

Supplemental data

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Supplemental Table 1. Exclusion and inclusion criteria

Inclusion criteria	Exclusion criteria
>18 years old	Active malignoma
Hemodialysis >1 year (HD group)	Immunosuppressive treatment
Vaccination with BNT162b2	Chronic liver disease (> Child-Pugh Score A)
	Chronic kidney disease (> CKD 3A) (HC)

HC, healthy controls; HD, hemodialysis

Supplemental Table 2. Cutoff values of the SARS-CoV-2 specific bead-based multiplex assay

Target antigens	Cutoff values (MFI)
SARS-CoV-2 Full Spike Protein	7500
SARS-CoV-2 S1 Protein	4000
SARS-CoV-2 RBD of the Spike Protein	5500
SARS-CoV-2 S2 Protein	3500
SARS-CoV-2 NC Protein	7500
HCoV-229E S1 Protein	5568
HCoV-HKU1 S1 Protein	4251
HCoV-NL63 S1 Protein	1927
HCoV-OC43 S1 Protein	5685
MERS-CoV S1 Protein	17
SARS-CoV S1 Protein	135

HD, hemodialysis; MFI, mean fluorescence intensity; NC, nucleocapsid; RBD, receptor binding domain; S, spike

Supplemental Table 3. Optical density values of the SARS-CoV-2 virus neutralizing assay

Optical density values after the first vaccination

	Healthy controls		Dialysis patients	
N	Optical density value	Inhibition %	Optical density value	Inhibition %
1	1.853	37.8	2.908	2.3
2	0.857	71.2	1.010	66.2
3	0.881	70.4	2.929	1.6
4	0.871	70.8	2.745	7.8
5	0.524	82.4	2.262	24.0
6	1.173	60.6	2.888	3.0
7	0.889	70.1	0.818	72.5
8	1.129	62.1	2.325	21.9
9	1.121	62.4	2.400	19.4
10	1.081	63.7	2.044	31.4
11	1.084	63.6	1.677	43.7
12	0.953	68.0	2.661	10.6
13	1.604	46.1	3.108	0
14	1.625	45.4	2.256	24.2
15	0.933	68.7	2.665	10.5
16	0.857	71.2	2.520	15.4

17	1.452	51.2	2.751	7.6
18	0.735	75.3	2.876	3.4
19	1.012	66.0	2.767	7.1
20	0.168	94.4	3.167	0
21	1.061	64.4	2.878	3.3
22	0.473	84.1	2.250	24.4
23	0.684	77.0		
24	1.248	58.1		
25	1.557	47.7		
26	0.444	85.1		
27	0.091	97.0		
28	2.244	24.6		
29	0.726	75.6		
30	0.664	77.7		
31	1.072	64.0		
32	0.924	69.0		
33	0.933	68.7		
34	1.539	48.3		
35	0.358	88.0		
36	0.761	74.4		
37	1.882	37.0		
38	0.711	76.1		
39	2.707	9.1		
40	2.822	5.2		

41	1.473	50.5		
42	1.084	63.6		
43	1.700	42.9		
44	1.520	49.0		
45	1.651	43.7		
46	0.205	92.1		

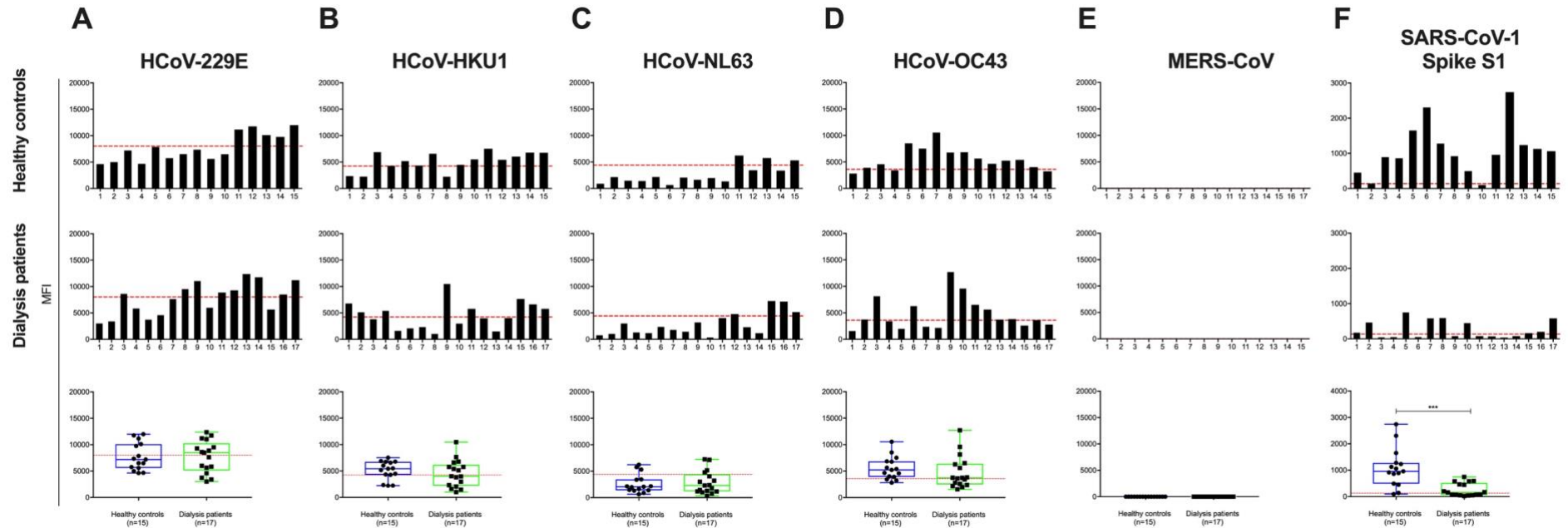
Optical density values after the second vaccination

	Healthy controls		Dialysis patients	
N	Optical density value	Inhibition %	Optical density value	Inhibition %
1	0.238	92.7	2.255	30.5
2	0.077	97.7	0.122	96.2
3	0.145	95.5	2.041	37.1
4	0.057	98.2	2.520	22.4
5	0.082	97.5	0.132	95.9
6	0.051	98.4	2.945	9.3
7	0.062	98.1	0.064	98.0
8	0.079	97.6	1.699	47.7
9	0.052	98.4	1.602	50.7
10	0.299	90.8	0.643	80.2
11	0.270	91.7	0.240	92.6

12	0.057	98.3	2.390	26.4
13	0.077	97.6	2.183	32.8
14	0.051	98.4	1.256	61.3
15	0.133	95.9	1.850	43.0
16	0.062	98.1	0.989	67.2
17	0.056	98.3	0.712	72.5
18	0.112	96.6		
19	0.067	98.0		
20	0.078	97.6		
21	0.086	97.4		
22	0.085	97.4		
23	0.068	97.9		
24	0.072	97.8		
25	0.104	96.8		
26	0.178	94.5		
27	0.062	98.1		
28	0.073	97.8		
29	0.062	98.1		
30	0.077	97.6		
31	0.079	97.6		
32	0.356	88.0		

33	0.049	98.4		
34	0.063	97.9		
35	0.047	98.4		
36	0.070	97.7		
37	0.072	97.6		
38	0.057	98.1		
39	1.005	66.6		
40	0.413	85.8		
41	0.172	94.2		
42	0.051	98.3		
43	0.083	97.2		
44	0.051	98.3		
45	0.048	98.4		
46	0.064	97.9		

Supplemental Figure 1



Detection of antibodies against the S1 spike protein of the 4 community coronaviruses HCoV-229E (A), HCoV-HKU1 (B), HCoV-NL63 (C), HCoV-OC43 (D), MERS-CoV (E) and SARS-CoV-1 (F). The x-axis represents the sample number and the y-axis represents the mean fluorescence intensity value of the reactivity. The dashed red line represents the cutoff, respectively.

MERS-CoV, middle-east respiratory syndrome coronavirus