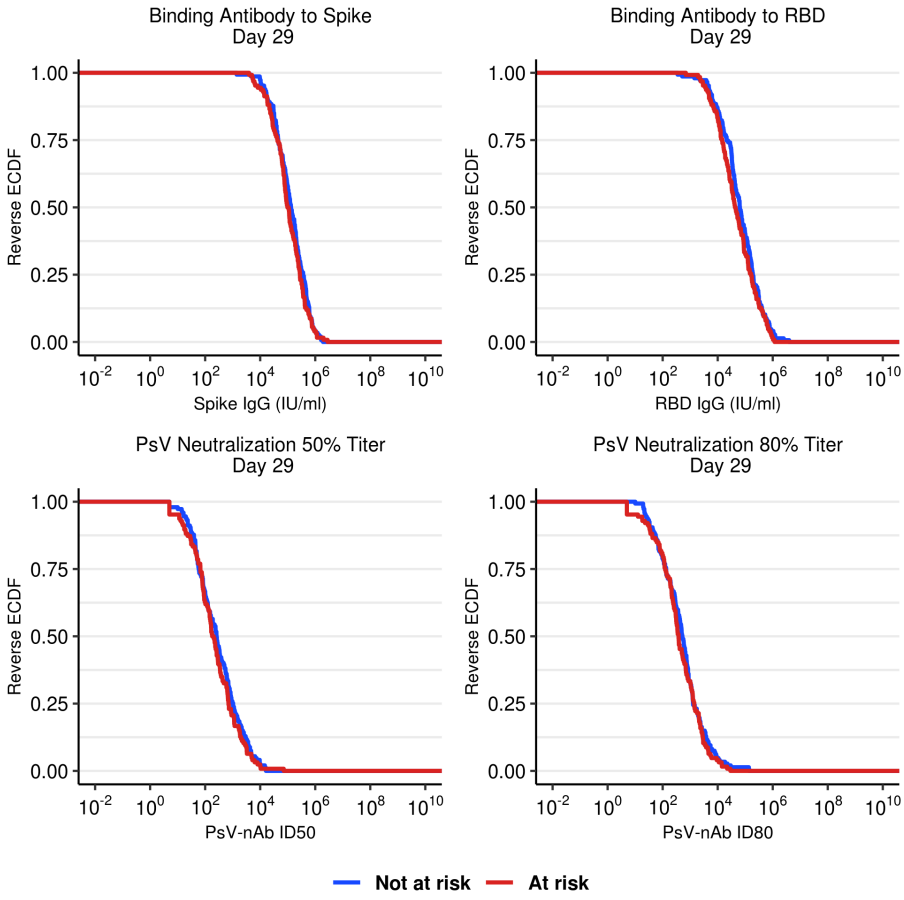

Figure 1.91: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by high-risk condition.

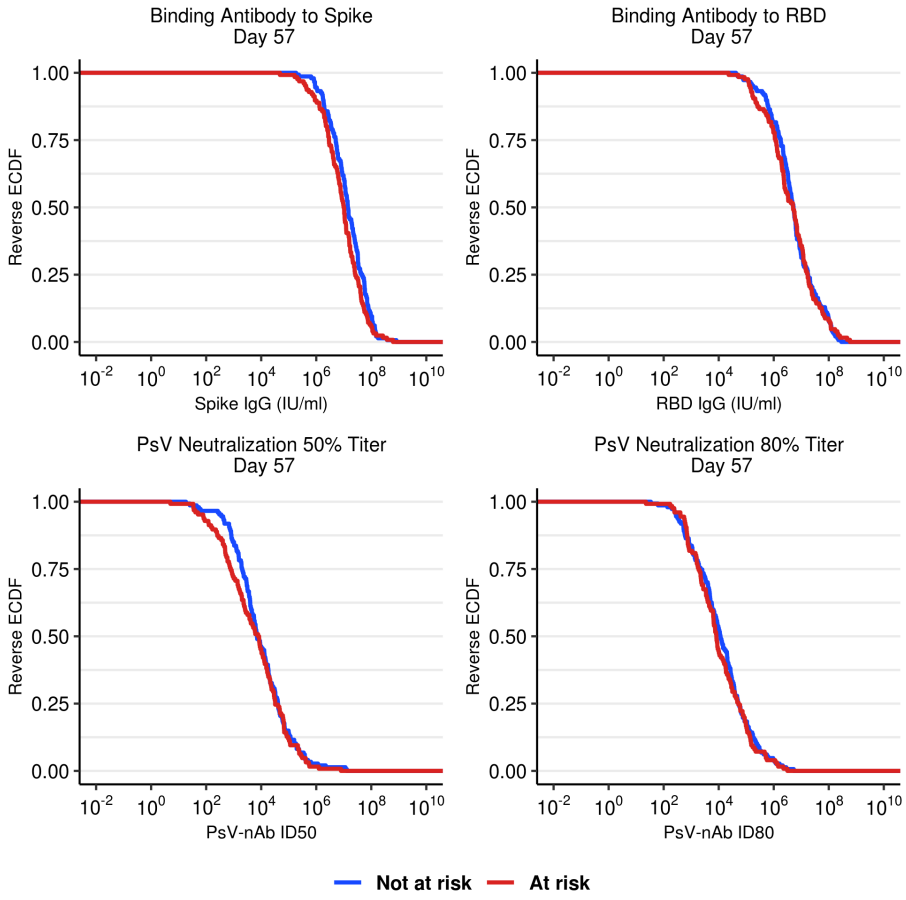

Figure 1.92: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by high-risk condition.

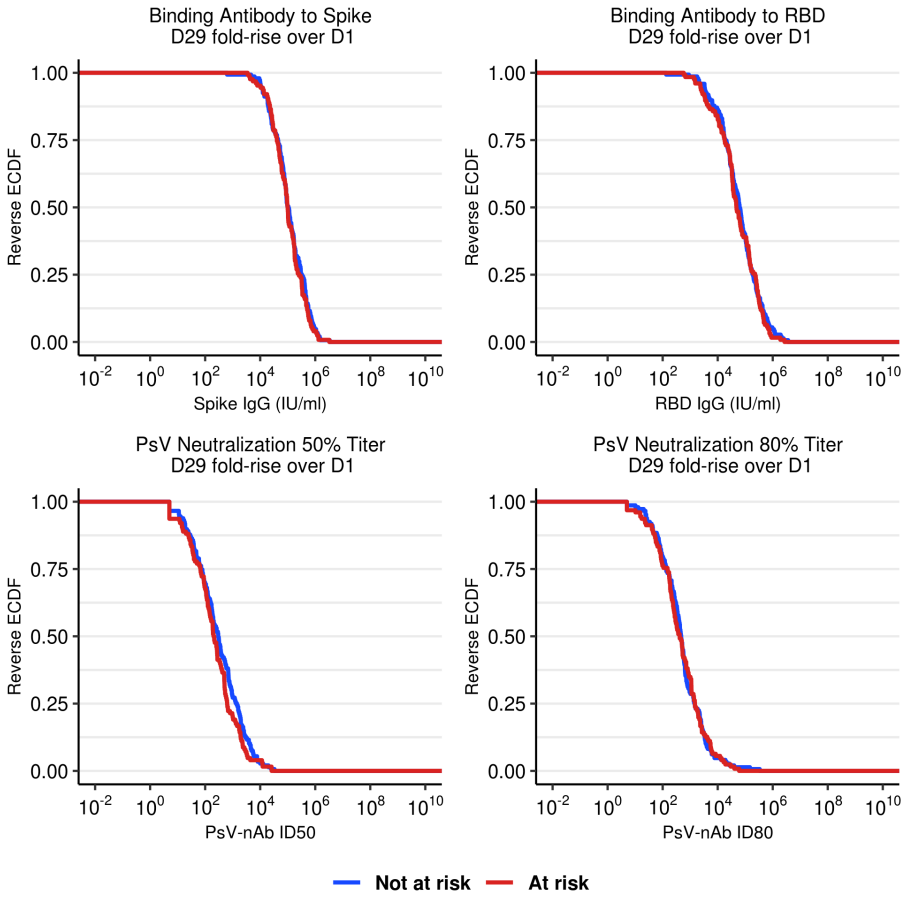

Figure 1.93: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

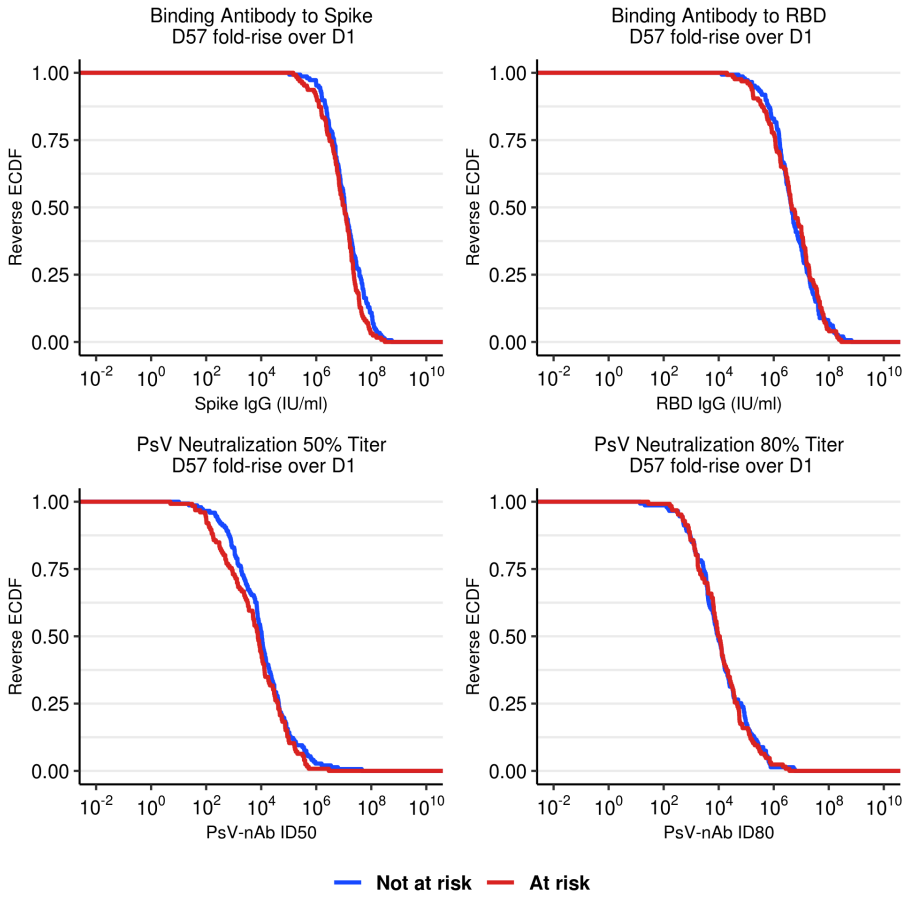

Figure 1.94: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

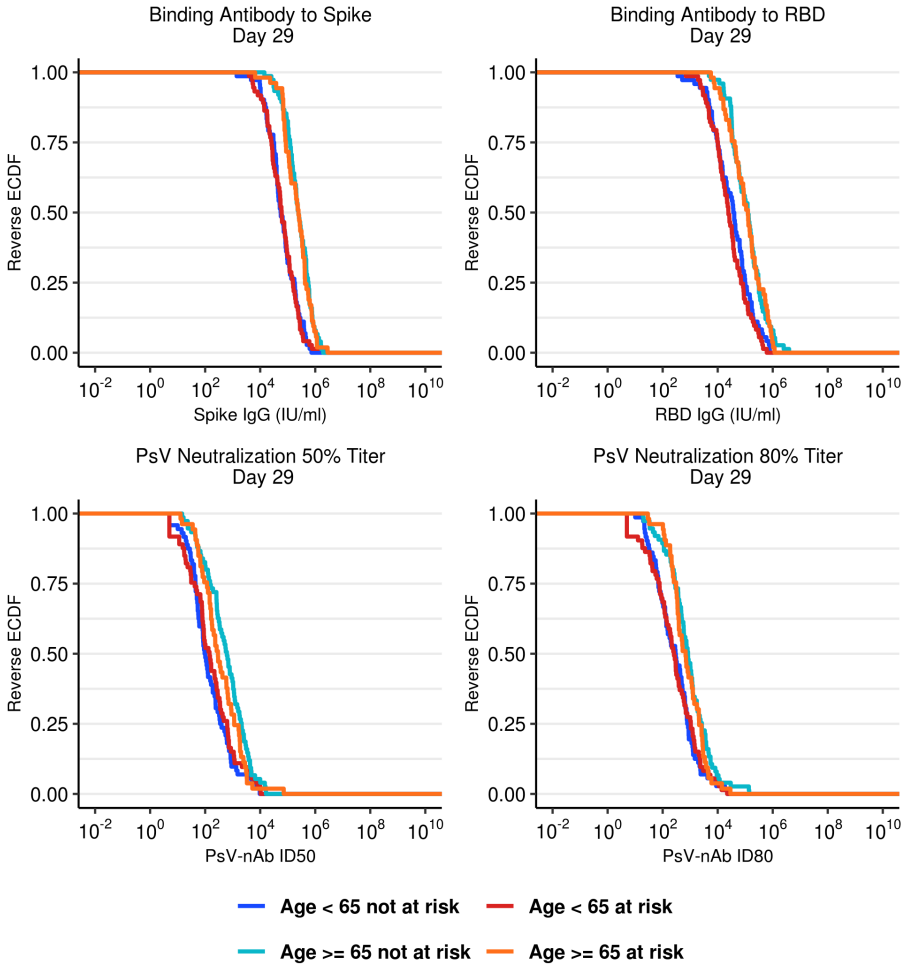

Figure 1.95: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and high-risk condition.

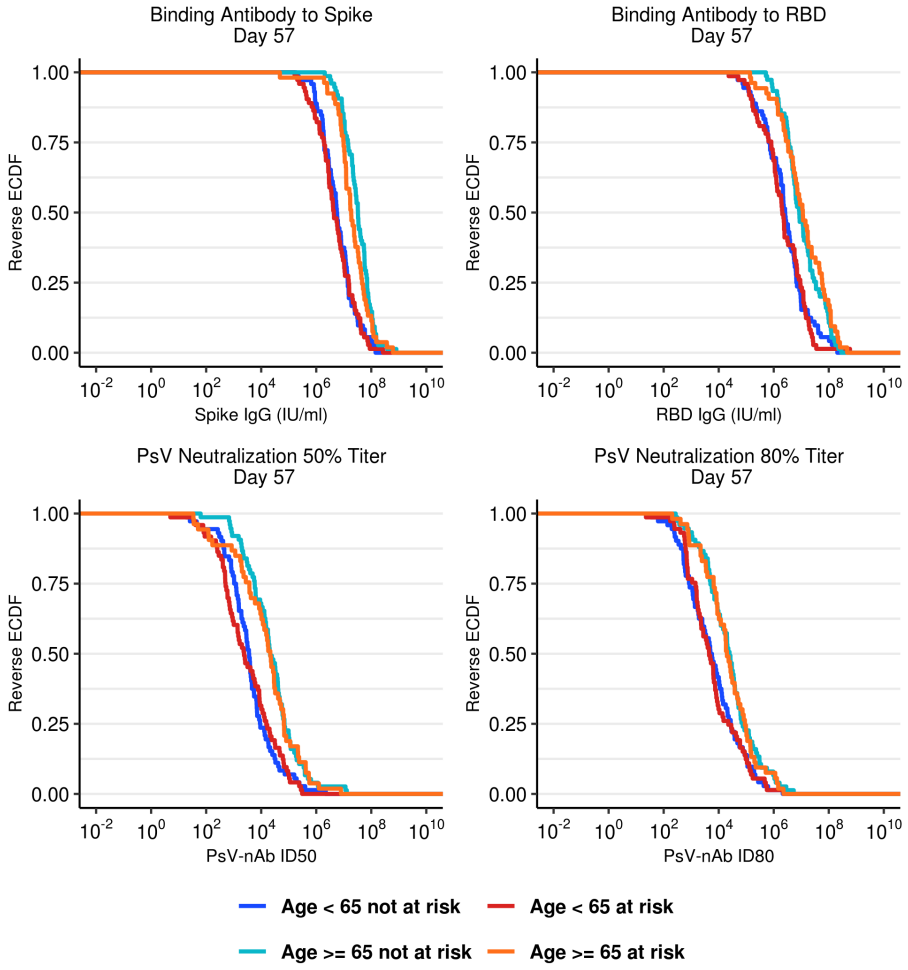

Figure 1.96: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by age and high-risk condition.

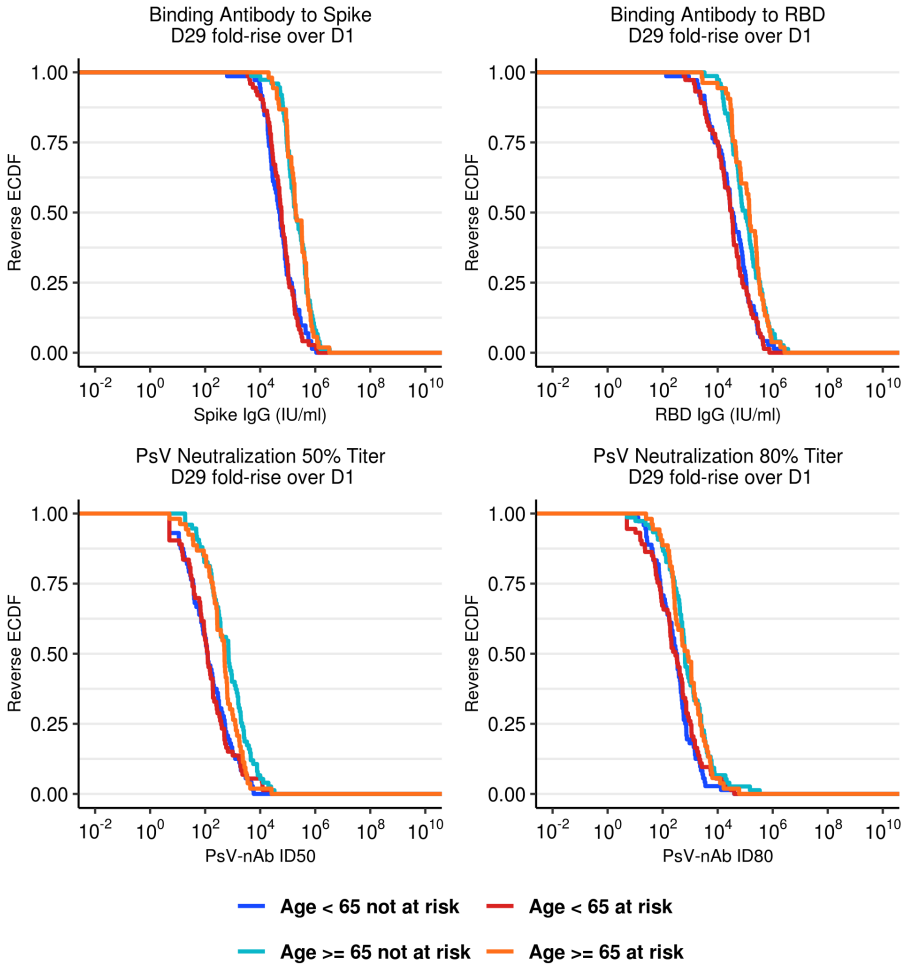

Figure 1.97: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

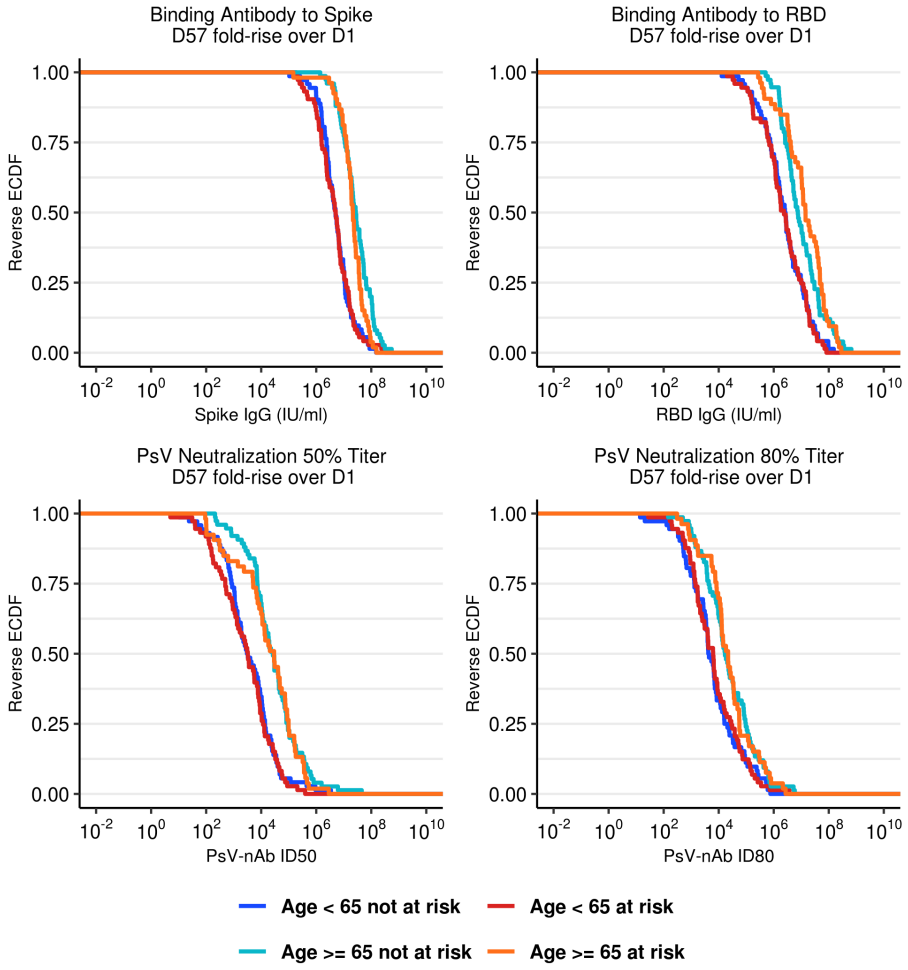

Figure 1.98: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

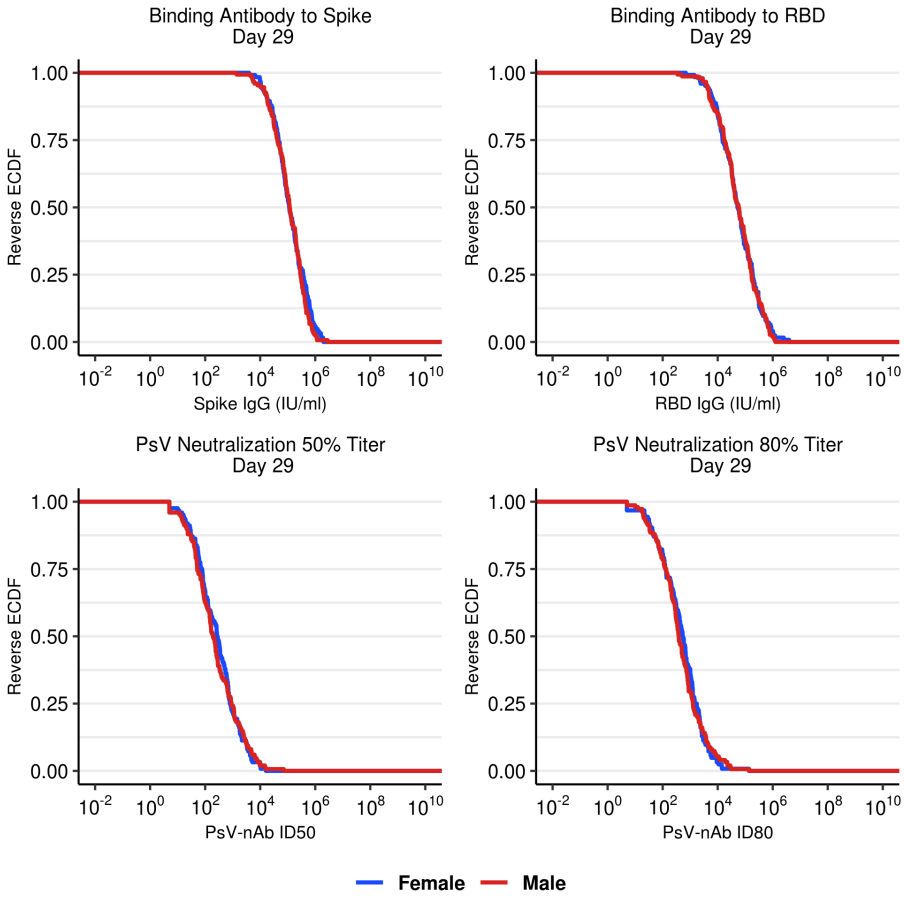

Figure 1.99: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by sex assigned at birth.

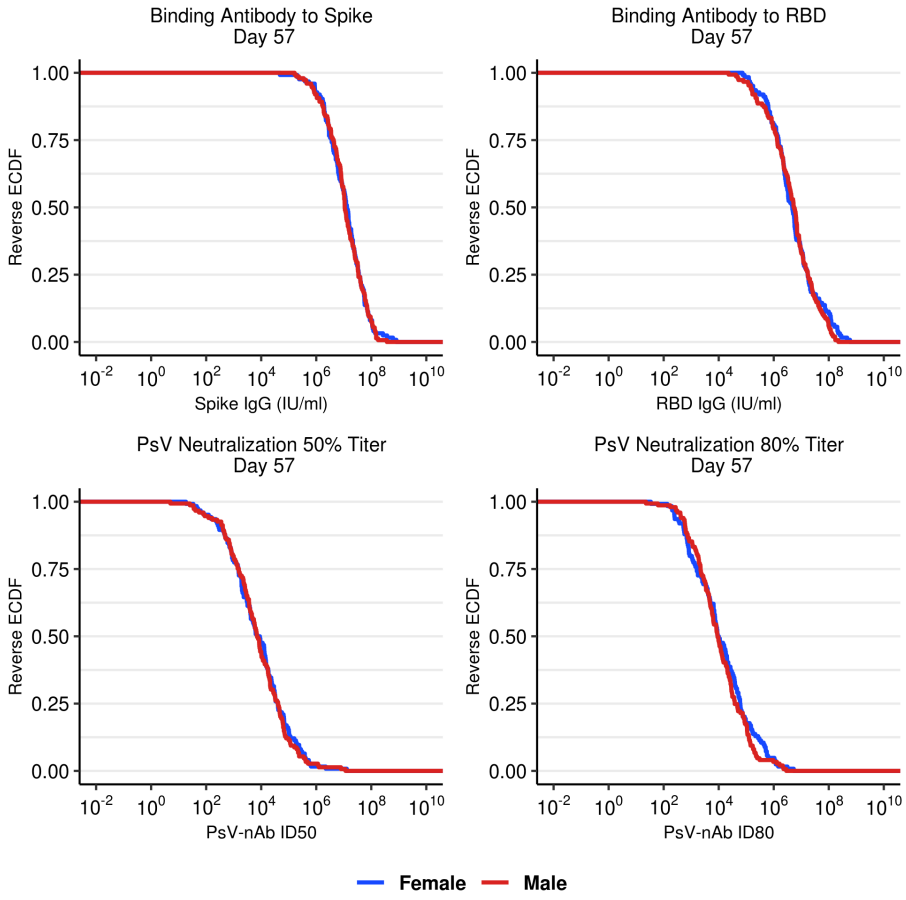

Figure 1.100: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by sex assigned at birth.

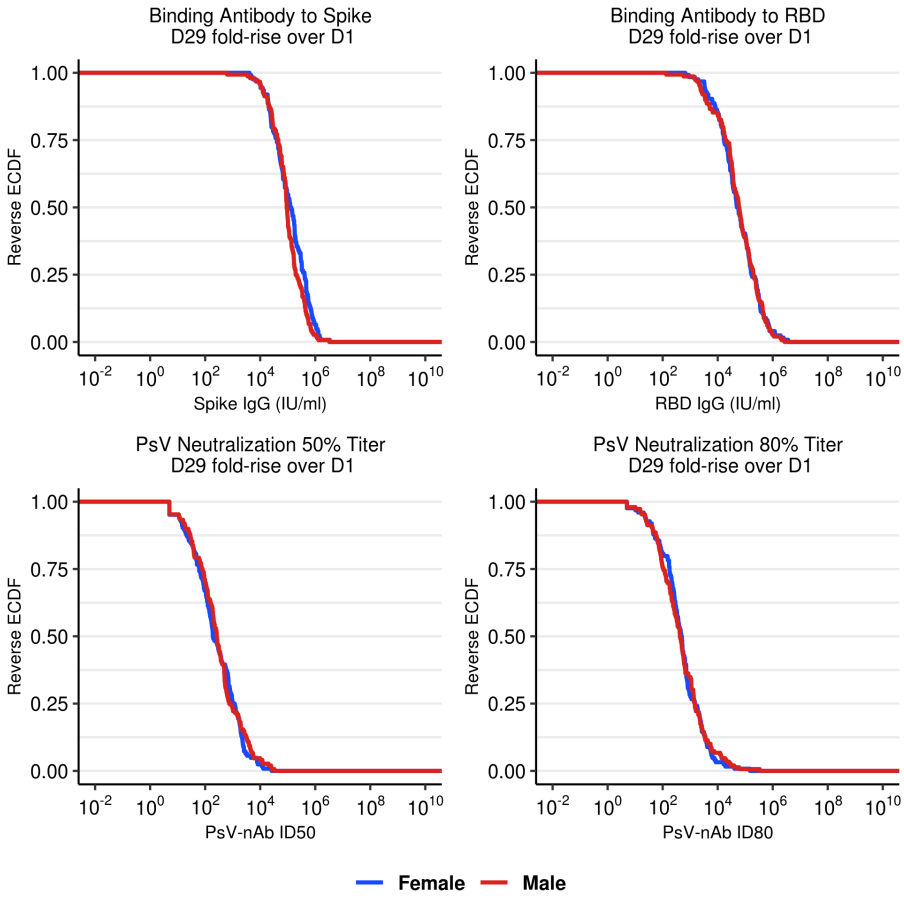

Figure 1.101: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

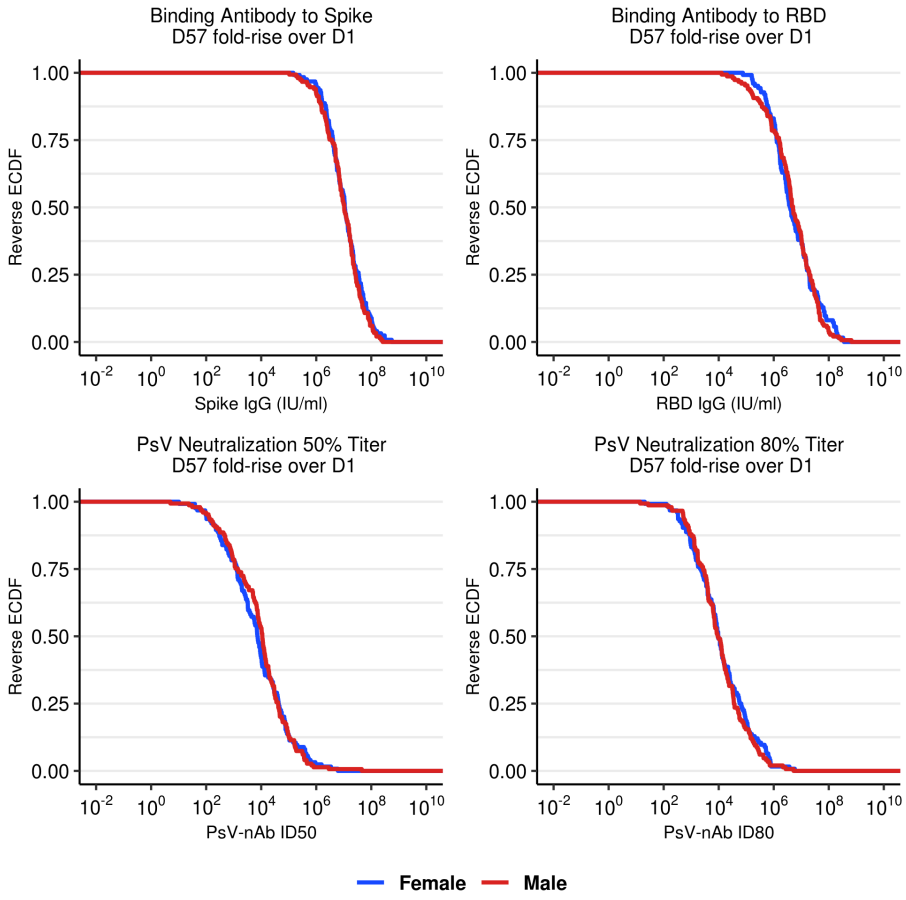

Figure 1.102: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

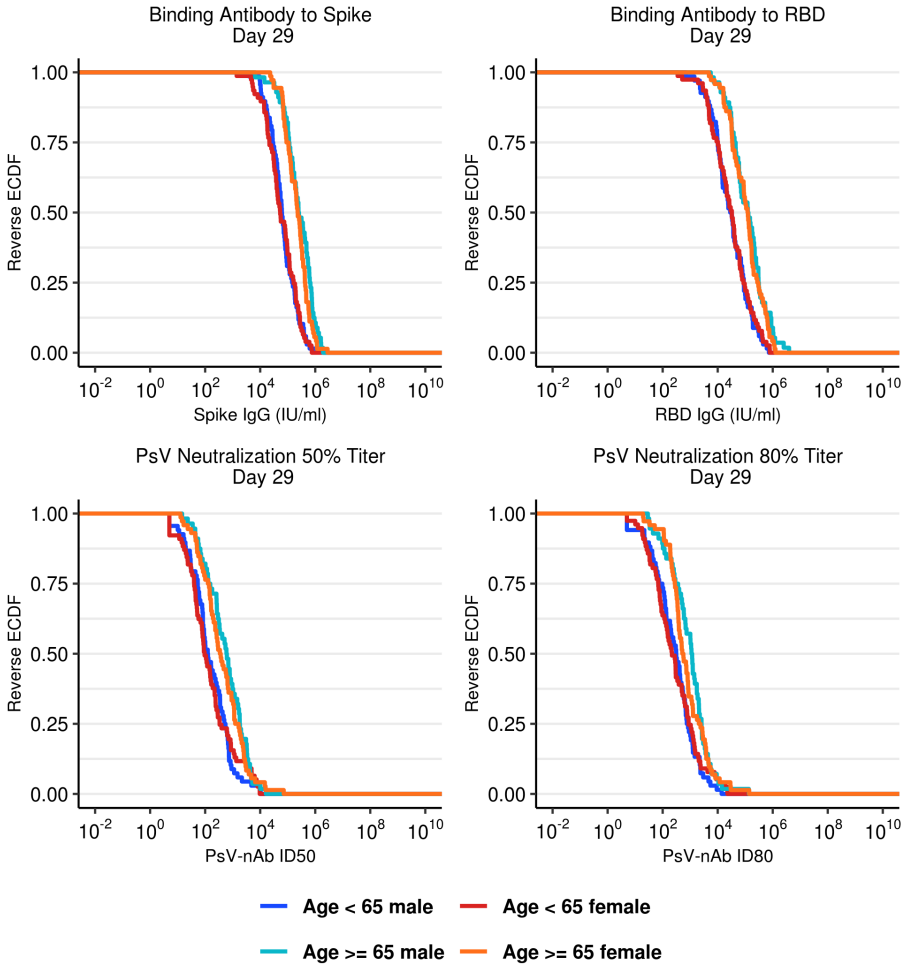

Figure 1.103: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

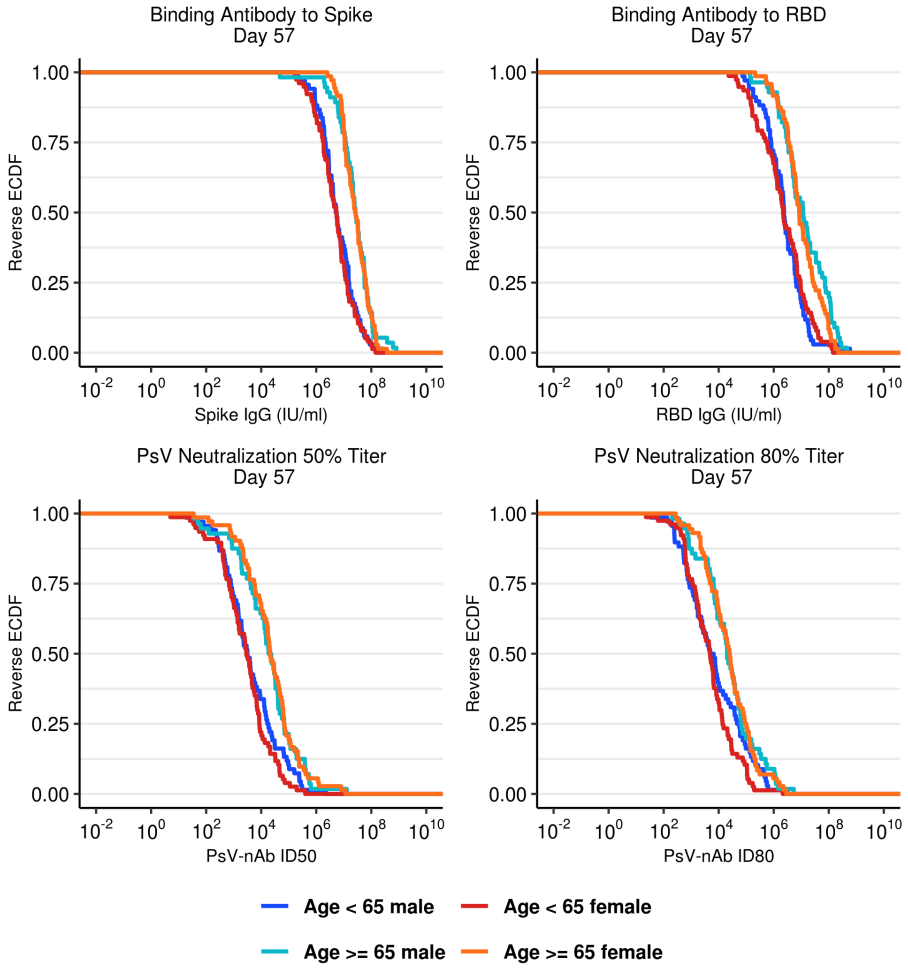

Figure 1.104: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

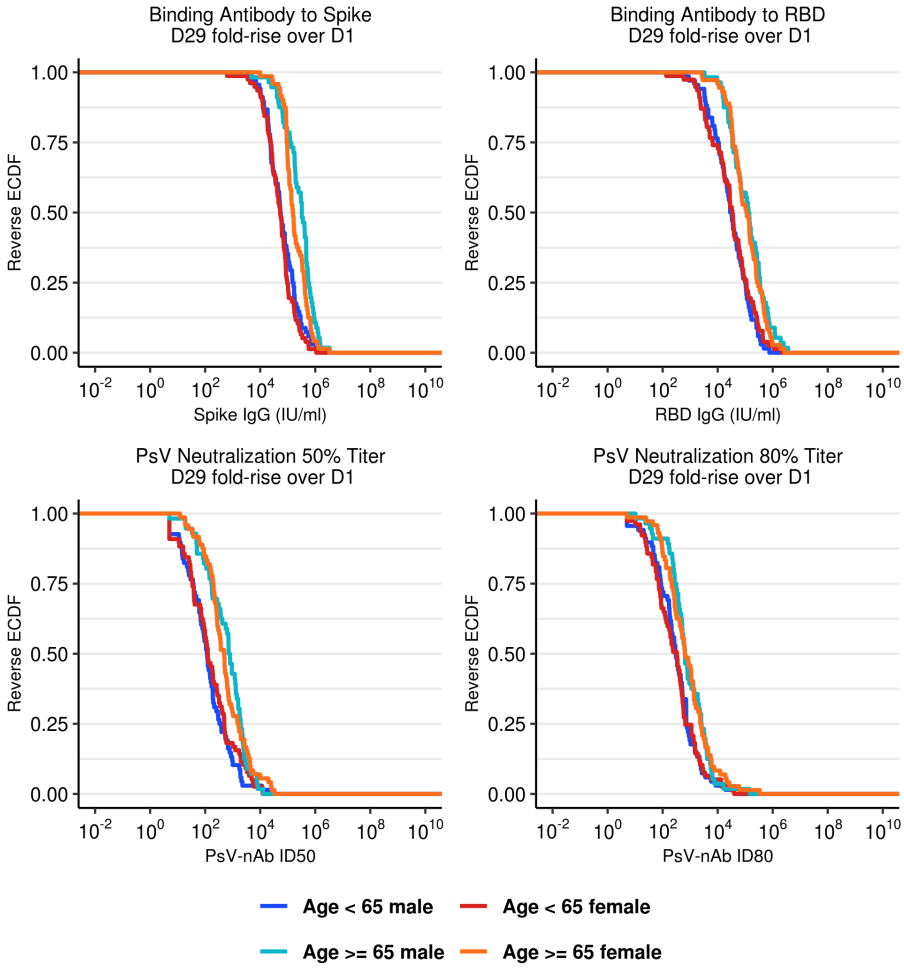

Figure 1.105: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

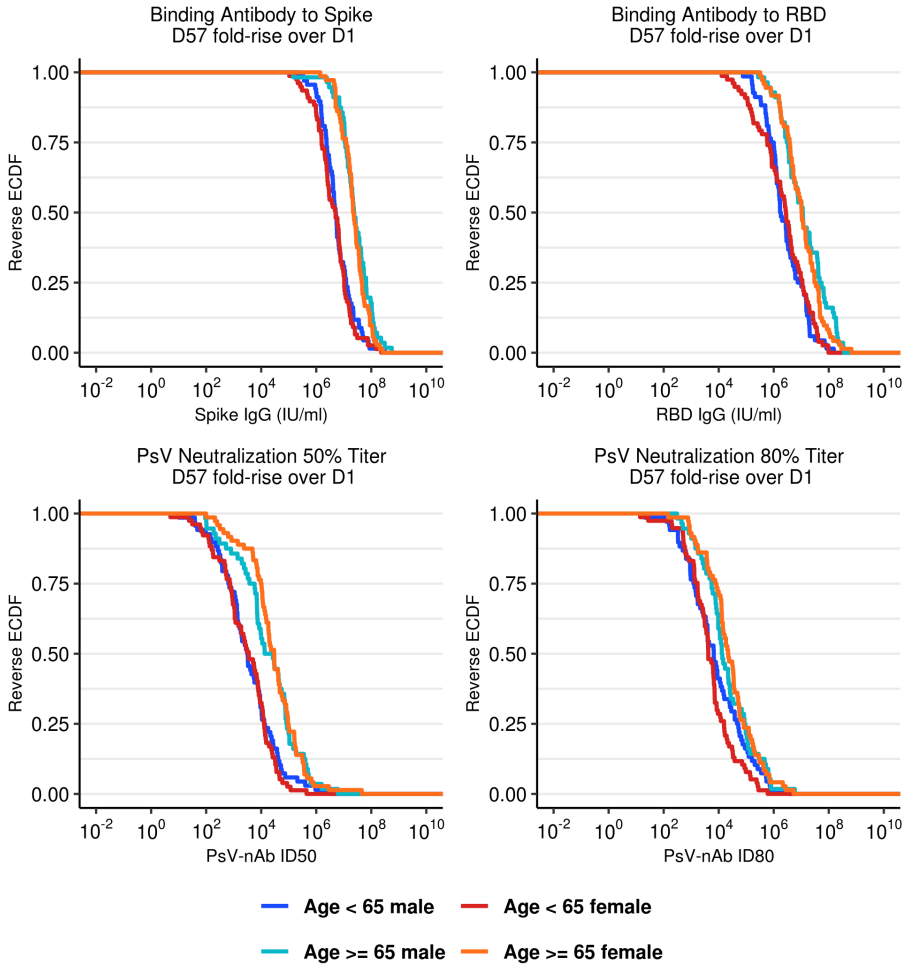

Figure 1.106: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

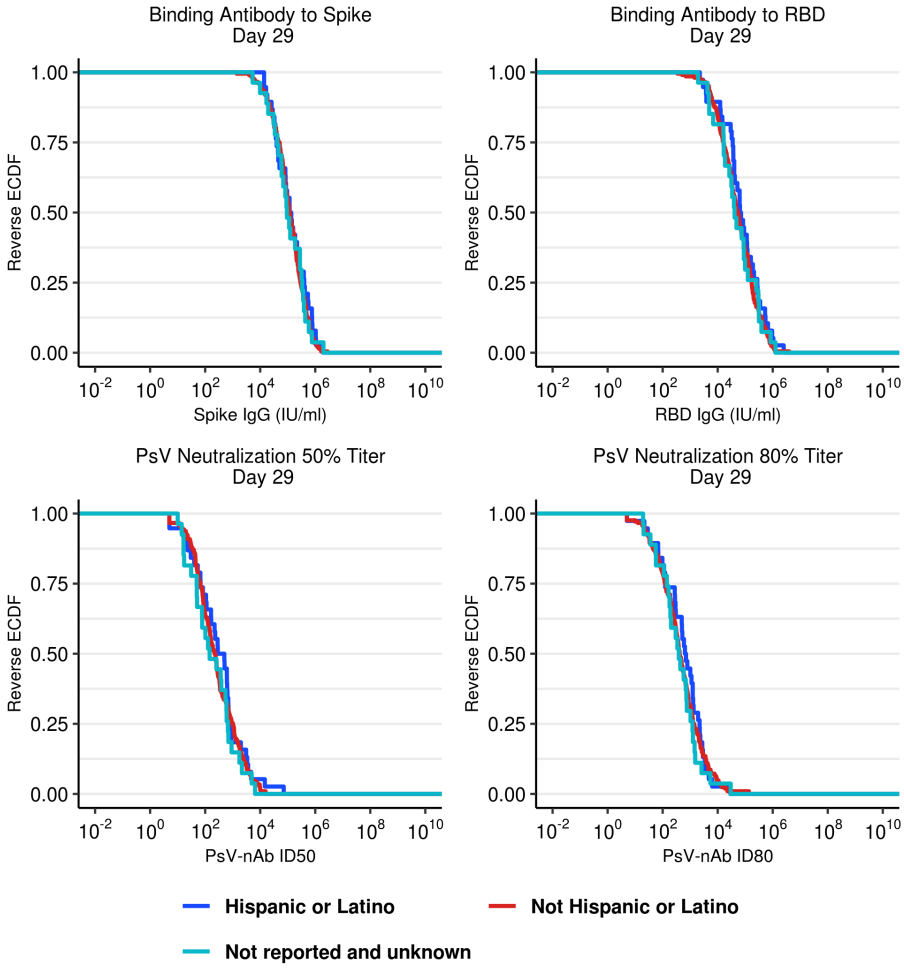

Figure 1.107: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by ethnicity.

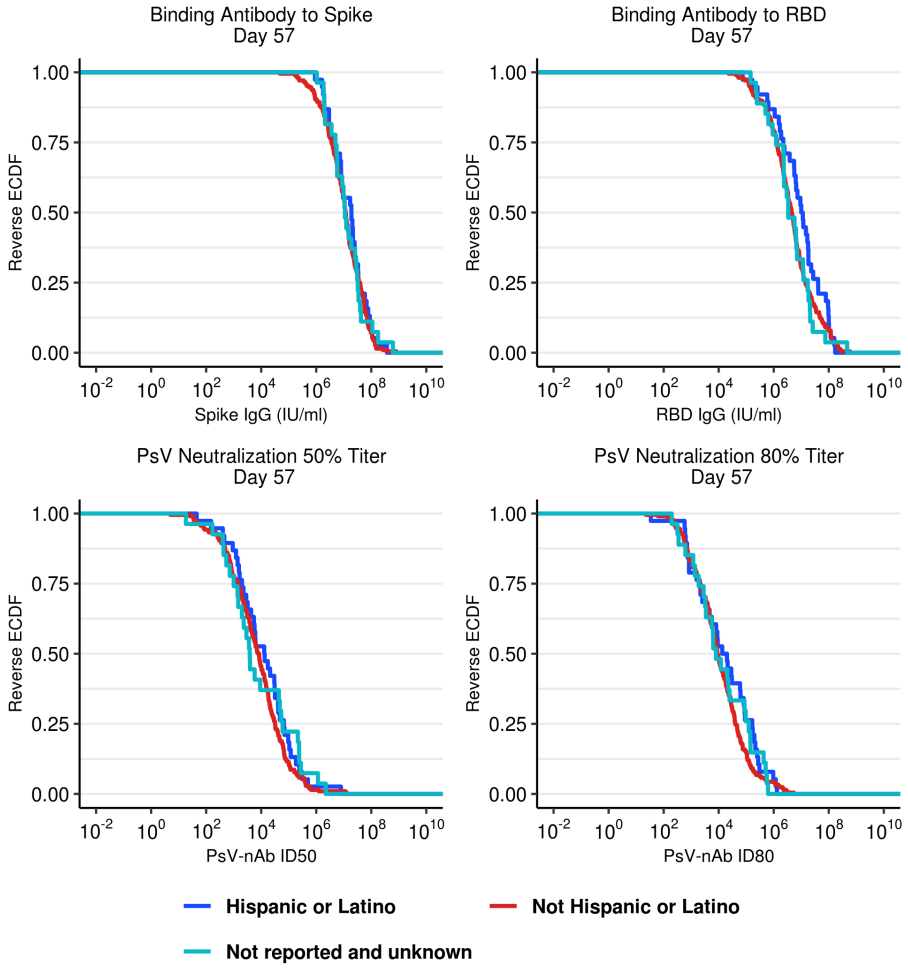

Figure 1.108: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by ethnicity.

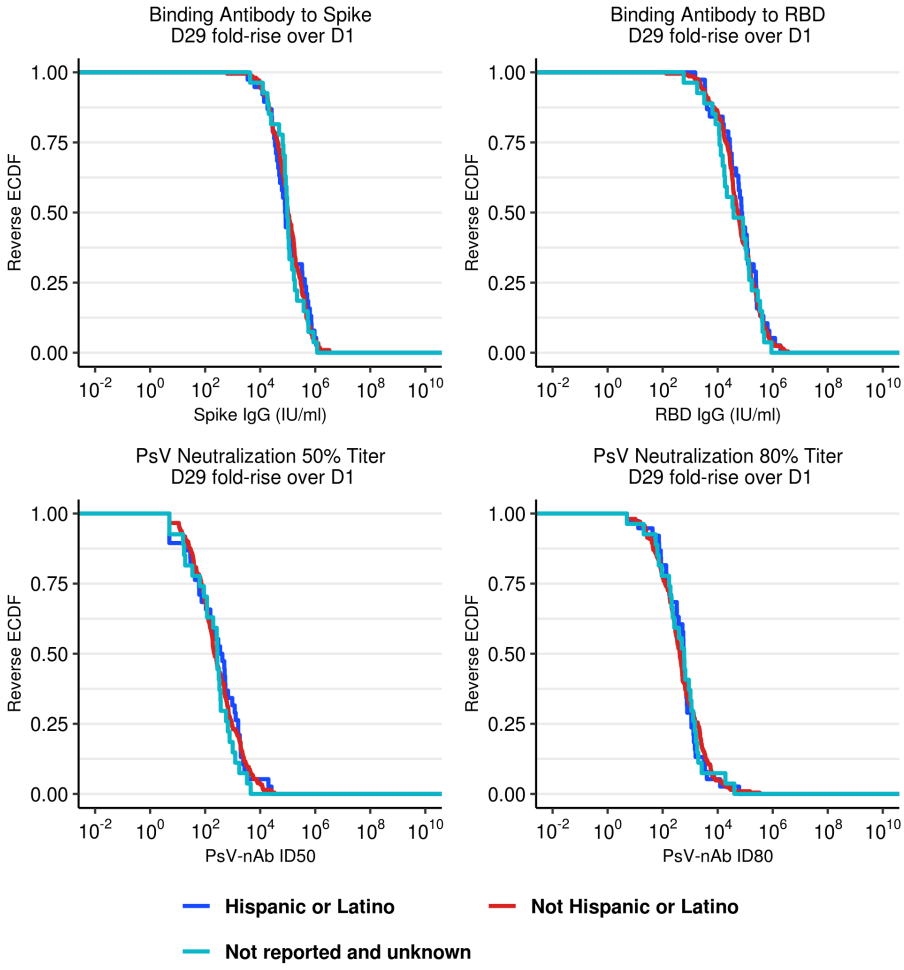

Figure 1.109: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

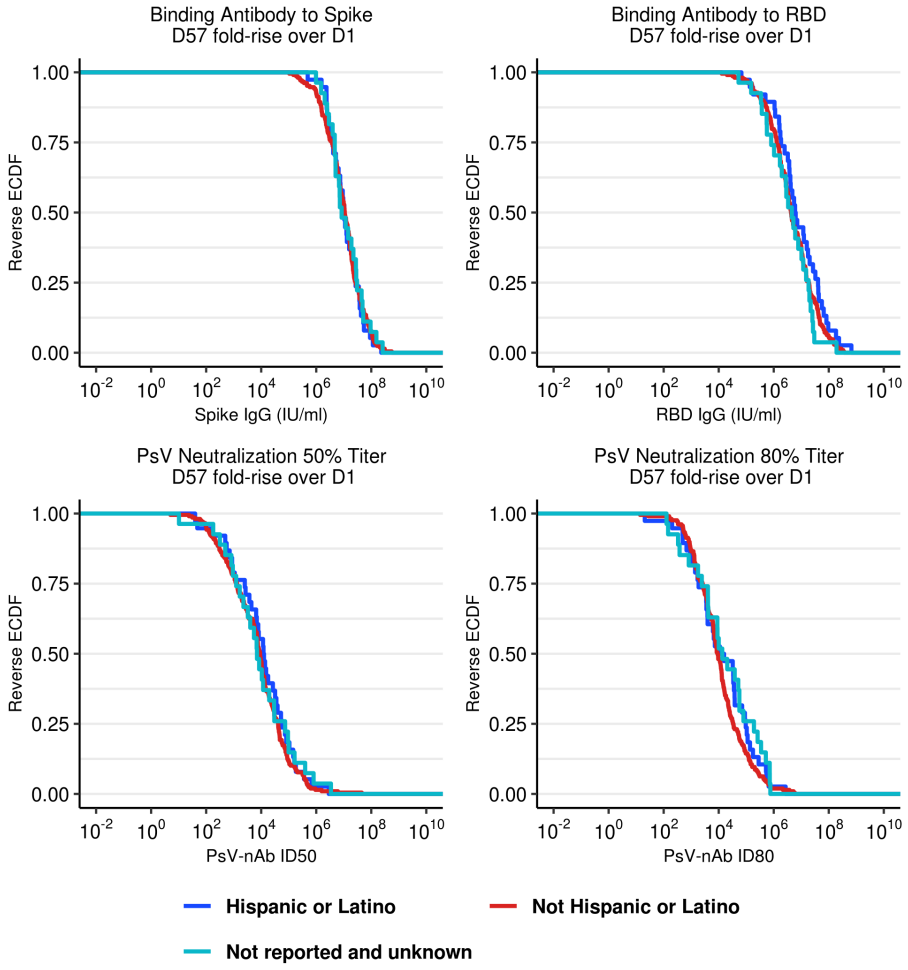

Figure 1.110: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

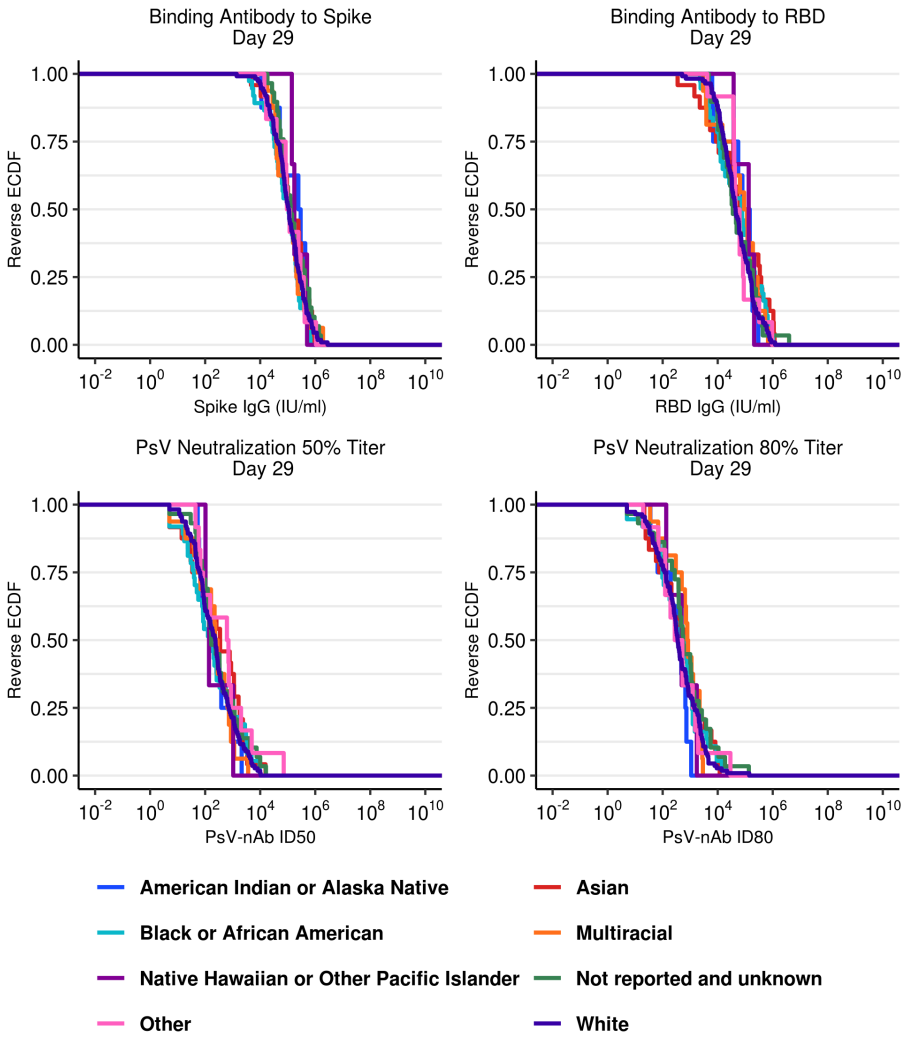

Figure 1.111: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by race.

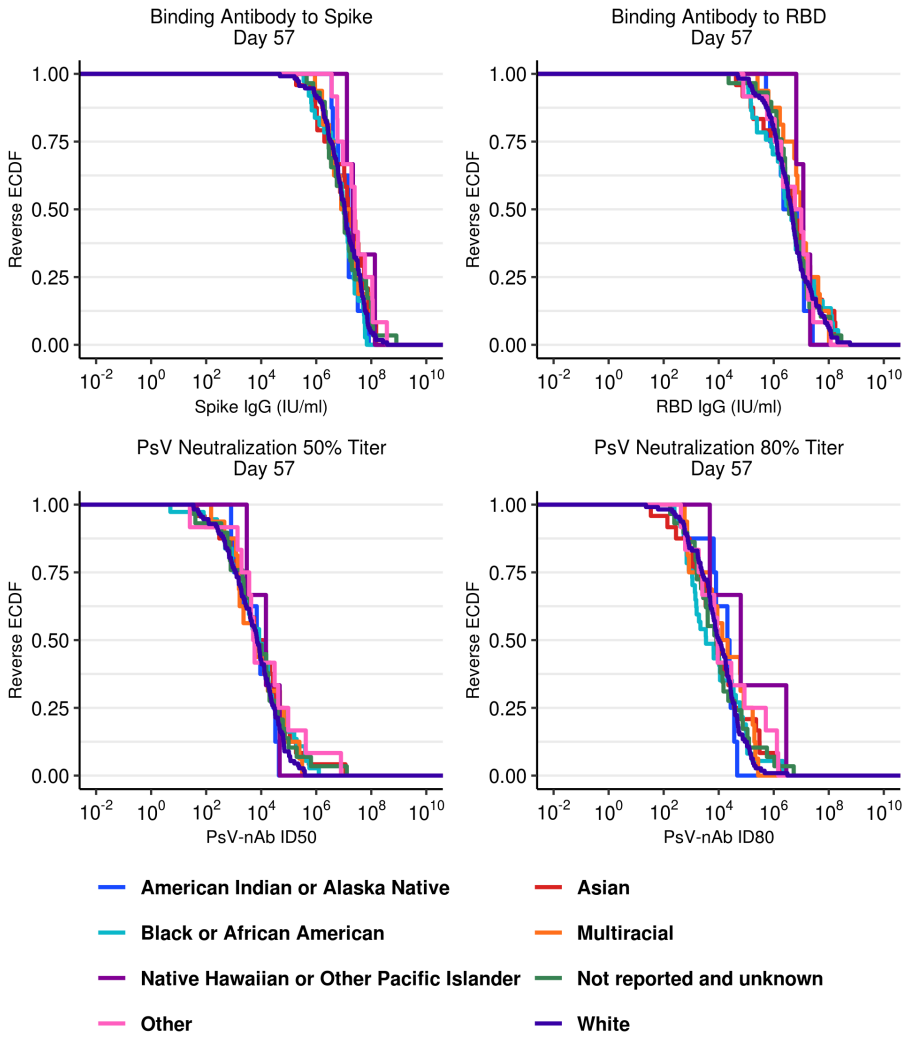

Figure 1.112: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by race.

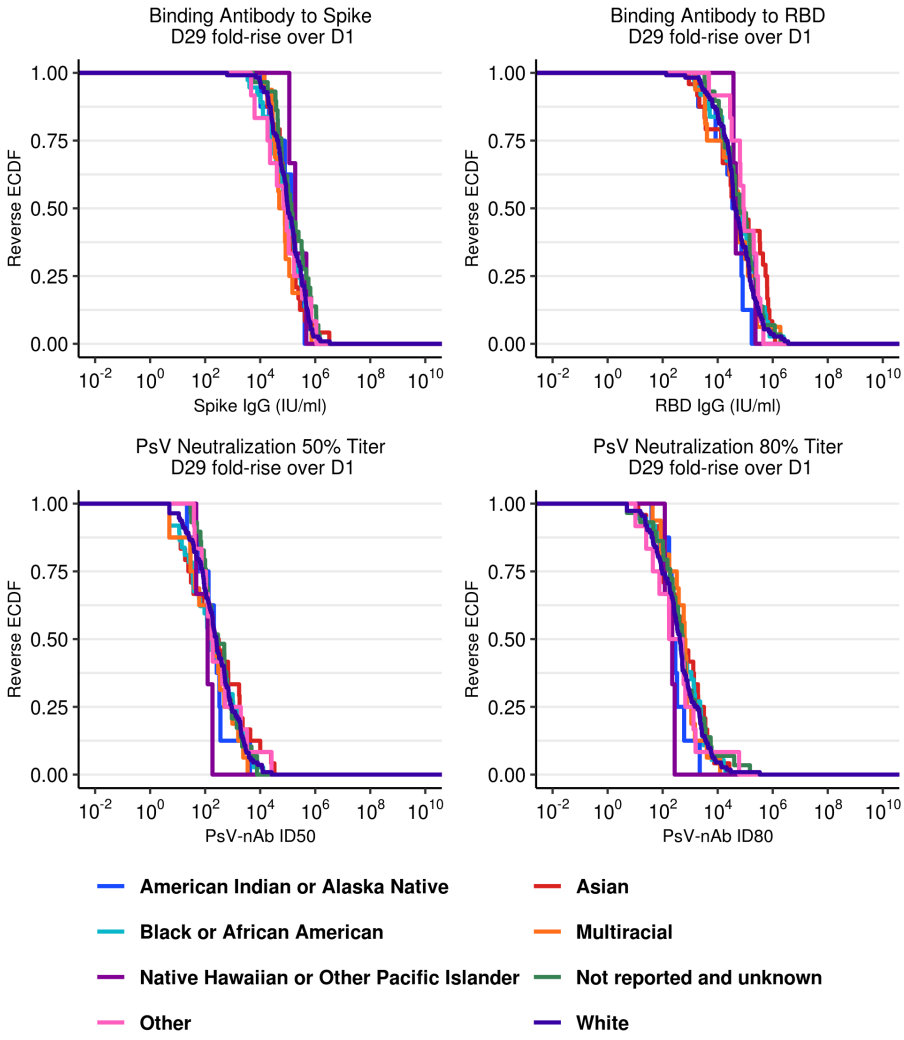

Figure 1.113: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

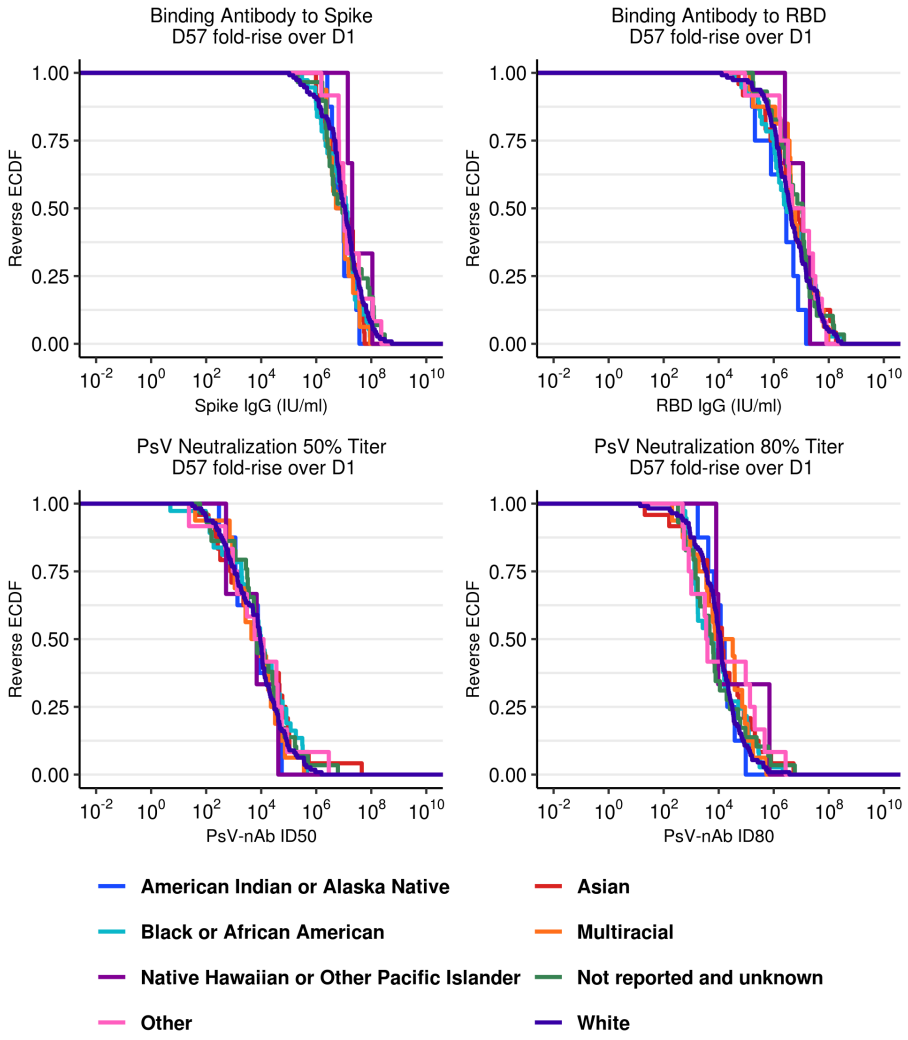

Figure 1.114: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

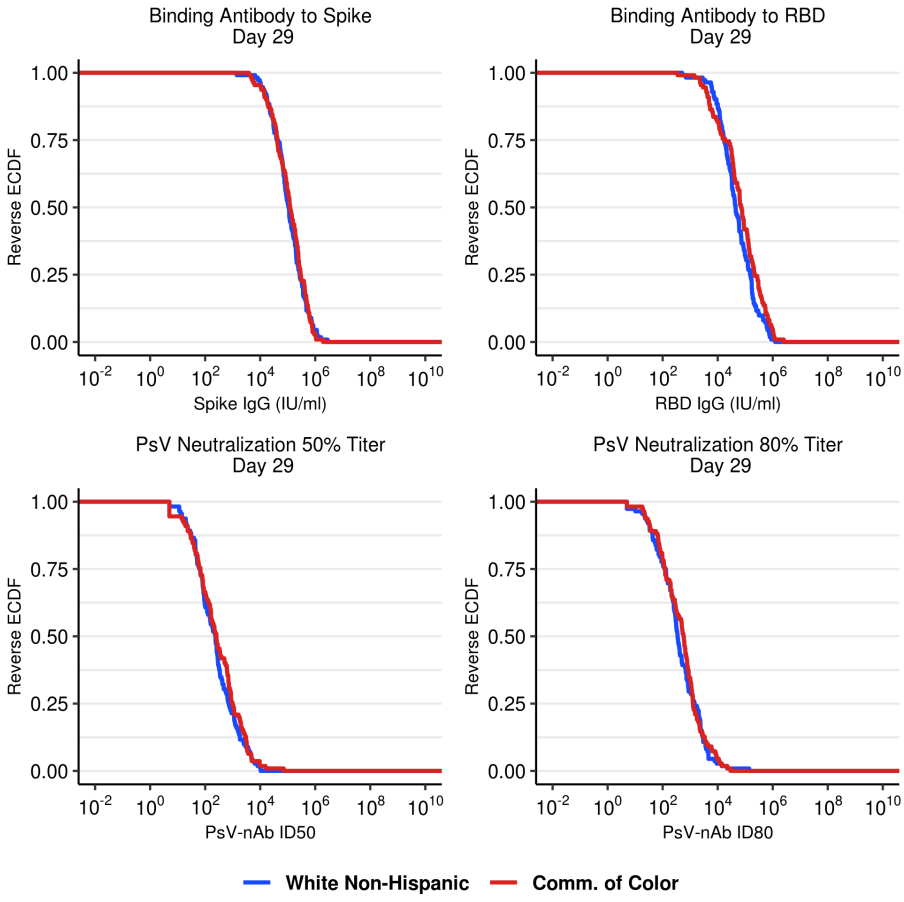

Figure 1.115: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group.

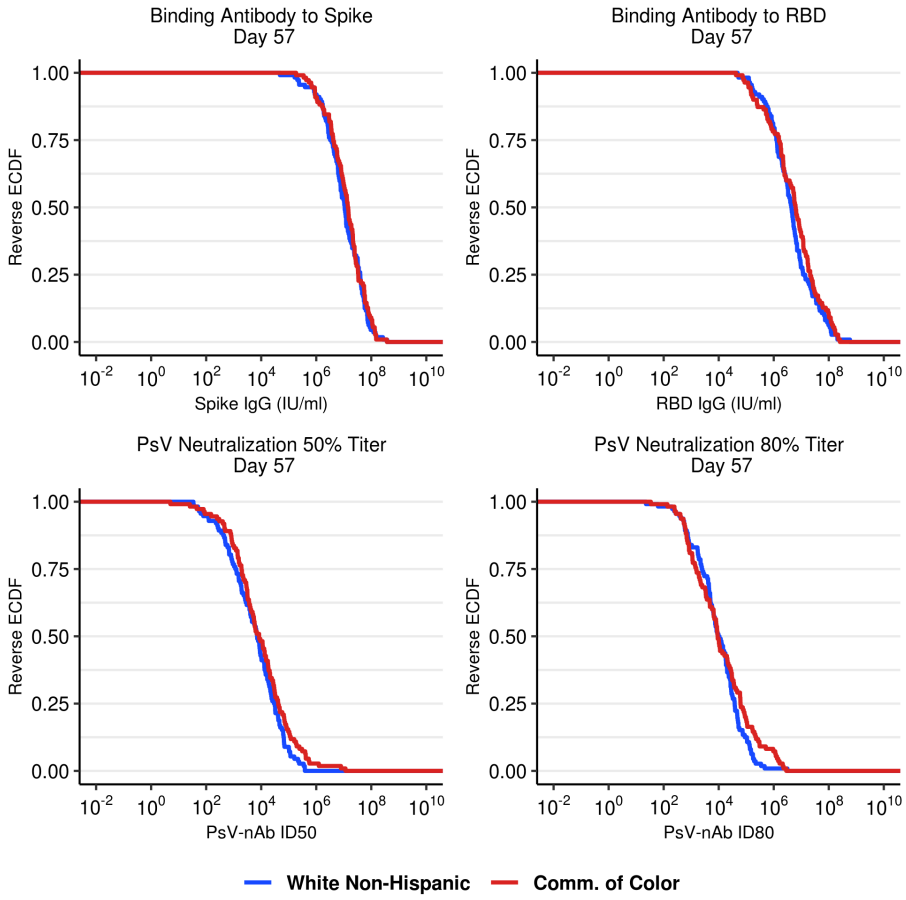

Figure 1.116: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group.

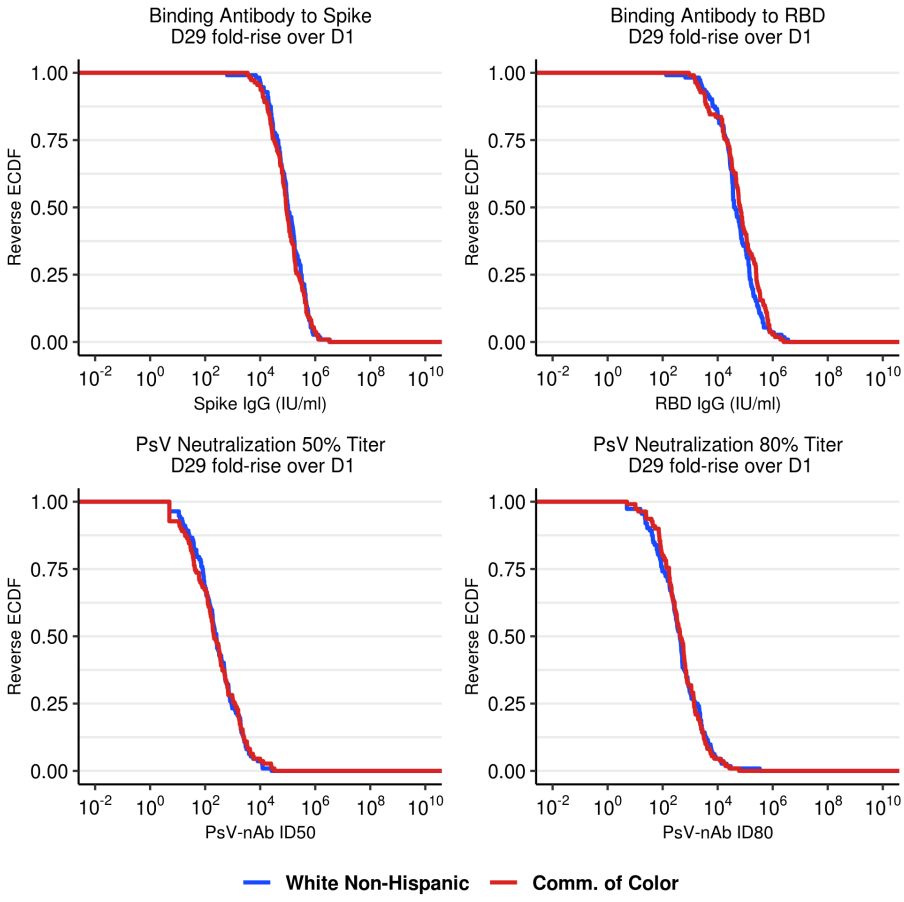

Figure 1.117: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group.

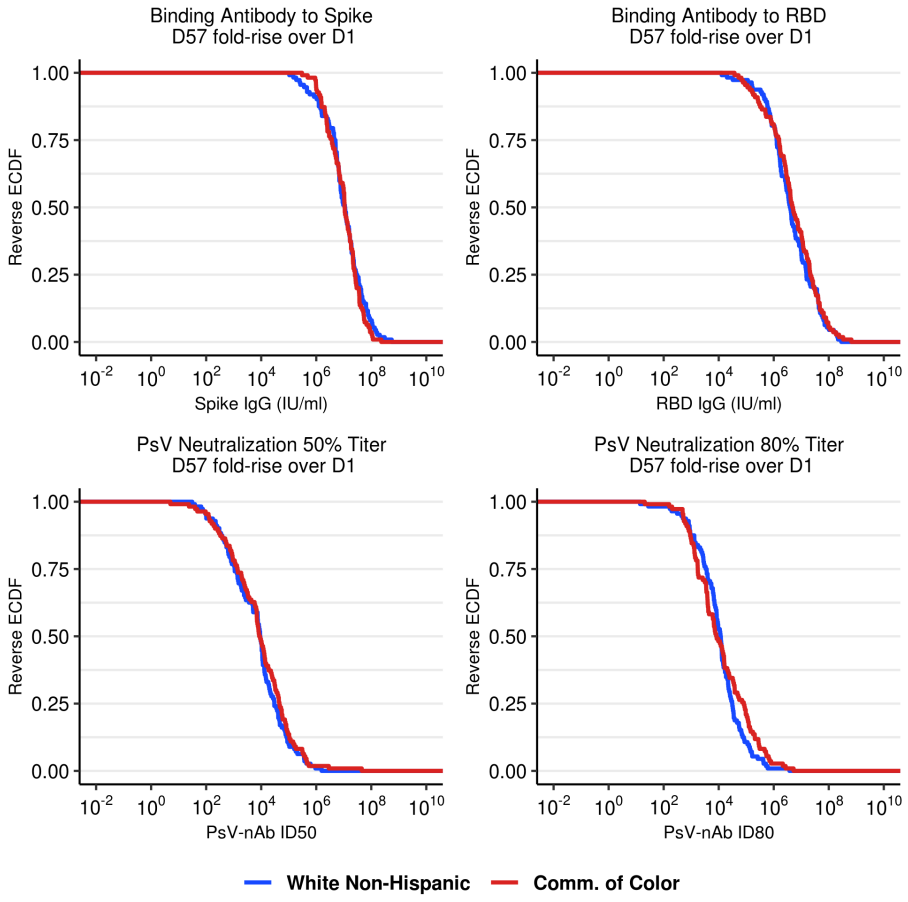

Figure 1.118: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group.

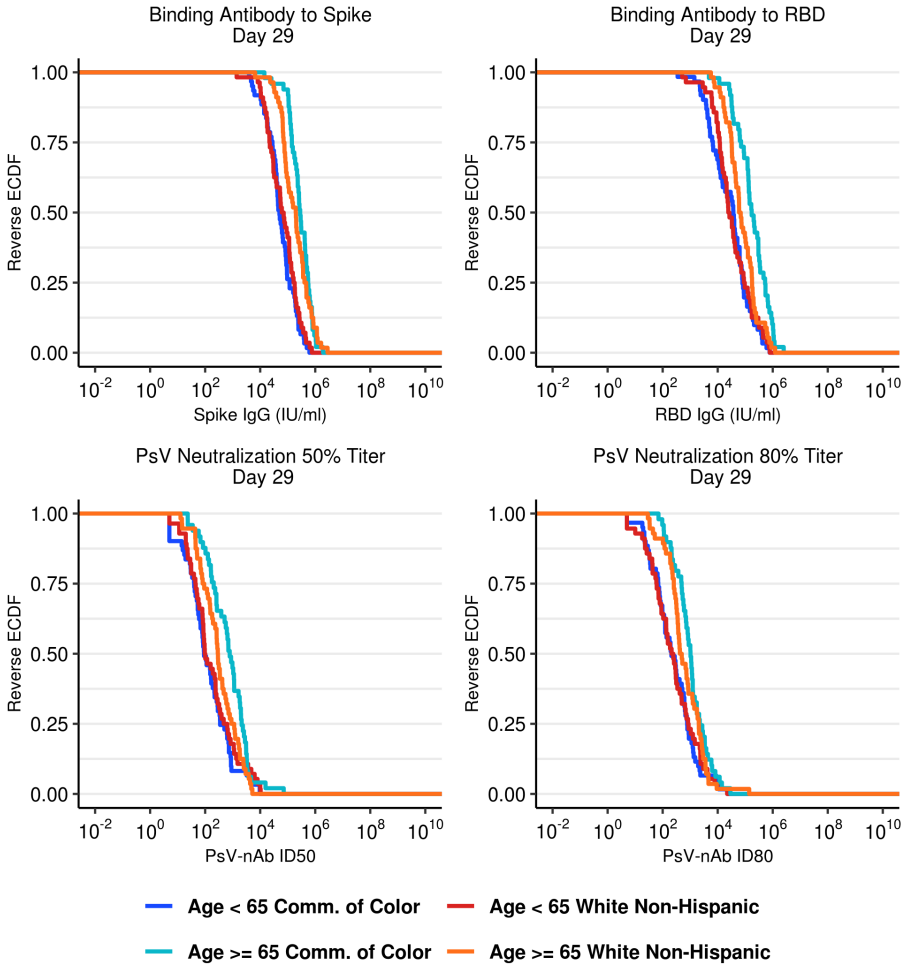

Figure 1.119: (Mock data) RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group.

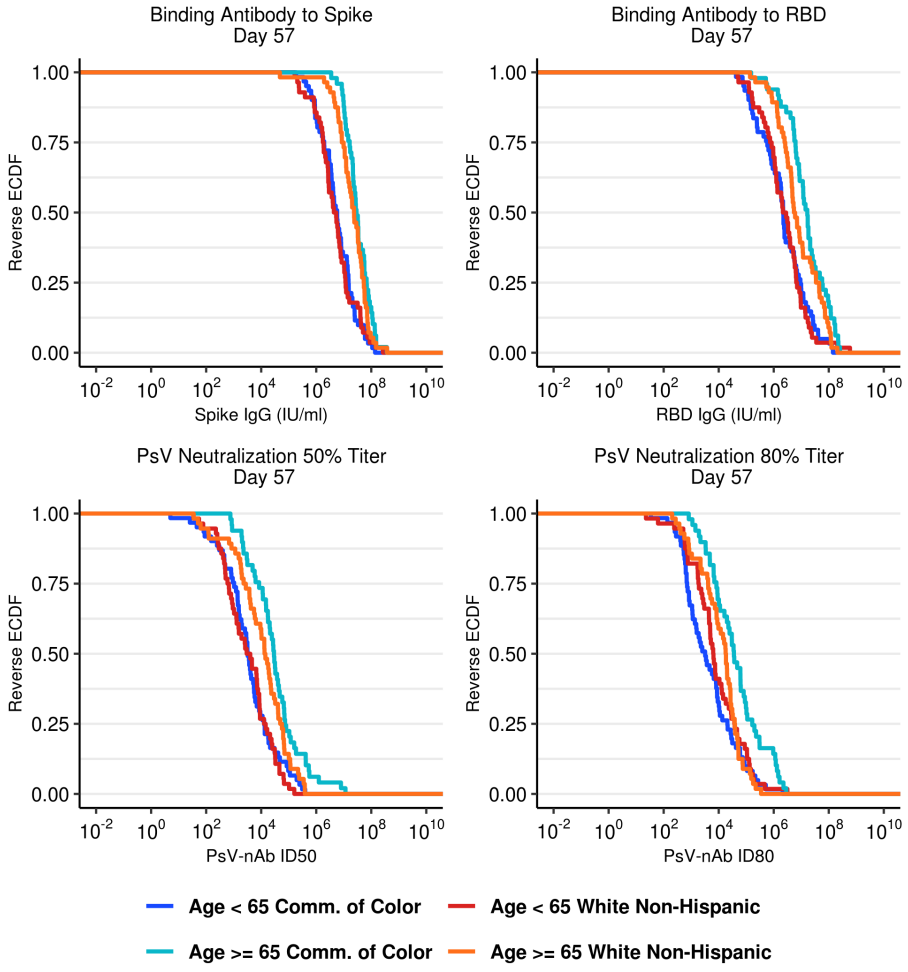

Figure 1.120: (Mock data) RCDF plots for D57 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group.

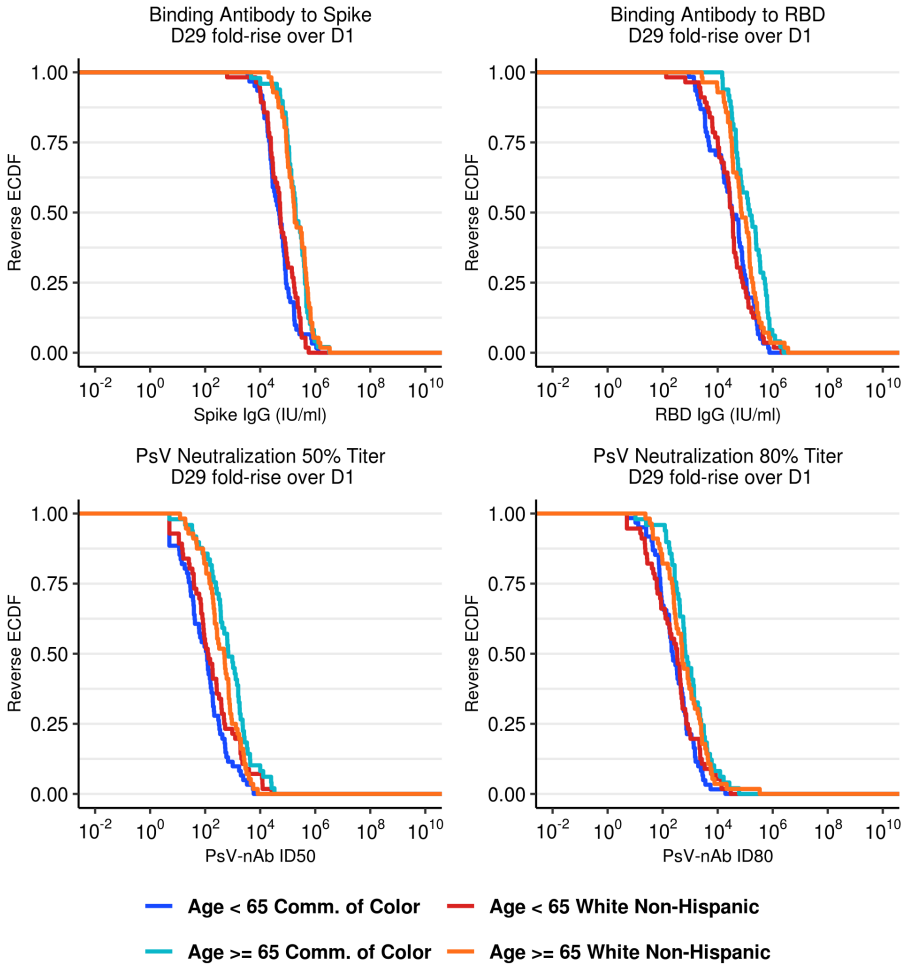

Figure 1.121: (Mock data) RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group.

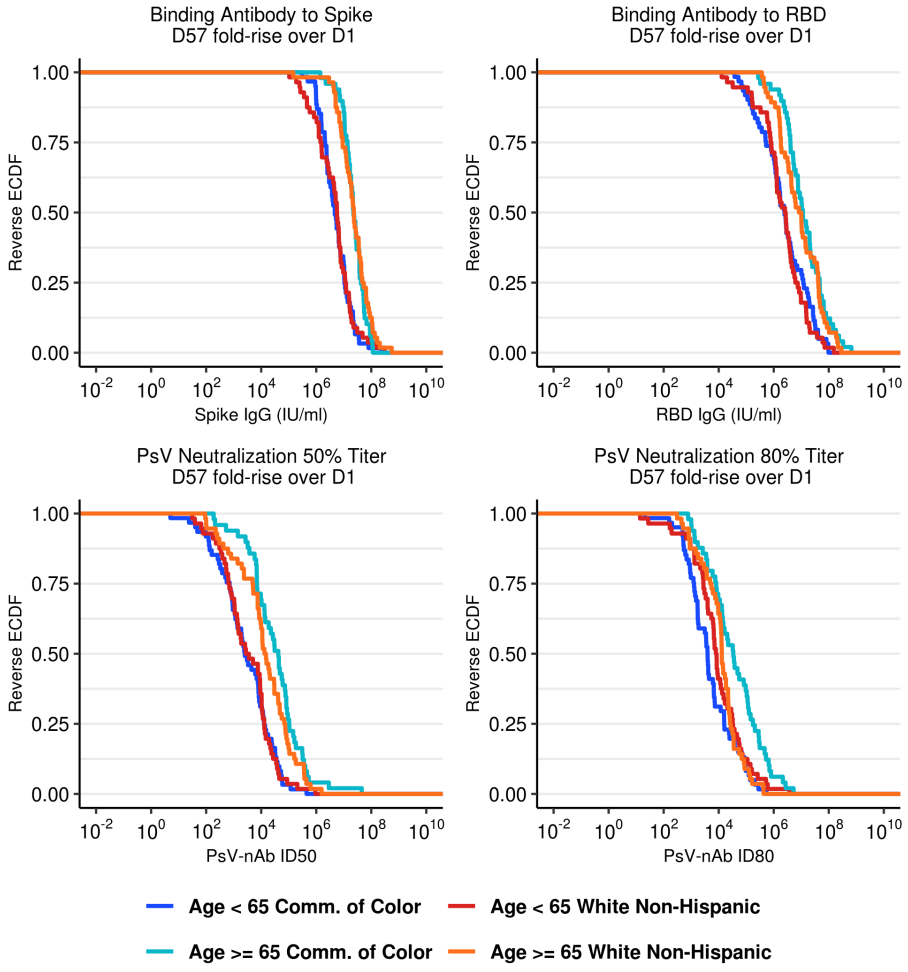

Figure 1.122: (Mock data) RCDF plots for D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group.

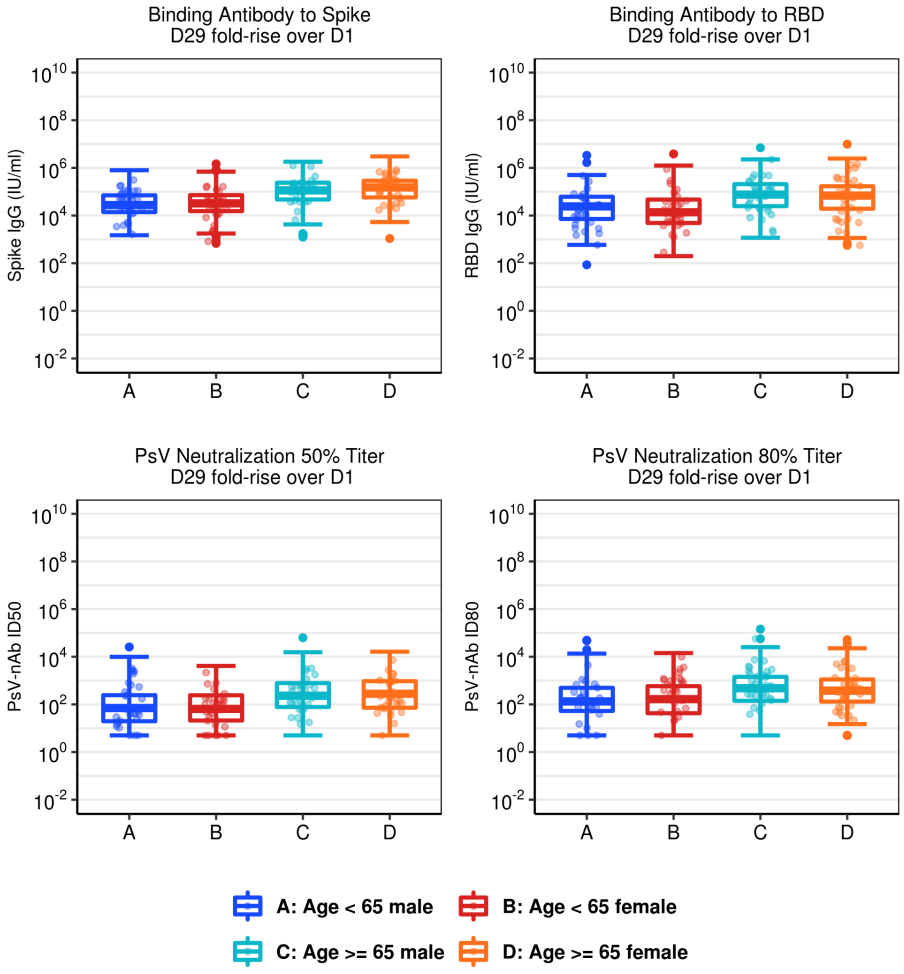

Figure 1.123: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and sex assigned at birth.

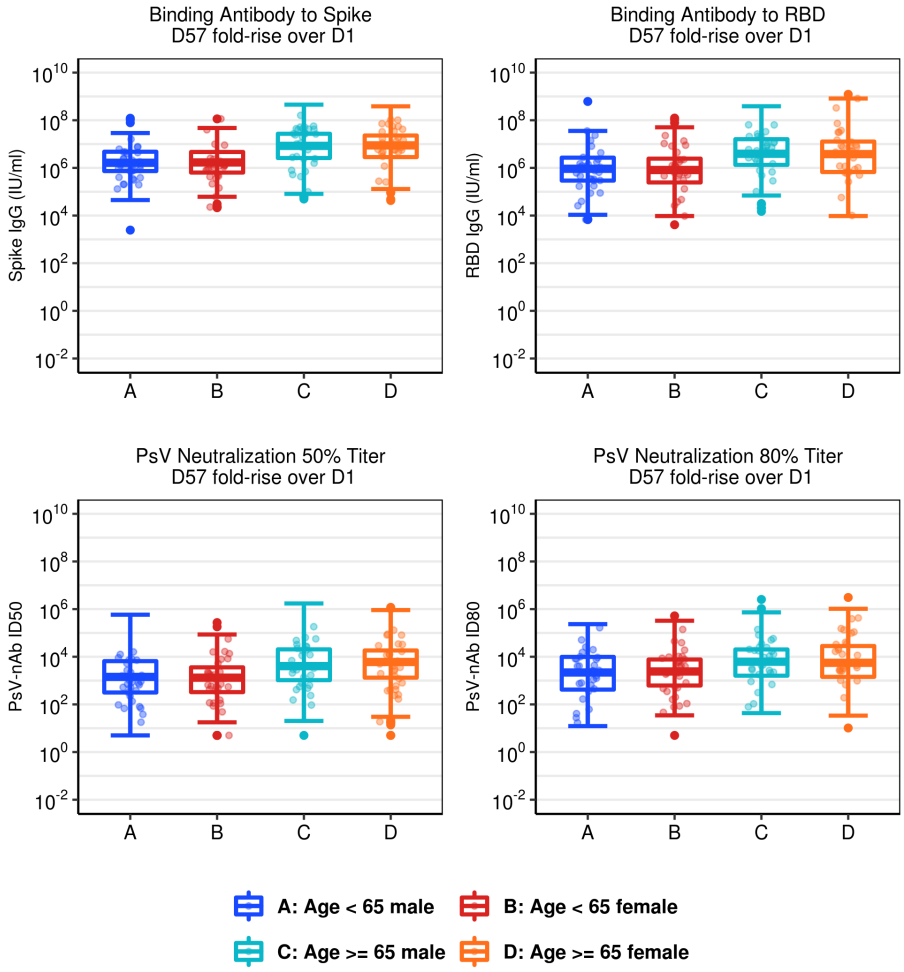

Figure 1.124: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and sex assigned at birth.

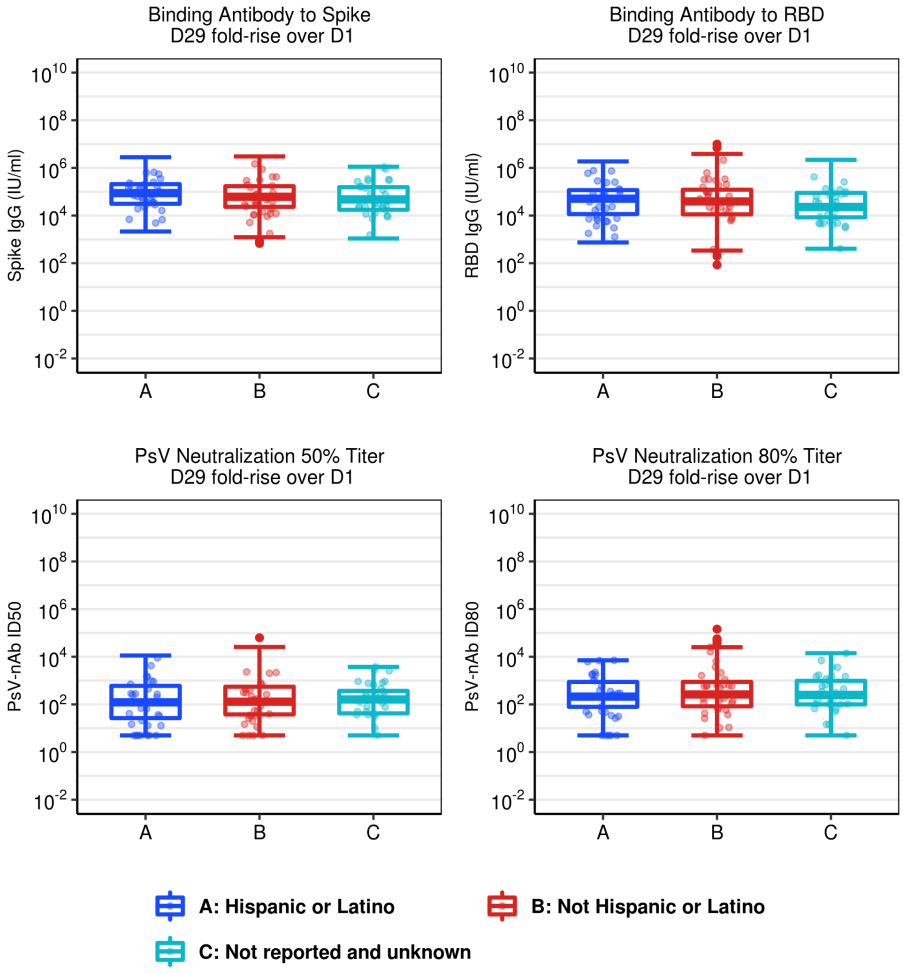

Figure 1.125: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by ethnicity.

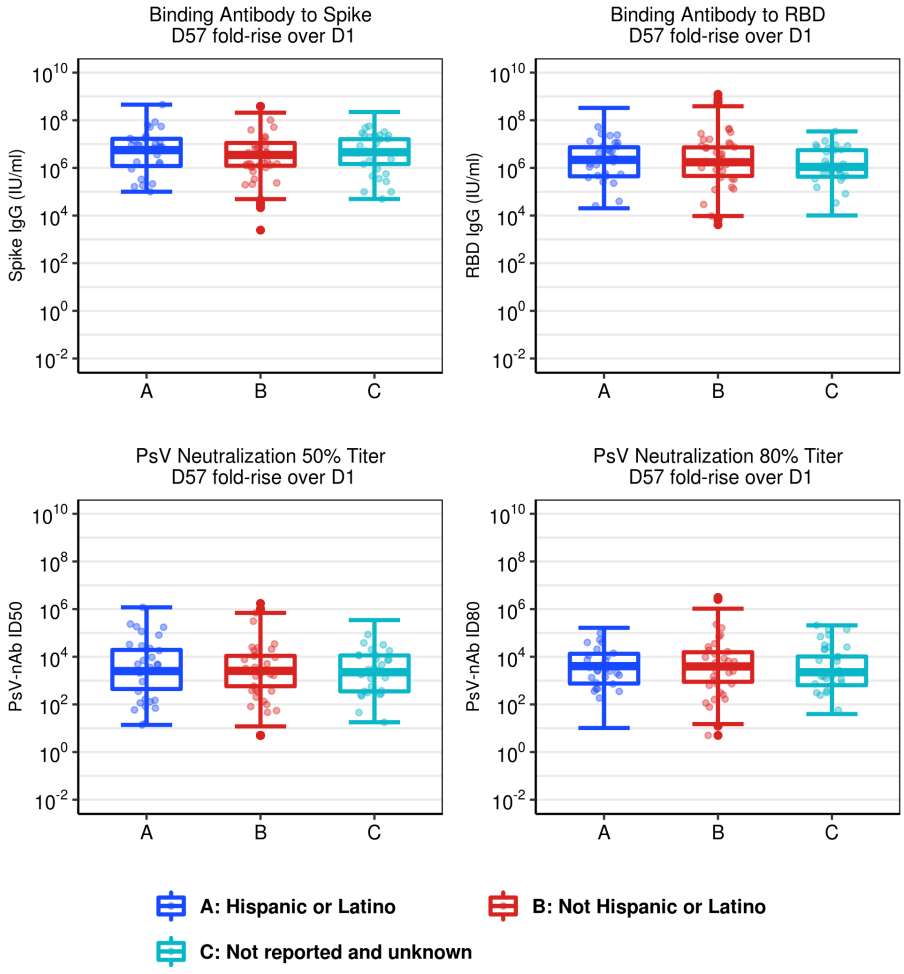

Figure 1.126: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: Baseline negative vaccine arm by ethnicity.

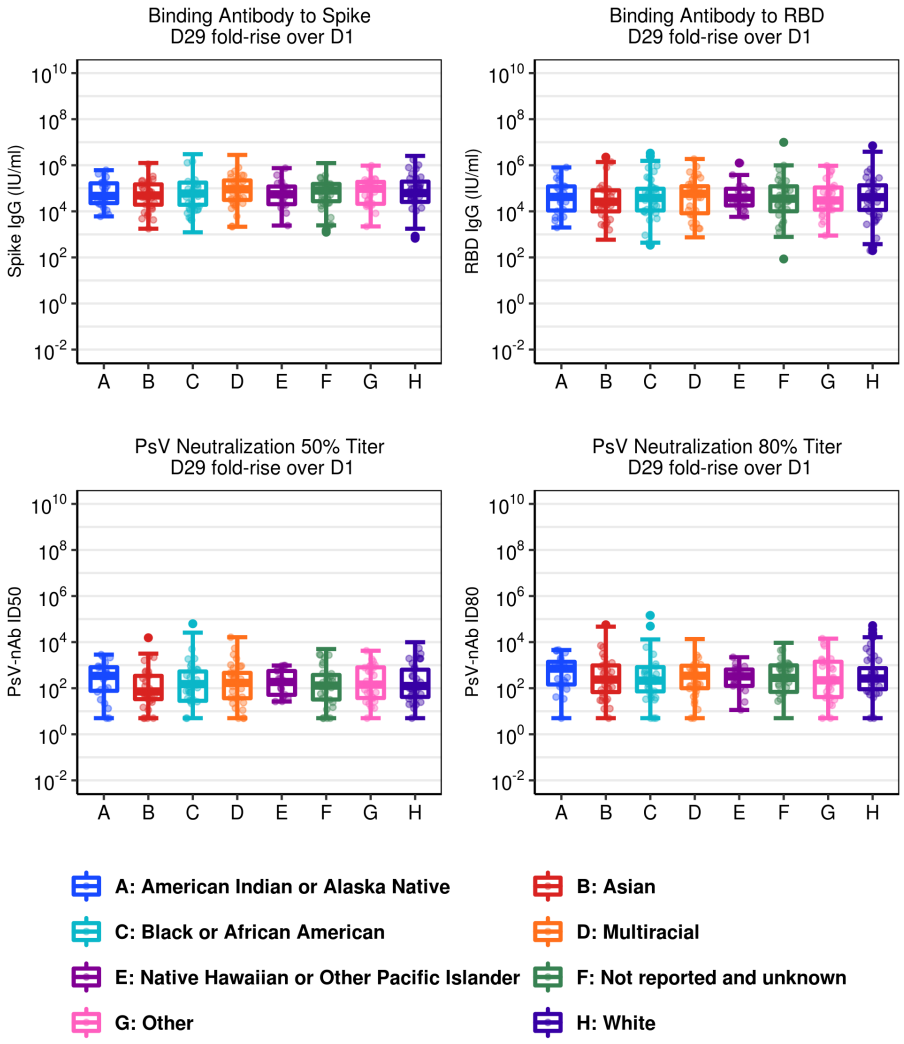

Figure 1.127: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by race.

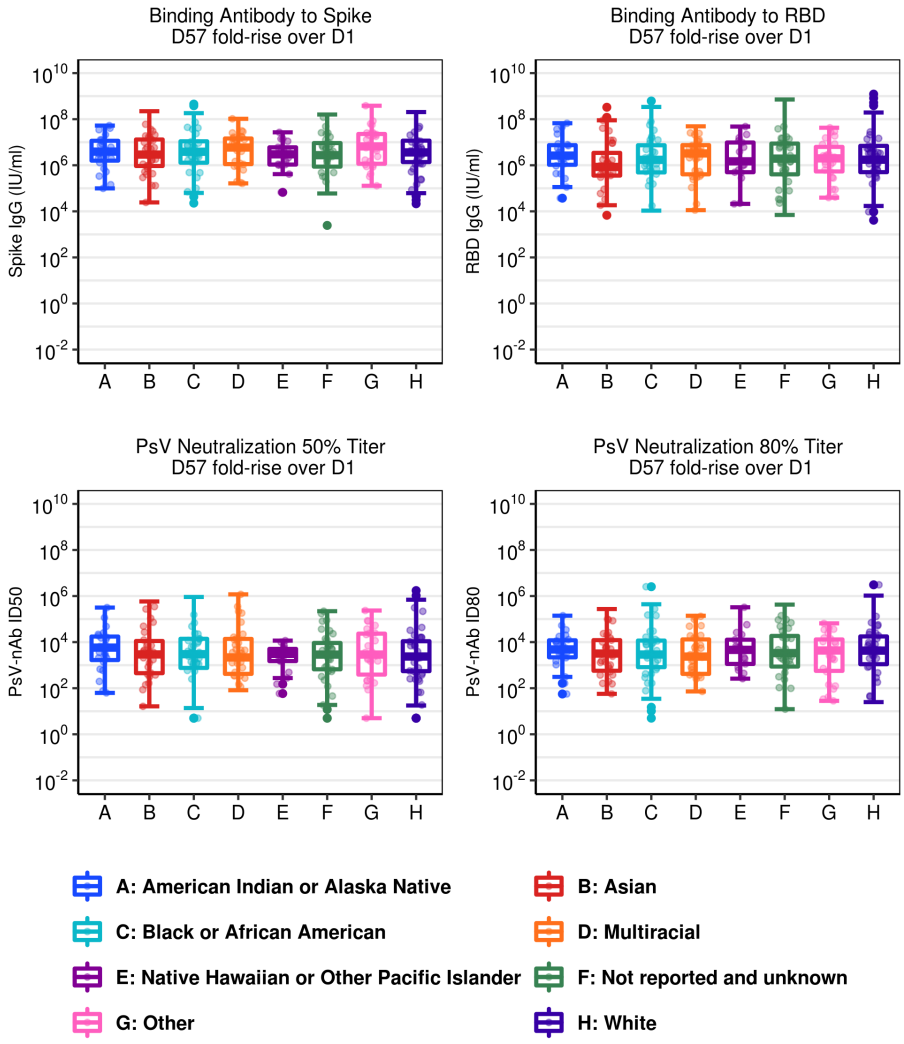

Figure 1.128: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: Baseline negative vaccine arm by race.

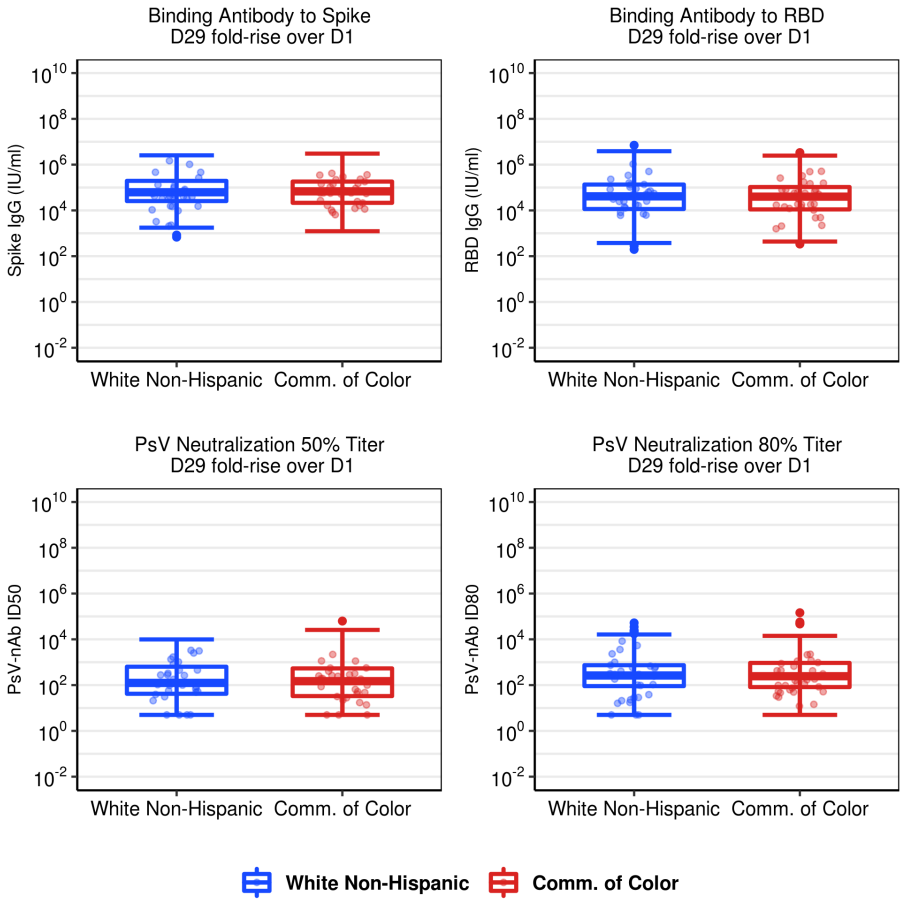

Figure 1.129: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group.

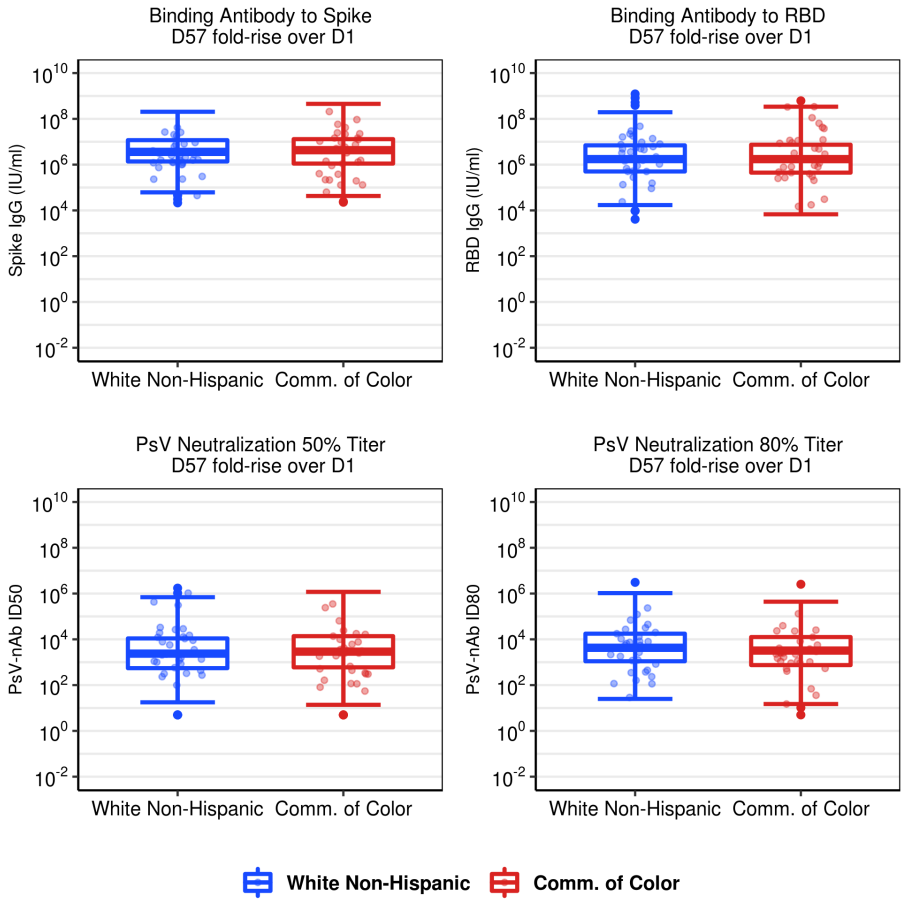

Figure 1.130: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group.

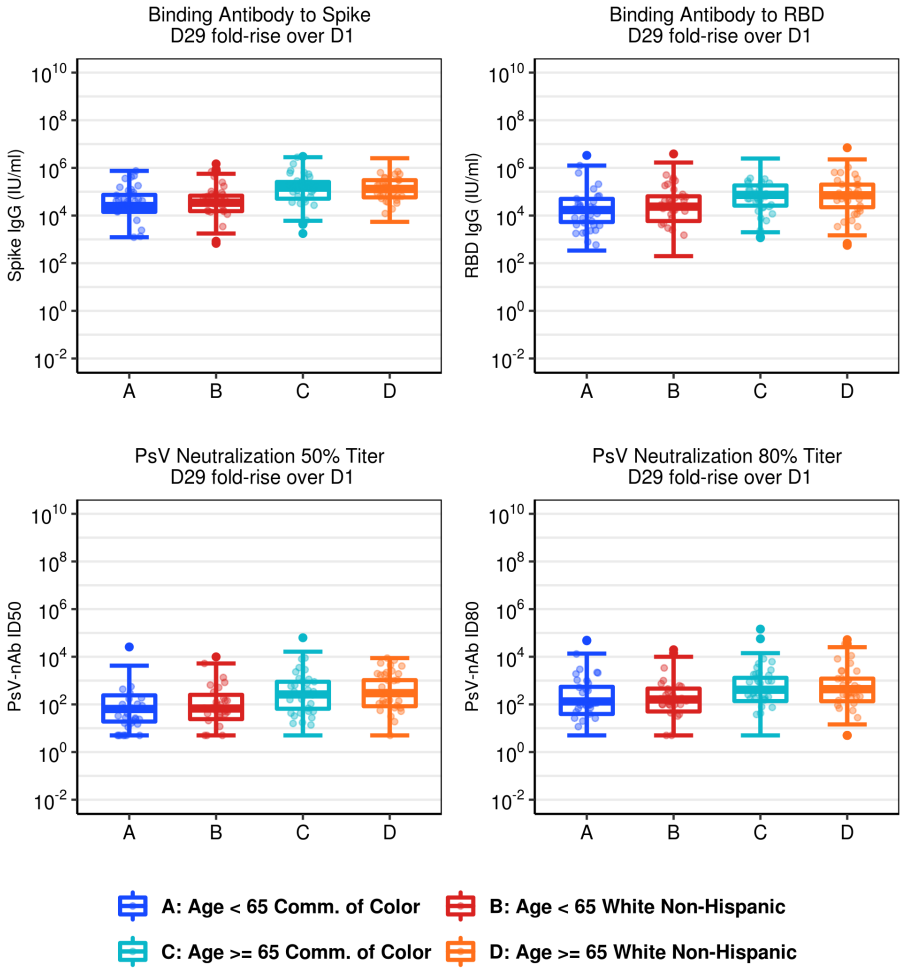

Figure 1.131: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and dichotomous classification of race and ethnic group.

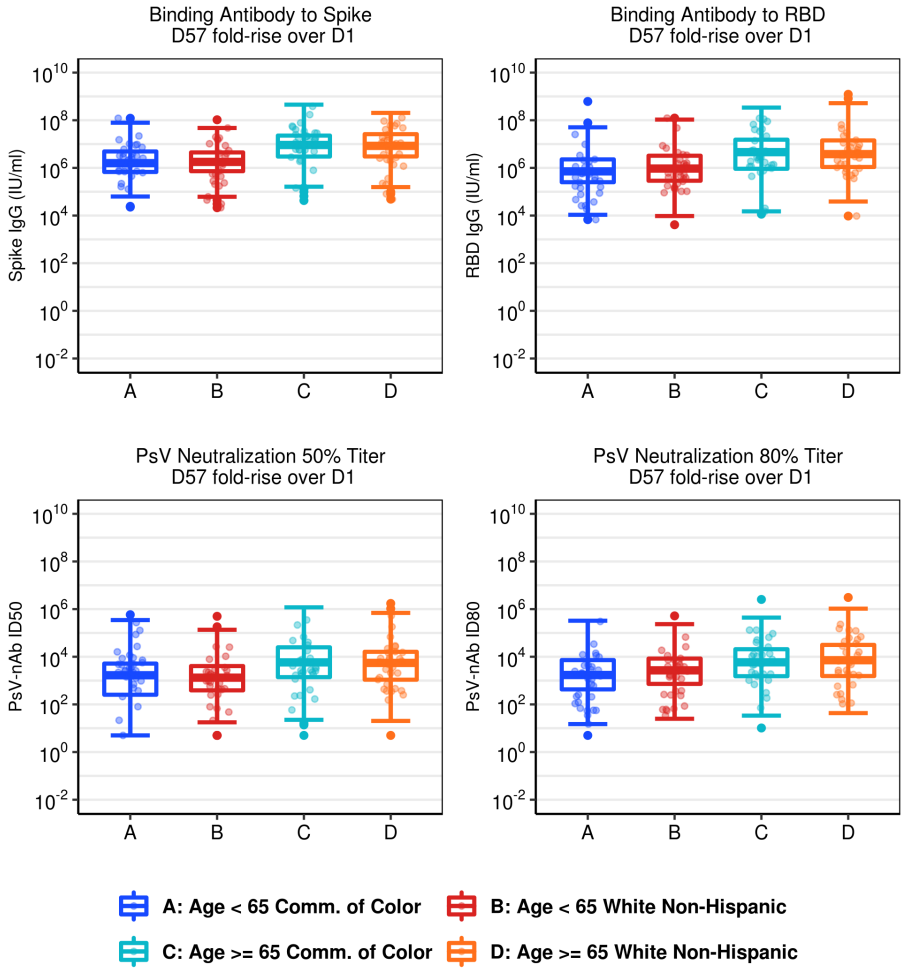

Figure 1.132: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and dichotomous classification of race and ethnic group.

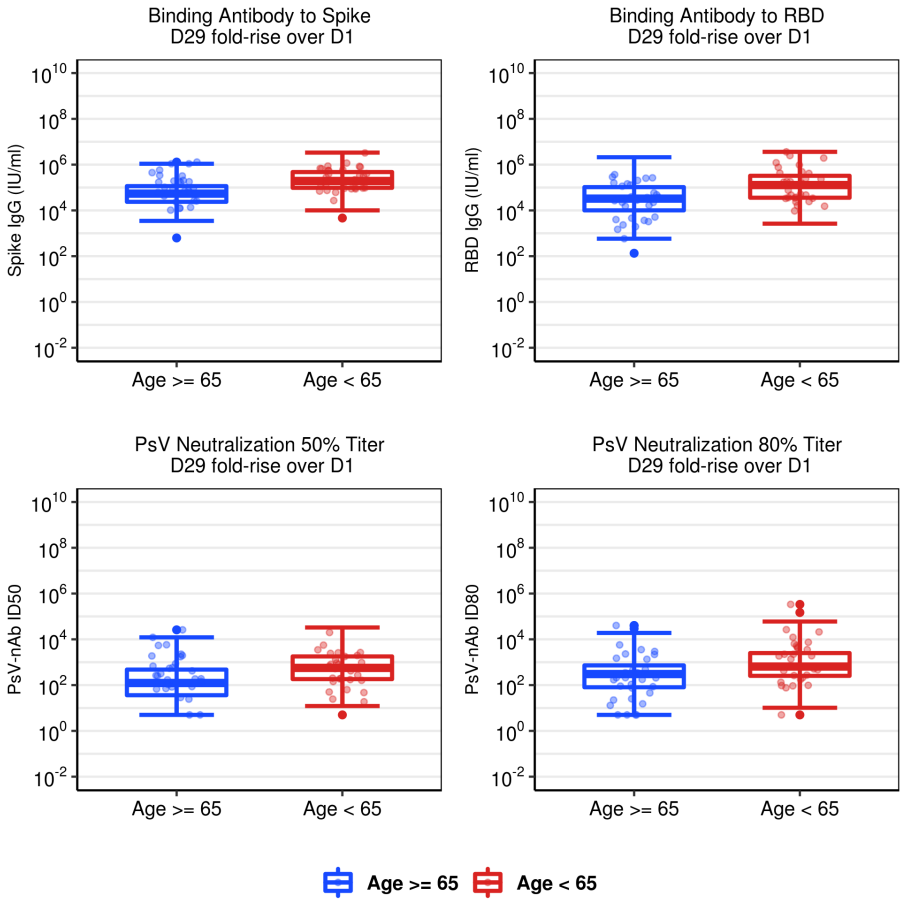

Figure 1.133: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age group.

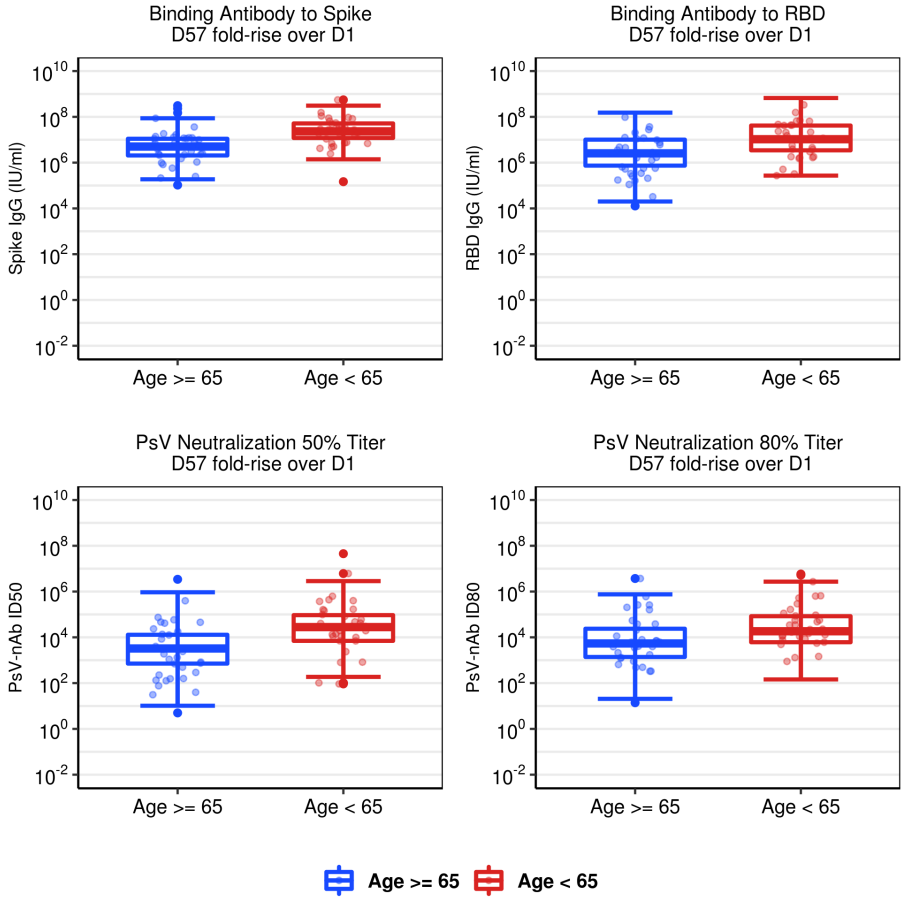

Figure 1.134: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by age group.

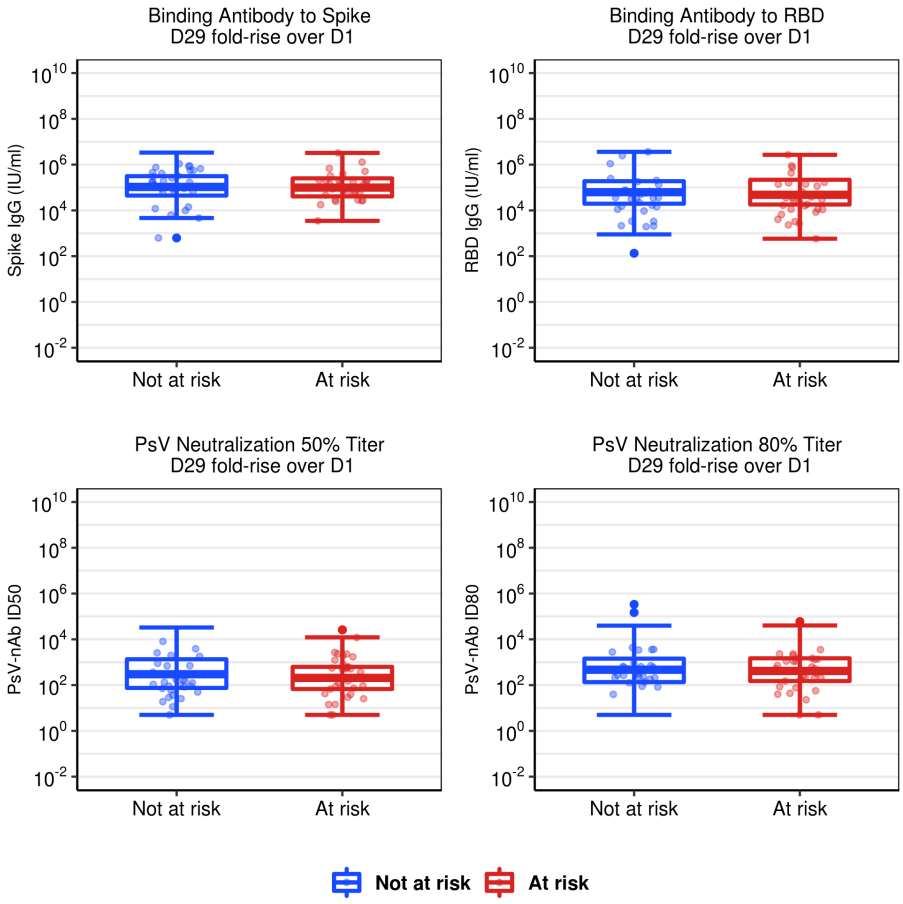

Figure 1.135: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

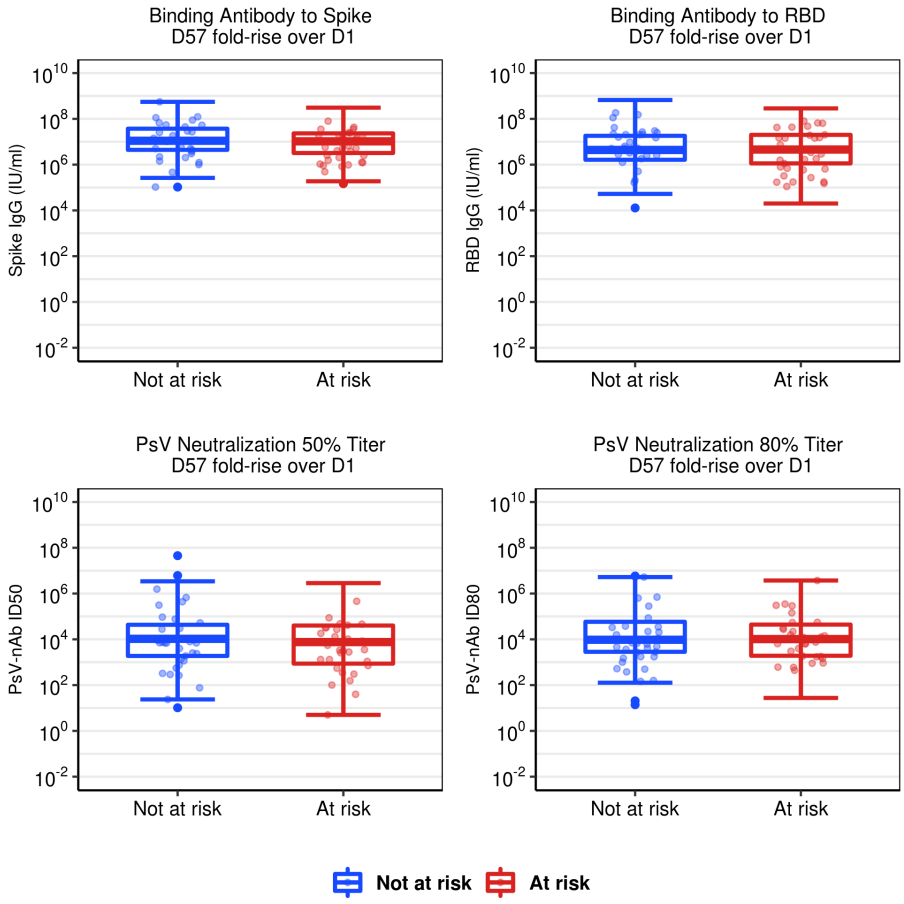

Figure 1.136: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

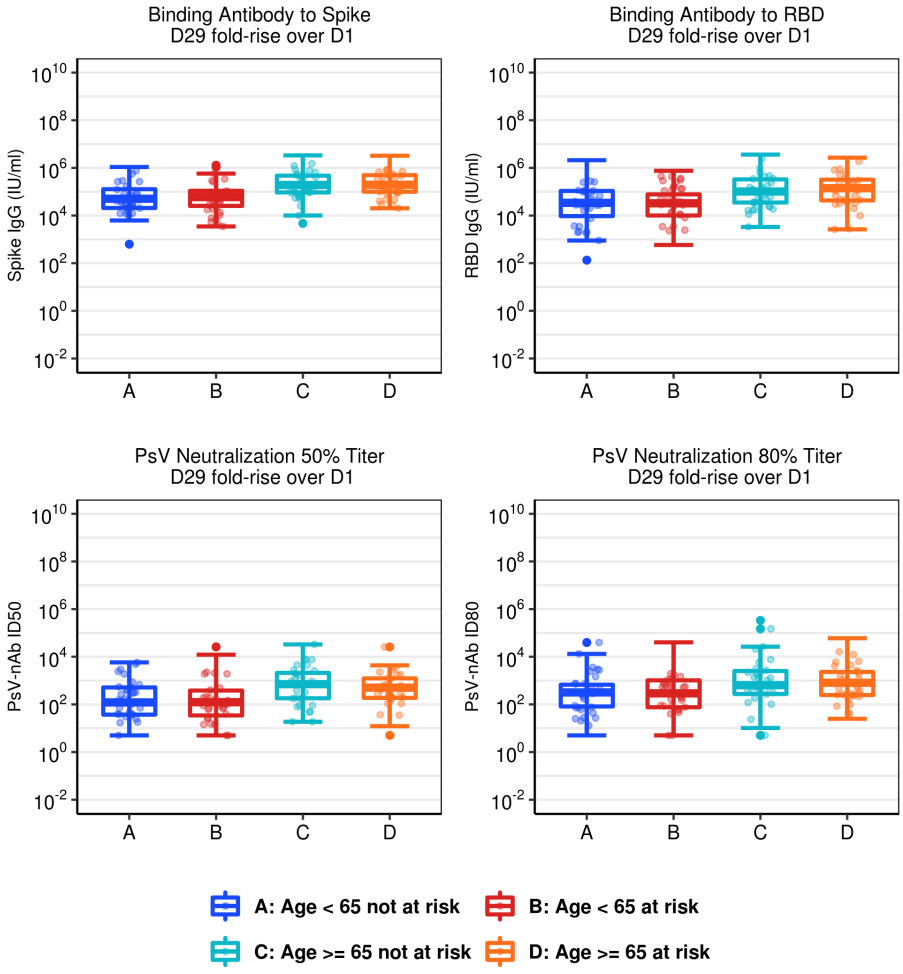

Figure 1.137: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

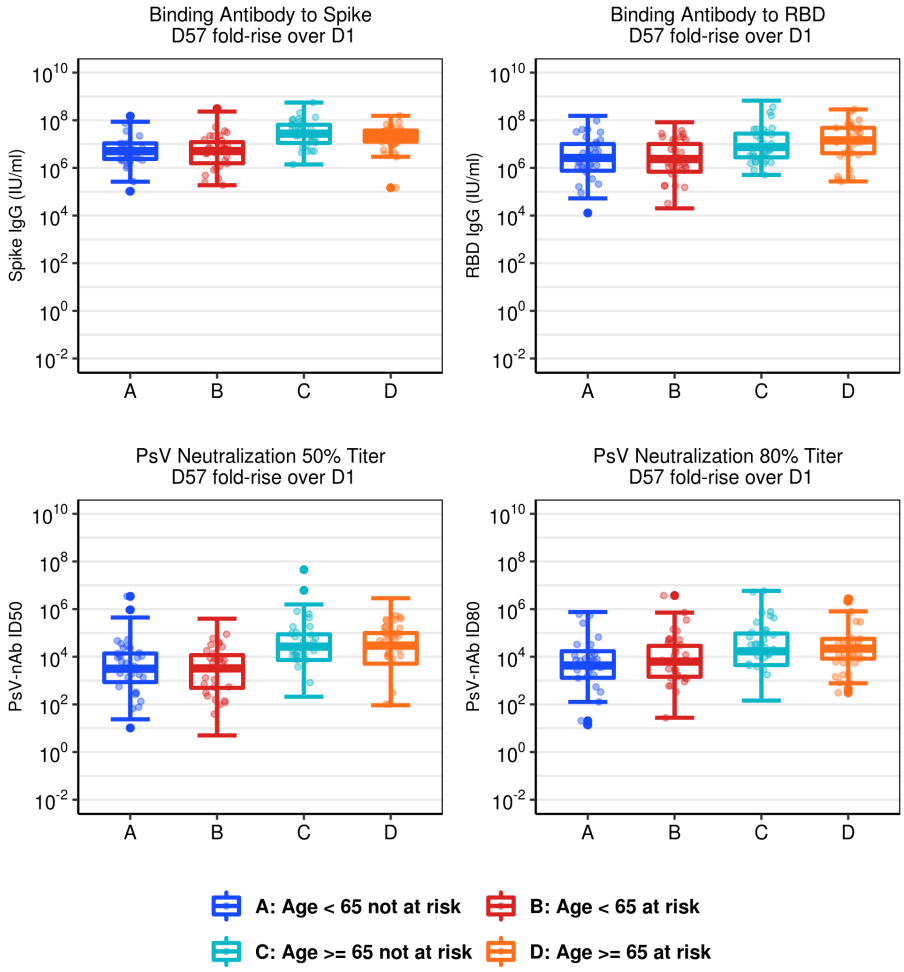

Figure 1.138: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

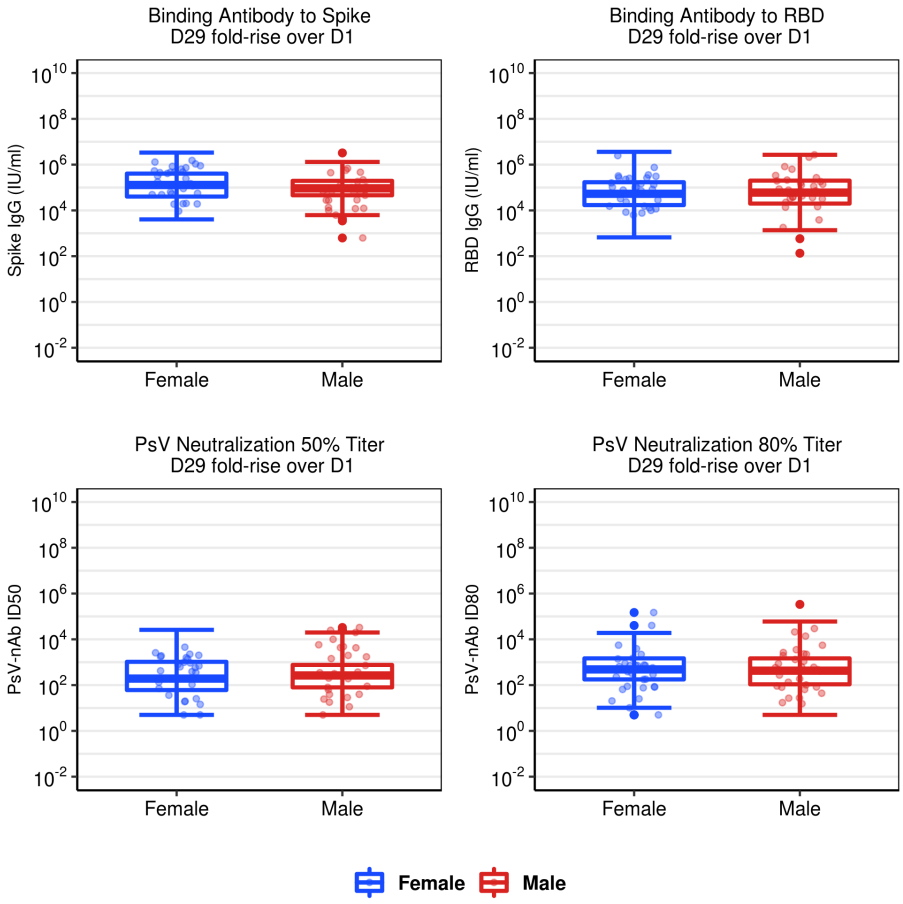

Figure 1.139: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

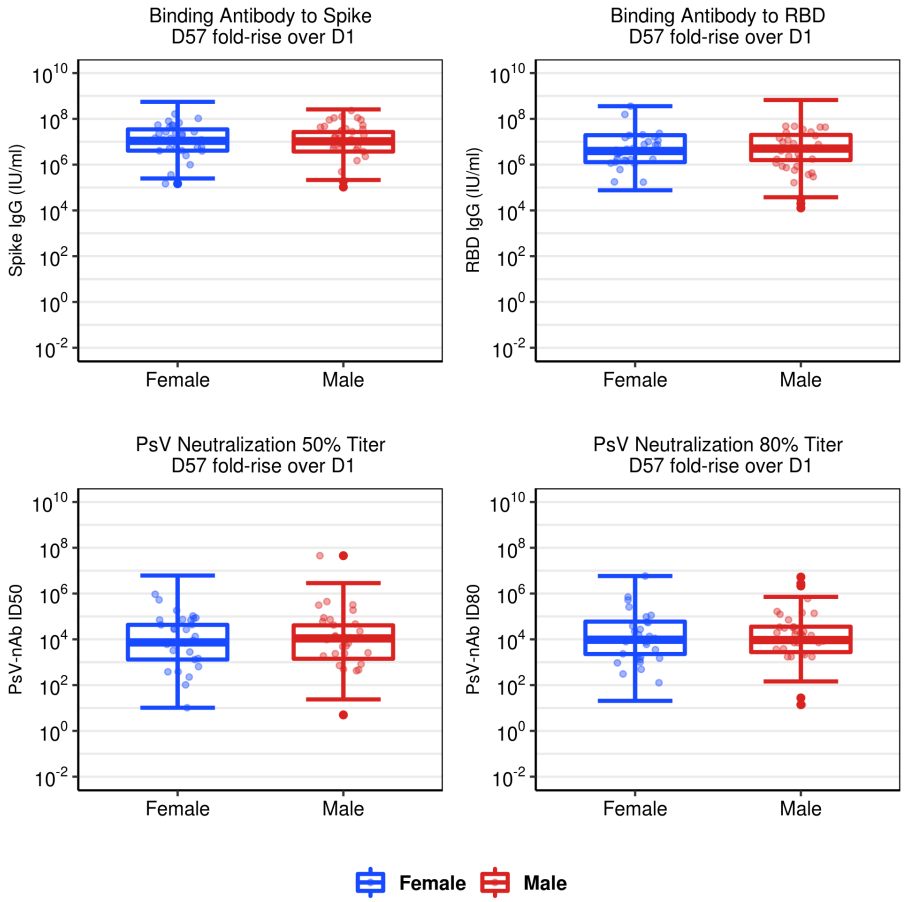

Figure 1.140: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

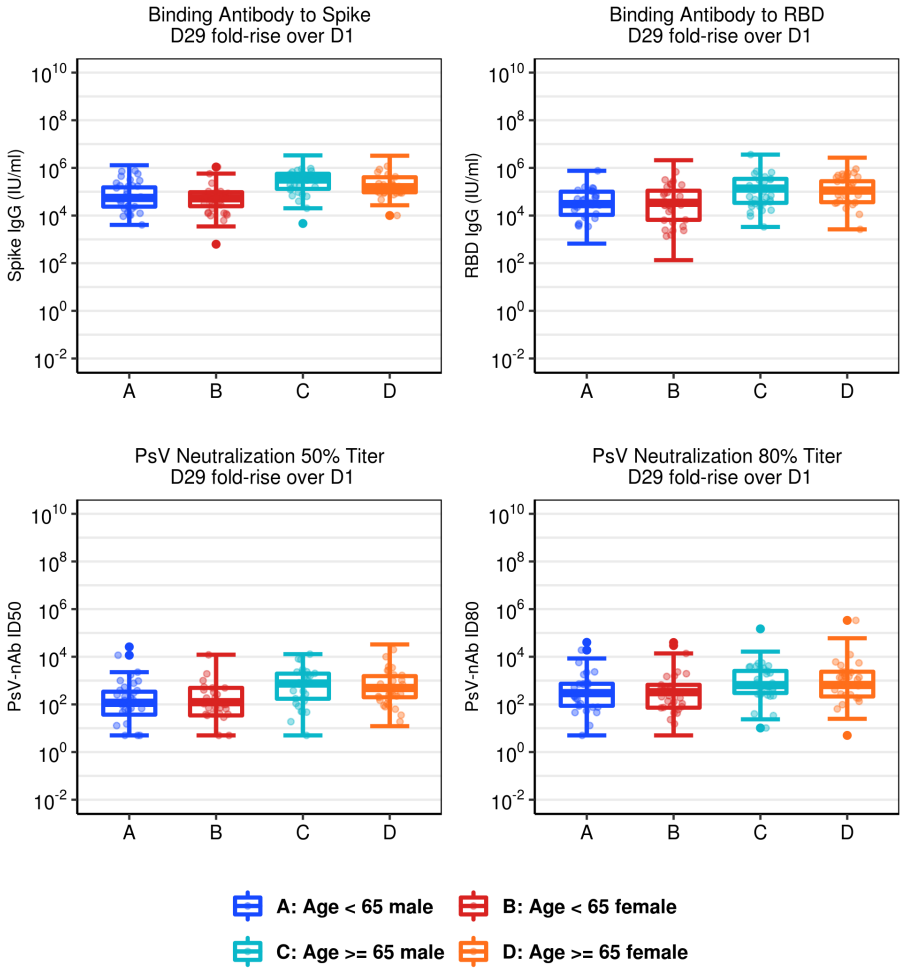

Figure 1.141: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

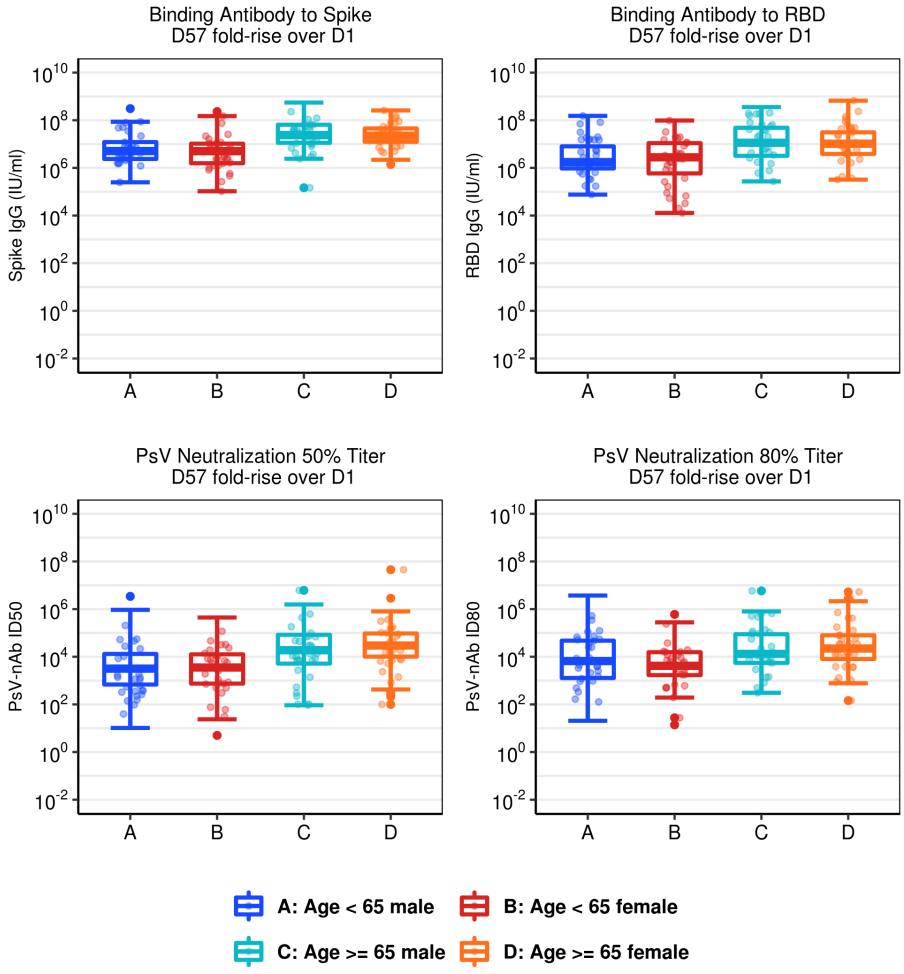

Figure 1.142: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

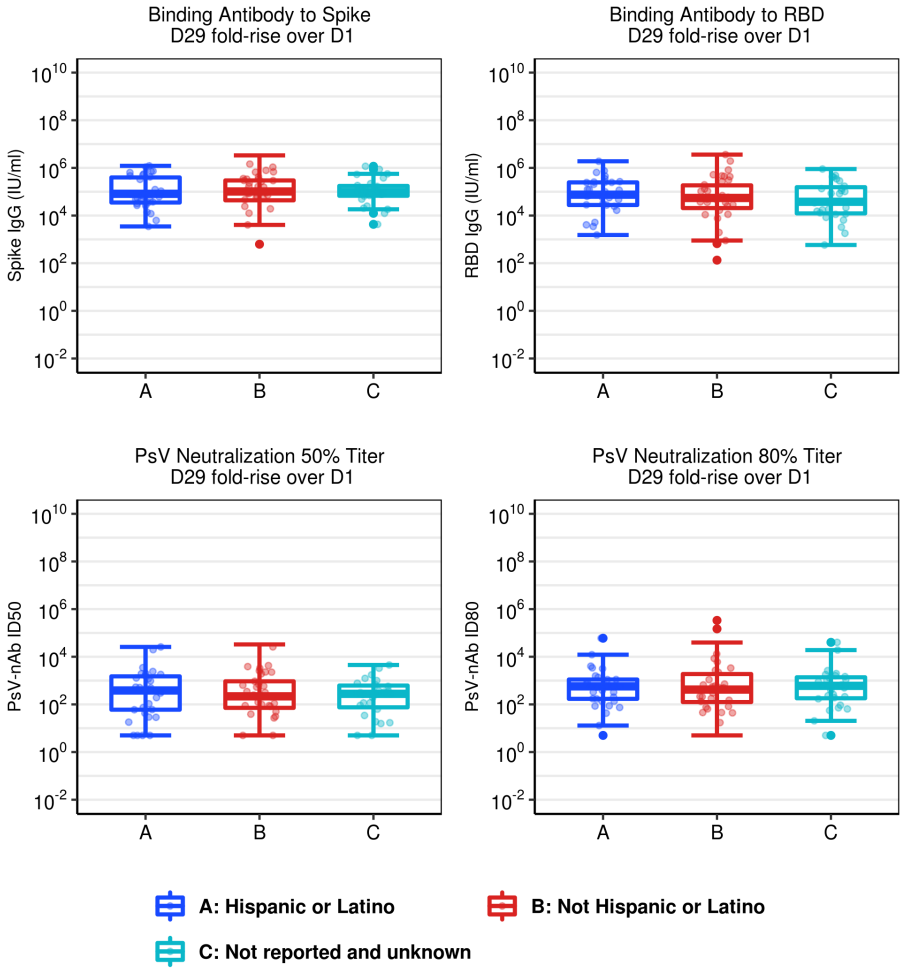

Figure 1.143: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

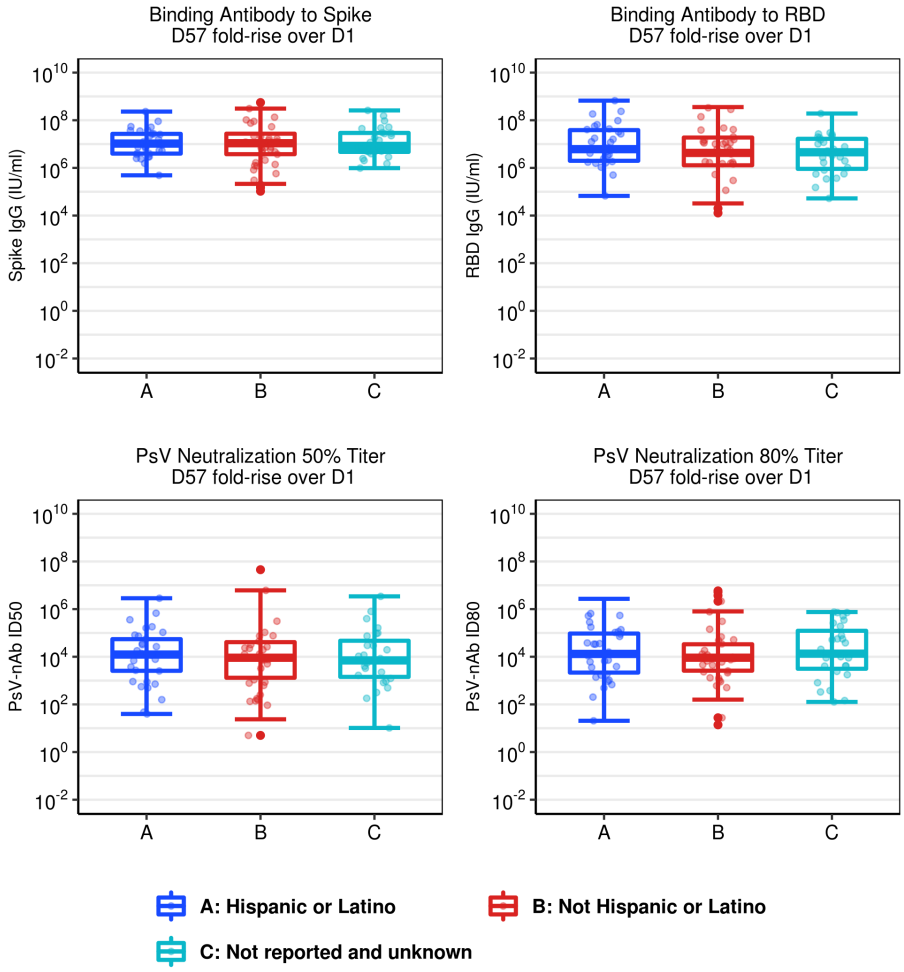

Figure 1.144: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

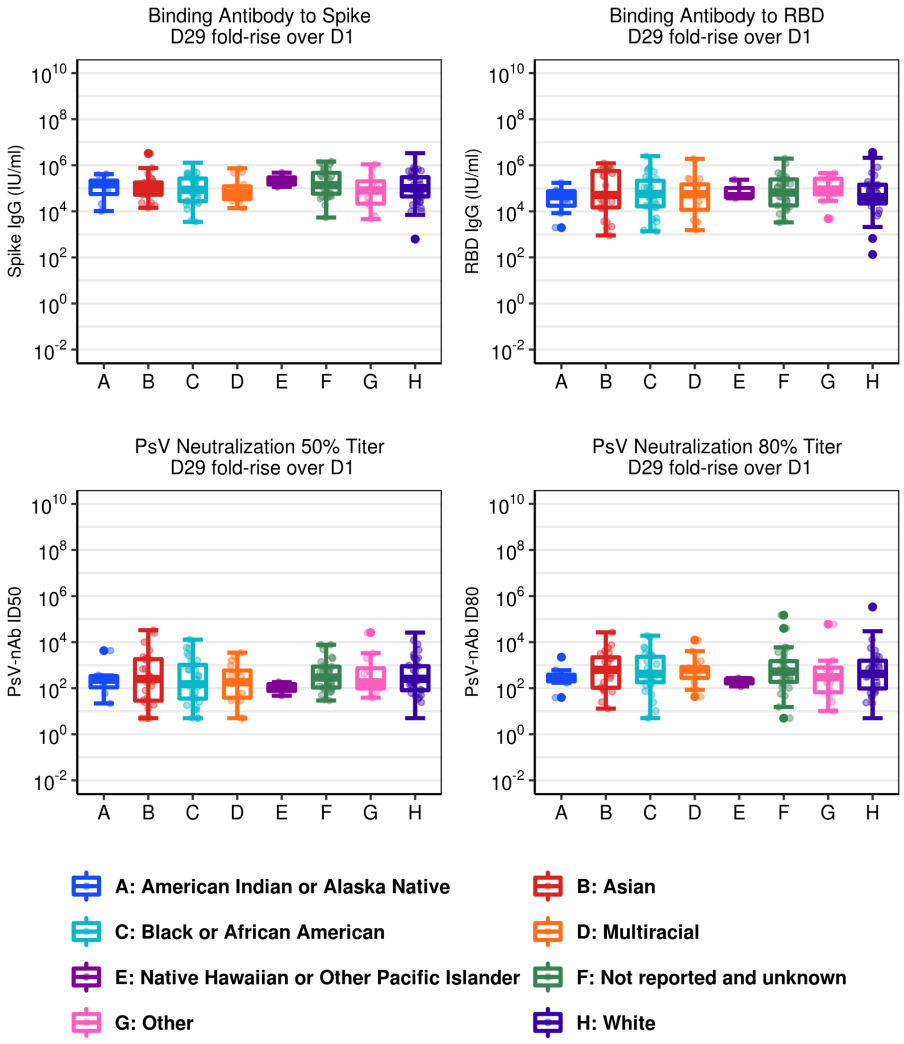

Figure 1.145: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

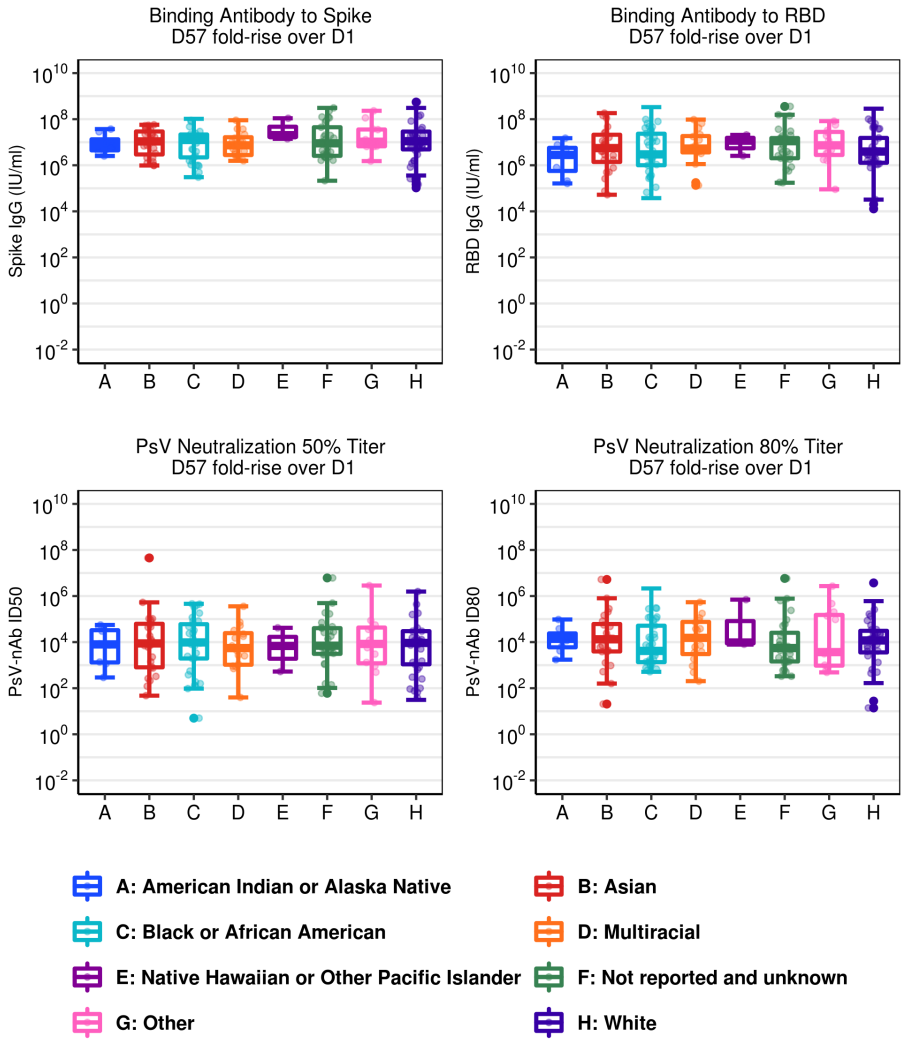

Figure 1.146: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

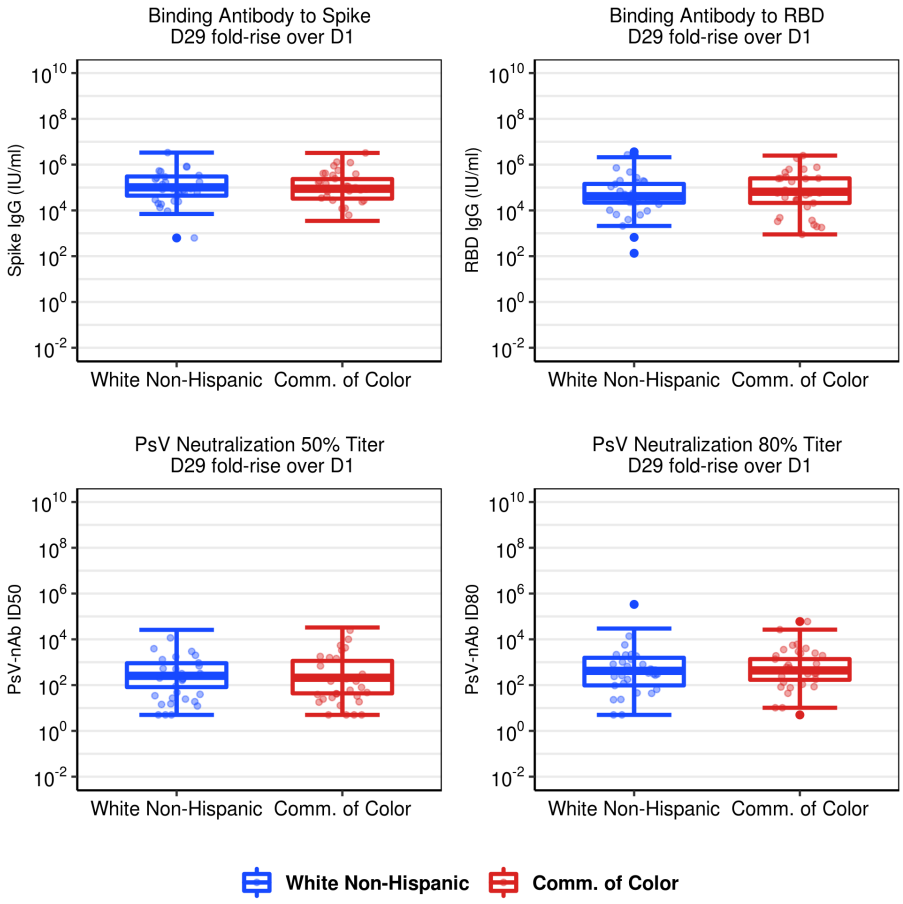

Figure 1.147: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group.

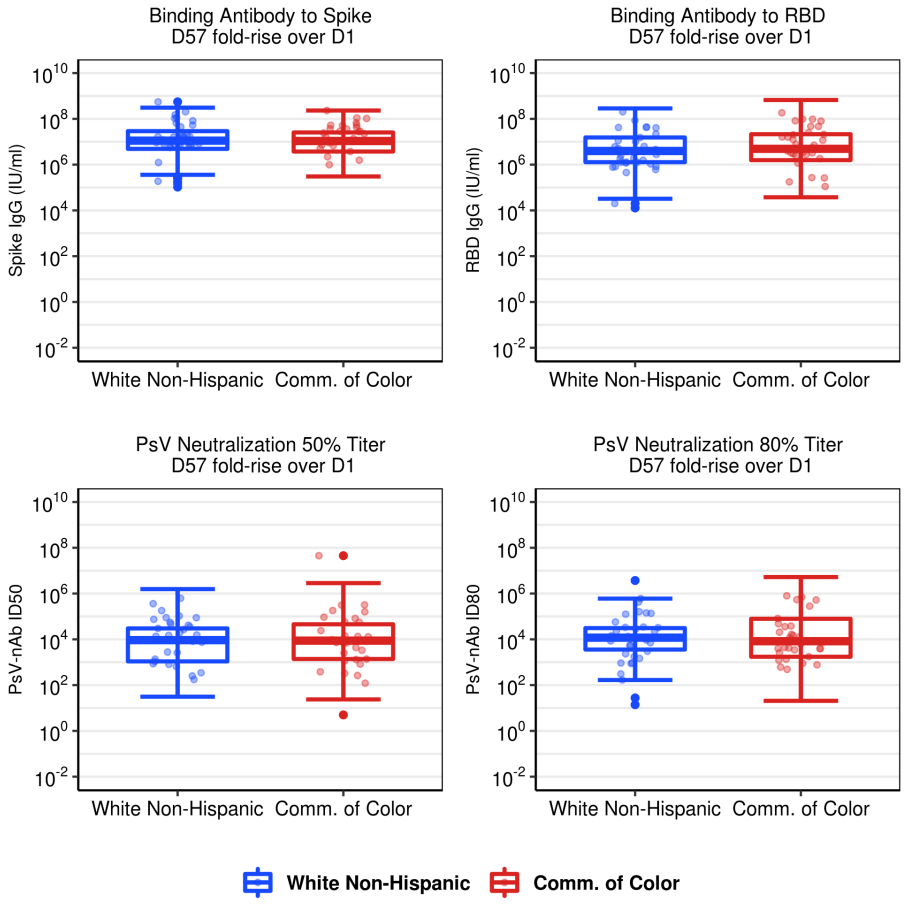

Figure 1.148: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group.

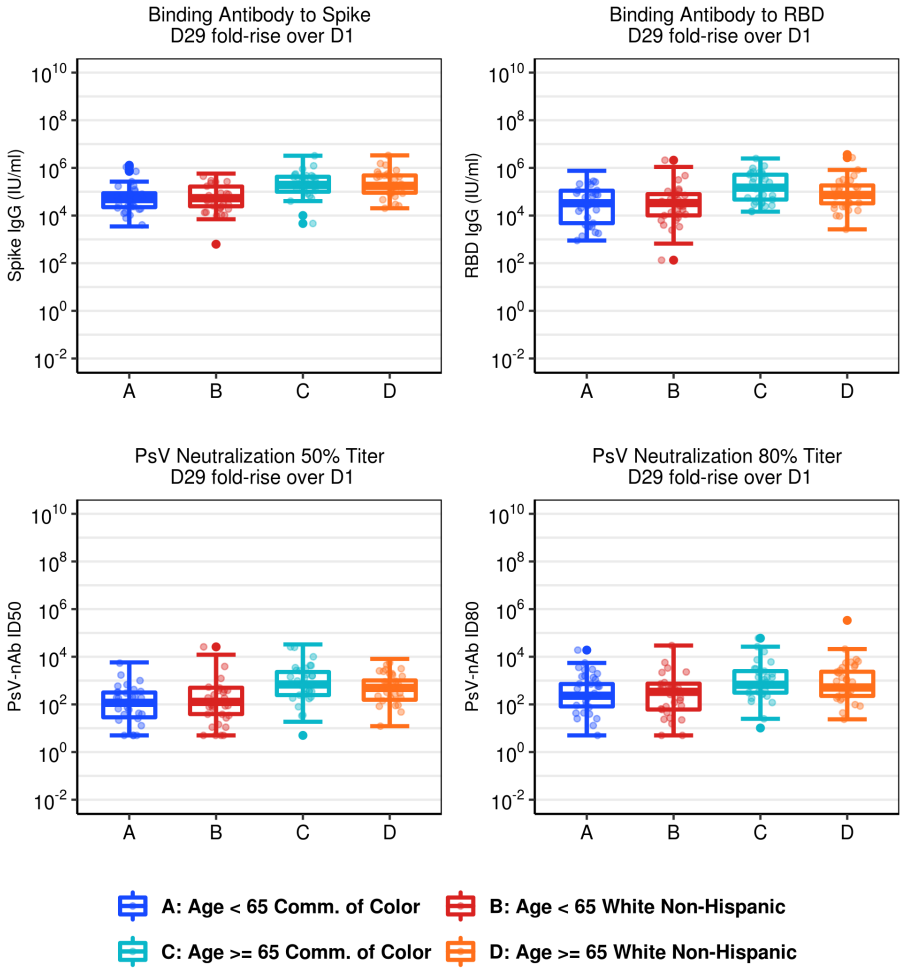

Figure 1.149: (Mock data) Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group.

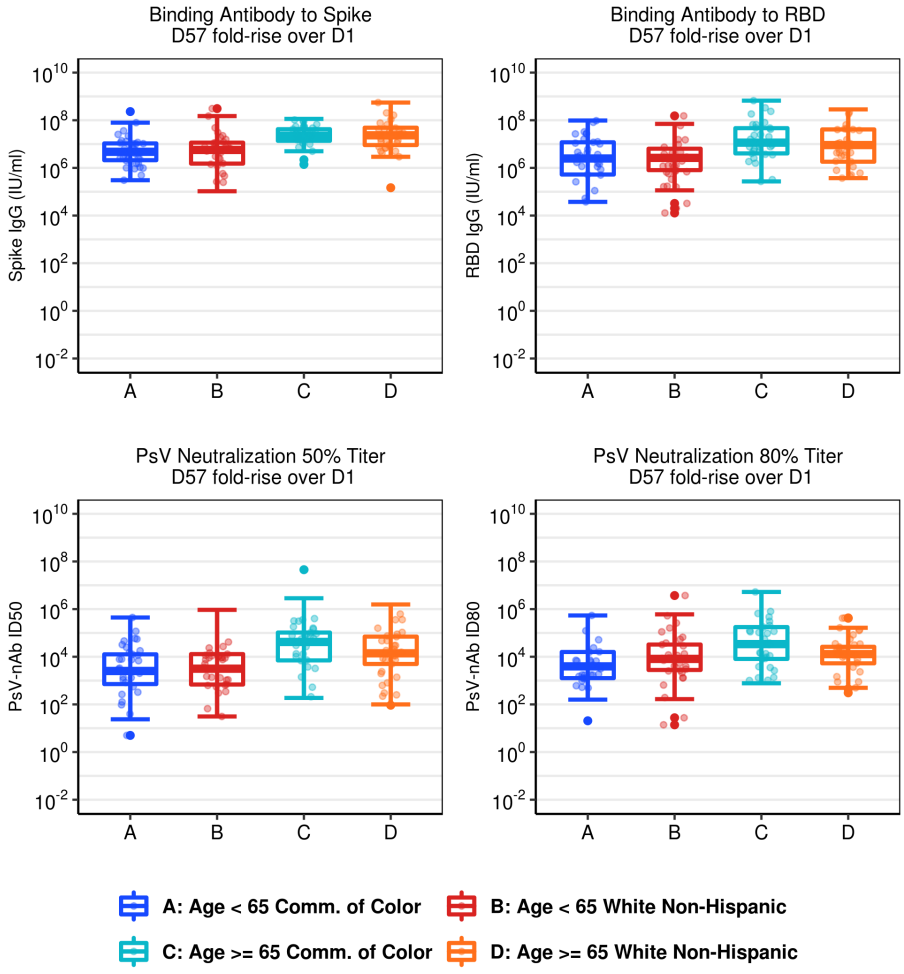

Figure 1.150: (Mock data) Boxplots of D57 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group.

Chapter 2

Tabular Description of Immunogenicity Data

2.0.1 Table 1. Demographic

Table 2.1: Table 1. Demographic

Characteristics	Placebo (N = 425)	Vaccine (N = 1180)	Total (N = 1605)
Age			
Age ¡ 65	228 (53.6)	579 (49.1)	807 (50.3)
Age ¿= 65	197 (46.4)	601 (50.9)	798 (49.7)
Mean (range)	56.6 (18, 85)	58.2 (18, 85)	57.8 (18, 85)
BMI			
Mean +/- SD	29.8 +/- 7.5	29.9 +/- 7.1	29.9 +/- 7.2
Sex			
Female	234 (55.1)	661 (56.0)	895 (55.8)
Male	191 (44.9)	519 (44.0)	710 (44.2)
Hispanic or Latino ethnicity			
Hispanic or Latino	62 (14.6)	140 (11.9)	202 (12.6)
Not Hispanic or Latino	317 (74.6)	933 (79.1)	1250 (77.9)
Not reported and unknown	46 (10.8)	107 (9.1)	153 (9.5)
Race			
American Indian or Alaska Native	13 (3.2)	31 (2.7)	44 (2.8)
Asian	33 (8.0)	97 (8.5)	130 (8.3)
Black or African American	84 (20.4)	223 (19.5)	307 (19.7)
Multiracial	24 (5.8)	66 (5.8)	90 (5.8)
Native Hawaiian or Other Pacific Islander	7 (1.7)	20 (1.7)	27 (1.7)
Not reported and unknown	35 (8.5)	111 (9.7)	146 (9.4)

Table 2.1: Table 1. Demographic (continued)

Characteristics	Placebo (N = 425)	Vaccine (N = 1180)	Total (N = 1605)
Other	14 (3.4)	38 (3.3)	52 (3.3)
White	24 (5.8)	57 (5.0)	81 (5.2)
White Non-Hispanic	178 (43.2)	502 (43.8)	680 (43.7)
Risk for Severe Covid-19			
At-risk	198 (46.6)	589 (49.9)	787 (49.0)
Not at-risk	227 (53.4)	591 (50.1)	818 (51.0)

This table summarises the case-cohort, which measures antibody markers at (Day 1, Day 29, and Day 57).

2.0.2 Table 2. Responder rates

Table 2.2: Table 2a. Responder rates by All participants

Group	Baseline	Visit	N	Endpoint	Responder
All participants					
All participants	Negative	Day 29	1062	Binding Antibody to RBD	51.4% (50.8%, 52.0%)
				Binding Antibody to Spike	51.4% (50.8%, 52.0%)
				PsV Neutralization 50% Titer	33.8% (28.6%, 39.1%)
				PsV Neutralization 80% Titer	41.0% (37.7%, 44.4%)
		Day 57	1062	Binding Antibody to RBD	51.4% (50.8%, 52.0%)
				Binding Antibody to Spike	51.4% (50.8%, 52.0%)
				PsV Neutralization 50% Titer	49.1% (48.1%, 50.0%)
				PsV Neutralization 80% Titer	50.0% (49.5%, 50.5%)
	Positive	Day 29	543	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	64.0% (51.6%, 76.4%)
				PsV Neutralization 80% Titer	82.1%

Table 2.2: Table 2a. Responder rates by All participants (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(77.3%, 87.0%)	(77.3%
		Day 57	543	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	90.2%	90.2%
					(85.2%, 95.2%)	(85.2%
				PsV Neutralization 80% Titer	98.1%	98.1%
					(97.8%, 98.4%)	(97.8%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable antib LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.3: Table 2b. Responder rates by Age

Group	Baseline	Visit	N	Endpoint	Responder
Age					
Age ¡ 65	Negative	Day 29	513	Binding Antibody to RBD	51.6% (51.5%, 51.8%)
				Binding Antibody to Spike	51.6% (51.5%, 51.8%)
				PsV Neutralization 50% Titer	31.5% (29.5%, 33.6%)
				PsV Neutralization 80% Titer	39.6% (37.9%, 41.3%)
		Day 57	513	Binding Antibody to RBD	51.6% (51.5%, 51.8%)
				Binding Antibody to Spike	51.6% (51.5%, 51.8%)
				PsV Neutralization 50% Titer	49.1% (47.9%, 50.3%)
				PsV Neutralization 80% Titer	50.0% (49.5%, 50.6%)
	Positive	Day 29	294	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	59.3% (57.1%, 61.4%)
				PsV Neutralization 80% Titer	80.2% (76.4%, 83.9%)
		Day 57	294	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	88.5% (86.7%, 90.2%)
				PsV Neutralization 80% Titer	98.0% (97.9%, 98.0%)
Age ¿= 65	Negative	Day 29	549	Binding Antibody to RBD	50.5% (50.5%, 50.5%)
				Binding Antibody to Spike	50.5% (50.5%, 50.5%)
				PsV Neutralization 50% Titer	42.1% (42.1%, 42.1%)
				PsV Neutralization 80% Titer	46.3% (46.3%, 46.3%)
		Day 57	549	Binding Antibody to RBD	50.5%

Table 2.3: Table 2b. Responder rates by Age (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(50.5%, 50.5%)	(50.5%
				Binding Antibody to Spike	50.5%	50.5%
					(50.5%, 50.5%)	(50.5%
				PsV Neutralization 50% Titer	48.9%	48.9%
					(48.9%, 48.9%)	(48.9%
				PsV Neutralization 80% Titer	50.0%	50.0%
					(50.0%, 50.0%)	(50.0%
	Positive	Day 29	249	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	83.1%	83.1%
					(83.1%, 83.1%)	(83.1%
				PsV Neutralization 80% Titer	90.1%	90.1%
					(90.1%, 90.1%)	(90.1%
		Day 57	249	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	97.4%	97.4%
					(97.4%, 97.4%)	(97.4%
				PsV Neutralization 80% Titer	98.6%	98.6%
					(98.6%, 98.6%)	(98.6%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable a assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.4: Table 2c. Responder rates by Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	Responder
Risk for Severe Covid-19					
At-risk	Negative	Day 29	541	Binding Antibody to RBD	52.0% (50.8%, 53.1%)
				Binding Antibody to Spike	52.0% (50.8%, 53.1%)
				PsV Neutralization 50% Titer	33.9% (23.1%, 44.7%)
				PsV Neutralization 80% Titer	40.9% (33.4%, 48.5%)
		Day 57	541	Binding Antibody to RBD	52.0% (50.8%, 53.1%)
				Binding Antibody to Spike	52.0% (50.8%, 53.1%)
				PsV Neutralization 50% Titer	48.7% (46.2%, 51.2%)
				PsV Neutralization 80% Titer	50.6% (47.7%, 53.6%)
	Positive	Day 29	246	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	68.7% (54.1%, 83.4%)
				PsV Neutralization 80% Titer	78.3% (70.2%, 86.3%)
		Day 57	246	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	92.2% (89.3%, 95.1%)
				PsV Neutralization 80% Titer	97.7% (96.8%, 98.5%)
Not at-risk	Negative	Day 29	521	Binding Antibody to RBD	51.2% (49.7%, 52.7%)
				Binding Antibody to Spike	51.2% (49.7%, 52.7%)
				PsV Neutralization 50% Titer	33.8% (29.5%, 38.1%)
				PsV Neutralization 80% Titer	41.1% (38.6%, 43.6%)
		Day 57	521	Binding Antibody to RBD	51.2%

Table 2.4: Table 2c. Responder rates by Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(49.7%, 52.7%)	(49.7%
				Binding Antibody to Spike	51.2%	51.2%
					(49.7%, 52.7%)	(49.7%
				PsV Neutralization 50% Titer	49.2%	49.2%
					(48.2%, 50.2%)	(48.2%
				PsV Neutralization 80% Titer	49.8%	49.8%
					(48.5%, 51.1%)	(48.5%
	Positive	Day 29	297	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	62.5%	62.5%
					(51.1%, 73.9%)	(51.1%
				PsV Neutralization 80% Titer	83.4%	83.4%
					(78.2%, 88.6%)	(78.2%
		Day 57	297	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	89.6%	89.6%
					(84.5%, 94.6%)	(84.5%
				PsV Neutralization 80% Titer	98.2%	98.2%
					(97.4%, 99.0%)	(97.4%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable a assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.5: Table 2d. Responder rates by Age, Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	Responder
Age, Risk for Severe Covid-19					
Age ¡ 65 At-risk	Negative	Day 29	257	Binding Antibody to RBD	51.4% (51.4%, 51.4%)
				Binding Antibody to Spike	51.4% (51.4%, 51.4%)
				PsV Neutralization 50% Titer	28.7% (28.7%, 28.7%)
				PsV Neutralization 80% Titer	37.3% (37.3%, 37.3%)
		Day 57	257	Binding Antibody to RBD	51.4% (51.4%, 51.4%)
				Binding Antibody to Spike	51.4% (51.4%, 51.4%)
				PsV Neutralization 50% Titer	47.5% (47.5%, 47.5%)
				PsV Neutralization 80% Titer	49.2% (49.2%, 49.2%)
	Positive	Day 29	148	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	62.4% (62.4%, 62.4%)
				PsV Neutralization 80% Titer	74.7% (74.7%, 74.7%)
		Day 57	148	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	91.0% (91.0%, 91.0%)
				PsV Neutralization 80% Titer	98.0% (98.0%, 98.0%)
Age ¡ 65 Not at-risk	Negative	Day 29	256	Binding Antibody to RBD	51.7% (51.7%, 51.7%)
				Binding Antibody to Spike	51.7% (51.7%, 51.7%)
				PsV Neutralization 50% Titer	32.3% (32.3%, 32.3%)
				PsV Neutralization 80% Titer	40.2% (40.2%, 40.2%)
		Day 57	256	Binding Antibody to RBD	51.7%

Table 2.5: Table 2d. Responder rates by Age, Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(51.7%, 51.7%)	(51.7%
				Binding Antibody to Spike	51.7%	51.7%
					(51.7%, 51.7%)	(51.7%
				PsV Neutralization 50% Titer	49.5%	49.5%
					(49.5%, 49.5%)	(49.5%
				PsV Neutralization 80% Titer	50.3%	50.3%
					(50.3%, 50.3%)	(50.3%
	Positive	Day 29	146	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	58.5%	58.5%
					(58.5%, 58.5%)	(58.5%
				PsV Neutralization 80% Titer	81.6%	81.6%
					(81.6%, 81.6%)	(81.6%
		Day 57	146	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	87.8%	87.8%
					(87.8%, 87.8%)	(87.8%
				PsV Neutralization 80% Titer	98.0%	98.0%
					(98.0%, 98.0%)	(98.0%
Age ¿= 65 At-risk	Negative	Day 29	284	Binding Antibody to RBD	52.8%	52.8%
					(52.8%, 52.8%)	(52.8%
				Binding Antibody to Spike	52.8%	52.8%
					(52.8%, 52.8%)	(52.8%
				PsV Neutralization 50% Titer	42.1%	42.1%
					(42.1%, 42.1%)	(42.1%
				PsV Neutralization 80% Titer	46.6%	46.6%
					(46.6%, 46.6%)	(46.6%
		Day 57	284	Binding Antibody to RBD	52.8%	52.8%
					(52.8%, 52.8%)	(52.8%
				Binding Antibody to Spike	52.8%	52.8%
					(52.8%, 52.8%)	(52.8%
				PsV Neutralization 50% Titer	50.6%	50.6%
					(50.6%, 50.6%)	(50.6%
				PsV Neutralization 80% Titer	52.8%	52.8%
					(52.8%, 52.8%)	(52.8%
	Positive	Day 29	98	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0

Table 2.5: Table 2d. Responder rates by Age, Risk for Severe Covid-19 (contin

Group	Baseline	Visit	N	Endpoint	Responder
				PsV Neutralization 50% Titer	82.1% (82.1%, 82.1%)
				PsV Neutralization 80% Titer	85.6% (85.6%, 85.6%)
		Day 57	98	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	94.9% (94.9%, 94.9%)
				PsV Neutralization 80% Titer	96.9% (96.9%, 96.9%)
Age ¿= 65 Not at-risk	Negative	Day 29	265	Binding Antibody to RBD	48.3% (48.3%, 48.3%)
				Binding Antibody to Spike	48.3% (48.3%, 48.3%)
				PsV Neutralization 50% Titer	42.1% (42.1%, 42.1%)
				PsV Neutralization 80% Titer	45.9% (45.9%, 45.9%)
		Day 57	265	Binding Antibody to RBD	48.3% (48.3%, 48.3%)
				Binding Antibody to Spike	48.3% (48.3%, 48.3%)
				PsV Neutralization 50% Titer	47.2% (47.2%, 47.2%)
				PsV Neutralization 80% Titer	47.2% (47.2%, 47.2%)
	Positive	Day 29	151	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	83.7% (83.7%, 83.7%)
				PsV Neutralization 80% Titer	93.0% (93.0%, 93.0%)
		Day 57	151	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	99.0% (99.0%, 99.0%)
				PsV Neutralization 80% Titer	99.7%

Table 2.5: Table 2d. Responder rates by Age, Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(99.7%, 99.7%)	(99.7%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable a assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.6: Table 2e. Responder rates by Sex

Group	Baseline	Visit	N	Endpoint	Responder
Sex					
Female	Negative	Day 29	597	Binding Antibody to RBD	51.9% (50.5%, 53.4%)
				Binding Antibody to Spike	51.9% (50.5%, 53.4%)
				PsV Neutralization 50% Titer	34.1% (27.7%, 40.5%)
				PsV Neutralization 80% Titer	40.9% (35.4%, 46.5%)
		Day 57	597	Binding Antibody to RBD	51.9% (50.5%, 53.4%)
				Binding Antibody to Spike	51.9% (50.5%, 53.4%)
				PsV Neutralization 50% Titer	49.3% (47.2%, 51.4%)
				PsV Neutralization 80% Titer	51.1% (49.6%, 52.6%)
	Positive	Day 29	298	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	61.3% (48.9%, 73.7%)
				PsV Neutralization 80% Titer	82.4% (78.9%, 85.9%)
		Day 57	298	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	89.2% (84.7%, 93.8%)
				PsV Neutralization 80% Titer	97.6% (97.0%, 98.3%)
Male	Negative	Day 29	465	Binding Antibody to RBD	50.7% (48.0%, 53.4%)
				Binding Antibody to Spike	50.7% (48.0%, 53.4%)
				PsV Neutralization 50% Titer	33.5% (28.8%, 38.2%)
				PsV Neutralization 80% Titer	41.2% (40.6%, 41.7%)
		Day 57	465	Binding Antibody to RBD	50.7%

Table 2.6: Table 2e. Responder rates by Sex (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(48.0%, 53.4%)	(48.0%
				Binding Antibody to Spike	50.7%	50.7%
					(48.0%, 53.4%)	(48.0%
				PsV Neutralization 50% Titer	48.7%	48.7%
					(46.3%, 51.2%)	(46.3%
				PsV Neutralization 80% Titer	48.7%	48.7%
					(47.1%, 50.2%)	(47.1%
	Positive	Day 29	245	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	67.5%	67.5%
					(55.6%, 79.4%)	(55.6%
				PsV Neutralization 80% Titer	81.8%	81.8%
					(74.9%, 88.7%)	(74.9%
		Day 57	245	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	91.5%	91.5%
					(85.8%, 97.3%)	(85.8%
				PsV Neutralization 80% Titer	98.7%	98.7%
					(97.9%, 99.5%)	(97.9%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable a assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.7: Table 2f. Responder rates by Age, sex

Group	Baseline	Visit	N	Endpoint	Responder
Age, sex					
Age ¡ 65 Female	Negative	Day 29	291	Binding Antibody to RBD	51.4% (49.8%, 53.0%)
				Binding Antibody to Spike	51.4% (49.8%, 53.0%)
				PsV Neutralization 50% Titer	31.4% (27.0%, 35.9%)
				PsV Neutralization 80% Titer	38.6% (35.9%, 41.2%)
		Day 57	291	Binding Antibody to RBD	51.4% (49.8%, 53.0%)
				Binding Antibody to Spike	51.4% (49.8%, 53.0%)
				PsV Neutralization 50% Titer	48.6% (46.3%, 50.9%)
				PsV Neutralization 80% Titer	50.6% (49.0%, 52.2%)
	Positive	Day 29	166	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	56.7% (54.9%, 58.4%)
				PsV Neutralization 80% Titer	81.2% (77.5%, 84.8%)
		Day 57	166	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	87.5% (87.2%, 87.7%)
				PsV Neutralization 80% Titer	97.5% (96.7%, 98.2%)
Age ¡ 65 Male	Negative	Day 29	222	Binding Antibody to RBD	51.9% (50.2%, 53.7%)
				Binding Antibody to Spike	51.9% (50.2%, 53.7%)
				PsV Neutralization 50% Titer	31.7% (30.6%, 32.8%)
				PsV Neutralization 80% Titer	40.9% (40.7%, 41.2%)
		Day 57	222	Binding Antibody to RBD	51.9%

Table 2.7: Table 2f. Responder rates by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(50.2%, 53.7%)	(50.2%
				Binding Antibody to Spike	51.9%	51.9%
					(50.2%, 53.7%)	(50.2%
				PsV Neutralization 50% Titer	49.8%	49.8%
					(49.4%, 50.2%)	(49.4%
				PsV Neutralization 80% Titer	49.4%	49.4%
					(48.7%, 50.0%)	(48.7%
	Positive	Day 29	128	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	62.9%	62.9%
					(60.6%, 65.1%)	(60.6%
				PsV Neutralization 80% Titer	78.8%	78.8%
					(75.1%, 82.5%)	(75.1%
		Day 57	128	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	89.8%	89.8%
					(86.2%, 93.4%)	(86.2%
				PsV Neutralization 80% Titer	98.7%	98.7%
					(97.7%, 99.7%)	(97.7%
Age ¿= 65 Female	Negative	Day 29	306	Binding Antibody to RBD	53.8%	53.8%
					(53.8%, 53.8%)	(53.8%
				Binding Antibody to Spike	53.8%	53.8%
					(53.8%, 53.8%)	(53.8%
				PsV Neutralization 50% Titer	44.3%	44.3%
					(44.3%, 44.3%)	(44.3%
				PsV Neutralization 80% Titer	50.1%	50.1%
					(50.1%, 50.1%)	(50.1%
		Day 57	306	Binding Antibody to RBD	53.8%	53.8%
					(53.8%, 53.8%)	(53.8%
				Binding Antibody to Spike	53.8%	53.8%
					(53.8%, 53.8%)	(53.8%
				PsV Neutralization 50% Titer	52.1%	52.1%
					(52.1%, 52.1%)	(52.1%
				PsV Neutralization 80% Titer	53.2%	53.2%
					(53.2%, 53.2%)	(53.2%
	Positive	Day 29	132	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0

Table 2.7: Table 2f. Responder rates by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	Responder
				PsV Neutralization 50% Titer	81.8% (81.8%, 81.8%)
				PsV Neutralization 80% Titer	87.9% (87.9%, 87.9%)
		Day 57	132	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	97.0% (97.0%, 97.0%)
				PsV Neutralization 80% Titer	98.5% (98.5%, 98.5%)
Age ¿= 65 Male	Negative	Day 29	243	Binding Antibody to RBD	46.8% (46.8%, 46.8%)
				Binding Antibody to Spike	46.8% (46.8%, 46.8%)
				PsV Neutralization 50% Titer	39.6% (39.6%, 39.6%)
				PsV Neutralization 80% Titer	42.0% (42.0%, 42.0%)
		Day 57	243	Binding Antibody to RBD	46.8% (46.8%, 46.8%)
				Binding Antibody to Spike	46.8% (46.8%, 46.8%)
				PsV Neutralization 50% Titer	45.2% (45.2%, 45.2%)
				PsV Neutralization 80% Titer	46.3% (46.3%, 46.3%)
	Positive	Day 29	117	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	84.5% (84.5%, 84.5%)
				PsV Neutralization 80% Titer	92.7% (92.7%, 92.7%)
		Day 57	117	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	97.9% (97.9%, 97.9%)
				PsV Neutralization 80% Titer	98.7%

Table 2.7: Table 2f. Responder rates by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(98.7%, 98.7%)	(98.7%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable a assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.8: Table 2g. Responder rates by Hispanic or Latino ethnicity

Group	Baseline	Visit	N	Endpoint	Responder
Hispanic or Latino ethnicity					
Hispanic or Latino	Negative	Day 29	125	Binding Antibody to RBD	46.0% (35.7%, 56.4%)
				Binding Antibody to Spike	46.0% (35.7%, 56.4%)
				PsV Neutralization 50% Titer	25.9% (10.8%, 41.0%)
				PsV Neutralization 80% Titer	37.0% (26.9%, 47.0%)
		Day 57	125	Binding Antibody to RBD	46.0% (35.7%, 56.4%)
				Binding Antibody to Spike	46.0% (35.7%, 56.4%)
				PsV Neutralization 50% Titer	45.1% (36.2%, 53.9%)
				PsV Neutralization 80% Titer	42.4% (30.9%, 54.0%)
	Positive	Day 29	77	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	61.0% (53.6%, 68.3%)
				PsV Neutralization 80% Titer	81.2% (74.3%, 88.1%)
		Day 57	77	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	89.2% (86.4%, 91.9%)
				PsV Neutralization 80% Titer	96.3% (94.5%, 98.2%)
Not Hispanic or Latino	Negative	Day 29	844	Binding Antibody to RBD	53.4% (49.3%, 57.5%)
				Binding Antibody to Spike	53.4% (49.3%, 57.5%)
				PsV Neutralization 50% Titer	35.7% (30.0%, 41.4%)
				PsV Neutralization 80% Titer	42.8% (38.0%, 47.7%)
		Day 57	844	Binding Antibody to RBD	53.4%

Table 2.8: Table 2g. Responder rates by Hispanic or Latino ethnicity (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(49.3%, 57.5%)	(49.3%
				Binding Antibody to Spike	53.4%	53.4%
					(49.3%, 57.5%)	(49.3%
				PsV Neutralization 50% Titer	50.8%	50.8%
					(46.0%, 55.5%)	(46.0%
				PsV Neutralization 80% Titer	52.2%	52.2%
					(47.8%, 56.5%)	(47.8%
	Positive	Day 29	406	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	64.9%	64.9%
					(51.7%, 78.1%)	(51.7%
				PsV Neutralization 80% Titer	80.5%	80.5%
					(74.9%, 86.0%)	(74.9%
		Day 57	406	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	91.7%	91.7%
					(87.3%, 96.2%)	(87.3%
				PsV Neutralization 80% Titer	98.9%	98.9%
					(98.1%, 99.6%)	(98.1%
Not reported and unknown	Negative	Day 29	93	Binding Antibody to RBD	42.1%	42.1%
					(28.5%, 55.7%)	(28.5%
				Binding Antibody to Spike	42.1%	42.1%
					(28.5%, 55.7%)	(28.5%
				PsV Neutralization 50% Titer	28.5%	28.5%
					(17.7%, 39.3%)	(17.7%
				PsV Neutralization 80% Titer	32.1%	32.1%
					(17.2%, 47.0%)	(17.2%
		Day 57	93	Binding Antibody to RBD	42.1%	42.1%
					(28.5%, 55.7%)	(28.5%
				Binding Antibody to Spike	42.1%	42.1%
					(28.5%, 55.7%)	(28.5%
				PsV Neutralization 50% Titer	40.7%	40.7%
					(26.4%, 54.9%)	(26.4%
				PsV Neutralization 80% Titer	42.1%	42.1%
					(28.5%, 55.7%)	(28.5%
	Positive	Day 29	60	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0

Table 2.8: Table 2g. Responder rates by Hispanic or Latino ethnicity (continu

Group	Baseline	Visit	N	Endpoint	Responder
				PsV Neutralization 50% Titer	62.1% (45.7%, 78.5%)
				PsV Neutralization 80% Titer	95.3% (86.7%, 103.9%)
		Day 57	60	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	81.5% (66.8%, 96.2%)
				PsV Neutralization 80% Titer	95.6% (91.7%, 99.5%)

Neutralization Responders are defined as participants who had baseline values below the lower limit of quan neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fol

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with dete assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concent

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.9: Table 2h. Responder rates by Race

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
Race						
Not reported and unknown	Negative	Day 29	98	Binding Antibody to RBD	49.1% (43.4%, 54.8%)	49.1% (43.4%
				Binding Antibody to Spike	49.1% (43.4%, 54.8%)	49.1% (43.4%
				PsV Neutralization 50% Titer	31.3% (24.5%, 38.1%)	31.3% (24.5%
				PsV Neutralization 80% Titer	38.3% (30.8%, 45.9%)	38.3% (30.8%
		Day 57	98	Binding Antibody to RBD	49.1% (43.4%, 54.8%)	49.1% (43.4%
				Binding Antibody to Spike	49.1% (43.4%, 54.8%)	49.1% (43.4%
				PsV Neutralization 50% Titer	48.1% (41.2%, 55.0%)	48.1% (41.2%
				PsV Neutralization 80% Titer	48.7% (42.0%, 55.4%)	48.7% (42.0%
	Positive	Day 29	48	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	63.6% (39.7%, 87.4%)	63.6% (39.7%
				PsV Neutralization 80% Titer	81.8% (77.6%, 86.1%)	81.8% (77.6%
		Day 57	48	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	97.5% (93.5%, 101.5%)	97.5% (93.5%
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)	100.0% (100.0
American Indian or Alaska Native	Negative	Day 29	27	Binding Antibody to RBD	49.5% (41.6%, 57.3%)	49.5% (41.6%
				Binding Antibody to Spike	49.5% (41.6%, 57.3%)	49.5% (41.6%
				PsV Neutralization 50% Titer	31.0% (21.8%, 40.3%)	31.0% (21.8%
				PsV Neutralization 80% Titer	37.5% (31.5%, 43.5%)	37.5% (31.5%

Table 2.9: Table 2h. Responder rates by Race (continued)

Group	Baseline	Visit	N	Endpoint	Responder
		Day 57	27	Binding Antibody to RBD	49.5% (41.6%, 57.3%)
				Binding Antibody to Spike	49.5% (41.6%, 57.3%)
				PsV Neutralization 50% Titer	48.6% (39.9%, 57.3%)
				PsV Neutralization 80% Titer	48.6% (39.9%, 57.3%)
	Positive	Day 29	17	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	78.4% (70.4%, 86.4%)
				PsV Neutralization 80% Titer	90.3% (64.8%, 115.7%)
		Day 57	17	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	96.9% (88.9%, 105.0%)
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)
Asian	Negative	Day 29	84	Binding Antibody to RBD	58.2% (47.3%, 69.2%)
				Binding Antibody to Spike	58.2% (47.3%, 69.2%)
				PsV Neutralization 50% Titer	38.2% (35.2%, 41.1%)
				PsV Neutralization 80% Titer	51.9% (40.2%, 63.5%)
		Day 57	84	Binding Antibody to RBD	58.2% (47.3%, 69.2%)
				Binding Antibody to Spike	58.2% (47.3%, 69.2%)
				PsV Neutralization 50% Titer	57.2% (44.1%, 70.3%)
				PsV Neutralization 80% Titer	57.3% (46.0%, 68.7%)
	Positive	Day 29	46	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0%

Table 2.9: Table 2h. Responder rates by Race (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	56.3%	56.3%
					(26.7%, 85.9%)	(26.7%
				PsV Neutralization 80% Titer	73.1%	73.1%
					(53.7%, 92.6%)	(53.7%
		Day 57	46	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	84.2%	84.2%
					(72.1%, 96.4%)	(72.1%
				PsV Neutralization 80% Titer	95.0%	95.0%
					(90.3%, 99.7%)	(90.3%
Black or African American	Negative	Day 29	216	Binding Antibody to RBD	51.5%	51.5%
					(50.4%, 52.6%)	(50.4%
				Binding Antibody to Spike	51.5%	51.5%
					(50.4%, 52.6%)	(50.4%
				PsV Neutralization 50% Titer	32.9%	32.9%
					(27.1%, 38.8%)	(27.1%
				PsV Neutralization 80% Titer	39.5%	39.5%
					(33.8%, 45.3%)	(33.8%
		Day 57	216	Binding Antibody to RBD	51.5%	51.5%
					(50.4%, 52.6%)	(50.4%
				Binding Antibody to Spike	51.5%	51.5%
					(50.4%, 52.6%)	(50.4%
				PsV Neutralization 50% Titer	46.2%	46.2%
					(42.0%, 50.3%)	(42.0%
				PsV Neutralization 80% Titer	49.6%	49.6%
					(48.3%, 50.8%)	(48.3%
	Positive	Day 29	91	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	57.5%	57.5%
					(45.2%, 69.7%)	(45.2%
				PsV Neutralization 80% Titer	81.2%	81.2%
					(69.8%, 92.7%)	(69.8%
		Day 57	91	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	93.2%	93.2%
					(89.9%, 96.6%)	(89.9%

Table 2.9: Table 2h. Responder rates by Race (continued)

Group	Baseline	Visit	N	Endpoint	Responder
				PsV Neutralization 80% Titer	98.7% (96.2%, 101.2%)
Multiracial	Negative	Day 29	62	Binding Antibody to RBD	37.1% (23.9%, 50.3%)
				Binding Antibody to Spike	37.1% (23.9%, 50.3%)
				PsV Neutralization 50% Titer	17.7% (0.6%, 34.9%)
				PsV Neutralization 80% Titer	28.6% (16.3%, 40.8%)
		Day 57	62	Binding Antibody to RBD	37.1% (23.9%, 50.3%)
				Binding Antibody to Spike	37.1% (23.9%, 50.3%)
				PsV Neutralization 50% Titer	37.1% (23.9%, 50.3%)
				PsV Neutralization 80% Titer	37.1% (23.9%, 50.3%)
	Positive	Day 29	28	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	71.6% (63.3%, 79.9%)
				PsV Neutralization 80% Titer	89.3% (82.6%, 96.0%)
		Day 57	28	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	85.8% (74.4%, 97.3%)
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)
Native Hawaiian or Other Pacific Islander	Negative	Day 29	20	Binding Antibody to RBD	66.0% (20.6%, 111.3%)
				Binding Antibody to Spike	66.0% (20.6%, 111.3%)
				PsV Neutralization 50% Titer	45.5% (26.4%, 64.7%)
				PsV Neutralization 80% Titer	61.1% (9.6%, 112.5%)

Table 2.9: Table 2h. Responder rates by Race (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
		Day 57	20	Binding Antibody to RBD	66.0% (20.6%, 111.3%)	66.0% (20.6%
				Binding Antibody to Spike	66.0% (20.6%, 111.3%)	66.0% (20.6%
				PsV Neutralization 50% Titer	66.0% (20.6%, 111.3%)	66.0% (20.6%
				PsV Neutralization 80% Titer	66.0% (20.6%, 111.3%)	66.0% (20.6%
	Positive	Day 29	7	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	91.4% (76.1%, 106.7%)	91.4% (76.1%
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)	100.0% (100.0
		Day 57	7	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	89.1% (60.6%, 117.6%)	89.1% (60.6%
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)	100.0% (100.0
Other	Negative	Day 29	28	Binding Antibody to RBD	79.8% (45.4%, 114.3%)	79.8% (45.4%
				Binding Antibody to Spike	79.8% (45.4%, 114.3%)	79.8% (45.4%
				PsV Neutralization 50% Titer	59.3% (39.3%, 79.2%)	59.3% (39.3%
				PsV Neutralization 80% Titer	53.8% (44.2%, 63.3%)	53.8% (44.2%
		Day 57	28	Binding Antibody to RBD	79.8% (45.4%, 114.3%)	79.8% (45.4%
				Binding Antibody to Spike	79.8% (45.4%, 114.3%)	79.8% (45.4%
				PsV Neutralization 50% Titer	77.2% (44.4%, 110.0%)	77.2% (44.4%
				PsV Neutralization 80% Titer	67.6% (49.3%, 85.8%)	67.6% (49.3%
	Positive	Day 29	24	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0%	100.0%

Table 2.9: Table 2h. Responder rates by Race (continued)

Group	Baseline	Visit	N	Endpoint	Responder
					(100.0%, 100.0%)
				PsV Neutralization 50% Titer	55.8% (43.9%, 67.7%)
				PsV Neutralization 80% Titer	82.9% (76.1%, 89.7%)
		Day 57	24	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	90.4% (87.7%, 93.2%)
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)
White	Negative	Day 29	43	Binding Antibody to RBD	47.0% (31.9%, 62.0%)
				Binding Antibody to Spike	47.0% (31.9%, 62.0%)
				PsV Neutralization 50% Titer	35.1% (25.2%, 45.0%)
				PsV Neutralization 80% Titer	38.7% (20.7%, 56.7%)
		Day 57	43	Binding Antibody to RBD	47.0% (31.9%, 62.0%)
				Binding Antibody to Spike	47.0% (31.9%, 62.0%)
				PsV Neutralization 50% Titer	43.3% (26.8%, 59.8%)
				PsV Neutralization 80% Titer	47.0% (31.9%, 62.0%)
	Positive	Day 29	38	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	68.1% (52.8%, 83.4%)
				PsV Neutralization 80% Titer	96.2% (89.1%, 103.3%)
		Day 57	38	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	78.4% (62.2%, 94.5%)

Table 2.9: Table 2h. Responder rates by Race (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
				PsV Neutralization 80% Titer	93.7% (87.0%, 100.5%)	93.7% (87.0%
White Non-Hispanic	Negative	Day 29	456	Binding Antibody to RBD	52.3% (49.2%, 55.5%)	52.3% (49.2%
				Binding Antibody to Spike	52.3% (49.2%, 55.5%)	52.3% (49.2%
				PsV Neutralization 50% Titer	36.0% (29.5%, 42.5%)	36.0% (29.5%
				PsV Neutralization 80% Titer	42.2% (38.0%, 46.5%)	42.2% (38.0%
		Day 57	456	Binding Antibody to RBD	52.3% (49.2%, 55.5%)	52.3% (49.2%
				Binding Antibody to Spike	52.3% (49.2%, 55.5%)	52.3% (49.2%
				PsV Neutralization 50% Titer	50.5% (45.9%, 55.2%)	50.5% (45.9%
				PsV Neutralization 80% Titer	51.4% (48.1%, 54.6%)	51.4% (48.1%
	Positive	Day 29	224	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	65.2% (54.5%, 75.9%)	65.2% (54.5%
				PsV Neutralization 80% Titer	79.8% (76.2%, 83.4%)	79.8% (76.2%
		Day 57	224	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	91.8% (87.1%, 96.5%)	91.8% (87.1%
				PsV Neutralization 80% Titer	98.1% (97.4%, 98.9%)	98.1% (97.4%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable a assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.10: Table 2i. Responder rates by Race and ethnic group

Group	Baseline	Visit	N	Endpoint	Responder
Race and ethnic group					
White Non-Hispanic	Negative	Day 29	456	Binding Antibody to RBD	52.3% (49.2%, 55.5%)
				Binding Antibody to Spike	52.3% (49.2%, 55.5%)
				PsV Neutralization 50% Titer	36.0% (29.5%, 42.5%)
				PsV Neutralization 80% Titer	42.2% (38.0%, 46.5%)
		Day 57	456	Binding Antibody to RBD	52.3% (49.2%, 55.5%)
				Binding Antibody to Spike	52.3% (49.2%, 55.5%)
				PsV Neutralization 50% Titer	50.5% (45.9%, 55.2%)
				PsV Neutralization 80% Titer	51.4% (48.1%, 54.6%)
	Positive	Day 29	224	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	65.2% (54.5%, 75.9%)
				PsV Neutralization 80% Titer	79.8% (76.2%, 83.4%)
		Day 57	224	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	91.8% (87.1%, 96.5%)
				PsV Neutralization 80% Titer	98.1% (97.4%, 98.9%)
Communities of Color	Negative	Day 29	535	Binding Antibody to RBD	51.1% (50.5%, 51.6%)
				Binding Antibody to Spike	51.1% (50.5%, 51.6%)
				PsV Neutralization 50% Titer	32.2% (25.9%, 38.4%)
				PsV Neutralization 80% Titer	40.4% (36.2%, 44.5%)
		Day 57	535	Binding Antibody to RBD	51.1%

Table 2.10: Table 2i. Responder rates by Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
					(50.5%, 51.6%)	(50.5%
				Binding Antibody to Spike	51.1%	51.1%
					(50.5%, 51.6%)	(50.5%
				PsV Neutralization 50% Titer	48.4%	48.4%
					(48.1%, 48.6%)	(48.1%
				PsV Neutralization 80% Titer	49.6%	49.6%
					(49.3%, 50.0%)	(49.3%
	Positive	Day 29	261	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	61.8%	61.8%
					(47.3%, 76.3%)	(47.3%
				PsV Neutralization 80% Titer	82.0%	82.0%
					(74.7%, 89.3%)	(74.7%
		Day 57	261	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	91.2%	91.2%
					(86.8%, 95.7%)	(86.8%
				PsV Neutralization 80% Titer	98.7%	98.7%
					(98.6%, 98.7%)	(98.6%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable a assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.11: Table 2j. Responder rates by Age, Race and ethnic group

Group	Baseline	Visit	N	Endpoint	Responder
Age, Race and ethnic group					
Age ¡ 65 Communities of Color	Negative	Day 29	253	Binding Antibody to RBD	51.3% (51.1%, 51.5%)
				Binding Antibody to Spike	51.3% (51.1%, 51.5%)
				PsV Neutralization 50% Titer	29.6% (29.3%, 30.0%)
				PsV Neutralization 80% Titer	38.6% (37.1%, 40.1%)
		Day 57	253	Binding Antibody to RBD	51.3% (51.1%, 51.5%)
				Binding Antibody to Spike	51.3% (51.1%, 51.5%)
				PsV Neutralization 50% Titer	48.3% (48.1%, 48.4%)
				PsV Neutralization 80% Titer	49.7% (49.6%, 49.9%)
	Positive	Day 29	148	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	56.4% (54.6%, 58.2%)
				PsV Neutralization 80% Titer	79.1% (73.5%, 84.7%)
		Day 57	148	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	89.6% (88.8%, 90.5%)
				PsV Neutralization 80% Titer	98.6% (98.6%, 98.7%)
Age ¡ 65 White Non-Hispanic	Negative	Day 29	227	Binding Antibody to RBD	52.3% (48.4%, 56.3%)
				Binding Antibody to Spike	52.3% (48.4%, 56.3%)
				PsV Neutralization 50% Titer	33.8% (26.9%, 40.7%)
				PsV Neutralization 80% Titer	41.0% (35.9%, 46.1%)

Table 2.11: Table 2j. Responder rates by Age, Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
		Day 57	227	Binding Antibody to RBD	52.3% (48.4%, 56.3%)	52.3% (48.4%
				Binding Antibody to Spike	52.3% (48.4%, 56.3%)	52.3% (48.4%
				PsV Neutralization 50% Titer	50.5% (44.7%, 56.4%)	50.5% (44.7%
				PsV Neutralization 80% Titer	51.1% (46.8%, 55.4%)	51.1% (46.8%
	Positive	Day 29	117	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	61.0% (59.0%, 63.0%)	61.0% (59.0%
				PsV Neutralization 80% Titer	78.4% (78.0%, 78.7%)	78.4% (78.0%
		Day 57	117	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	90.3% (87.7%, 92.9%)	90.3% (87.7%
				PsV Neutralization 80% Titer	97.9% (97.0%, 98.7%)	97.9% (97.0%
Age ¿= 65 Communities of Color	Negative	Day 29	282	Binding Antibody to RBD	50.2% (50.2%, 50.2%)	50.2% (50.2%
				Binding Antibody to Spike	50.2% (50.2%, 50.2%)	50.2% (50.2%
				PsV Neutralization 50% Titer	41.0% (41.0%, 41.0%)	41.0% (41.0%
				PsV Neutralization 80% Titer	46.7% (46.7%, 46.7%)	46.7% (46.7%
		Day 57	282	Binding Antibody to RBD	50.2% (50.2%, 50.2%)	50.2% (50.2%
				Binding Antibody to Spike	50.2% (50.2%, 50.2%)	50.2% (50.2%
				PsV Neutralization 50% Titer	48.8% (48.8%, 48.8%)	48.8% (48.8%
				PsV Neutralization 80% Titer	49.2% (49.2%, 49.2%)	49.2% (49.2%
	Positive	Day 29	113	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0

Table 2.11: Table 2j. Responder rates by Age, Race and ethnic group (continu

Group	Baseline	Visit	N	Endpoint	Responder
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	86.7% (86.7%, 86.7%)
				PsV Neutralization 80% Titer	95.1% (95.1%, 95.1%)
		Day 57	113	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	98.7% (98.7%, 98.7%)
				PsV Neutralization 80% Titer	98.7% (98.7%, 98.7%)
Age ¿= 65 White Non-Hispanic	Negative	Day 29	229	Binding Antibody to RBD	52.3% (52.3%, 52.3%)
				Binding Antibody to Spike	52.3% (52.3%, 52.3%)
				PsV Neutralization 50% Titer	44.8% (44.8%, 44.8%)
				PsV Neutralization 80% Titer	47.0% (47.0%, 47.0%)
		Day 57	229	Binding Antibody to RBD	52.3% (52.3%, 52.3%)
				Binding Antibody to Spike	52.3% (52.3%, 52.3%)
				PsV Neutralization 50% Titer	50.5% (50.5%, 50.5%)
				PsV Neutralization 80% Titer	52.3% (52.3%, 52.3%)
	Positive	Day 29	107	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	80.4% (80.4%, 80.4%)
				PsV Neutralization 80% Titer	85.0% (85.0%, 85.0%)
		Day 57	107	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)

Table 2.11: Table 2j. Responder rates by Age, Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	Responder	2-Fold
				PsV Neutralization 50% Titer	97.2% (97.2%, 97.2%)	97.2% (97.2%
				PsV Neutralization 80% Titer	99.1% (99.1%, 99.1%)	99.1% (99.1%

Neutralization Responders are defined as participants who had baseline values below the lower limit of quantificatio neutralization titer above the assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increas

Binding Antibody Responders are defined as participants who had baseline values below the LLOQ with detectable a assay LLOQ, or as participants with baseline values above the LLOQ with a 4-fold increase in antibody concentration.

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

2.0.3 Table 3. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs)

Table 2.12: Table 3a. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by All participants

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95
All participants						
All participants	Negative	Day 1	1062	Binding Antibody to RBD	17	(1
				Binding Antibody to Spike	17	(1
				PsV Neutralization 50% Titer	24	(2
				PsV Neutralization 80% Titer	22	(2
		Day 29	1062	Binding Antibody to RBD	712	(5
				Binding Antibody to Spike	982	(7
				PsV Neutralization 50% Titer	56	(4
				PsV Neutralization 80% Titer	71	(5
		Day 57	1062	Binding Antibody to RBD	4931	(3
				Binding Antibody to Spike	7432	(5
				PsV Neutralization 50% Titer	225	(1
				PsV Neutralization 80% Titer	263	(2
	Positive	Day 1	543	Binding Antibody to RBD	17	(1
				Binding Antibody to Spike	17	(1
				PsV Neutralization 50% Titer	24	(2
				PsV Neutralization 80% Titer	22	(2
		Day 29	543	Binding Antibody to RBD	22509	(1
				Binding Antibody to Spike	38829	(1
				PsV Neutralization 50% Titer	114	(6
				PsV Neutralization 80% Titer	229	(1
		Day 57	543	Binding Antibody to RBD	1120836	(5
				Binding Antibody to Spike	2091817	(1
				PsV Neutralization 50% Titer	1665	(6
				PsV Neutralization 80% Titer	3728	(2

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.13: Table 3b. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
Age						
Age ¡ 65	Negative	Day 1	513	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	513	Binding Antibody to RBD	621	(585, 659)
				Binding Antibody to Spike	865	(807, 926)
				PsV Neutralization 50% Titer	50	(48, 53)
				PsV Neutralization 80% Titer	65	(60, 70)
		Day 57	513	Binding Antibody to RBD	4352	(4139, 4577)
				Binding Antibody to Spike	6696	(6197, 7235)
				PsV Neutralization 50% Titer	196	(184, 209)
				PsV Neutralization 80% Titer	237	(215, 261)
	Positive	Day 1	294	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	294	Binding Antibody to RBD	17189	(16844, 175
				Binding Antibody to Spike	29915	(28129, 318
				PsV Neutralization 50% Titer	92	(81, 105)
				PsV Neutralization 80% Titer	190	(188, 193)
		Day 57	294	Binding Antibody to RBD	848266	(817139, 88
				Binding Antibody to Spike	1607999	(1544200, 1
				PsV Neutralization 50% Titer	1174	(1093, 1261)
				PsV Neutralization 80% Titer	2971	(2943, 2998)
Age ¿= 65	Negative	Day 1	549	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	549	Binding Antibody to RBD	1168	(1168, 1168)
				Binding Antibody to Spike	1555	(1555, 1555)
				PsV Neutralization 50% Titer	85	(85, 85)
				PsV Neutralization 80% Titer	102	(102, 102)
		Day 57	549	Binding Antibody to RBD	7753	(7753, 7753)
				Binding Antibody to Spike	10848	(10848, 108
				PsV Neutralization 50% Titer	372	(372, 372)
				PsV Neutralization 80% Titer	381	(381, 381)
	Positive	Day 1	249	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)

Table 2.13: Table 3b. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
		Day 29	249	Binding Antibody to RBD	67301	(67
				Binding Antibody to Spike	112025	(11
				PsV Neutralization 50% Titer	265	(26
				PsV Neutralization 80% Titer	484	(48
		Day 57	249	Binding Antibody to RBD	3476290	(34
				Binding Antibody to Spike	6089580	(60
				PsV Neutralization 50% Titer	6890	(68
				PsV Neutralization 80% Titer	9374	(93

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.14: Table 3c. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
Risk for Severe Covid-19						
At-risk	Negative	Day 1	541	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	541	Binding Antibody to RBD	778	(411, 1471)
				Binding Antibody to Spike	1068	(564, 2022)
				PsV Neutralization 50% Titer	59	(38, 91)
				PsV Neutralization 80% Titer	72	(46, 112)
		Day 57	541	Binding Antibody to RBD	5533	(2908, 1052
				Binding Antibody to Spike	8028	(4405, 1463
				PsV Neutralization 50% Titer	235	(134, 411)
				PsV Neutralization 80% Titer	274	(153, 490)
	Positive	Day 1	246	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	21	(21, 22)
		Day 29	246	Binding Antibody to RBD	25128	(9811, 6435
				Binding Antibody to Spike	46636	(20642, 105
				PsV Neutralization 50% Titer	139	(83, 234)
				PsV Neutralization 80% Titer	252	(138, 461)
		Day 57	246	Binding Antibody to RBD	1379449	(511168, 37
				Binding Antibody to Spike	2471668	(1053363, 5
				PsV Neutralization 50% Titer	2118	(693, 6480)
				PsV Neutralization 80% Titer	4084	(1906, 8751
Not at-risk	Negative	Day 1	521	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	21	(21, 22)
		Day 29	521	Binding Antibody to RBD	689	(545, 871)
				Binding Antibody to Spike	951	(778, 1162)
				PsV Neutralization 50% Titer	56	(44, 71)
				PsV Neutralization 80% Titer	71	(59, 86)
		Day 57	521	Binding Antibody to RBD	4724	(3939, 5665
				Binding Antibody to Spike	7221	(6315, 8258
				PsV Neutralization 50% Titer	222	(167, 295)
				PsV Neutralization 80% Titer	259	(223, 299)
	Positive	Day 1	297	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)

Table 2.14: Table 3c. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
		Day 29	297	Binding Antibody to RBD	21738	(11
				Binding Antibody to Spike	36642	(19
				PsV Neutralization 50% Titer	106	(61
				PsV Neutralization 80% Titer	222	(14
		Day 57	297	Binding Antibody to RBD	1049555	(54
				Binding Antibody to Spike	1984211	(10
				PsV Neutralization 50% Titer	1543	(65
				PsV Neutralization 80% Titer	3622	(20

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.15: Table 3d. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
Age, Risk for Severe Covid-19						
Age ¡ 65 At-risk	Negative	Day 1	257	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	21	(21, 22)
		Day 29	257	Binding Antibody to RBD	572	(572, 572)
				Binding Antibody to Spike	786	(786, 786)
				PsV Neutralization 50% Titer	48	(48, 48)
				PsV Neutralization 80% Titer	58	(58, 58)
		Day 57	257	Binding Antibody to RBD	4058	(4058, 4058)
				Binding Antibody to Spike	6011	(6011, 6011)
				PsV Neutralization 50% Titer	180	(180, 180)
				PsV Neutralization 80% Titer	207	(207, 207)
	Positive	Day 1	148	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	21	(21, 22)
		Day 29	148	Binding Antibody to RBD	16690	(16690, 166
				Binding Antibody to Spike	32712	(32712, 327
				PsV Neutralization 50% Titer	111	(111, 111)
				PsV Neutralization 80% Titer	194	(194, 194)
		Day 57	148	Binding Antibody to RBD	895596	(895596, 89
				Binding Antibody to Spike	1705379	(1705379, 1
				PsV Neutralization 50% Titer	1302	(1302, 1302)
				PsV Neutralization 80% Titer	2931	(2931, 2931)
Age ¡ 65 Not at-risk	Negative	Day 1	256	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	25	(24, 25)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	256	Binding Antibody to RBD	635	(635, 635)
				Binding Antibody to Spike	887	(887, 887)
				PsV Neutralization 50% Titer	51	(51, 51)
				PsV Neutralization 80% Titer	67	(67, 67)
		Day 57	256	Binding Antibody to RBD	4435	(4435, 4435)
				Binding Antibody to Spike	6892	(6892, 6892)
				PsV Neutralization 50% Titer	201	(201, 201)
				PsV Neutralization 80% Titer	246	(246, 246)
	Positive	Day 1	146	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 25)
				PsV Neutralization 80% Titer	21	(21, 22)

Table 2.15: Table 3d. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
		Day 29	146	Binding Antibody to RBD	17319	(17
				Binding Antibody to Spike	29242	(29
				PsV Neutralization 50% Titer	88	(88
				PsV Neutralization 80% Titer	189	(18
		Day 57	146	Binding Antibody to RBD	836628	(83
				Binding Antibody to Spike	1584123	(15
				PsV Neutralization 50% Titer	1143	(11
				PsV Neutralization 80% Titer	2981	(29
Age ¿= 65 At-risk	Negative	Day 1	284	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	284	Binding Antibody to RBD	1260	(12
				Binding Antibody to Spike	1733	(17
				PsV Neutralization 50% Titer	82	(82
				PsV Neutralization 80% Titer	100	(10
		Day 57	284	Binding Antibody to RBD	9007	(90
				Binding Antibody to Spike	12651	(12
				PsV Neutralization 50% Titer	359	(35
				PsV Neutralization 80% Titer	425	(42
	Positive	Day 1	98	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	98	Binding Antibody to RBD	59244	(59
				Binding Antibody to Spike	98073	(98
				PsV Neutralization 50% Titer	223	(22
				PsV Neutralization 80% Titer	437	(43
		Day 57	98	Binding Antibody to RBD	3411234	(34
				Binding Antibody to Spike	5380342	(53
				PsV Neutralization 50% Titer	5873	(58
				PsV Neutralization 80% Titer	8184	(81
Age ¿= 65 Not at-risk	Negative	Day 1	265	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	265	Binding Antibody to RBD	1087	(10
				Binding Antibody to Spike	1403	(14
				PsV Neutralization 50% Titer	89	(89
				PsV Neutralization 80% Titer	103	(10
		Day 57	265	Binding Antibody to RBD	6720	(67
				Binding Antibody to Spike	9368	(93

Table 2.15: Table 3d. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
				PsV Neutralization 50% Titer	385	(385, 385)
				PsV Neutralization 80% Titer	343	(343, 343)
	Positive	Day 1	151	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	151	Binding Antibody to RBD	73095	(73095, 730
				Binding Antibody to Spike	122104	(122104, 12
				PsV Neutralization 50% Titer	296	(296, 296)
				PsV Neutralization 80% Titer	518	(518, 518)
		Day 57	151	Binding Antibody to RBD	3519087	(3519087, 3
				Binding Antibody to Spike	6598095	(6598095, 6
				PsV Neutralization 50% Titer	7640	(7640, 7640
				PsV Neutralization 80% Titer	10236	(10236, 102

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.16: Table 3e. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Sex

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
Sex						
Female	Negative	Day 1	597	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	597	Binding Antibody to RBD	712	(44
				Binding Antibody to Spike	1038	(66
				PsV Neutralization 50% Titer	56	(42
				PsV Neutralization 80% Titer	71	(55
		Day 57	597	Binding Antibody to RBD	5346	(33
				Binding Antibody to Spike	7938	(50
				PsV Neutralization 50% Titer	218	(14
				PsV Neutralization 80% Titer	271	(19
	Positive	Day 1	298	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	21	(21
		Day 29	298	Binding Antibody to RBD	21334	(11
				Binding Antibody to Spike	35333	(18
				PsV Neutralization 50% Titer	114	(75
				PsV Neutralization 80% Titer	232	(17
		Day 57	298	Binding Antibody to RBD	1087218	(56
				Binding Antibody to Spike	2053878	(11
				PsV Neutralization 50% Titer	1624	(70
				PsV Neutralization 80% Titer	3631	(21
Male	Negative	Day 1	465	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	465	Binding Antibody to RBD	712	(60
				Binding Antibody to Spike	915	(77
				PsV Neutralization 50% Titer	57	(45
				PsV Neutralization 80% Titer	72	(60
		Day 57	465	Binding Antibody to RBD	4454	(37
				Binding Antibody to Spike	6839	(61
				PsV Neutralization 50% Titer	234	(19
				PsV Neutralization 80% Titer	253	(22
	Positive	Day 1	245	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22

Table 2.16: Table 3e. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Sex (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
		Day 29	245	Binding Antibody to RBD	24161	(11946, 488
				Binding Antibody to Spike	43983	(21721, 890
				PsV Neutralization 50% Titer	112	(52, 245)
				PsV Neutralization 80% Titer	225	(109, 464)
		Day 57	245	Binding Antibody to RBD	1166837	(528077, 25
				Binding Antibody to Spike	2143002	(1014552, 4
				PsV Neutralization 50% Titer	1722	(620, 4779)
				PsV Neutralization 80% Titer	3859	(1838, 8103

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.17: Table 3f. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, sex

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
Age, sex						
Age ¡ 65 Female	Negative	Day 1	291	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	291	Binding Antibody to RBD	582	(49
				Binding Antibody to Spike	860	(69
				PsV Neutralization 50% Titer	49	(45
				PsV Neutralization 80% Titer	63	(57
		Day 57	291	Binding Antibody to RBD	4372	(34
				Binding Antibody to Spike	6537	(51
				PsV Neutralization 50% Titer	181	(16
				PsV Neutralization 80% Titer	236	(20
	Positive	Day 1	166	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	166	Binding Antibody to RBD	16489	(15
				Binding Antibody to Spike	27584	(27
				PsV Neutralization 50% Titer	97	(95
				PsV Neutralization 80% Titer	206	(18
		Day 57	166	Binding Antibody to RBD	829179	(71
				Binding Antibody to Spike	1596315	(14
				PsV Neutralization 50% Titer	1152	(95
				PsV Neutralization 80% Titer	2917	(21
Age ¡ 65 Male	Negative	Day 1	222	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	222	Binding Antibody to RBD	676	(61
				Binding Antibody to Spike	871	(77
				PsV Neutralization 50% Titer	52	(50
				PsV Neutralization 80% Titer	67	(64
		Day 57	222	Binding Antibody to RBD	4327	(36
				Binding Antibody to Spike	6909	(59
				PsV Neutralization 50% Titer	217	(21
				PsV Neutralization 80% Titer	238	(22
	Positive	Day 1	128	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22

Table 2.17: Table 3f. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
		Day 29	128	Binding Antibody to RBD	18199	(17074, 193
				Binding Antibody to Spike	33432	(29168, 383
				PsV Neutralization 50% Titer	86	(61, 122)
				PsV Neutralization 80% Titer	171	(144, 204)
		Day 57	128	Binding Antibody to RBD	875142	(661880, 115
				Binding Antibody to Spike	1624152	(1290202, 20
				PsV Neutralization 50% Titer	1205	(785, 1850)
				PsV Neutralization 80% Titer	3046	(2012, 4611)
Age ¿= 65 Female	Negative	Day 1	306	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	306	Binding Antibody to RBD	1557	(1557, 1557)
				Binding Antibody to Spike	2159	(2159, 2159)
				PsV Neutralization 50% Titer	91	(91, 91)
				PsV Neutralization 80% Titer	109	(109, 109)
		Day 57	306	Binding Antibody to RBD	11651	(11651, 116
				Binding Antibody to Spike	16857	(16857, 168
				PsV Neutralization 50% Titer	449	(449, 449)
				PsV Neutralization 80% Titer	459	(459, 459)
	Positive	Day 1	132	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	25	(24, 25)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	132	Binding Antibody to RBD	66473	(66473, 664
				Binding Antibody to Spike	105315	(105315, 10
				PsV Neutralization 50% Titer	238	(238, 238)
				PsV Neutralization 80% Titer	391	(391, 391)
		Day 57	132	Binding Antibody to RBD	3592671	(3592671, 3
				Binding Antibody to Spike	6243753	(6243753, 6
				PsV Neutralization 50% Titer	7379	(7379, 7379)
				PsV Neutralization 80% Titer	9539	(9539, 9539)
Age ¿= 65 Male	Negative	Day 1	243	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	243	Binding Antibody to RBD	846	(846, 846)
				Binding Antibody to Spike	1076	(1076, 1076)
				PsV Neutralization 50% Titer	79	(79, 79)
				PsV Neutralization 80% Titer	94	(94, 94)
		Day 57	243	Binding Antibody to RBD	4908	(4908, 4908)
				Binding Antibody to Spike	6613	(6613, 6613)

Table 2.17: Table 3f. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
				PsV Neutralization 50% Titer	301	(30
				PsV Neutralization 80% Titer	309	(30
	Positive	Day 1	117	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	117	Binding Antibody to RBD	68256	(68
				Binding Antibody to Spike	120187	(12
				PsV Neutralization 50% Titer	300	(30
				PsV Neutralization 80% Titer	618	(61
		Day 57	117	Binding Antibody to RBD	3348376	(33
				Binding Antibody to Spike	5918688	(59
				PsV Neutralization 50% Titer	6372	(63
				PsV Neutralization 80% Titer	9190	(91

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.18: Table 3g. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Hispanic or Latino ethnicity

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
Hispanic or Latino ethnicity						
Hispanic or Latino	Negative	Day 1	125	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	125	Binding Antibody to RBD	468	(143, 1532)
				Binding Antibody to Spike	640	(202, 2027)
				PsV Neutralization 50% Titer	49	(29, 82)
				PsV Neutralization 80% Titer	60	(38, 93)
		Day 57	125	Binding Antibody to RBD	2630	(611, 11319)
				Binding Antibody to Spike	3871	(887, 16897)
				PsV Neutralization 50% Titer	181	(80, 409)
				PsV Neutralization 80% Titer	161	(60, 433)
	Positive	Day 1	77	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	77	Binding Antibody to RBD	25213	(15602, 407
				Binding Antibody to Spike	40456	(26282, 622
				PsV Neutralization 50% Titer	116	(74, 180)
				PsV Neutralization 80% Titer	195	(127, 299)
		Day 57	77	Binding Antibody to RBD	1404743	(886268, 22
				Binding Antibody to Spike	2250797	(1632173, 3
				PsV Neutralization 50% Titer	1802	(821, 3955)
				PsV Neutralization 80% Titer	3289	(2051, 5275)
Not Hispanic or Latino	Negative	Day 1	844	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	21	(21, 22)
		Day 29	844	Binding Antibody to RBD	833	(562, 1234)
				Binding Antibody to Spike	1155	(769, 1733)
				PsV Neutralization 50% Titer	59	(45, 76)
				PsV Neutralization 80% Titer	75	(59, 94)
		Day 57	844	Binding Antibody to RBD	6206	(3849, 1000
				Binding Antibody to Spike	9278	(5609, 1534
				PsV Neutralization 50% Titer	247	(179, 341)
				PsV Neutralization 80% Titer	303	(222, 413)
	Positive	Day 1	406	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)

Table 2.18: Table 3g. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Hispanic or Latino ethnicity (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
		Day 29	406	Binding Antibody to RBD	22503	(11
				Binding Antibody to Spike	40053	(19
				PsV Neutralization 50% Titer	117	(66
				PsV Neutralization 80% Titer	234	(14
		Day 57	406	Binding Antibody to RBD	1125831	(53
				Binding Antibody to Spike	2007106	(94
				PsV Neutralization 50% Titer	1735	(71
				PsV Neutralization 80% Titer	4085	(24
Not reported and unknown	Negative	Day 1	93	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	21	(21
		Day 29	93	Binding Antibody to RBD	345	(12
				Binding Antibody to Spike	461	(15
				PsV Neutralization 50% Titer	50	(39
				PsV Neutralization 80% Titer	62	(44
		Day 57	93	Binding Antibody to RBD	1730	(34
				Binding Antibody to Spike	2841	(55
				PsV Neutralization 50% Titer	144	(74
				PsV Neutralization 80% Titer	152	(74
	Positive	Day 1	60	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	60	Binding Antibody to RBD	18882	(77
				Binding Antibody to Spike	29386	(10
				PsV Neutralization 50% Titer	89	(43
				PsV Neutralization 80% Titer	252	(15
		Day 57	60	Binding Antibody to RBD	763268	(19
				Binding Antibody to Spike	2481988	(11
				PsV Neutralization 50% Titer	1106	(32
				PsV Neutralization 80% Titer	2409	(74

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.19: Table 3h. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Race

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
Race						
Not reported and unknown	Negative	Day 1	98	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	98	Binding Antibody to RBD	585	(367, 933)
				Binding Antibody to Spike	878	(496, 1554)
				PsV Neutralization 50% Titer	53	(41, 69)
				PsV Neutralization 80% Titer	73	(57, 93)
		Day 57	98	Binding Antibody to RBD	4062	(2011, 8207)
				Binding Antibody to Spike	5229	(2524, 10835
				PsV Neutralization 50% Titer	230	(149, 353)
				PsV Neutralization 80% Titer	283	(162, 495)
	Positive	Day 1	48	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	48	Binding Antibody to RBD	24907	(11413, 5430
				Binding Antibody to Spike	48753	(19822, 1199
				PsV Neutralization 50% Titer	133	(55, 325)
				PsV Neutralization 80% Titer	286	(138, 592)
		Day 57	48	Binding Antibody to RBD	1323263	(505712, 340
				Binding Antibody to Spike	2024829	(764415, 530
				PsV Neutralization 50% Titer	2991	(991, 9024)
				PsV Neutralization 80% Titer	3100	(980, 9806)
American Indian or Alaska Native	Negative	Day 1	27	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	27	Binding Antibody to RBD	492	(281, 862)
				Binding Antibody to Spike	841	(497, 1424)
				PsV Neutralization 50% Titer	56	(37, 83)
				PsV Neutralization 80% Titer	58	(35, 99)
		Day 57	27	Binding Antibody to RBD	3701	(2089, 6558)
				Binding Antibody to Spike	5302	(2655, 10589
				PsV Neutralization 50% Titer	273	(208, 359)
				PsV Neutralization 80% Titer	247	(219, 280)
	Positive	Day 1	17	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)

Table 2.19: Table 3h. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Race (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
				PsV Neutralization 80% Titer	22	(22
		Day 29	17	Binding Antibody to RBD	53664	(28
				Binding Antibody to Spike	70861	(39
				PsV Neutralization 50% Titer	115	(83
				PsV Neutralization 80% Titer	213	(10
		Day 57	17	Binding Antibody to RBD	1414716	(66
				Binding Antibody to Spike	5725330	(31
				PsV Neutralization 50% Titer	2916	(10
				PsV Neutralization 80% Titer	5444	(24
Asian	Negative	Day 1	84	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	84	Binding Antibody to RBD	1130	(74
				Binding Antibody to Spike	1571	(10
				PsV Neutralization 50% Titer	63	(58
				PsV Neutralization 80% Titer	92	(85
		Day 57	84	Binding Antibody to RBD	7837	(41
				Binding Antibody to Spike	16133	(62
				PsV Neutralization 50% Titer	407	(27
				PsV Neutralization 80% Titer	373	(27
	Positive	Day 1	46	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	46	Binding Antibody to RBD	11619	(19
				Binding Antibody to Spike	36569	(11
				PsV Neutralization 50% Titer	87	(23
				PsV Neutralization 80% Titer	149	(50
		Day 57	46	Binding Antibody to RBD	521481	(99
				Binding Antibody to Spike	1751893	(65
				PsV Neutralization 50% Titer	1291	(24
				PsV Neutralization 80% Titer	2189	(44
Black or African American	Negative	Day 1	216	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	25	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	216	Binding Antibody to RBD	678	(42
				Binding Antibody to Spike	907	(56
				PsV Neutralization 50% Titer	56	(44
				PsV Neutralization 80% Titer	66	(50
		Day 57	216	Binding Antibody to RBD	4901	(31

Table 2.19: Table 3h. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Race (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
				Binding Antibody to Spike	7128	(4607, 1102
				PsV Neutralization 50% Titer	209	(121, 361)
				PsV Neutralization 80% Titer	242	(172, 341)
	Positive	Day 1	91	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	91	Binding Antibody to RBD	22121	(12760, 383
				Binding Antibody to Spike	27258	(15935, 466
				PsV Neutralization 50% Titer	107	(71, 162)
				PsV Neutralization 80% Titer	229	(147, 355)
		Day 57	91	Binding Antibody to RBD	946101	(483662, 185
				Binding Antibody to Spike	1414303	(716855, 279
				PsV Neutralization 50% Titer	1608	(912, 2834)
				PsV Neutralization 80% Titer	3218	(2241, 4620
Multiracial	Negative	Day 1	62	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	62	Binding Antibody to RBD	220	(54, 890)
				Binding Antibody to Spike	293	(70, 1232)
				PsV Neutralization 50% Titer	39	(21, 71)
				PsV Neutralization 80% Titer	53	(33, 85)
		Day 57	62	Binding Antibody to RBD	939	(160, 5531)
				Binding Antibody to Spike	1329	(218, 8095)
				PsV Neutralization 50% Titer	113	(47, 273)
				PsV Neutralization 80% Titer	100	(34, 292)
	Positive	Day 1	28	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	28	Binding Antibody to RBD	37199	(22732, 608
				Binding Antibody to Spike	47412	(33185, 677
				PsV Neutralization 50% Titer	150	(122, 184)
				PsV Neutralization 80% Titer	327	(220, 486)
		Day 57	28	Binding Antibody to RBD	2284913	(1619956, 3
				Binding Antibody to Spike	2984414	(2020851, 4
				PsV Neutralization 50% Titer	1828	(714, 4684)
				PsV Neutralization 80% Titer	8232	(5671, 1195
Native Hawaiian or Other Pacific Islander	Negative	Day 1	20	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)

Table 2.19: Table 3h. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Race (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	20	Binding Antibody to RBD	2795	(12
				Binding Antibody to Spike	3885	(11
				PsV Neutralization 50% Titer	79	(48
				PsV Neutralization 80% Titer	179	(28
		Day 57	20	Binding Antibody to RBD	26587	(25
				Binding Antibody to Spike	51884	(19
				PsV Neutralization 50% Titer	504	(56
				PsV Neutralization 80% Titer	943	(82
	Positive	Day 1	7	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	7	Binding Antibody to RBD	33785	(16
				Binding Antibody to Spike	67752	(19
				PsV Neutralization 50% Titer	99	(46
				PsV Neutralization 80% Titer	391	(21
		Day 57	7	Binding Antibody to RBD	1775012	(39
				Binding Antibody to Spike	2028355	(38
				PsV Neutralization 50% Titer	798	(36
				PsV Neutralization 80% Titer	24331	(80
Other	Negative	Day 1	28	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	28	Binding Antibody to RBD	6301	(10
				Binding Antibody to Spike	8355	(12
				PsV Neutralization 50% Titer	103	(89
				PsV Neutralization 80% Titer	102	(50
		Day 57	28	Binding Antibody to RBD	105462	(85
				Binding Antibody to Spike	221629	(83
				PsV Neutralization 50% Titer	860	(48
				PsV Neutralization 80% Titer	624	(44
	Positive	Day 1	24	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	24	Binding Antibody to RBD	17228	(10
				Binding Antibody to Spike	43917	(38
				PsV Neutralization 50% Titer	101	(50
				PsV Neutralization 80% Titer	142	(80

Table 2.19: Table 3h. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Race (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
		Day 57	24	Binding Antibody to RBD	794994	(549369, 115
				Binding Antibody to Spike	2203051	(1830631, 26
				PsV Neutralization 50% Titer	1881	(883, 4006)
				PsV Neutralization 80% Titer	2713	(1110, 6631)
White	Negative	Day 1	43	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	43	Binding Antibody to RBD	464	(165, 1307)
				Binding Antibody to Spike	684	(225, 2083)
				PsV Neutralization 50% Titer	62	(55, 71)
				PsV Neutralization 80% Titer	77	(56, 106)
		Day 57	43	Binding Antibody to RBD	3252	(571, 18539)
				Binding Antibody to Spike	5596	(971, 32243)
				PsV Neutralization 50% Titer	154	(69, 343)
				PsV Neutralization 80% Titer	174	(68, 450)
	Positive	Day 1	38	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	38	Binding Antibody to RBD	21515	(7856, 5892
				Binding Antibody to Spike	32724	(10987, 974
				PsV Neutralization 50% Titer	113	(62, 205)
				PsV Neutralization 80% Titer	280	(168, 464)
		Day 57	38	Binding Antibody to RBD	899840	(269899, 300
				Binding Antibody to Spike	2849885	(1213108, 6
				PsV Neutralization 50% Titer	1185	(283, 4957)
				PsV Neutralization 80% Titer	2817	(742, 10699)
White Non-Hispanic	Negative	Day 1	456	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	456	Binding Antibody to RBD	820	(555, 1213)
				Binding Antibody to Spike	1102	(742, 1637)
				PsV Neutralization 50% Titer	58	(43, 77)
				PsV Neutralization 80% Titer	72	(57, 92)
		Day 57	456	Binding Antibody to RBD	5778	(3698, 9029)
				Binding Antibody to Spike	8551	(5369, 1362
				PsV Neutralization 50% Titer	230	(164, 322)
				PsV Neutralization 80% Titer	297	(220, 402)
	Positive	Day 1	224	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)

Table 2.19: Table 3h. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Race (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	224	Binding Antibody to RBD	21377	(10
				Binding Antibody to Spike	39697	(19
				PsV Neutralization 50% Titer	114	(66
				PsV Neutralization 80% Titer	237	(17
		Day 57	224	Binding Antibody to RBD	1196300	(63
				Binding Antibody to Spike	2008434	(95
				PsV Neutralization 50% Titer	1605	(72
				PsV Neutralization 80% Titer	4347	(33

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.20: Table 3i. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Race and ethnic group

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
Race and ethnic group						
White Non-Hispanic	Negative	Day 1	456	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	456	Binding Antibody to RBD	820	(555, 1213)
				Binding Antibody to Spike	1102	(742, 1637)
				PsV Neutralization 50% Titer	58	(43, 77)
				PsV Neutralization 80% Titer	72	(57, 92)
		Day 57	456	Binding Antibody to RBD	5778	(3698, 9029)
				Binding Antibody to Spike	8551	(5369, 1362
				PsV Neutralization 50% Titer	230	(164, 322)
				PsV Neutralization 80% Titer	297	(220, 402)
	Positive	Day 1	224	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	224	Binding Antibody to RBD	21377	(10629, 429
				Binding Antibody to Spike	39697	(19683, 800
				PsV Neutralization 50% Titer	114	(66, 196)
				PsV Neutralization 80% Titer	237	(172, 328)
		Day 57	224	Binding Antibody to RBD	1196300	(639742, 22
				Binding Antibody to Spike	2008434	(956643, 42
				PsV Neutralization 50% Titer	1605	(723, 3563)
				PsV Neutralization 80% Titer	4347	(3347, 5646
Communities of Color	Negative	Day 1	535	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	535	Binding Antibody to RBD	659	(445, 974)
				Binding Antibody to Spike	916	(649, 1294)
				PsV Neutralization 50% Titer	55	(42, 72)
				PsV Neutralization 80% Titer	71	(56, 90)
		Day 57	535	Binding Antibody to RBD	4500	(3149, 6430)
				Binding Antibody to Spike	6827	(5206, 8954)
				PsV Neutralization 50% Titer	231	(166, 323)
				PsV Neutralization 80% Titer	249	(194, 320)
	Positive	Day 1	261	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)

Table 2.20: Table 3i. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
		Day 29	261	Binding Antibody to RBD	22232	(11
				Binding Antibody to Spike	38731	(21
				PsV Neutralization 50% Titer	111	(61
				PsV Neutralization 80% Titer	218	(12
		Day 57	261	Binding Antibody to RBD	1018509	(47
				Binding Antibody to Spike	1986558	(10
				PsV Neutralization 50% Titer	1816	(72
				PsV Neutralization 80% Titer	3532	(17

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.21: Table 3j. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, Race and ethnic group

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
Age, Race and ethnic group						
Age ¡ 65 Communities of Color	Negative	Day 1	253	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	253	Binding Antibody to RBD	563	(536, 591)
				Binding Antibody to Spike	794	(793, 794)
				PsV Neutralization 50% Titer	49	(49, 49)
				PsV Neutralization 80% Titer	64	(60, 68)
		Day 57	253	Binding Antibody to RBD	3882	(3848, 3917)
				Binding Antibody to Spike	6096	(6064, 6128)
				PsV Neutralization 50% Titer	201	(194, 209)
				PsV Neutralization 80% Titer	223	(208, 239)
	Positive	Day 1	148	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	25	(24, 25)
				PsV Neutralization 80% Titer	22	(22, 22)
		Day 29	148	Binding Antibody to RBD	16900	(14512, 196
				Binding Antibody to Spike	30307	(28649, 320
				PsV Neutralization 50% Titer	88	(85, 91)
				PsV Neutralization 80% Titer	174	(172, 177)
		Day 57	148	Binding Antibody to RBD	759339	(737392, 781
				Binding Antibody to Spike	1536749	(1478612, 15
				PsV Neutralization 50% Titer	1263	(1256, 1269)
				PsV Neutralization 80% Titer	2676	(2533, 2827)
Age ¡ 65 White Non-Hispanic	Negative	Day 1	227	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	21	(21, 22)
		Day 29	227	Binding Antibody to RBD	720	(468, 1109)
				Binding Antibody to Spike	961	(632, 1460)
				PsV Neutralization 50% Titer	51	(45, 58)
				PsV Neutralization 80% Titer	66	(55, 78)
		Day 57	227	Binding Antibody to RBD	5027	(3007, 8404)
				Binding Antibody to Spike	7516	(4267, 13239
				PsV Neutralization 50% Titer	200	(157, 256)
				PsV Neutralization 80% Titer	269	(193, 374)
	Positive	Day 1	117	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)

Table 2.21: Table 3j. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95%
				PsV Neutralization 80% Titer	22	(22
		Day 29	117	Binding Antibody to RBD	16418	(13
				Binding Antibody to Spike	30286	(25
				PsV Neutralization 50% Titer	94	(73
				PsV Neutralization 80% Titer	209	(20
		Day 57	117	Binding Antibody to RBD	929328	(88
				Binding Antibody to Spike	1510748	(12
				PsV Neutralization 50% Titer	1165	(10
				PsV Neutralization 80% Titer	3881	(35
Age ¿= 65 Communities of Color	Negative	Day 1	282	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	282	Binding Antibody to RBD	1136	(11
				Binding Antibody to Spike	1507	(15
				PsV Neutralization 50% Titer	81	(81
				PsV Neutralization 80% Titer	102	(10
		Day 57	282	Binding Antibody to RBD	7509	(75
				Binding Antibody to Spike	10117	(10
				PsV Neutralization 50% Titer	378	(37
				PsV Neutralization 80% Titer	364	(36
	Positive	Day 1	113	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	113	Binding Antibody to RBD	77378	(77
				Binding Antibody to Spike	118160	(11
				PsV Neutralization 50% Titer	318	(31
				PsV Neutralization 80% Titer	607	(60
		Day 57	113	Binding Antibody to RBD	3872288	(38
				Binding Antibody to Spike	6385528	(63
				PsV Neutralization 50% Titer	9473	(94
				PsV Neutralization 80% Titer	12476	(12
Age ¿= 65 White Non-Hispanic	Negative	Day 1	229	Binding Antibody to RBD	17	(17
				Binding Antibody to Spike	17	(17
				PsV Neutralization 50% Titer	24	(24
				PsV Neutralization 80% Titer	22	(22
		Day 29	229	Binding Antibody to RBD	1373	(13
				Binding Antibody to Spike	1899	(18
				PsV Neutralization 50% Titer	94	(94

Table 2.21: Table 3j. Geometric mean titers (GMTs) or geometric mean value of concentrations (GMCs) by Age, Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	GMT/GMC	95% CI
				PsV Neutralization 80% Titer	106	(106, 106)
		Day 57	229	Binding Antibody to RBD	10032	(10032, 100
				Binding Antibody to Spike	14259	(14259, 142
				PsV Neutralization 50% Titer	397	(397, 397)
				PsV Neutralization 80% Titer	443	(443, 443)
	Positive	Day 1	107	Binding Antibody to RBD	17	(17, 17)
				Binding Antibody to Spike	17	(17, 17)
				PsV Neutralization 50% Titer	24	(24, 24)
				PsV Neutralization 80% Titer	22	(21, 22)
		Day 29	107	Binding Antibody to RBD	55615	(55615, 556
				Binding Antibody to Spike	105802	(105802, 10
				PsV Neutralization 50% Titer	221	(221, 221)
				PsV Neutralization 80% Titer	379	(379, 379)
		Day 57	107	Binding Antibody to RBD	2986544	(2986544, 2
				Binding Antibody to Spike	5634914	(5634914, 5
				PsV Neutralization 50% Titer	5121	(5121, 5121
				PsV Neutralization 80% Titer	6556	(6556, 6556

bAb LLOQ = 34; nAb ID50 LLOQ = 49; nAb ID80 LLOQ = 43

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

2.0.4 Table 4. GMTRs or GMCRs between post-vaccinations vs. pre-vaccination

Table 2.22: Table 4a. Geometric mean titer ratios (GMTRs) or geometric mean c ratios (GMCRs) between post-vaccinations/pre-vaccination by All participants

Group	Baseline	Visit	N	Endpoint	G
All participants					
All participants	Negative	D29 fold-rise over D1	1062	Binding Antibody to RBD	55
				Binding Antibody to Spike	74
				PsV Neutralization 50% Titer	24
				PsV Neutralization 80% Titer	35
		D57 fold-rise over D1	1062	Binding Antibody to RBD	39
				Binding Antibody to Spike	59
				PsV Neutralization 50% Titer	10
				PsV Neutralization 80% Titer	12
		D57 fold-rise over D29	1062	Binding Antibody to RBD	22
				Binding Antibody to Spike	24
				PsV Neutralization 50% Titer	10
				PsV Neutralization 80% Titer	9.
	Positive	D29 fold-rise over D1	543	Binding Antibody to RBD	22
				Binding Antibody to Spike	36
				PsV Neutralization 50% Titer	95
				PsV Neutralization 80% Titer	21
		D57 fold-rise over D1	543	Binding Antibody to RBD	12
				Binding Antibody to Spike	22
				PsV Neutralization 50% Titer	16
				PsV Neutralization 80% Titer	36
		D57 fold-rise over D29	543	Binding Antibody to RBD	56
				Binding Antibody to Spike	60
				PsV Neutralization 50% Titer	22
				PsV Neutralization 80% Titer	21

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.23: Table 4b. Geometric mean titer ratios (GMTRs) or geometric mean concentra ratios (GMCRs) between post-vaccinations/pre-vaccination by Age

Group	Baseline	Visit	N	Endpoint	GMTR/GM
Age					
Age ¡ 65	Negative	D29 fold-rise over D1	513	Binding Antibody to RBD	489.15
				Binding Antibody to Spike	653.42
				PsV Neutralization 50% Titer	21.72
				PsV Neutralization 80% Titer	32.82
		D57 fold-rise over D1	513	Binding Antibody to RBD	3487.32
				Binding Antibody to Spike	5191.97
				PsV Neutralization 50% Titer	93.11
				PsV Neutralization 80% Titer	117.31
		D57 fold-rise over D29	513	Binding Antibody to RBD	21.94
				Binding Antibody to Spike	24.05
				PsV Neutralization 50% Titer	10.82
				PsV Neutralization 80% Titer	9.53
	Positive	D29 fold-rise over D1	294	Binding Antibody to RBD	16816.68
				Binding Antibody to Spike	27355.47
				PsV Neutralization 50% Titer	73.25
				PsV Neutralization 80% Titer	179.36
		D57 fold-rise over D1	294	Binding Antibody to RBD	890756.73
				Binding Antibody to Spike	1614779.22
				PsV Neutralization 50% Titer	1106.10
				PsV Neutralization 80% Titer	2879.09
		D57 fold-rise over D29	294	Binding Antibody to RBD	53.78
				Binding Antibody to Spike	56.59
				PsV Neutralization 50% Titer	20.05
				PsV Neutralization 80% Titer	20.99
Age ¿= 65	Negative	D29 fold-rise over D1	549	Binding Antibody to RBD	881.82
				Binding Antibody to Spike	1168.32
				PsV Neutralization 50% Titer	36.61
				PsV Neutralization 80% Titer	47.02
		D57 fold-rise over D1	549	Binding Antibody to RBD	6435.64
				Binding Antibody to Spike	9449.75
				PsV Neutralization 50% Titer	168.66
				PsV Neutralization 80% Titer	183.62
		D57 fold-rise over D29	549	Binding Antibody to RBD	23.54
				Binding Antibody to Spike	25.54
				PsV Neutralization 50% Titer	11.17
				PsV Neutralization 80% Titer	9.80
	Positive	D29 fold-rise over D1	249	Binding Antibody to RBD	66946.13
				Binding Antibody to Spike	114866.92
				PsV Neutralization 50% Titer	282.42
				PsV Neutralization 80% Titer	487.89

Table 2.23: Table 4b. Geometric mean titer ratios (GMTRs) or geometric mean c ratios (GMCRs) between post-vaccinations/pre-vaccination by Age (continued)

Group	Baseline	Visit	N	Endpoint	GM
		D57 fold-rise over D1	249	Binding Antibody to RBD	452
				Binding Antibody to Spike	892
				PsV Neutralization 50% Titer	770
				PsV Neutralization 80% Titer	940
		D57 fold-rise over D29	249	Binding Antibody to RBD	68.
				Binding Antibody to Spike	76.
				PsV Neutralization 50% Titer	33.
				PsV Neutralization 80% Titer	23.

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.24: Table 4c. Geometric mean titer ratios (GMTRs) or geometric mean concentrat ratios (GMCRs) between post-vaccinations/pre-vaccination by Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	GMTR/GM
Risk for Severe Covid-19					
At-risk	Negative	D29 fold-rise over D1	541	Binding Antibody to RBD	609.41
				Binding Antibody to Spike	816.88
				PsV Neutralization 50% Titer	23.96
				PsV Neutralization 80% Titer	35.20
		D57 fold-rise over D1	541	Binding Antibody to RBD	4432.39
				Binding Antibody to Spike	6518.38
				PsV Neutralization 50% Titer	107.58
				PsV Neutralization 80% Titer	141.00
		D57 fold-rise over D29	541	Binding Antibody to RBD	22.86
				Binding Antibody to Spike	23.95
				PsV Neutralization 50% Titer	10.67
				PsV Neutralization 80% Titer	10.45
	Positive	D29 fold-rise over D1	246	Binding Antibody to RBD	26205.91
				Binding Antibody to Spike	42092.31
				PsV Neutralization 50% Titer	113.33
				PsV Neutralization 80% Titer	243.81
		D57 fold-rise over D1	246	Binding Antibody to RBD	1650844.79
				Binding Antibody to Spike	2628330.98
				PsV Neutralization 50% Titer	1986.45
				PsV Neutralization 80% Titer	4134.61
		D57 fold-rise over D29	246	Binding Antibody to RBD	63.68
				Binding Antibody to Spike	60.95
				PsV Neutralization 50% Titer	25.09
				PsV Neutralization 80% Titer	21.63
Not at-risk	Negative	D29 fold-rise over D1	521	Binding Antibody to RBD	536.79
				Binding Antibody to Spike	714.39
				PsV Neutralization 50% Titer	24.45
				PsV Neutralization 80% Titer	35.57
		D57 fold-rise over D1	521	Binding Antibody to RBD	3825.04
				Binding Antibody to Spike	5697.47
				PsV Neutralization 50% Titer	105.24
				PsV Neutralization 80% Titer	125.12
		D57 fold-rise over D29	521	Binding Antibody to RBD	22.07
				Binding Antibody to Spike	24.52
				PsV Neutralization 50% Titer	10.98
				PsV Neutralization 80% Titer	9.29
	Positive	D29 fold-rise over D1	297	Binding Antibody to RBD	20931.32
				Binding Antibody to Spike	34662.99
				PsV Neutralization 50% Titer	90.63
				PsV Neutralization 80% Titer	211.13

Table 2.24: Table 4c. Geometric mean titer ratios (GMTRs) or geometric mean concentr
(GMCRs) between post-vaccinations/pre-vaccination by Risk for Severe Covid-19 (con

Group	Baseline	Visit	N	Endpoint	GM
		D57 fold-rise over D1	297	Binding Antibody to RBD	111
				Binding Antibody to Spike	215
				PsV Neutralization 50% Titer	152
				PsV Neutralization 80% Titer	349
		D57 fold-rise over D29	297	Binding Antibody to RBD	54.
				Binding Antibody to Spike	59.
				PsV Neutralization 50% Titer	21.
				PsV Neutralization 80% Titer	21.

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.25: Table 4d. Geometric mean titer ratios (GMTRs) or geometric mean concentra
ratios (GMCRs) between post-vaccinations/pre-vaccination by Age, Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	GMTR/GM
Age, Risk for Severe Covid-19					
Age ¡ 65 At-risk	Negative	D29 fold-rise over D1	257	Binding Antibody to RBD	451.38
				Binding Antibody to Spike	601.13
				PsV Neutralization 50% Titer	18.48
				PsV Neutralization 80% Titer	28.94
		D57 fold-rise over D1	257	Binding Antibody to RBD	3224.20
				Binding Antibody to Spike	4687.58
				PsV Neutralization 50% Titer	81.00
				PsV Neutralization 80% Titer	108.97
		D57 fold-rise over D29	257	Binding Antibody to RBD	22.59
				Binding Antibody to Spike	23.29
				PsV Neutralization 50% Titer	10.46
				PsV Neutralization 80% Titer	10.25
	Positive	D29 fold-rise over D1	148	Binding Antibody to RBD	16491.48
				Binding Antibody to Spike	27081.18
				PsV Neutralization 50% Titer	78.36
				PsV Neutralization 80% Titer	177.67
		D57 fold-rise over D1	148	Binding Antibody to RBD	924707.07
				Binding Antibody to Spike	1549249.24
				PsV Neutralization 50% Titer	1074.78
				PsV Neutralization 80% Titer	2904.02
		D57 fold-rise over D29	148	Binding Antibody to RBD	56.36
				Binding Antibody to Spike	55.59
				PsV Neutralization 50% Titer	21.02
				PsV Neutralization 80% Titer	20.78
Age ¡ 65 Not at-risk	Negative	D29 fold-rise over D1	256	Binding Antibody to RBD	499.82
				Binding Antibody to Spike	668.22
				PsV Neutralization 50% Titer	22.68
				PsV Neutralization 80% Titer	33.95
		D57 fold-rise over D1	256	Binding Antibody to RBD	3561.57
				Binding Antibody to Spike	5336.44
				PsV Neutralization 50% Titer	96.66
				PsV Neutralization 80% Titer	119.66
		D57 fold-rise over D29	256	Binding Antibody to RBD	21.77
				Binding Antibody to Spike	24.26
				PsV Neutralization 50% Titer	10.92
				PsV Neutralization 80% Titer	9.35
	Positive	D29 fold-rise over D1	146	Binding Antibody to RBD	16900.44
				Binding Antibody to Spike	27425.71
				PsV Neutralization 50% Titer	72.01
				PsV Neutralization 80% Titer	179.80

Table 2.25: Table 4d. Geometric mean titer ratios (GMTRs) or geometric mean concent
(GMCRs) between post-vaccinations/pre-vaccination by Age, Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	GM
		D57 fold-rise over D1	146	Binding Antibody to RBD	882
				Binding Antibody to Spike	163
				PsV Neutralization 50% Titer	111
				PsV Neutralization 80% Titer	287
		D57 fold-rise over D29	146	Binding Antibody to RBD	53.
				Binding Antibody to Spike	56.
				PsV Neutralization 50% Titer	19.
				PsV Neutralization 80% Titer	21.
Age ¿= 65 At-risk	Negative	D29 fold-rise over D1	284	Binding Antibody to RBD	976
				Binding Antibody to Spike	132
				PsV Neutralization 50% Titer	36.
				PsV Neutralization 80% Titer	47.
		D57 fold-rise over D1	284	Binding Antibody to RBD	731
				Binding Antibody to Spike	109
				PsV Neutralization 50% Titer	168
				PsV Neutralization 80% Titer	211
		D57 fold-rise over D29	284	Binding Antibody to RBD	23.
				Binding Antibody to Spike	25.
				PsV Neutralization 50% Titer	11.
				PsV Neutralization 80% Titer	10.
	Positive	D29 fold-rise over D1	98	Binding Antibody to RBD	691
				Binding Antibody to Spike	106
				PsV Neutralization 50% Titer	245
				PsV Neutralization 80% Titer	473
		D57 fold-rise over D1	98	Binding Antibody to RBD	556
				Binding Antibody to Spike	795
				PsV Neutralization 50% Titer	719
				PsV Neutralization 80% Titer	867
		D57 fold-rise over D29	98	Binding Antibody to RBD	82.
				Binding Antibody to Spike	73.
				PsV Neutralization 50% Titer	36.
				PsV Neutralization 80% Titer	23.
Age ¿= 65 Not at-risk	Negative	D29 fold-rise over D1	265	Binding Antibody to RBD	799
				Binding Antibody to Spike	103
				PsV Neutralization 50% Titer	37.
				PsV Neutralization 80% Titer	46.
		D57 fold-rise over D1	265	Binding Antibody to RBD	569
				Binding Antibody to Spike	821
				PsV Neutralization 50% Titer	169
				PsV Neutralization 80% Titer	160
		D57 fold-rise over D29	265	Binding Antibody to RBD	23.
				Binding Antibody to Spike	26.

Table 2.25: Table 4d. Geometric mean titer ratios (GMTRs) or geometric mean concentration ra
(GMCRs) between post-vaccinations/pre-vaccination by Age, Risk for Severe Covid-19 (continu

Group	Baseline	Visit	N	Endpoint	GMTR/GM
				PsV Neutralization 50% Titer	11.33
				PsV Neutralization 80% Titer	8.95
	Positive	D29 fold-rise over D1	151	Binding Antibody to RBD	65536.14
				Binding Antibody to Spike	120936.03
				PsV Neutralization 50% Titer	309.15
				PsV Neutralization 80% Titer	497.58
		D57 fold-rise over D1	151	Binding Antibody to RBD	3951583.83
				Binding Antibody to Spike	9609727.65
				PsV Neutralization 50% Titer	8049.02
				PsV Neutralization 80% Titer	9917.30
		D57 fold-rise over D29	151	Binding Antibody to RBD	61.08
				Binding Antibody to Spike	78.59
				PsV Neutralization 50% Titer	31.68
				PsV Neutralization 80% Titer	24.27

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.26: Table 4e. Geometric mean titer ratios (GMTRs) or geometric mean co ratios (GMCRs) between post-vaccinations/pre-vaccination by Sex

Group	Baseline	Visit	N	Endpoint	GM
Sex					
Female	Negative	D29 fold-rise over D1	597	Binding Antibody to RBD	542
				Binding Antibody to Spike	796
				PsV Neutralization 50% Titer	25.
				PsV Neutralization 80% Titer	35.
		D57 fold-rise over D1	597	Binding Antibody to RBD	422
				Binding Antibody to Spike	633
				PsV Neutralization 50% Titer	107
				PsV Neutralization 80% Titer	137
		D57 fold-rise over D29	597	Binding Antibody to RBD	23.
				Binding Antibody to Spike	24.
				PsV Neutralization 50% Titer	10.
				PsV Neutralization 80% Titer	9.9
	Positive	D29 fold-rise over D1	298	Binding Antibody to RBD	220
				Binding Antibody to Spike	320
				PsV Neutralization 50% Titer	93.
				PsV Neutralization 80% Titer	213
		D57 fold-rise over D1	298	Binding Antibody to RBD	125
				Binding Antibody to Spike	217
				PsV Neutralization 50% Titer	154
				PsV Neutralization 80% Titer	341
		D57 fold-rise over D29	298	Binding Antibody to RBD	58.
				Binding Antibody to Spike	64.
				PsV Neutralization 50% Titer	22.
				PsV Neutralization 80% Titer	20.
Male	Negative	D29 fold-rise over D1	465	Binding Antibody to RBD	572
				Binding Antibody to Spike	675
				PsV Neutralization 50% Titer	23.
				PsV Neutralization 80% Titer	35.
		D57 fold-rise over D1	465	Binding Antibody to RBD	369
				Binding Antibody to Spike	540
				PsV Neutralization 50% Titer	104
				PsV Neutralization 80% Titer	119
		D57 fold-rise over D29	465	Binding Antibody to RBD	20.
				Binding Antibody to Spike	24.
				PsV Neutralization 50% Titer	11.
				PsV Neutralization 80% Titer	9.1
	Positive	D29 fold-rise over D1	245	Binding Antibody to RBD	221
				Binding Antibody to Spike	428
				PsV Neutralization 50% Titer	98.
				PsV Neutralization 80% Titer	225

Table 2.26: Table 4e. Geometric mean titer ratios (GMTRs) or geometric mean concentrat ratios (GMCRs) between post-vaccinations/pre-vaccination by Sex (continued)

Group	Baseline	Visit	N	Endpoint	GMTR/GM
		D57 fold-rise over D1	245	Binding Antibody to RBD	1190973.05
				Binding Antibody to Spike	2392593.05
				PsV Neutralization 50% Titer	1731.20
				PsV Neutralization 80% Titer	3951.26
		D57 fold-rise over D29	245	Binding Antibody to RBD	53.96
				Binding Antibody to Spike	54.33
				PsV Neutralization 50% Titer	21.79
				PsV Neutralization 80% Titer	23.49

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.27: Table 4f. Geometric mean titer ratios (GMTRs) or geometric mean concent
(GMCRs) between post-vaccinations/pre-vaccination by Age, sex

Group	Baseline	Visit	N	Endpoint	GM
Age, sex					
Age ¡ 65 Female	Negative	D29 fold-rise over D1	291	Binding Antibody to RBD	446
				Binding Antibody to Spike	662
				PsV Neutralization 50% Titer	22.
				PsV Neutralization 80% Titer	32.
		D57 fold-rise over D1	291	Binding Antibody to RBD	343
				Binding Antibody to Spike	508
				PsV Neutralization 50% Titer	89.
				PsV Neutralization 80% Titer	120
		D57 fold-rise over D29	291	Binding Antibody to RBD	23.
				Binding Antibody to Spike	23.
				PsV Neutralization 50% Titer	10.
				PsV Neutralization 80% Titer	9.8
	Positive	D29 fold-rise over D1	166	Binding Antibody to RBD	171
				Binding Antibody to Spike	246
				PsV Neutralization 50% Titer	74.
				PsV Neutralization 80% Titer	183
		D57 fold-rise over D1	166	Binding Antibody to RBD	943
				Binding Antibody to Spike	158
				PsV Neutralization 50% Titer	104
				PsV Neutralization 80% Titer	267
		D57 fold-rise over D29	166	Binding Antibody to RBD	56.
				Binding Antibody to Spike	61.
				PsV Neutralization 50% Titer	19.
				PsV Neutralization 80% Titer	18.
Age ¡ 65 Male	Negative	D29 fold-rise over D1	222	Binding Antibody to RBD	550
				Binding Antibody to Spike	641
				PsV Neutralization 50% Titer	21.
				PsV Neutralization 80% Titer	33.
		D57 fold-rise over D1	222	Binding Antibody to RBD	355
				Binding Antibody to Spike	533
				PsV Neutralization 50% Titer	98.
				PsV Neutralization 80% Titer	112
		D57 fold-rise over D29	222	Binding Antibody to RBD	20.
				Binding Antibody to Spike	24.
				PsV Neutralization 50% Titer	11.
				PsV Neutralization 80% Titer	9.2
	Positive	D29 fold-rise over D1	128	Binding Antibody to RBD	163
				Binding Antibody to Spike	315
				PsV Neutralization 50% Titer	71.
				PsV Neutralization 80% Titer	174

Table 2.27: Table 4f. Geometric mean titer ratios (GMTRs) or geometric mean concentration ra
(GMCRs) between post-vaccinations/pre-vaccination by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	GMTR/GM
		D57 fold-rise over D1	128	Binding Antibody to RBD	823023.51
				Binding Antibody to Spike	1656343.31
				PsV Neutralization 50% Titer	1196.91
				PsV Neutralization 80% Titer	3184.76
		D57 fold-rise over D29	128	Binding Antibody to RBD	50.39
				Binding Antibody to Spike	50.69
				PsV Neutralization 50% Titer	20.66
				PsV Neutralization 80% Titer	24.12
Age ¿= 65 Female	Negative	D29 fold-rise over D1	306	Binding Antibody to RBD	1153.43
				Binding Antibody to Spike	1631.88
				PsV Neutralization 50% Titer	41.90
				PsV Neutralization 80% Titer	52.79
		D57 fold-rise over D1	306	Binding Antibody to RBD	9395.49
				Binding Antibody to Spike	14906.94
				PsV Neutralization 50% Titer	216.59
				PsV Neutralization 80% Titer	229.98
		D57 fold-rise over D29	306	Binding Antibody to RBD	25.18
				Binding Antibody to Spike	26.46
				PsV Neutralization 50% Titer	12.04
				PsV Neutralization 80% Titer	10.54
	Positive	D29 fold-rise over D1	132	Binding Antibody to RBD	65617.70
				Binding Antibody to Spike	102214.88
				PsV Neutralization 50% Titer	258.26
				PsV Neutralization 80% Titer	417.22
		D57 fold-rise over D1	132	Binding Antibody to RBD	4439677.78
				Binding Antibody to Spike	8680593.01
				PsV Neutralization 50% Titer	8713.68
				PsV Neutralization 80% Titer	10066.53
		D57 fold-rise over D29	132	Binding Antibody to RBD	68.09
				Binding Antibody to Spike	83.10
				PsV Neutralization 50% Titer	40.98
				PsV Neutralization 80% Titer	26.57
Age ¿= 65 Male	Negative	D29 fold-rise over D1	243	Binding Antibody to RBD	652.29
				Binding Antibody to Spike	802.79
				PsV Neutralization 50% Titer	31.46
				PsV Neutralization 80% Titer	41.29
		D57 fold-rise over D1	243	Binding Antibody to RBD	4207.95
				Binding Antibody to Spike	5664.02
				PsV Neutralization 50% Titer	127.35
				PsV Neutralization 80% Titer	142.60
		D57 fold-rise over D29	243	Binding Antibody to RBD	21.83
				Binding Antibody to Spike	24.55

Table 2.27: Table 4f. Geometric mean titer ratios (GMTRs) or geometric mean concent
(GMCRs) between post-vaccinations/pre-vaccination by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	GM
				PsV Neutralization 50% Titer	10.
				PsV Neutralization 80% Titer	9.0
	Positive	D29 fold-rise over D1	117	Binding Antibody to RBD	684
				Binding Antibody to Spike	131
				PsV Neutralization 50% Titer	312
				PsV Neutralization 80% Titer	583
		D57 fold-rise over D1	117	Binding Antibody to RBD	461
				Binding Antibody to Spike	920
				PsV Neutralization 50% Titer	669
				PsV Neutralization 80% Titer	870
		D57 fold-rise over D29	117	Binding Antibody to RBD	69.
				Binding Antibody to Spike	70.
				PsV Neutralization 50% Titer	26.
				PsV Neutralization 80% Titer	21.

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.28: Table 4g. Geometric mean titer ratios (GMTRs) or geometric mean concentra ratios (GMCRs) between post-vaccinations/pre-vaccination by Hispanic or Latino ethnicity

Group	Baseline	Visit	N	Endpoint	GMTR/GM
Hispanic or Latino ethnicity					
Hispanic or Latino	Negative	D29 fold-rise over D1	125	Binding Antibody to RBD	352.86
				Binding Antibody to Spike	509.78
				PsV Neutralization 50% Titer	18.37
				PsV Neutralization 80% Titer	25.04
		D57 fold-rise over D1	125	Binding Antibody to RBD	2020.32
				Binding Antibody to Spike	3202.02
				PsV Neutralization 50% Titer	79.45
				PsV Neutralization 80% Titer	70.70
		D57 fold-rise over D29	125	Binding Antibody to RBD	19.39
				Binding Antibody to Spike	22.00
				PsV Neutralization 50% Titer	11.51
				PsV Neutralization 80% Titer	8.29
	Positive	D29 fold-rise over D1	77	Binding Antibody to RBD	29174.13
				Binding Antibody to Spike	31003.47
				PsV Neutralization 50% Titer	102.24
				PsV Neutralization 80% Titer	186.60
		D57 fold-rise over D1	77	Binding Antibody to RBD	1880589.79
				Binding Antibody to Spike	2085701.16
				PsV Neutralization 50% Titer	1965.39
				PsV Neutralization 80% Titer	3050.81
		D57 fold-rise over D29	77	Binding Antibody to RBD	62.19
				Binding Antibody to Spike	64.94
				PsV Neutralization 50% Titer	22.23
				PsV Neutralization 80% Titer	22.58
Not Hispanic or Latino	Negative	D29 fold-rise over D1	844	Binding Antibody to RBD	667.83
				Binding Antibody to Spike	876.97
				PsV Neutralization 50% Titer	26.46
				PsV Neutralization 80% Titer	39.31
		D57 fold-rise over D1	844	Binding Antibody to RBD	5172.82
				Binding Antibody to Spike	7417.66
				PsV Neutralization 50% Titer	121.19
				PsV Neutralization 80% Titer	156.84
		D57 fold-rise over D29	844	Binding Antibody to RBD	23.09
				Binding Antibody to Spike	24.62
				PsV Neutralization 50% Titer	11.09
				PsV Neutralization 80% Titer	10.08
	Positive	D29 fold-rise over D1	406	Binding Antibody to RBD	21022.34
				Binding Antibody to Spike	37716.26
				PsV Neutralization 50% Titer	95.46
				PsV Neutralization 80% Titer	222.23

Table 2.28: Table 4g. Geometric mean titer ratios (GMTRs) or geometric mean concent
(GMCRs) between post-vaccinations/pre-vaccination by Hispanic or Latino ethnicity

Group	Baseline	Visit	N	Endpoint	GM
		D57 fold-rise over D1	406	Binding Antibody to RBD	117
				Binding Antibody to Spike	217
				PsV Neutralization 50% Titer	161
				PsV Neutralization 80% Titer	404
		D57 fold-rise over D29	406	Binding Antibody to RBD	56.
				Binding Antibody to Spike	55.
				PsV Neutralization 50% Titer	21.
				PsV Neutralization 80% Titer	22.
Not reported and unknown	Negative	D29 fold-rise over D1	93	Binding Antibody to RBD	228
				Binding Antibody to Spike	313
				PsV Neutralization 50% Titer	17.
				PsV Neutralization 80% Titer	23.
		D57 fold-rise over D1	93	Binding Antibody to RBD	116
				Binding Antibody to Spike	208
				PsV Neutralization 50% Titer	52.
				PsV Neutralization 80% Titer	57.
		D57 fold-rise over D29	93	Binding Antibody to RBD	19.
				Binding Antibody to Spike	25.
				PsV Neutralization 50% Titer	9.0
				PsV Neutralization 80% Titer	7.6
	Positive	D29 fold-rise over D1	60	Binding Antibody to RBD	201
				Binding Antibody to Spike	358
				PsV Neutralization 50% Titer	87.
				PsV Neutralization 80% Titer	249
		D57 fold-rise over D1	60	Binding Antibody to RBD	861
				Binding Antibody to Spike	343
				PsV Neutralization 50% Titer	125
				PsV Neutralization 80% Titer	231
		D57 fold-rise over D29	60	Binding Antibody to RBD	45.
				Binding Antibody to Spike	94.
				PsV Neutralization 50% Titer	24.
				PsV Neutralization 80% Titer	15.

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.29: Table 4h. Geometric mean titer ratios (GMTRs) or geometric mean concentra ratios (GMCRs) between post-vaccinations/pre-vaccination by Race

Group	Baseline	Visit	N	Endpoint	GMTR/GM
Race					
Not reported and unknown	Negative	D29 fold-rise over D1	98	Binding Antibody to RBD	421.00
				Binding Antibody to Spike	613.97
				PsV Neutralization 50% Titer	20.05
				PsV Neutralization 80% Titer	36.46
		D57 fold-rise over D1	98	Binding Antibody to RBD	3012.94
				Binding Antibody to Spike	3788.43
				PsV Neutralization 50% Titer	96.94
				PsV Neutralization 80% Titer	127.96
		D57 fold-rise over D29	98	Binding Antibody to RBD	22.86
				Binding Antibody to Spike	19.90
				PsV Neutralization 50% Titer	12.06
				PsV Neutralization 80% Titer	10.42
	Positive	D29 fold-rise over D1	48	Binding Antibody to RBD	27507.44
				Binding Antibody to Spike	41982.38
				PsV Neutralization 50% Titer	115.25
				PsV Neutralization 80% Titer	262.75
		D57 fold-rise over D1	48	Binding Antibody to RBD	1644385.58
				Binding Antibody to Spike	2148611.41
				PsV Neutralization 50% Titer	3182.34
				PsV Neutralization 80% Titer	2980.20
		D57 fold-rise over D29	48	Binding Antibody to RBD	56.59
				Binding Antibody to Spike	51.93
				PsV Neutralization 50% Titer	27.13
				PsV Neutralization 80% Titer	18.66
American Indian or Alaska Native	Negative	D29 fold-rise over D1	27	Binding Antibody to RBD	386.89
				Binding Antibody to Spike	713.05
				PsV Neutralization 50% Titer	22.72
				PsV Neutralization 80% Titer	29.97
		D57 fold-rise over D1	27	Binding Antibody to RBD	3014.32
				Binding Antibody to Spike	4981.13
				PsV Neutralization 50% Titer	122.32
				PsV Neutralization 80% Titer	132.15
		D57 fold-rise over D29	27	Binding Antibody to RBD	25.44
				Binding Antibody to Spike	20.82
				PsV Neutralization 50% Titer	13.03
				PsV Neutralization 80% Titer	10.69
	Positive	D29 fold-rise over D1	17	Binding Antibody to RBD	21904.15
				Binding Antibody to Spike	41435.07
				PsV Neutralization 50% Titer	90.91

Table 2.29: Table 4h. Geometric mean titer ratios (GMTRs) or geometric mean c ratios (GMCRs) between post-vaccinations/pre-vaccination by Race (continued)

Group	Baseline	Visit	N	Endpoint	GM
				PsV Neutralization 80% Titer	182
		D57 fold-rise over D1	17	Binding Antibody to RBD	589
				Binding Antibody to Spike	360
				PsV Neutralization 50% Titer	224
				PsV Neutralization 80% Titer	447
		D57 fold-rise over D29	17	Binding Antibody to RBD	29.
				Binding Antibody to Spike	88.
				PsV Neutralization 50% Titer	27.
				PsV Neutralization 80% Titer	21.
Asian	Negative	D29 fold-rise over D1	84	Binding Antibody to RBD	861
				Binding Antibody to Spike	120
				PsV Neutralization 50% Titer	30.
				PsV Neutralization 80% Titer	50.
		D57 fold-rise over D1	84	Binding Antibody to RBD	609
				Binding Antibody to Spike	130
				PsV Neutralization 50% Titer	201
				PsV Neutralization 80% Titer	210
		D57 fold-rise over D29	84	Binding Antibody to RBD	19.
				Binding Antibody to Spike	28.
				PsV Neutralization 50% Titer	16.
				PsV Neutralization 80% Titer	9.7
	Positive	D29 fold-rise over D1	46	Binding Antibody to RBD	140
				Binding Antibody to Spike	357
				PsV Neutralization 50% Titer	52.
				PsV Neutralization 80% Titer	167
		D57 fold-rise over D1	46	Binding Antibody to RBD	685
				Binding Antibody to Spike	194
				PsV Neutralization 50% Titer	114
				PsV Neutralization 80% Titer	265
		D57 fold-rise over D29	46	Binding Antibody to RBD	49.
				Binding Antibody to Spike	53.
				PsV Neutralization 50% Titer	23.
				PsV Neutralization 80% Titer	20.
Black or African American	Negative	D29 fold-rise over D1	216	Binding Antibody to RBD	544
				Binding Antibody to Spike	706
				PsV Neutralization 50% Titer	24.
				PsV Neutralization 80% Titer	30.
		D57 fold-rise over D1	216	Binding Antibody to RBD	412
				Binding Antibody to Spike	587
				PsV Neutralization 50% Titer	101
				PsV Neutralization 80% Titer	115
		D57 fold-rise over D29	216	Binding Antibody to RBD	23.

Table 2.29: Table 4h. Geometric mean titer ratios (GMTRs) or geometric mean concentra ratios (GMCRs) between post-vaccinations/pre-vaccination by Race (continued)

Group	Baseline	Visit	N	Endpoint	GMTR/GM
				Binding Antibody to Spike	25.12
				PsV Neutralization 50% Titer	10.60
				PsV Neutralization 80% Titer	9.51
	Positive	D29 fold-rise over D1	91	Binding Antibody to RBD	22493.30
				Binding Antibody to Spike	29535.35
				PsV Neutralization 50% Titer	81.14
				PsV Neutralization 80% Titer	281.79
		D57 fold-rise over D1	91	Binding Antibody to RBD	1131288.91
				Binding Antibody to Spike	1683482.75
				PsV Neutralization 50% Titer	1372.25
				PsV Neutralization 80% Titer	4096.94
		D57 fold-rise over D29	91	Binding Antibody to RBD	48.41
				Binding Antibody to Spike	52.28
				PsV Neutralization 50% Titer	23.39
				PsV Neutralization 80% Titer	17.99
Multiracial	Negative	D29 fold-rise over D1	62	Binding Antibody to RBD	157.76
				Binding Antibody to Spike	212.67
				PsV Neutralization 50% Titer	14.32
				PsV Neutralization 80% Titer	19.83
		D57 fold-rise over D1	62	Binding Antibody to RBD	684.26
				Binding Antibody to Spike	988.34
				PsV Neutralization 50% Titer	41.69
				PsV Neutralization 80% Titer	39.35
		D57 fold-rise over D29	62	Binding Antibody to RBD	18.52
				Binding Antibody to Spike	19.77
				PsV Neutralization 50% Titer	9.80
				PsV Neutralization 80% Titer	7.01
	Positive	D29 fold-rise over D1	28	Binding Antibody to RBD	43692.65
				Binding Antibody to Spike	34705.72
				PsV Neutralization 50% Titer	142.97
				PsV Neutralization 80% Titer	294.77
		D57 fold-rise over D1	28	Binding Antibody to RBD	3321276.27
				Binding Antibody to Spike	3028697.60
				PsV Neutralization 50% Titer	1683.56
				PsV Neutralization 80% Titer	6969.92
		D57 fold-rise over D29	28	Binding Antibody to RBD	74.45
				Binding Antibody to Spike	80.20
				PsV Neutralization 50% Titer	19.06
				PsV Neutralization 80% Titer	27.17
Native Hawaiian or Other Pacific Islander	Negative	D29 fold-rise over D1	20	Binding Antibody to RBD	1944.56
				Binding Antibody to Spike	2287.99

Table 2.29: Table 4h. Geometric mean titer ratios (GMTRs) or geometric mean c ratios (GMCRs) between post-vaccinations/pre-vaccination by Race (continued)

Group	Baseline	Visit	N	Endpoint	GM
				PsV Neutralization 50% Titer	43.
				PsV Neutralization 80% Titer	79.
		D57 fold-rise over D1	20	Binding Antibody to RBD	193
				Binding Antibody to Spike	351
				PsV Neutralization 50% Titer	324
				PsV Neutralization 80% Titer	425
		D57 fold-rise over D29	20	Binding Antibody to RBD	23.
				Binding Antibody to Spike	33.
				PsV Neutralization 50% Titer	12.
				PsV Neutralization 80% Titer	12.
	Positive	D29 fold-rise over D1	7	Binding Antibody to RBD	478
				Binding Antibody to Spike	532
				PsV Neutralization 50% Titer	95.
				PsV Neutralization 80% Titer	249
		D57 fold-rise over D1	7	Binding Antibody to RBD	253
				Binding Antibody to Spike	190
				PsV Neutralization 50% Titer	775
				PsV Neutralization 80% Titer	155
		D57 fold-rise over D29	7	Binding Antibody to RBD	51.
				Binding Antibody to Spike	28.
				PsV Neutralization 50% Titer	13.
				PsV Neutralization 80% Titer	59.
Other	Negative	D29 fold-rise over D1	28	Binding Antibody to RBD	562
				Binding Antibody to Spike	762
				PsV Neutralization 50% Titer	60.
				PsV Neutralization 80% Titer	55.
		D57 fold-rise over D1	28	Binding Antibody to RBD	995
				Binding Antibody to Spike	232
				PsV Neutralization 50% Titer	538
				PsV Neutralization 80% Titer	305
		D57 fold-rise over D29	28	Binding Antibody to RBD	30.
				Binding Antibody to Spike	47.
				PsV Neutralization 50% Titer	14.
				PsV Neutralization 80% Titer	11.
	Positive	D29 fold-rise over D1	24	Binding Antibody to RBD	288
				Binding Antibody to Spike	315
				PsV Neutralization 50% Titer	108
				PsV Neutralization 80% Titer	98.
		D57 fold-rise over D1	24	Binding Antibody to RBD	137
				Binding Antibody to Spike	202
				PsV Neutralization 50% Titer	227
				PsV Neutralization 80% Titer	178

Table 2.29: Table 4h. Geometric mean titer ratios (GMTRs) or geometric mean concentra ratios (GMCRs) between post-vaccinations/pre-vaccination by Race (continued)

Group	Baseline	Visit	N	Endpoint	GMTR/GM
		D57 fold-rise over D29	24	Binding Antibody to RBD	46.49
				Binding Antibody to Spike	59.15
				PsV Neutralization 50% Titer	27.85
				PsV Neutralization 80% Titer	27.42
White	Negative	D29 fold-rise over D1	43	Binding Antibody to RBD	295.10
				Binding Antibody to Spike	476.61
				PsV Neutralization 50% Titer	20.62
				PsV Neutralization 80% Titer	36.21
		D57 fold-rise over D1	43	Binding Antibody to RBD	2118.26
				Binding Antibody to Spike	4228.05
				PsV Neutralization 50% Titer	57.67
				PsV Neutralization 80% Titer	81.91
		D57 fold-rise over D29	43	Binding Antibody to RBD	24.10
				Binding Antibody to Spike	30.04
				PsV Neutralization 50% Titer	8.44
				PsV Neutralization 80% Titer	6.82
	Positive	D29 fold-rise over D1	38	Binding Antibody to RBD	22744.80
				Binding Antibody to Spike	41650.95
				PsV Neutralization 50% Titer	127.07
				PsV Neutralization 80% Titer	268.34
		D57 fold-rise over D1	38	Binding Antibody to RBD	1032251.91
				Binding Antibody to Spike	4232833.71
				PsV Neutralization 50% Titer	1403.07
				PsV Neutralization 80% Titer	2613.51
		D57 fold-rise over D29	38	Binding Antibody to RBD	47.76
				Binding Antibody to Spike	98.94
				PsV Neutralization 50% Titer	21.70
				PsV Neutralization 80% Titer	17.41
White Non-Hispanic	Negative	D29 fold-rise over D1	456	Binding Antibody to RBD	662.84
				Binding Antibody to Spike	836.46
				PsV Neutralization 50% Titer	26.16
				PsV Neutralization 80% Titer	38.69
		D57 fold-rise over D1	456	Binding Antibody to RBD	4836.36
				Binding Antibody to Spike	6806.21
				PsV Neutralization 50% Titer	112.20
				PsV Neutralization 80% Titer	153.89
		D57 fold-rise over D29	456	Binding Antibody to RBD	22.31
				Binding Antibody to Spike	24.46
				PsV Neutralization 50% Titer	10.34
				PsV Neutralization 80% Titer	10.05
	Positive	D29 fold-rise over D1	224	Binding Antibody to RBD	18243.12
				Binding Antibody to Spike	36804.59

Table 2.29: Table 4h. Geometric mean titer ratios (GMTRs) or geometric mean c ratios (GMCRs) between post-vaccinations/pre-vaccination by Race (continued)

Group	Baseline	Visit	N	Endpoint	GM
				PsV Neutralization 50% Titer	96.
				PsV Neutralization 80% Titer	201
		D57 fold-rise over D1	224	Binding Antibody to RBD	111
				Binding Antibody to Spike	211
				PsV Neutralization 50% Titer	157
				PsV Neutralization 80% Titer	384
		D57 fold-rise over D29	224	Binding Antibody to RBD	66.
				Binding Antibody to Spike	56.
				PsV Neutralization 50% Titer	21.
				PsV Neutralization 80% Titer	23.

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.30: Table 4i. Geometric mean titer ratios (GMTRs) or geometric mean concentration ra
(GMCRs) between post-vaccinations/pre-vaccination by Race and ethnic group

Group	Baseline	Visit	N	Endpoint	GMTR/GM
Race and ethnic group					
White Non-Hispanic	Negative	D29 fold-rise over D1	456	Binding Antibody to RBD	662.84
				Binding Antibody to Spike	836.46
				PsV Neutralization 50% Titer	26.16
				PsV Neutralization 80% Titer	38.69
		D57 fold-rise over D1	456	Binding Antibody to RBD	4836.36
				Binding Antibody to Spike	6806.21
				PsV Neutralization 50% Titer	112.20
				PsV Neutralization 80% Titer	153.89
		D57 fold-rise over D29	456	Binding Antibody to RBD	22.31
				Binding Antibody to Spike	24.46
				PsV Neutralization 50% Titer	10.34
				PsV Neutralization 80% Titer	10.05
	Positive	D29 fold-rise over D1	224	Binding Antibody to RBD	18243.12
				Binding Antibody to Spike	36804.59
				PsV Neutralization 50% Titer	96.37
				PsV Neutralization 80% Titer	201.23
		D57 fold-rise over D1	224	Binding Antibody to RBD	1119992.35
				Binding Antibody to Spike	2116938.10
				PsV Neutralization 50% Titer	1573.83
				PsV Neutralization 80% Titer	3847.47
		D57 fold-rise over D29	224	Binding Antibody to RBD	66.01
				Binding Antibody to Spike	56.23
				PsV Neutralization 50% Titer	21.36
				PsV Neutralization 80% Titer	23.51
Communities of Color	Negative	D29 fold-rise over D1	535	Binding Antibody to RBD	504.80
				Binding Antibody to Spike	691.42
				PsV Neutralization 50% Titer	23.29
				PsV Neutralization 80% Titer	33.32
		D57 fold-rise over D1	535	Binding Antibody to RBD	3570.14
				Binding Antibody to Spike	5444.02
				PsV Neutralization 50% Titer	106.96
				PsV Neutralization 80% Titer	117.71
		D57 fold-rise over D29	535	Binding Antibody to RBD	22.15
				Binding Antibody to Spike	24.04
				PsV Neutralization 50% Titer	11.69
				PsV Neutralization 80% Titer	9.45
	Positive	D29 fold-rise over D1	261	Binding Antibody to RBD	24128.55
				Binding Antibody to Spike	34415.59
				PsV Neutralization 50% Titer	88.91
				PsV Neutralization 80% Titer	218.94

Table 2.30: Table 4i. Geometric mean titer ratios (GMTRs) or geometric mean concentr
(GMCRs) between post-vaccinations/pre-vaccination by Race and ethnic group (contin

Group	Baseline	Visit	N	Endpoint	GM
		D57 fold-rise over D1	261	Binding Antibody to RBD	124
				Binding Antibody to Spike	208
				PsV Neutralization 50% Titer	169
				PsV Neutralization 80% Titer	359
		D57 fold-rise over D29	261	Binding Antibody to RBD	50.
				Binding Antibody to Spike	57.
				PsV Neutralization 50% Titer	23.
				PsV Neutralization 80% Titer	21.

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.31: Table 4j. Geometric mean titer ratios (GMTRs) or geometric mean concentration ra
(GMCRs) between post-vaccinations/pre-vaccination by Age, Race and ethnic group

Group	Baseline	Visit	N	Endpoint	GMTR/GM
Age, Race and ethnic group					
Age ¡ 65 Communities of Color	Negative	D29 fold-rise over D1	253	Binding Antibody to RBD	435.92
				Binding Antibody to Spike	601.64
				PsV Neutralization 50% Titer	20.72
				PsV Neutralization 80% Titer	30.50
		D57 fold-rise over D1	253	Binding Antibody to RBD	3046.19
				Binding Antibody to Spike	4761.87
				PsV Neutralization 50% Titer	93.53
				PsV Neutralization 80% Titer	106.44
		D57 fold-rise over D29	253	Binding Antibody to RBD	21.78
				Binding Antibody to Spike	23.93
				PsV Neutralization 50% Titer	11.63
				PsV Neutralization 80% Titer	9.42
	Positive	D29 fold-rise over D1	148	Binding Antibody to RBD	18550.34
				Binding Antibody to Spike	27128.41
				PsV Neutralization 50% Titer	65.48
				PsV Neutralization 80% Titer	174.38
		D57 fold-rise over D1	148	Binding Antibody to RBD	910274.90
				Binding Antibody to Spike	1540863.96
				PsV Neutralization 50% Titer	1132.24
				PsV Neutralization 80% Titer	2732.08
		D57 fold-rise over D29	148	Binding Antibody to RBD	47.81
				Binding Antibody to Spike	53.58
				PsV Neutralization 50% Titer	21.76
				PsV Neutralization 80% Titer	20.27
Age ¡ 65 White Non-Hispanic	Negative	D29 fold-rise over D1	227	Binding Antibody to RBD	587.13
				Binding Antibody to Spike	726.40
				PsV Neutralization 50% Titer	23.26
				PsV Neutralization 80% Titer	35.78
		D57 fold-rise over D1	227	Binding Antibody to RBD	4187.86
				Binding Antibody to Spike	5792.05
				PsV Neutralization 50% Titer	98.69
				PsV Neutralization 80% Titer	138.51
		D57 fold-rise over D29	227	Binding Antibody to RBD	21.61
				Binding Antibody to Spike	23.88
				PsV Neutralization 50% Titer	10.29
				PsV Neutralization 80% Titer	9.94
	Positive	D29 fold-rise over D1	117	Binding Antibody to RBD	13504.88
				Binding Antibody to Spike	26368.53
				PsV Neutralization 50% Titer	76.43

Table 2.31: Table 4j. Geometric mean titer ratios (GMTRs) or geometric mean concent
(GMCRs) between post-vaccinations/pre-vaccination by Age, Race and ethnic group

Group	Baseline	Visit	N	Endpoint	GM
				PsV Neutralization 80% Titer	168
		D57 fold-rise over D1	117	Binding Antibody to RBD	807
				Binding Antibody to Spike	142
				PsV Neutralization 50% Titer	110
				PsV Neutralization 80% Titer	330
		D57 fold-rise over D29	117	Binding Antibody to RBD	64.
				Binding Antibody to Spike	52.
				PsV Neutralization 50% Titer	19.
				PsV Neutralization 80% Titer	24.
Age ¿= 65 Communities of Color	Negative	D29 fold-rise over D1	282	Binding Antibody to RBD	839
				Binding Antibody to Spike	112
				PsV Neutralization 50% Titer	34.
				PsV Neutralization 80% Titer	45.
		D57 fold-rise over D1	282	Binding Antibody to RBD	619
				Binding Antibody to Spike	866
				PsV Neutralization 50% Titer	170
				PsV Neutralization 80% Titer	166
		D57 fold-rise over D29	282	Binding Antibody to RBD	23.
				Binding Antibody to Spike	24.
				PsV Neutralization 50% Titer	11.
				PsV Neutralization 80% Titer	9.5
	Positive	D29 fold-rise over D1	113	Binding Antibody to RBD	797
				Binding Antibody to Spike	101
				PsV Neutralization 50% Titer	357
				PsV Neutralization 80% Titer	616
		D57 fold-rise over D1	113	Binding Antibody to RBD	519
				Binding Antibody to Spike	818
				PsV Neutralization 50% Titer	104
				PsV Neutralization 80% Titer	126
		D57 fold-rise over D29	113	Binding Antibody to RBD	65.
				Binding Antibody to Spike	78.
				PsV Neutralization 50% Titer	35.
				PsV Neutralization 80% Titer	25.
Age ¿= 65 White Non-Hispanic	Negative	D29 fold-rise over D1	229	Binding Antibody to RBD	107
				Binding Antibody to Spike	146
				PsV Neutralization 50% Titer	41.
				PsV Neutralization 80% Titer	52.
		D57 fold-rise over D1	229	Binding Antibody to RBD	855
				Binding Antibody to Spike	128
				PsV Neutralization 50% Titer	186

Table 2.31: Table 4j. Geometric mean titer ratios (GMTRs) or geometric mean concentration ra
(GMCRs) between post-vaccinations/pre-vaccination by Age, Race and ethnic group (continue

Group	Baseline	Visit	N	Endpoint	GMTR/GM
				PsV Neutralization 80% Titer	233.58
		D57 fold-rise over D29	229	Binding Antibody to RBD	25.28
				Binding Antibody to Spike	26.88
				PsV Neutralization 50% Titer	10.58
				PsV Neutralization 80% Titer	10.46
	Positive	D29 fold-rise over D1	107	Binding Antibody to RBD	54235.32
				Binding Antibody to Spike	123185.22
				PsV Neutralization 50% Titer	223.15
				PsV Neutralization 80% Titer	386.42
		D57 fold-rise over D1	107	Binding Antibody to RBD	3665429.27
				Binding Antibody to Spike	8778206.78
				PsV Neutralization 50% Titer	5720.88
				PsV Neutralization 80% Titer	6641.17
		D57 fold-rise over D29	107	Binding Antibody to RBD	70.34
				Binding Antibody to Spike	71.33
				PsV Neutralization 50% Titer	31.34
				PsV Neutralization 80% Titer	21.00

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

2.0.5 Table 5. Ratios of GMTs/GMCs between the vaccine arm vs. placebo arm, by baseline status

Table 2.32: Table 5. Ratios of GMTs/GMCs between the vaccine arm vs. placebo arm, by baseline status

Baseline	Visit	N	Endpoint	Ratios of GMT/GMC	95% CI
All participants					
Negative	Day 29	1062	Binding Antibody to RBD	0.00	(0.00, 0.00)
			Binding Antibody to Spike	0.00	(0.00, 0.00)
			PsV Neutralization 50% Titer	0.20	(0.17, 0.23)
			PsV Neutralization 80% Titer	0.10	(0.08, 0.11)
	Day 57	1062	Binding Antibody to RBD	0.00	(0.00, 0.00)
			Binding Antibody to Spike	0.00	(0.00, 0.00)
			PsV Neutralization 50% Titer	0.01	(0.01, 0.02)
			PsV Neutralization 80% Titer	0.01	(0.01, 0.01)
Positive	Day 29	543	Binding Antibody to RBD	0.30	(0.23, 0.40)
			Binding Antibody to Spike	0.23	(0.18, 0.28)
			PsV Neutralization 50% Titer	0.38	(0.29, 0.49)
			PsV Neutralization 80% Titer	0.46	(0.35, 0.61)
	Day 57	543	Binding Antibody to RBD	0.17	(0.13, 0.22)
			Binding Antibody to Spike	0.12	(0.10, 0.15)
			PsV Neutralization 50% Titer	0.12	(0.08, 0.17)
			PsV Neutralization 80% Titer	0.24	(0.17, 0.35)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strata.

2.0.6 Table 6. Ratios of GMTs/GMCs between baseline positive participants vs. negative participants, among the vaccinees

Table 2.33: Table 6. Ratios of GMTs/GMCs between baseline positive participants vs. negative participants, among the vaccine recipients

Visit	N	Endpoint	Ratios of GMT/GMC	95% CI
All participants				
Day 29	1180	Binding Antibody to RBD	1.66	(1.21, 2.28)
		Binding Antibody to Spike	1.76	(1.35, 2.31)

Table 2.33: Table 6. Ratios of GMTs/GMCs between baseline positive participants vs. negative participants, among the vaccine recipients (continued)

Visit	N	Endpoint	Ratios of GMT/GMC	95% CI
		PsV Neutralization 50% Titer	1.47	(1.09, 1.98)
		PsV Neutralization 80% Titer	1.50	(1.08, 2.09)
Day 57	1180	Binding Antibody to RBD	2.55	(1.83, 3.54)
		Binding Antibody to Spike	2.50	(1.90, 3.30)
		PsV Neutralization 50% Titer	2.61	(1.71, 4.00)
		PsV Neutralization 80% Titer	2.67	(1.78, 4.00)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strata.

2.0.7 Table 7. Ratios of GMTs/GMCs between demographic subgroups among the vaccine recipients

Table 2.34: Table 7. Ratios of GMTs/GMCs between demographic subgroups among the vaccine recipients

Baseline	Visit	Endpoint	N	Ratios of GMT/GMC	95% CI
Age					
Negative	Day 29	Binding Antibody to RBD	847	0.78	(0.63, 0.97)
		Binding Antibody to Spike		0.85	(0.70, 1.03)
		PsV Neutralization 50% Titer		0.94	(0.76, 1.16)
		PsV Neutralization 80% Titer		1.01	(0.80, 1.28)
		Binding Antibody to RBD	907	4.09	(3.20, 5.23)
				1.18	(0.95, 1.47)
				0.89	(0.70, 1.13)
				1.09	(0.76, 1.56)
		Binding Antibody to Spike		3.80	(3.09, 4.67)
				0.93	(0.78, 1.13)
				0.90	(0.73, 1.11)
				1.02	(0.75, 1.39)
		PsV Neutralization 50% Titer		2.91	(2.30, 3.69)
				1.08	(0.88, 1.32)
				0.92	(0.74, 1.16)
				1.15	(0.82, 1.62)
Sex					

Table 2.34: Table 7. Ratios of GMTs/GMCs between demographic subgroups among the vaccine recipients (continued)

Baseline	Visit	Endpoint	N	Ratios of GMT/GMC	95% CI
		PsV Neutralization 80% Titer		2.56	(1.96, 3.34)
				1.09	(0.87, 1.37)
				1.03	(0.80, 1.33)
				1.12	(0.77, 1.63)
	Day 57	Binding Antibody to RBD	847	0.81	(0.64, 1.02)
		Binding Antibody to Spike		0.86	(0.71, 1.05)
		PsV Neutralization 50% Titer		1.13	(0.84, 1.52)
		PsV Neutralization 80% Titer		0.80	(0.61, 1.06)
		Binding Antibody to RBD	907	4.00	(3.09, 5.18)
				0.90	(0.72, 1.13)
				0.87	(0.68, 1.12)
				1.10	(0.76, 1.61)
		Binding Antibody to Spike		3.37	(2.71, 4.20)
				0.98	(0.81, 1.19)
				0.98	(0.79, 1.21)
				1.01	(0.74, 1.39)
		PsV Neutralization 50% Titer		3.89	(2.76, 5.47)
				1.26	(0.95, 1.69)
				0.96	(0.69, 1.32)
				0.98	(0.60, 1.59)
		PsV Neutralization 80% Titer		2.84	(2.05, 3.94)
				0.97	(0.74, 1.28)
				0.97	(0.71, 1.31)
				1.78	(1.13, 2.80)
Positive	Day 29	Binding Antibody to RBD	241	1.00	(0.65, 1.53)
		Binding Antibody to Spike		1.05	(0.75, 1.46)
		PsV Neutralization 50% Titer		1.10	(0.71, 1.71)
		PsV Neutralization 80% Titer		1.21	(0.76, 1.91)
		Binding Antibody to RBD	273	3.62	(2.25, 5.80)
				0.99	(0.66, 1.47)
				0.97	(0.61, 1.53)
				0.85	(0.49, 1.47)
		Binding Antibody to Spike		3.76	(2.62, 5.40)
				1.12	(0.82, 1.54)
				0.84	(0.58, 1.21)
				1.05	(0.68, 1.62)
		PsV Neutralization 50% Titer		3.15	(1.92, 5.15)
				0.94	(0.62, 1.41)
				0.78	(0.49, 1.25)
				0.96	(0.55, 1.68)
		PsV Neutralization 80% Titer		2.96	(1.77, 4.94)
				0.96	(0.63, 1.47)

Table 2.34: Table 7. Ratios of GMTs/GMCs between demographic subgroups among the vaccine recipients (continued)

Baseline	Visit	Endpoint	N	Ratios of GMT/GMC	95% CI
				0.88	(0.54, 1.43)
				1.08	(0.61, 1.94)
	Day 57	Binding Antibody to RBD	241	0.97	(0.64, 1.48)
		Binding Antibody to Spike		1.14	(0.84, 1.56)
		PsV Neutralization 50% Titer		1.24	(0.71, 2.18)
		PsV Neutralization 80% Titer		0.67	(0.38, 1.20)
		Binding Antibody to RBD	273	3.31	(2.08, 5.26)
				0.95	(0.64, 1.40)
				0.88	(0.56, 1.37)
				0.56	(0.33, 0.94)
		Binding Antibody to Spike		2.82	(2.02, 3.93)
				1.05	(0.79, 1.40)
				1.03	(0.74, 1.42)
				0.80	(0.54, 1.17)
		PsV Neutralization 50% Titer		5.60	(2.91, 10.76)
				1.00	(0.58, 1.74)
				0.97	(0.52, 1.83)
				0.83	(0.39, 1.77)
		PsV Neutralization 80% Titer		4.09	(2.08, 8.03)
				0.89	(0.51, 1.56)
				0.80	(0.42, 1.51)
				1.12	(0.52, 2.41)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strata.

2.0.8 Table 8. Differences of responder rates between the vaccine arm and the placebo arm

Table 2.35: Table 8a. Differences of responder rates between the vaccine arm and the placebo by All participants

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
All participants	Negative	Day 29	1062	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0%	100.0

Table 2.35: Table 8a. Differences of responder rates between the vaccine arm and the
by All participants (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
					(100.0%, 100.0%)
				PsV Neutralization 50% Titer	65.8%
					(61.7%, 69.9%)
				PsV Neutralization 80% Titer	79.8%
					(76.4%, 83.3%)
		Day 57	1062	Binding Antibody to RBD	100.0%
					(100.0%, 100.0%)
				Binding Antibody to Spike	100.0%
					(100.0%, 100.0%)
				PsV Neutralization 50% Titer	95.4%
					(93.6%, 97.2%)
				PsV Neutralization 80% Titer	97.3%
					(95.9%, 98.7%)
	Positive	Day 29	543	Binding Antibody to RBD	-0.0%
					(-0.0%, -0.0%)
				Binding Antibody to Spike	-0.0%
					(-0.0%, -0.0%)
				PsV Neutralization 50% Titer	24.6%
					(16.8%, 32.4%)
				PsV Neutralization 80% Titer	7.7%
					(1.3%, 14.1%)
		Day 57	543	Binding Antibody to RBD	-0.0%
					(-0.0%, -0.0%)
				Binding Antibody to Spike	-0.0%
					(-0.0%, -0.0%)
				PsV Neutralization 50% Titer	12.5%
					(7.6%, 17.4%)
				PsV Neutralization 80% Titer	1.6%
					(-0.7%, 3.9%)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.36: Table 8b. Differences of responder rates between the vaccine arm and the placebo
by Age

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
Age ¡ 65	Negative	Day 29	513	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	61.1% (55.0%, 67.2%)	46.1% (39.9%
				PsV Neutralization 80% Titer	76.7% (71.4%, 81.9%)	65.3% (59.4%
		Day 57	513	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	95.1% (92.4%, 97.8%)	88.4% (84.4%
				PsV Neutralization 80% Titer	96.9% (94.7%, 99.1%)	93.5% (90.5%
	Positive	Day 29	294	Binding Antibody to RBD	-0.0% (-0.0%, -0.0%)	0.3% (-0.6%
				Binding Antibody to Spike	-0.0% (-0.0%, -0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	26.5% (15.7%, 37.4%)	20.0% (9.0%,
				PsV Neutralization 80% Titer	7.0% (-2.1%, 16.1%)	13.0% (2.1%,
		Day 57	294	Binding Antibody to RBD	-0.0% (-0.0%, -0.0%)	-0.0% (-0.0%
				Binding Antibody to Spike	-0.0% (-0.0%, -0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	15.0% (7.9%, 22.2%)	20.6% (12.5%
				PsV Neutralization 80% Titer	1.3% (-1.9%, 4.5%)	4.8% (-0.1%
Age ¿= 65	Negative	Day 29	549	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	83.4% (79.0%, 87.8%)	72.6% (67.3%

Table 2.36: Table 8b. Differences of responder rates between the vaccine arm and the
by Age (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
				PsV Neutralization 80% Titer	91.6% (88.3%, 94.9%)
		Day 57	549	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	96.7% (94.6%, 98.9%)
				PsV Neutralization 80% Titer	98.9% (97.7%, 100.2%)
	Positive	Day 29	249	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	16.3% (7.2%, 25.4%)
				PsV Neutralization 80% Titer	10.6% (3.3%, 17.9%)
		Day 57	249	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	2.1% (-1.8%, 6.1%)
				PsV Neutralization 80% Titer	2.9% (-0.0%, 5.8%)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.37: Table 8c. Differences of responder rates between the vaccine arm and the placebo
by Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
At-risk	Negative	Day 29	541	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	65.2% (59.4%, 71.1%)	51.1% (45.0%
				PsV Neutralization 80% Titer	78.7% (73.7%, 83.7%)	67.1% (61.4%
		Day 57	541	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	93.7% (90.7%, 96.7%)	89.6% (85.9%
				PsV Neutralization 80% Titer	97.4% (95.5%, 99.3%)	94.4% (91.6%
	Positive	Day 29	246	Binding Antibody to RBD	0.0% (0.0%, 0.0%)	0.9% (-0.7%
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				PsV Neutralization 50% Titer	21.5% (10.2%, 32.8%)	21.6% (9.3%,
				PsV Neutralization 80% Titer	14.3% (4.0%, 24.5%)	18.3% (7.1%,
		Day 57	246	Binding Antibody to RBD	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				PsV Neutralization 50% Titer	8.1% (1.4%, 14.7%)	10.5% (2.3%,
				PsV Neutralization 80% Titer	3.0% (-0.8%, 6.8%)	4.6% (0.3%,
Not at-risk	Negative	Day 29	521	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	66.0% (60.2%, 71.9%)	52.0% (45.8%

Table 2.37: Table 8c. Differences of responder rates between the vaccine arm and the
by Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
				PsV Neutralization 80% Titer	80.3% (75.4%, 85.2%)
		Day 57	521	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	96.1% (93.7%, 98.5%)
				PsV Neutralization 80% Titer	97.3% (95.3%, 99.3%)
	Positive	Day 29	297	Binding Antibody to RBD	-0.0% (-0.0%, -0.0%)
				Binding Antibody to Spike	-0.0% (-0.0%, -0.0%)
				PsV Neutralization 50% Titer	25.4% (14.7%, 36.0%)
				PsV Neutralization 80% Titer	5.8% (-2.6%, 14.3%)
		Day 57	297	Binding Antibody to RBD	-0.0% (-0.0%, -0.0%)
				Binding Antibody to Spike	-0.0% (-0.0%, -0.0%)
				PsV Neutralization 50% Titer	13.8% (7.1%, 20.6%)
				PsV Neutralization 80% Titer	1.2% (-1.8%, 4.2%)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.38: Table 8d. Differences of responder rates between the vaccine arm and the placebo
by Age, Risk for Severe Covid-19

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
Age ¡ 65 At-risk	Negative	Day 29	257	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	55.8% (47.0%, 64.6%)	40.2% (31.5%
				PsV Neutralization 80% Titer	72.5% (64.6%, 80.4%)	60.2% (51.5%
		Day 57	257	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	92.3% (87.6%, 97.0%)	86.7% (80.7%
				PsV Neutralization 80% Titer	95.7% (92.1%, 99.3%)	91.9% (87.1%
	Positive	Day 29	148	Binding Antibody to RBD	0.0% (0.0%, 0.0%)	1.3% (-1.2%
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				PsV Neutralization 50% Titer	21.9% (6.6%, 37.3%)	18.8% (2.9%,
				PsV Neutralization 80% Titer	10.1% (-3.9%, 24.2%)	13.9% (-1.5%
		Day 57	148	Binding Antibody to RBD	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				PsV Neutralization 50% Titer	10.6% (1.4%, 19.7%)	11.8% (0.8%,
				PsV Neutralization 80% Titer	1.3% (-3.2%, 5.8%)	2.6% (-2.5%
Age ¡ 65 Not at-risk	Negative	Day 29	256	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	62.5% (53.9%, 71.1%)	47.7% (38.8%

Table 2.38: Table 8d. Differences of responder rates between the vaccine arm and the
by Age, Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
				PsV Neutralization 80% Titer	77.8% (70.4%, 85.1%)
		Day 57	256	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	95.8% (92.3%, 99.4%)
				PsV Neutralization 80% Titer	97.2% (94.3%, 100.1%)
	Positive	Day 29	146	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	27.6% (12.2%, 43.1%)
				PsV Neutralization 80% Titer	6.3% (-6.3%, 19.0%)
		Day 57	146	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	16.1% (5.8%, 26.5%)
				PsV Neutralization 80% Titer	1.3% (-3.3%, 5.9%)
Age ¿= 65 At-risk	Negative	Day 29	284	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	79.7% (72.9%, 86.6%)
				PsV Neutralization 80% Titer	88.2% (82.8%, 93.7%)
		Day 57	284	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)

Table 2.38: Table 8d. Differences of responder rates between the vaccine arm and the placebo
by Age, Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
				PsV Neutralization 50% Titer	95.7% (92.3%, 99.2%)	94.1% (90.0%
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)	98.3% (96.1%
	Positive	Day 29	98	Binding Antibody to RBD	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				PsV Neutralization 50% Titer	20.4% (5.5%, 35.2%)	27.4% (8.8%,
				PsV Neutralization 80% Titer	22.9% (9.5%, 36.2%)	27.3% (13.5%
		Day 57	98	Binding Antibody to RBD	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				PsV Neutralization 50% Titer	2.9% (-6.0%, 11.7%)	7.6% (-3.9%
				PsV Neutralization 80% Titer	6.7% (-0.1%, 13.5%)	8.9% (1.1%,
Age ¿= 65 Not at-risk	Negative	Day 29	265	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	87.3% (81.7%, 92.9%)	77.6% (70.6%
				PsV Neutralization 80% Titer	95.2% (91.6%, 98.8%)	84.6% (78.6%
		Day 57	265	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	97.8% (95.3%, 100.3%)	97.4% (94.7%
				PsV Neutralization 80% Titer	97.8% (95.3%, 100.3%)	97.8% (95.3%
	Positive	Day 29	151	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				Binding Antibody to Spike	0.0%	0.0%

Table 2.38: Table 8d. Differences of responder rates between the vaccine arm and the
by Age, Risk for Severe Covid-19 (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
					(-0.0%, 0.0%)
				PsV Neutralization 50% Titer	13.8% (2.2%, 25.4%)
				PsV Neutralization 80% Titer	3.2% (-4.9%, 11.4%)
		Day 57	151	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	1.9% (-1.2%, 5.1%)
				PsV Neutralization 80% Titer	0.6% (-1.2%, 2.4%)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.39: Table 8e. Differences of responder rates between the vaccine arm and the placebo
by Sex

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
Female	Negative	Day 29	597	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	65.7% (60.1%, 71.2%)	52.0% (46.2%
				PsV Neutralization 80% Titer	78.8% (74.1%, 83.6%)	68.3% (62.9%
		Day 57	597	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	95.0% (92.5%, 97.5%)	91.1% (87.8%
				PsV Neutralization 80% Titer	98.4% (97.0%, 99.9%)	94.7% (92.2%
	Positive	Day 29	298	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)	0.3% (-0.6%
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	21.4% (10.6%, 32.2%)	21.3% (10.2%
				PsV Neutralization 80% Titer	2.0% (-6.7%, 10.6%)	13.4% (2.8%,
		Day 57	298	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	15.0% (8.1%, 21.8%)	19.0% (11.1%
				PsV Neutralization 80% Titer	3.8% (0.4%, 7.2%)	6.7% (1.6%,
Male	Negative	Day 29	465	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	66.1% (59.9%, 72.2%)	51.4% (44.9%

Table 2.39: Table 8e. Differences of responder rates between the vaccine arm and the
by Sex (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
				PsV Neutralization 80% Titer	81.1% (76.1%, 86.2%)
		Day 57	465	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	96.0% (93.5%, 98.6%)
				PsV Neutralization 80% Titer	95.9% (93.3%, 98.5%)
	Positive	Day 29	245	Binding Antibody to RBD	0.0% (0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)
				PsV Neutralization 50% Titer	28.3% (17.1%, 39.6%)
				PsV Neutralization 80% Titer	15.4% (5.9%, 25.0%)
		Day 57	245	Binding Antibody to RBD	0.0% (0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)
				PsV Neutralization 50% Titer	9.1% (2.1%, 16.0%)
				PsV Neutralization 80% Titer	-1.4% (-4.2%, 1.5%)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.40: Table 8f. Differences of responder rates between the vaccine arm and the placebo
by Age, sex

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
Age ¡ 65 Female	Negative	Day 29	291	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	61.1% (53.0%, 69.2%)	46.6% (38.3%
				PsV Neutralization 80% Titer	75.0% (67.8%, 82.1%)	65.2% (57.3%
		Day 57	291	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	94.5% (90.7%, 98.3%)	89.8% (84.8%
				PsV Neutralization 80% Titer	98.3% (96.2%, 100.5%)	93.8% (89.9%
	Positive	Day 29	166	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)	0.4% (-1.0%
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				PsV Neutralization 50% Titer	20.9% (6.0%, 35.7%)	19.4% (4.7%,
				PsV Neutralization 80% Titer	-1.9% (-13.8%, 10.1%)	10.0% (-4.7%
		Day 57	166	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				PsV Neutralization 50% Titer	17.1% (7.4%, 26.9%)	21.1% (9.9%,
				PsV Neutralization 80% Titer	3.9% (-0.9%, 8.7%)	7.2% (-0.1%
Age ¡ 65 Male	Negative	Day 29	222	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	61.0% (51.7%, 70.4%)	45.5% (36.0%

Table 2.40: Table 8f. Differences of responder rates between the vaccine arm and the by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
				PsV Neutralization 80% Titer	78.8% (71.0%, 86.6%)
		Day 57	222	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	95.9% (92.1%, 99.7%)
				PsV Neutralization 80% Titer	95.1% (90.9%, 99.2%)
	Positive	Day 29	128	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	33.7% (17.8%, 49.6%)
				PsV Neutralization 80% Titer	19.6% (5.7%, 33.5%)
		Day 57	128	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	11.9% (1.5%, 22.3%)
				PsV Neutralization 80% Titer	-2.4% (-6.4%, 1.6%)
Age ¿= 65 Female	Negative	Day 29	306	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	82.4% (76.1%, 88.7%)
				PsV Neutralization 80% Titer	93.1% (89.0%, 97.3%)
		Day 57	306	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)

Table 2.40: Table 8f. Differences of responder rates between the vaccine arm and the placebo
by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
				PsV Neutralization 50% Titer	96.9% (94.0%, 99.8%)	95.7% (92.4%
				PsV Neutralization 80% Titer	98.9% (97.1%, 100.6%)	98.1% (95.8%
	Positive	Day 29	132	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				PsV Neutralization 50% Titer	18.6% (5.7%, 31.5%)	24.4% (8.7%,
				PsV Neutralization 80% Titer	17.5% (6.6%, 28.4%)	24.4% (12.3%
		Day 57	132	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				PsV Neutralization 50% Titer	3.6% (-2.3%, 9.5%)	6.9% (-0.1%
				PsV Neutralization 80% Titer	3.3% (-0.8%, 7.5%)	3.3% (-0.8%
Age ¿= 65 Male	Negative	Day 29	243	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0%
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0%
				PsV Neutralization 50% Titer	84.7% (78.4%, 90.9%)	73.3% (65.6%
				PsV Neutralization 80% Titer	89.7% (84.4%, 95.0%)	82.8% (76.3%
		Day 57	243	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0%
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0%
				PsV Neutralization 50% Titer	96.6% (93.4%, 99.7%)	95.6% (92.0%
				PsV Neutralization 80% Titer	99.0% (97.3%, 100.7%)	98.0% (95.6%
	Positive	Day 29	117	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				Binding Antibody to Spike	0.0%	0.0%

Table 2.40: Table 8f. Differences of responder rates between the vaccine arm and the
by Age, sex (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
					(-0.0%, 0.0%)
				PsV Neutralization 50% Titer	14.2% (1.2%, 27.2%)
				PsV Neutralization 80% Titer	3.6% (-5.9%, 13.1%)
		Day 57	117	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	0.6% (-4.7%, 5.9%)
				PsV Neutralization 80% Titer	2.4% (-1.6%, 6.5%)

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampl

Table 2.41: Table 8g. Differences of responder rates between the vaccine arm and the placebo
by Hispanic or Latino ethnicity

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
Hispanic or Latino	Negative	Day 29	125	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	56.2% (44.2%, 68.2%)	44.8% (32.8%
				PsV Neutralization 80% Titer	80.3% (70.6%, 89.9%)	69.3% (58.2%
		Day 57	125	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	97.8% (94.3%, 101.4%)	90.5% (83.4%
				PsV Neutralization 80% Titer	92.2% (85.7%, 98.7%)	90.6% (83.5%
	Positive	Day 29	77	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	34.8% (14.2%, 55.4%)	36.5% (15.5%
				PsV Neutralization 80% Titer	10.1% (-7.4%, 27.7%)	25.4% (4.3%,
		Day 57	77	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	10.8% (-3.0%, 24.7%)	12.0% (-2.1%
				PsV Neutralization 80% Titer	-3.5% (-12.0%, 5.0%)	1.7% (-9.3%
Not Hispanic or Latino	Negative	Day 29	844	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	66.8% (62.1%, 71.5%)	51.5% (46.5%

Table 2.41: Table 8g. Differences of responder rates between the vaccine arm and the by Hispanic or Latino ethnicity (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
				PsV Neutralization 80% Titer	80.2% (76.2%, 84.1%)
		Day 57	844	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	95.0% (92.9%, 97.2%)
				PsV Neutralization 80% Titer	97.7% (96.2%, 99.2%)
	Positive	Day 29	406	Binding Antibody to RBD	0.0% (0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)
				PsV Neutralization 50% Titer	23.5% (14.5%, 32.6%)
				PsV Neutralization 80% Titer	8.5% (0.8%, 16.2%)
		Day 57	406	Binding Antibody to RBD	0.0% (0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)
				PsV Neutralization 50% Titer	11.7% (6.4%, 16.9%)
				PsV Neutralization 80% Titer	1.7% (-0.4%, 3.7%)
Not reported and unknown	Negative	Day 29	93	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	67.6% (55.0%, 80.3%)
				PsV Neutralization 80% Titer	76.3% (64.8%, 87.7%)
		Day 57	93	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)

Table 2.41: Table 8g. Differences of responder rates between the vaccine arm and the placebo
by Hispanic or Latino ethnicity (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
				PsV Neutralization 50% Titer	96.6% (91.7%, 101.5%)	91.4% (83.9%
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)	93.4% (86.7%
	Positive	Day 29	60	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				PsV Neutralization 50% Titer	15.5% (-9.1%, 40.2%)	29.1% (5.1%,
				PsV Neutralization 80% Titer	-1.0% (-11.9%, 9.9%)	-7.5% (-27.3%
		Day 57	60	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
				PsV Neutralization 50% Titer	20.6% (1.4%, 39.9%)	40.2% (19.5%
				PsV Neutralization 80% Titer	9.0% (-1.4%, 19.3%)	17.2% (3.6%,

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.42: Table 8h. Differences of responder rates between the vaccine arm and the
by Race

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
Not reported and unknown	Negative	Day 29	98	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	63.8% (50.3%, 77.3%)
				PsV Neutralization 80% Titer	78.0% (66.4%, 89.6%)
		Day 57	98	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	97.9% (93.9%, 101.9%)
				PsV Neutralization 80% Titer	99.1% (96.4%, 101.8%)
	Positive	Day 29	48	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	38.0% (12.4%, 63.6%)
				PsV Neutralization 80% Titer	23.1% (1.8%, 44.4%)
		Day 57	48	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	-4.6% (-13.5%, 4.3%)
				PsV Neutralization 80% Titer	-0.0% (-0.0%, 0.0%)
American Indian or Alaska Native	Negative	Day 29	27	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	62.8%

Table 2.42: Table 8h. Differences of responder rates between the vaccine arm and the placebo
by Race (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
					(36.1%, 89.4%)	(21.9%
				PsV Neutralization 80% Titer	75.8%	51.5%
					(52.1%, 99.4%)	(24.0%
		Day 57	27	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	98.2%	98.2%
					(90.9%, 105.5%)	(90.9%
				PsV Neutralization 80% Titer	98.2%	98.2%
					(90.9%, 105.5%)	(90.9%
	Positive	Day 29	17	Binding Antibody to RBD	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				Binding Antibody to Spike	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				PsV Neutralization 50% Titer	61.7%	23.3%
					(31.2%, 92.2%)	(-28.1%
				PsV Neutralization 80% Titer	12.0%	28.4%
					(-18.9%, 42.9%)	(-20.5%
		Day 57	17	Binding Antibody to RBD	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				Binding Antibody to Spike	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				PsV Neutralization 50% Titer	8.8%	8.8%
					(-9.0%, 26.5%)	(-9.0%
				PsV Neutralization 80% Titer	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
Asian	Negative	Day 29	84	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				PsV Neutralization 50% Titer	65.5%	45.7%
					(49.5%, 81.5%)	(28.9%
				PsV Neutralization 80% Titer	89.1%	69.3%
					(78.5%, 99.6%)	(53.8%
		Day 57	84	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0
				Binding Antibody to Spike	100.0%	100.0%

Table 2.42: Table 8h. Differences of responder rates between the vaccine arm and the by Race (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
					(100.0%, 100.0%)
				PsV Neutralization 50% Titer	98.3% (93.9%, 102.7%)
				PsV Neutralization 80% Titer	98.4% (94.2%, 102.6%)
	Positive	Day 29	46	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	-23.2% (-51.8%, 5.5%)
				PsV Neutralization 80% Titer	-20.6% (-46.2%, 5.1%)
		Day 57	46	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	15.3% (-5.9%, 36.5%)
				PsV Neutralization 80% Titer	-9.0% (-21.7%, 3.7%)
Black or African American	Negative	Day 29	216	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	63.9% (54.7%, 73.1%)
				PsV Neutralization 80% Titer	76.7% (68.6%, 84.9%)
		Day 57	216	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	89.6% (83.7%, 95.5%)
				PsV Neutralization 80% Titer	96.2% (92.5%, 99.9%)
	Positive	Day 29	91	Binding Antibody to RBD	0.0%

Table 2.42: Table 8h. Differences of responder rates between the vaccine arm and the placebo
by Race (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
					(0.0%, 0.0%)	(0.0%,
				Binding Antibody to Spike	0.0%	0.0%
					(0.0%, 0.0%)	(0.0%,
				PsV Neutralization 50% Titer	28.8%	9.5%
					(8.9%, 48.8%)	(-11.0%
				PsV Neutralization 80% Titer	20.7%	19.7%
					(4.8%, 36.6%)	(0.1%,
		Day 57	91	Binding Antibody to RBD	0.0%	0.0%
					(0.0%, 0.0%)	(0.0%,
				Binding Antibody to Spike	0.0%	0.0%
					(0.0%, 0.0%)	(0.0%,
				PsV Neutralization 50% Titer	8.8%	18.0%
					(-1.6%, 19.2%)	(4.0%,
				PsV Neutralization 80% Titer	2.3%	2.3%
					(-2.5%, 7.1%)	(-2.5%
Multiracial	Negative	Day 29	62	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	47.8%	33.7%
					(31.9%, 63.8%)	(18.6%
				PsV Neutralization 80% Titer	77.0%	67.0%
					(63.6%, 90.4%)	(52.1%
		Day 57	62	Binding Antibody to RBD	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	100.0%	86.7%
					(100.0%, 100.0%)	(75.9%
				PsV Neutralization 80% Titer	100.0%	97.2%
					(100.0%, 100.0%)	(91.8%
	Positive	Day 29	28	Binding Antibody to RBD	0.0%	0.0%
					(0.0%, 0.0%)	(0.0%,
				Binding Antibody to Spike	0.0%	0.0%
					(0.0%, 0.0%)	(0.0%,
				PsV Neutralization 50% Titer	24.7%	33.9%
					(-9.4%, 58.9%)	(-3.2%
				PsV Neutralization 80% Titer	18.9%	49.2%

Table 2.42: Table 8h. Differences of responder rates between the vaccine arm and the by Race (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
					(-4.3%, 42.1%)
		Day 57	28	Binding Antibody to RBD	0.0% (0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)
				PsV Neutralization 50% Titer	35.8% (12.1%, 59.5%)
				PsV Neutralization 80% Titer	0.0% (0.0%, 0.0%)
Native Hawaiian or Other Pacific Islander	Negative	Day 29	20	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	69.0% (32.4%, 105.7%)
				PsV Neutralization 80% Titer	92.6% (71.8%, 113.3%)
		Day 57	20	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	100.0% (100.0%, 100.0%)
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)
	Positive	Day 29	7	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	11.6% (-43.7%, 66.8%)
				PsV Neutralization 80% Titer	0.0% (-0.0%, 0.0%)
		Day 57	7	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	14.7%

Table 2.42: Table 8h. Differences of responder rates between the vaccine arm and the placebo
by Race (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
					(-46.5%, 75.8%)	(-46.5%
				PsV Neutralization 80% Titer	0.0% (-0.0%, 0.0%)	0.0% (-0.0%
Other	Negative	Day 29	28	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0%
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0%
				PsV Neutralization 50% Titer	74.2% (36.8%, 111.7%)	65.2% (24.4%
				PsV Neutralization 80% Titer	67.4% (27.2%, 107.5%)	64.1% (23.0%
		Day 57	28	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0%
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0%
				PsV Neutralization 50% Titer	96.7% (81.4%, 112.0%)	96.7% (81.4%
				PsV Neutralization 80% Titer	84.6% (53.8%, 115.5%)	84.6% (53.8%
	Positive	Day 29	24	Binding Antibody to RBD	-0.0% (-0.0%, -0.0%)	-0.0% (-0.0%
				Binding Antibody to Spike	-0.0% (-0.0%, -0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	59.9% (26.8%, 93.1%)	56.4% (24.1%
				PsV Neutralization 80% Titer	4.0% (-27.4%, 35.4%)	51.5% (16.1%
		Day 57	24	Binding Antibody to RBD	-0.0% (-0.0%, -0.0%)	-0.0% (-0.0%
				Binding Antibody to Spike	-0.0% (-0.0%, -0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	-11.5% (-35.6%, 12.6%)	-7.9% (-34.2%
				PsV Neutralization 80% Titer	-0.0% (-0.0%, -0.0%)	15.5% (-5.6%
White	Negative	Day 29	43	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0%
				Binding Antibody to Spike	100.0%	100.0%

Table 2.42: Table 8h. Differences of responder rates between the vaccine arm and the by Race (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
					(100.0%, 100.0%)
				PsV Neutralization 50% Titer	74.8% (56.5%, 93.0%)
				PsV Neutralization 80% Titer	82.4% (66.4%, 98.4%)
		Day 57	43	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	92.2% (80.9%, 103.5%)
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)
	Positive	Day 29	38	Binding Antibody to RBD	0.0% (0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)
				PsV Neutralization 50% Titer	2.8% (-27.8%, 33.4%)
				PsV Neutralization 80% Titer	-0.8% (-13.4%, 11.7%)
		Day 57	38	Binding Antibody to RBD	0.0% (0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)
				PsV Neutralization 50% Titer	22.5% (-3.6%, 48.5%)
				PsV Neutralization 80% Titer	14.1% (-1.1%, 29.3%)
White Non-Hispanic	Negative	Day 29	456	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	68.9% (62.7%, 75.0%)
				PsV Neutralization 80% Titer	80.7% (75.4%, 86.0%)
		Day 57	456	Binding Antibody to RBD	100.0%

Table 2.42: Table 8h. Differences of responder rates between the vaccine arm and the placebo
by Race (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
					(100.0%, 100.0%)	(100.0%
				Binding Antibody to Spike	100.0%	100.0%
					(100.0%, 100.0%)	(100.0%
				PsV Neutralization 50% Titer	96.6%	92.4%
					(94.1%, 99.0%)	(88.9%
				PsV Neutralization 80% Titer	98.2%	95.2%
					(96.4%, 99.9%)	(92.4%
	Positive	Day 29	224	Binding Antibody to RBD	-0.0%	0.5%
					(-0.0%, -0.0%)	(-0.8%
				Binding Antibody to Spike	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				PsV Neutralization 50% Titer	23.5%	11.2%
					(11.3%, 35.6%)	(-1.9%
				PsV Neutralization 80% Titer	7.4%	12.3%
					(-3.1%, 17.9%)	(0.3%,
		Day 57	224	Binding Antibody to RBD	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				Binding Antibody to Spike	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				PsV Neutralization 50% Titer	14.7%	17.3%
					(7.7%, 21.6%)	(8.7%,
				PsV Neutralization 80% Titer	2.5%	1.6%
					(-1.0%, 6.1%)	(-3.3%

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.43: Table 8i. Differences of responder rates between the vaccine arm and the
by Race and ethnic group

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
White Non-Hispanic	Negative	Day 29	456	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	68.9% (62.7%, 75.0%)
				PsV Neutralization 80% Titer	80.7% (75.4%, 86.0%)
		Day 57	456	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	96.6% (94.1%, 99.0%)
				PsV Neutralization 80% Titer	98.2% (96.4%, 99.9%)
	Positive	Day 29	224	Binding Antibody to RBD	-0.0% (-0.0%, -0.0%)
				Binding Antibody to Spike	-0.0% (-0.0%, -0.0%)
				PsV Neutralization 50% Titer	23.5% (11.3%, 35.6%)
				PsV Neutralization 80% Titer	7.4% (-3.1%, 17.9%)
		Day 57	224	Binding Antibody to RBD	-0.0% (-0.0%, -0.0%)
				Binding Antibody to Spike	-0.0% (-0.0%, -0.0%)
				PsV Neutralization 50% Titer	14.7% (7.7%, 21.6%)
				PsV Neutralization 80% Titer	2.5% (-1.0%, 6.1%)
Communities of Color	Negative	Day 29	535	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	63.0% (57.1%, 68.9%)

Table 2.43: Table 8i. Differences of responder rates between the vaccine arm and the placebo
by Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
				PsV Neutralization 80% Titer	79.1% (74.2%, 84.0%)	66.7% (61.0%
		Day 57	535	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	94.8% (92.1%, 97.5%)	88.7% (84.9%
				PsV Neutralization 80% Titer	97.2% (95.2%, 99.2%)	94.7% (92.0%
	Positive	Day 29	261	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	26.0% (14.6%, 37.4%)	25.8% (14.2%
				PsV Neutralization 80% Titer	10.3% (1.0%, 19.6%)	18.0% (6.6%,
		Day 57	261	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)	-0.0% (-0.0%
				PsV Neutralization 50% Titer	8.1% (1.3%, 14.9%)	13.9% (6.0%,
				PsV Neutralization 80% Titer	-0.9% (-3.7%, 1.9%)	6.2% (1.1%,

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat

Table 2.44: Table 8j. Differences of responder rates between the vaccine arm and the
by Age, Race and ethnic group

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
Age ¡ 65 Communities of Color	Negative	Day 29	253	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	57.7% (49.0%, 66.5%)
				PsV Neutralization 80% Titer	75.2% (67.5%, 82.9%)
		Day 57	253	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	94.1% (89.9%, 98.3%)
				PsV Neutralization 80% Titer	97.0% (93.9%, 100.0%)
	Positive	Day 29	148	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	28.2% (12.8%, 43.7%)
				PsV Neutralization 80% Titer	11.5% (-1.6%, 24.5%)
		Day 57	148	Binding Antibody to RBD	0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	10.2% (0.4%, 20.0%)
				PsV Neutralization 80% Titer	-1.6% (-5.4%, 2.1%)
Age ¡ 65 White Non-Hispanic	Negative	Day 29	227	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	64.6% (55.6%, 73.7%)

Table 2.44: Table 8j. Differences of responder rates between the vaccine arm and the placebo
by Age, Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
				PsV Neutralization 80% Titer	78.4% (70.6%, 86.2%)	67.4% (58.5%
		Day 57	227	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	96.6% (93.1%, 100.0%)	91.4% (86.1%
				PsV Neutralization 80% Titer	97.7% (94.8%, 100.5%)	94.0% (89.5%
	Positive	Day 29	117	Binding Antibody to RBD	0.0% (0.0%, 0.0%)	0.7% (-1.4%
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				PsV Neutralization 50% Titer	25.5% (8.3%, 42.7%)	8.3% (-9.8%
				PsV Neutralization 80% Titer	3.8% (-11.3%, 18.8%)	8.7% (-8.4%
		Day 57	117	Binding Antibody to RBD	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				Binding Antibody to Spike	0.0% (0.0%, 0.0%)	0.0% (0.0%,
				PsV Neutralization 50% Titer	18.0% (7.7%, 28.3%)	21.2% (8.8%,
				PsV Neutralization 80% Titer	2.7% (-2.5%, 7.9%)	0.5% (-6.6%
Age ¿= 65 Communities of Color	Negative	Day 29	282	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)	100.0% (100.0
				PsV Neutralization 50% Titer	81.7% (75.3%, 88.1%)	71.2% (63.7%
				PsV Neutralization 80% Titer	92.9% (88.7%, 97.2%)	80.5% (73.9%
		Day 57	282	Binding Antibody to RBD	100.0% (100.0%, 100.0%)	100.0% (100.0
				Binding Antibody to Spike	100.0%	100.0%

Table 2.44: Table 8j. Differences of responder rates between the vaccine arm and the by Age, Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise
					(100.0%, 100.0%)
				PsV Neutralization 50% Titer	97.1% (94.3%, 99.9%)
				PsV Neutralization 80% Titer	97.9% (95.6%, 100.3%)
	Positive	Day 29	113	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	17.6% (5.4%, 29.9%)
				PsV Neutralization 80% Titer	6.1% (-1.8%, 14.0%)
		Day 57	113	Binding Antibody to RBD	-0.0% (-0.0%, 0.0%)
				Binding Antibody to Spike	-0.0% (-0.0%, 0.0%)
				PsV Neutralization 50% Titer	-1.0% (-5.2%, 3.2%)
				PsV Neutralization 80% Titer	2.6% (-1.6%, 6.8%)
Age ¿= 65 White Non-Hispanic	Negative	Day 29	229	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	85.7% (79.0%, 92.3%)
				PsV Neutralization 80% Titer	89.8% (84.1%, 95.5%)
		Day 57	229	Binding Antibody to RBD	100.0% (100.0%, 100.0%)
				Binding Antibody to Spike	100.0% (100.0%, 100.0%)
				PsV Neutralization 50% Titer	96.4% (92.9%, 99.9%)
				PsV Neutralization 80% Titer	100.0% (100.0%, 100.0%)
	Positive	Day 29	107	Binding Antibody to RBD	-0.0%

Table 2.44: Table 8j. Differences of responder rates between the vaccine arm and the placebo
by Age, Race and ethnic group (continued)

Group	Baseline	Visit	N	Endpoint	2-Fold Rise	4-Fold
					(-0.0%, -0.0%)	(-0.0%
				Binding Antibody to Spike	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				PsV Neutralization 50% Titer	15.0%	20.3%
					(0.0%, 29.9%)	(2.3%,
				PsV Neutralization 80% Titer	20.1%	24.4%
					(7.0%, 33.2%)	(9.6%,
		Day 57	107	Binding Antibody to RBD	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				Binding Antibody to Spike	-0.0%	-0.0%
					(-0.0%, -0.0%)	(-0.0%
				PsV Neutralization 50% Titer	2.1%	2.5%
					(-4.2%, 8.4%)	(-7.0%
				PsV Neutralization 80% Titer	2.0%	5.9%
					(-1.7%, 5.6%)	(-0.3%

All calculations were weighted by the inverse probability sampling (IPS), defined based on the subcohort sampling strat