

**S5 Table.** Reactogenicity after the first, second, and third doses of vaccine in the average 54-year-old cohort groups

	Cancer patients				Healthcare workers				p-value	
	Grade 0	Grade 1	Grade 2	Grade 3	Grade 0	Grade 1	Grade 2	Grade 3		
<b>1st, mRNA<sup>a)</sup></b>										
Pain	16	74.7	9.3	0	16.7	83.3	0	0	> 0.99	
Redness	100	0	0	0	100	0	0	0	> 0.99	
Swelling	93.3	6.7	0	0	100	0	0	0	> 0.99	
Headache	80	16.0	4.0	0	83.3	16.7	0	0	> 0.99	
Fatigue	73.4	17.3	9.3	0	33.3	66.7	0	0	0.06	
Fever, chill	92	5.3	2.7	0	100	0	0	0	> 0.99	
Myalgia	86.7	9.3	4.0	0	66.7	33.3	0	0	0.22	
Arthralgia	92	6.7	1.3	0	83.3	16.7	0	0	0.43	
<b>1st, AdV<sup>b)</sup></b>										
Pain	40.5	51.4	8.1	0	28.6	50.0	21.4	0	0.53	
Redness	97.3	2.7	0	0	92.9	7.1	0	0	0.48	
Swelling	94.6	5.4	0	0	92.9	7.1	0	0	> 0.99	
Headache	83.8	13.5	2.7	0	57.2	35.7	7.1	0	0.07	
Fatigue	78.4	16.2	5.4	0	28.6	50.0	14.3	0	0.01	
Fever, chill	78.4	21.6	0	0	42.9	57.1	0	0	0.02	
Myalgia	75.7	16.2	8.1	0	57.1	42.9	0	0	0.30	
Arthralgia	91.9	5.4	2.7	0	71.4	28.6	0	0	0.08	
<b>2nd, mRNA<sup>a)</sup></b>										
Pain	16.5	71.6	11.9	0	0	50.0	50.0	0	0.58	
Redness	96.4	3.6	0	0	66.6	16.7	16.7	0	0.04	
Swelling	92.5	7.5	0	0	66.6	16.7	16.7	0	0.10	
Headache	92.4	6.1	1.5	0	50	16.7	33.3	0	0.02	
Fatigue	73.1	19.4	7.5	0	33.3	50.0	16.7	0	0.06	
Fever, chill	76.1	20.9	3.0	0	50	33.3	16.7	0	0.12	
Myalgia	76.1	20.9	3.0	0	33.3	50.0	16.7	0	0.04	
Arthralgia	95.5	3.0	1.5	0	50	16.7	33.3	0	< 0.01	
<b>2nd, AdV<sup>b)</sup></b>										
Pain	53	38.2	8.8	0	35.7	42.9	21.4	0	0.35	
Redness	100	0	0	0	100	0	0	0	> 0.99	
Swelling	100	0	0	0	100	0	0	0	> 0.99	

Headache	91.2	5.9	2.9	0	78.6	14.3	7.1	0	0.34
Fatigue	70.6	20.6	8.8	0	64.4	21.4	7.1	0	> 0.99
Fever, chill	91.2	8.8	0	0	85.8	7.1	7.1	0	0.62
Myalgia	88.2	5.9	5.9	0	64.4	21.4	7.1	0	0.21
Arthralgia	97.1	0	2.9	0	78.7	7.1	7.1	0	0.20
<b>3rd, mRNA<sup>c)</sup></b>									
Pain	10.7	85.7	3.6	0	0	80.0	20.0	0	> 0.99
Redness	96.4	3.6	0	0	60	40.0	0	0	0.05
Swelling	96.3	3.7	0	0	40	60.0	0	0	< 0.01
Headache	92.8	3.6	3.6	0	60	40.0	0	0	0.10
Fatigue	82.1	14.3	3.6	0	60	40.0	0	0	0.28
Fever, chill	92.9	7.1	0	0	80	20.0	0	0	0.02
Myalgia	92.9	7.1	0	0	40	60.0	0	0	0.40
Arthralgia	100	0	0	0	100	0	0	0	> 0.99
<b>3rd, AdV<sup>d)</sup></b>									
Pain	21.8	65.2	13.0	0	14.3	71.4	14.3	0	0.69
Redness	100	0	0	0	92.9	7.1	0	0	0.38
Swelling	95.6	4.4	0	0	92.9	7.1	0	0	> 0.99
Headache	100	0	0	0	64.3	35.7	0	0	< 0.01
Fatigue	82.6	17.4	0	0	64.3	21.4	14.3	0	0.25
Fever, chill	91.3	8.7	0	0	85.7	14.3	0	0	0.08
Myalgia	91.2	4.4	4.4	0	64.3	35.7	0	0	0.08
Arthralgia	95.6	4.4	0	0	92.6	7.4	0	0	> 0.99

Values are presented as percentage. <sup>a)</sup>Participants who received first or second doses of mRNA vaccines (either BNT162b2 or mRNA-1273), <sup>b)</sup>Participants who received first or second doses of adenovirus vectored vaccine (AZD1222), <sup>c)</sup>Participants who received three doses of mRNA vaccine (either BNT162b2 or mRNA-1273), <sup>d)</sup>Participants who received two doses of adenovirus vector vaccine (AZD1222) followed with mRNA vaccines (either BNT162b2 or mRNA-1273).