

Supplementary Table 1. Baseline characteristics of the 38 nursing home residents included in the analysis are depicted as median (range) for continuous variables or as number (percentage) otherwise.

Age (years old)	88 (72-101)
Female sex	30 (78.95%)
Male sex	8 (21.05%)
Delay vaccine doses 1-2 (days)	21 (18-31)
Delay vaccine doses 2-3 (days)	236 (194-250)
Delay vaccine dose 2 - 1st sampling (days)	56 (28-68)
Delay vaccine dose 3 - 2nd sampling (days)	55 (48-64)
Convalescent	30 (78.95%)
Nursing home	A: 19 (50.00%) B : 13 (34.21%) C : 6 (15.79%)

Supplementary Table 2. Individual characteristics of the 13 nursing home residents who developed a breakthrough infection after the 3rd vaccine dose.

SARS-CoV-2 variant responsible for breakthrough infection :

§ omicron suspicion based on identification of a variant not harboring E484K/Q or L452R mutations

£ omicron suspicion based on identification of a variant harboring K417N mutation

unk unknown variant due to insufficient viral load

	Nursing home	Age	Sex	Convalescent	Breakthrough infection characteristics			
					Diagnostic date	Delay vaccine dose 3 - breakthrough diagnostic (days)	SARS-CoV-2 variant	Symptoms
1	A	92	Female	Yes	21/01/2022	112	omicron suspicion [§]	No
2	A	90	Female	No	13/01/2022	93	omicron suspicion [§]	Yes (mild)
3	A	85	Female	No	15/01/2022	106	omicron suspicion [§]	Yes (mild)
4	A	101	Female	No	21/01/2022	112	unk	No
5	A	82	Female	Yes	17/01/2022	97	omicron suspicion [§]	No
6	A	88	Female	Yes	17/01/2022	104	omicron suspicion [§]	Yes (mild)
7	A	92	Female	Yes	17/01/2022	97	omicron suspicion [§]	Yes (mild)
8	A	89	Female	Yes	31/01/2022	118	omicron suspicion [£]	No
9	A	72	Male	Yes	31/01/2022	118	omicron suspicion [£]	Yes (mild)
10	A	77	Female	No	27/01/2022	118	omicron suspicion [£]	No
11	A	89	Female	No	24/01/2022	115	omicron suspicion [£]	Yes (mild)
12	A	86	Female	No	31/01/2022	118	omicron suspicion [£]	No
13	C	91	Female	Yes	28/12/2021	83	unk	No