

Age-Stratified Seroprevalence of SARS-CoV-2 Antibodies before and during the Vaccination Era, Japan, February 2020–March 2022

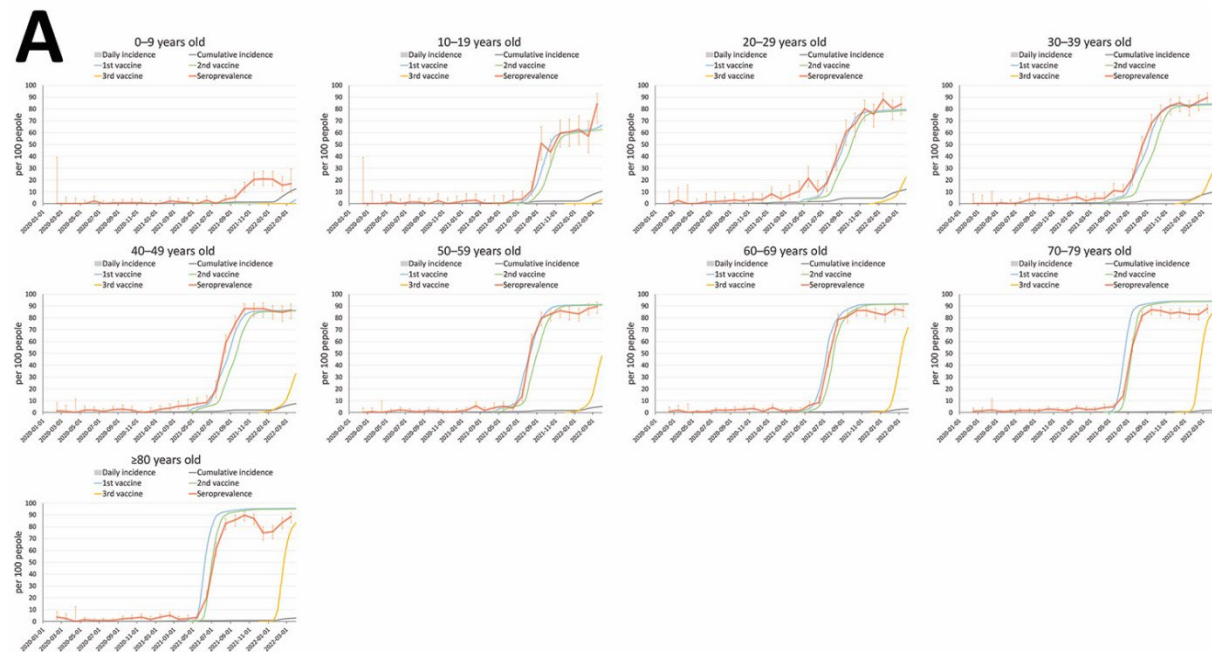
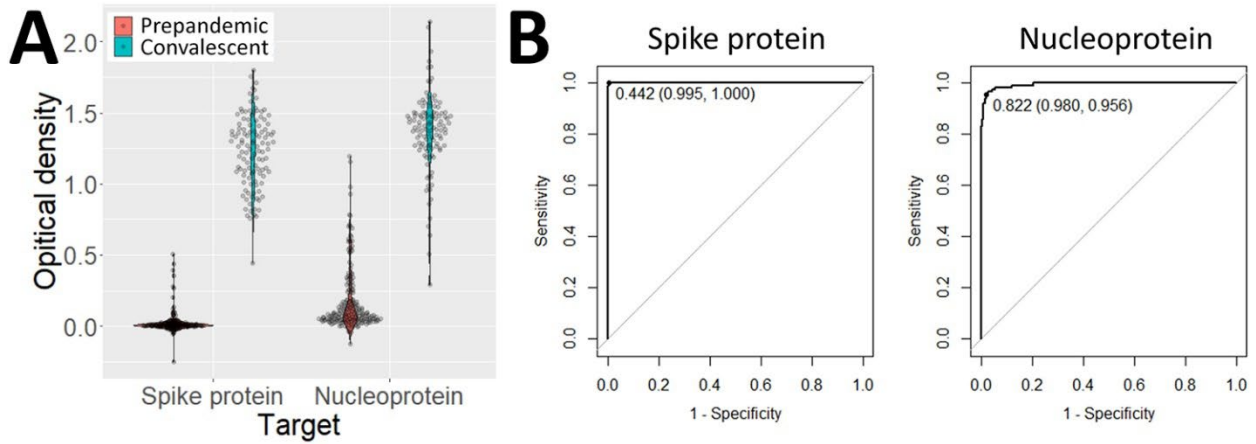
Appendix

Appendix Table 1. Number of samples analyzed in the Tokyo Metropolitan Area

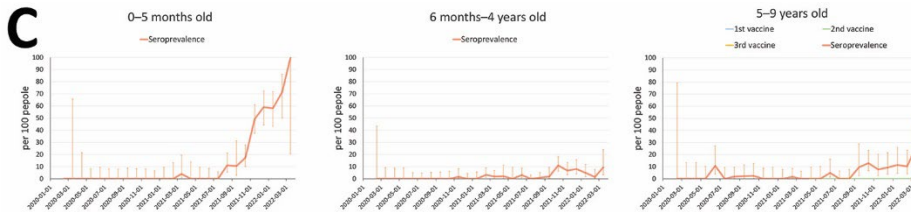
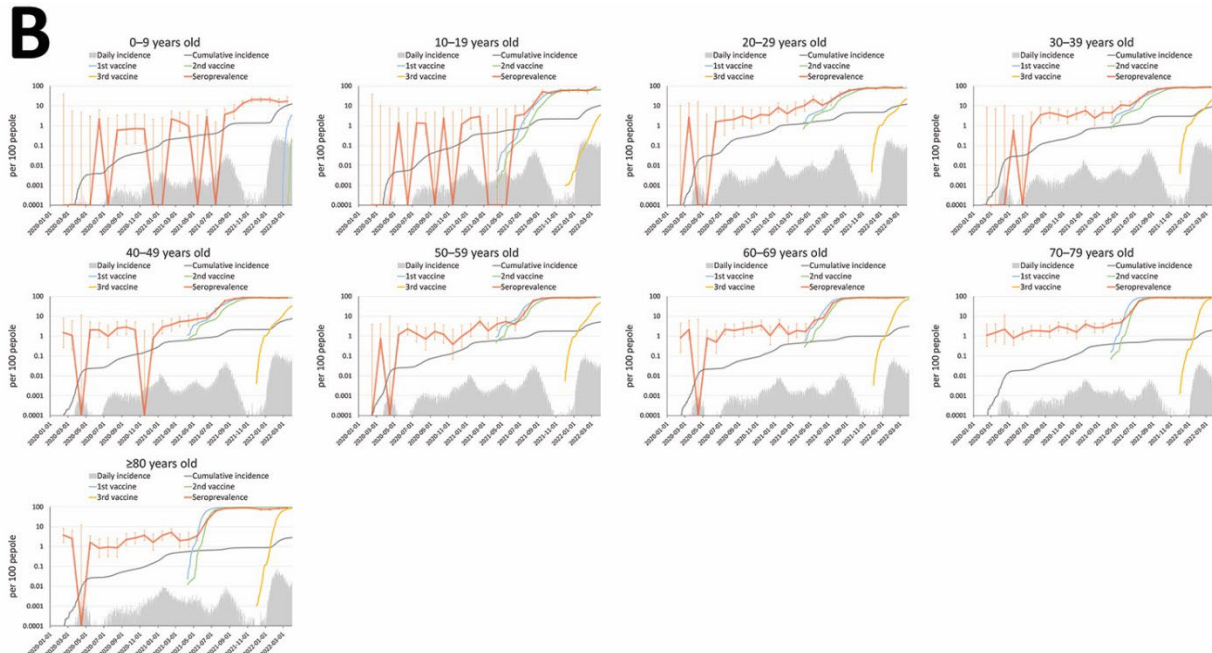
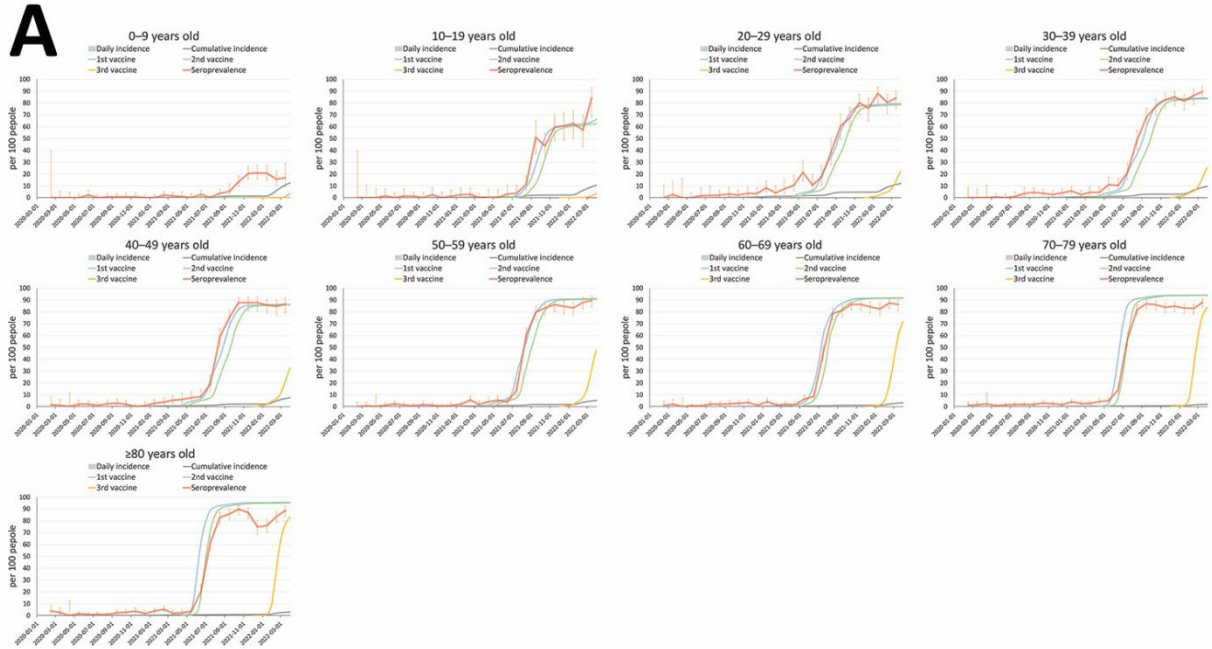
Year–month	Age group, y									Total
	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70–79	≥80	
2020–02	6	6	32	41	67	97	120	182	135	686
2020–03	65	32	38	49	92	136	141	199	158	910
2020–04	79	48	20	33	30	34	50	45	27	366
2020–05	121	71	95	170	193	337	491	635	371	2484
2020–06	137	87	63	118	244	350	397	592	362	2350
2020–07	156	73	54	114	204	303	414	531	320	2169
2020–08	167	155	144	113	240	278	364	492	347	2300
2020–09	153	79	97	197	175	234	294	478	312	2019
2020–10	140	82	136	221	196	243	324	461	332	2135
2020–11	146	74	111	220	201	261	320	492	301	2126
2020–12	176	85	118	199	129	207	280	378	242	1814
2021–01	148	81	134	244	213	298	358	554	355	2385
2021–02	181	103	99	164	186	268	327	457	348	2133
2021–03	188	117	80	155	186	216	265	480	302	1989
2021–04	106	52	77	133	135	170	235	328	221	1457
2021–05	108	52	84	145	162	241	289	458	313	1852
2021–06	179	64	75	136	131	181	235	396	222	1619
2021–07	243	80	75	131	123	181	223	313	235	1604
2021–08	217	106	70	134	169	253	268	347	240	1804
2021–09	96	45	76	129	137	183	213	328	219	1426
2021–10	231	80	80	140	149	186	235	315	206	1622
2021–11	206	67	76	129	123	188	226	317	225	1557
2021–12	177	66	74	128	116	163	247	342	223	1536
2022–01	160	59	76	137	147	187	206	322	216	1510
2022–02	128	49	87	110	118	175	233	322	245	1467
2022–03	53	32	89	135	120	164	206	342	211	1352
Total	3767	1845	2160	3625	3986	5534	6961	10106	6688	44672

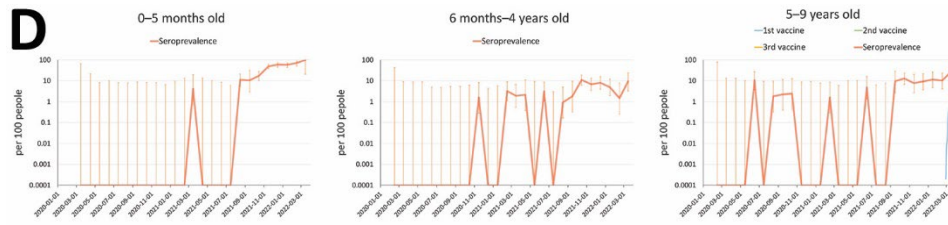
Appendix Table 2. Number of samples analyzed in Hokkaido Prefecture

Year-month	Age group, y									Total
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	≥80	
2020-02	34	28	28	65	79	58	79	82	53	506
2020-03	72	140	155	213	361	214	288	285	121	1849
2020-04	21	22	64	147	155	116	113	120	68	826
2020-05	20	30	56	130	181	89	116	137	58	817
2020-06	14	49	66	151	174	115	130	125	89	913
2020-07	10	62	76	141	89	95	95	121	71	760
2020-08	9	60	48	95	67	68	72	78	39	536
2020-09	15	50	88	98	93	57	71	88	38	598
2020-10	15	51	78	89	93	69	85	89	53	622
2020-11	9	34	68	88	104	56	85	93	40	577
2020-12	9	54	61	97	81	55	76	102	38	573
2021-01	6	57	62	108	82	67	94	89	36	601
2021-02	3	49	69	95	73	65	79	81	26	540
2021-03	0	65	87	130	55	68	99	107	35	646
2021-04	1	27	67	120	99	56	85	99	29	583
2021-05	0	32	54	85	100	58	82	97	47	555
2021-06	2	29	58	97	103	61	82	101	31	564
2021-07	2	57	56	91	62	51	88	96	32	535
2021-08	3	60	68	120	96	64	105	105	43	664
2021-09	1	29	63	106	88	58	75	84	45	549
2021-10	2	26	54	116	101	64	75	90	45	573
2021-11	2	30	64	109	73	63	81	102	28	552
2021-12	2	47	66	97	92	57	64	97	32	554
2022-01	1	29	48	97	81	69	79	69	33	506
2022-02	2	24	44	90	99	52	79	94	25	509
2022-03	1	32	74	117	95	57	65	91	39	571
Total	256	1173	1722	2892	2776	1902	2442	2722	1194	17079

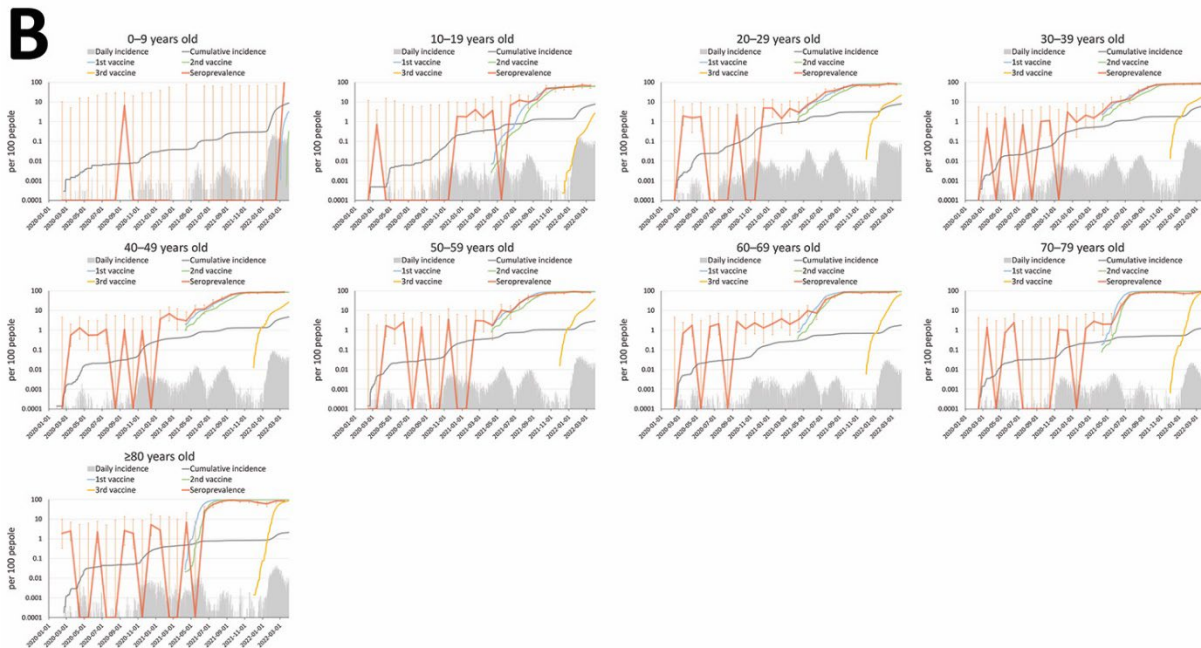
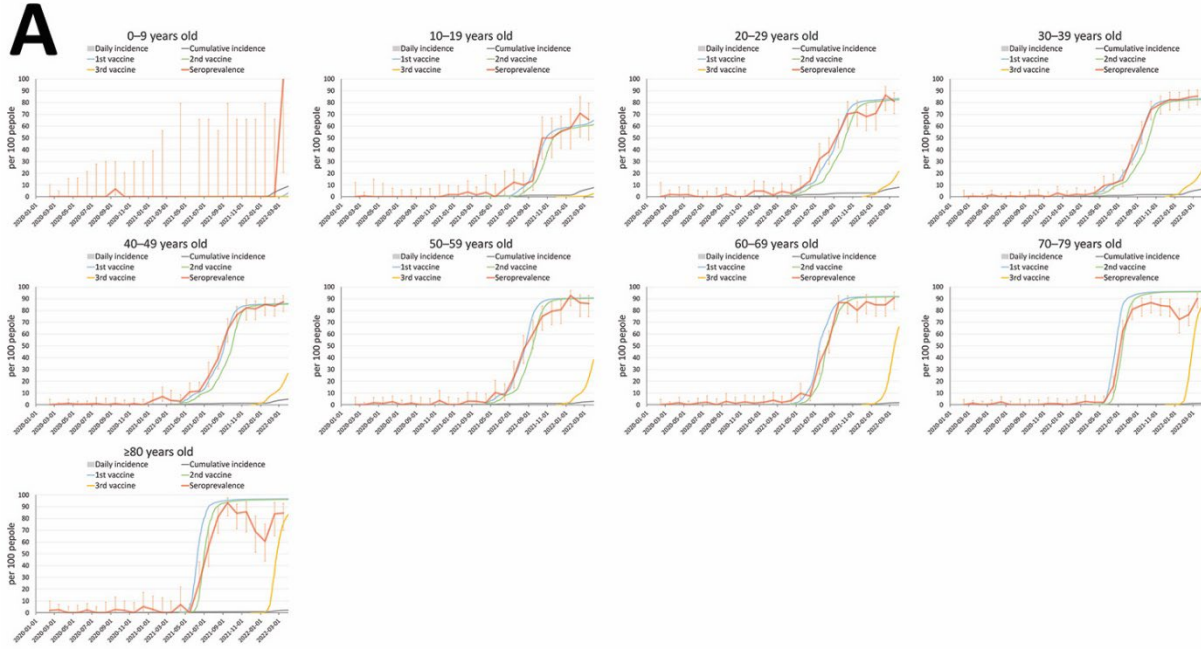


Appendix Figure 1. Antibody titers for SARS-CoV-2 in prepandemic and convalescent samples. A) The results of ELISA tests against the SARS-CoV-2 spike protein and nucleoprotein are shown for samples collected in 2012 (prepandemic, $n = 200$) and samples from COVID-19-confirmed cases (convalescent, $n = 113$). B) ROCs were drawn for the SARS-CoV-2 spike protein and nucleoprotein to differentiate prepandemic and convalescent samples. A cutoff value was determined by using Youden's index. The specificity and sensitivity of the test are described in parentheses in the figure





Appendix Figure 2. Seroprevalence of SARS-CoV-2 by age in the Tokyo Metropolitan Area, February 2020–March 2022. A) Seropositive rates for the SARS-CoV-2 spike protein in the Tokyo Metropolitan Area are shown by 10-year age group. The daily number of reported COVID-19 cases, their cumulative number, and the cumulative number for the first, second, and third vaccine administrations per population are also shown. The vertical orange lines indicate the 95% CIs of the seroprevalence data. B) The same data on a logarithmic scale are shown. C) and D) The proportions of seropositive samples in children aged 0–6 months, 6 months–4 years, and 5–9 years are shown on linear (C) and logarithmic (D) scales.



Appendix Figure 3. Seroprevalence of SARS-CoV-2 by age in Hokkaido Prefecture, February 2020–March 2022. A) Seropositive rates for the SARS-CoV-2 spike protein in Hokkaido Prefecture are shown by 10-year age group. The daily number of reported COVID-19 cases, their cumulative number, and the cumulative number for the first, second, and third vaccine administrations per population are also shown. The vertical orange lines indicate the 95% CIs of the seroprevalence data. B) The same data on a logarithmic scale are shown.