Table S1. Bivalent-vaccinated HCW and BA.2.86/JN.1-wave first responder cohorts

	Bivalent Health Care Workers (n=8)	BA.2.86/JN.1 Wave Patients (n=9)
Age in Years at Sample Collection [Median (Range)]	39 (27-46)	51 (34-77)
Gender [n (% of Total)]		
Male	5 (63%)	5 (56%)
Female	3 (37%)	4 (44%)
Sample Collection Window	Dec. 2022	Nov. 2023-Aug.2024
Vaccine status [n (% of Total)]	NA	
1-dose Pfizer	NA	1 (10%)
2-dose Moderna	NA	2 (20%)
4-dose Moderna	NA	1 (10%)
1-dose Moderna +1-dose Pfizer bivalent	NA	1 (10%)
1-dose Pfizer +1-dose Pfizer bivalent	NA	2(20%)
2-dose Pfizer +1-dose Pfizer bivalent	1 (12.5%)	NA
3-dose Pfizer +1-dose Moderna bivalent	NA	1 (14.3%)
3-dose Pfizer +1-dose Pfizer bivalent	3 (37.5%)	NA
3-dose Moderna +1-dose Moderna bivalent	4 (50%)	1 (14.3%)
Days from last vaccination	NA	621 (34-1033)
Days post the bivalent dose for recipients	65 (23-97)	NA
COVID-19 positive [n (% of Total)]	8 (80%)	9 (100%)
Days before sample collection [(Median Range)]	324 (182-994)	7 (1-10)
Infected Variants		
JN.1/BA.2.86	NA	2 (22%)
Undetermined	NA	8 (78%)

Summary of the demographic information for two cohorts used for neutralization experiments depicted in Figure 2. "NA" means the category is not applicable to the cohort.

Bivalent HCWs			
AD (D614G)		AD (JN.1)	
JN.1	4.9	D614G	4.9
KP.3	5.3	KP.3	1.0
KP.3_T22N	5.4	KP.3_T22N	1.3
KP.3_F59S	6.8	KP.3_F59S	3.6
XEC	7.5	XEC	3.3
XEC_S24A	6.7	XEC_S24A	4.8
KP.3.1.1	7.3	KP.3.1.1	5.0
KP.3.1.1_T33A	6.1	KP.3.1.1_T33A	1.2

BA.2.86/JN.1-wave patients			
AD (D614G)		AD (JN.1)	
JN.1	3.4	D614G	3.4
KP.3	4.1	KP.3	1.7
KP.3_T22N	4.3	KP.3_T22N	1.7
KP.3_F59S	4.9	KP.3_F59S	3.1
XEC	5.7	XEC	3.4
XEC_S24A	5.2	XEC_S24A	4.2
KP.3.1.1	5.3	KP.3.1.1	2.9
KP.3.1.1_T33A	4.9	KP.3.1.1_T33A	1.8

XBB.1.5-monovalent hamsters			
AD (D614G)		AD (JN.1)	
JN.1	2.7	D614G	2.7
KP.3	2.7	KP.3	0.2
KP.3_T22N	2.8	KP.3_T22N	0.2
KP.3_F59S	2.5	KP.3_F59S	0.7
XEC	3.0	XEC	0.7
XEC_S24A	3.0	XEC_S24A	0.5
KP.3.1.1	2.7	KP.3.1.1	0.6
KP.3.1.1_T33A	2.8	KP.3.1.1_T33A	0.7

Figure S1