

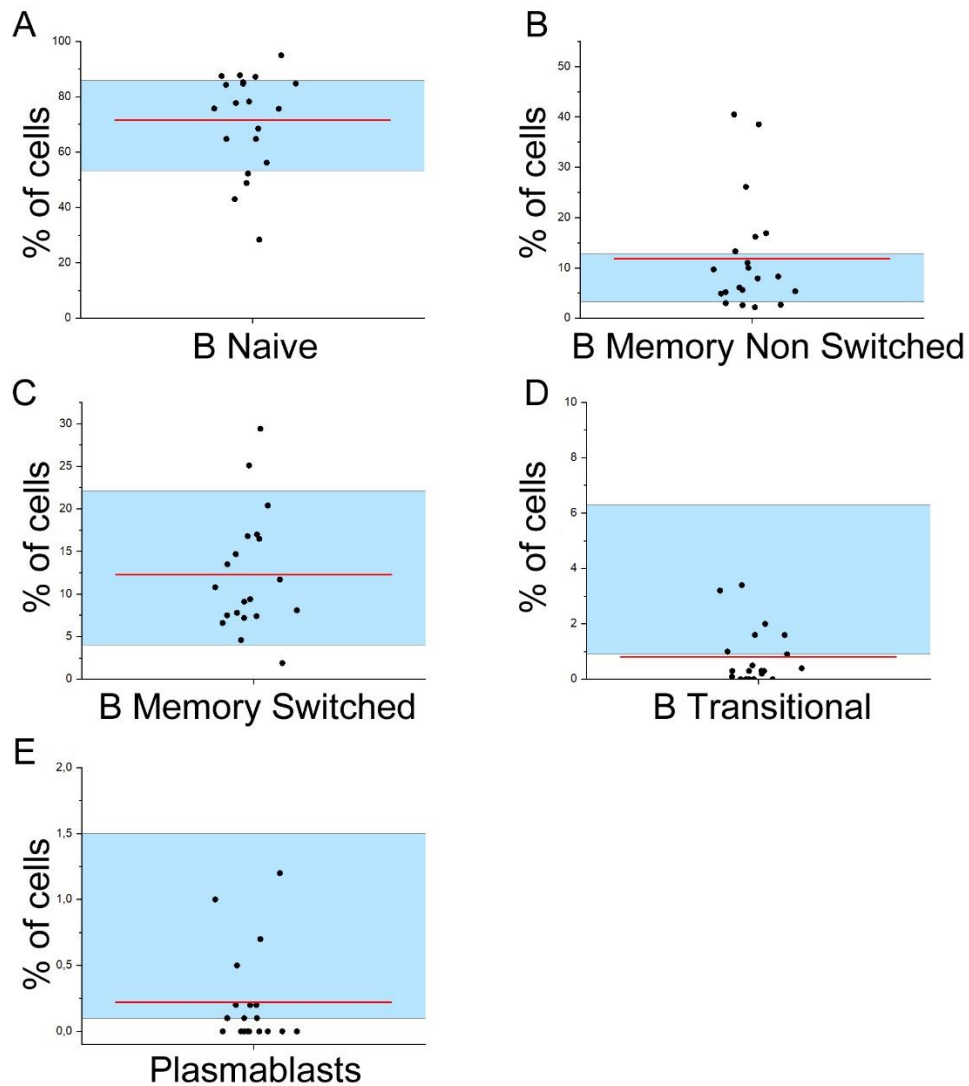


Figure S1. Frequency of B cell subsets in COVID-19 patients

Frequency of naïve (IgD+CD27-) (A), memory non switched (IgD+CD27+) (B), memory switched (IgD-CD27+) (C), transitional (IgM^{high}CD38^{high}) (D), plasmablasts (CD27^{high}CD38^{high}) (E) among CD19+CD20+ B cells in COVID-19 patients. The normality range is highlighted in light blue. Red lines represent mean values for each population. Data have been obtained from 20 COVID-19 patients.

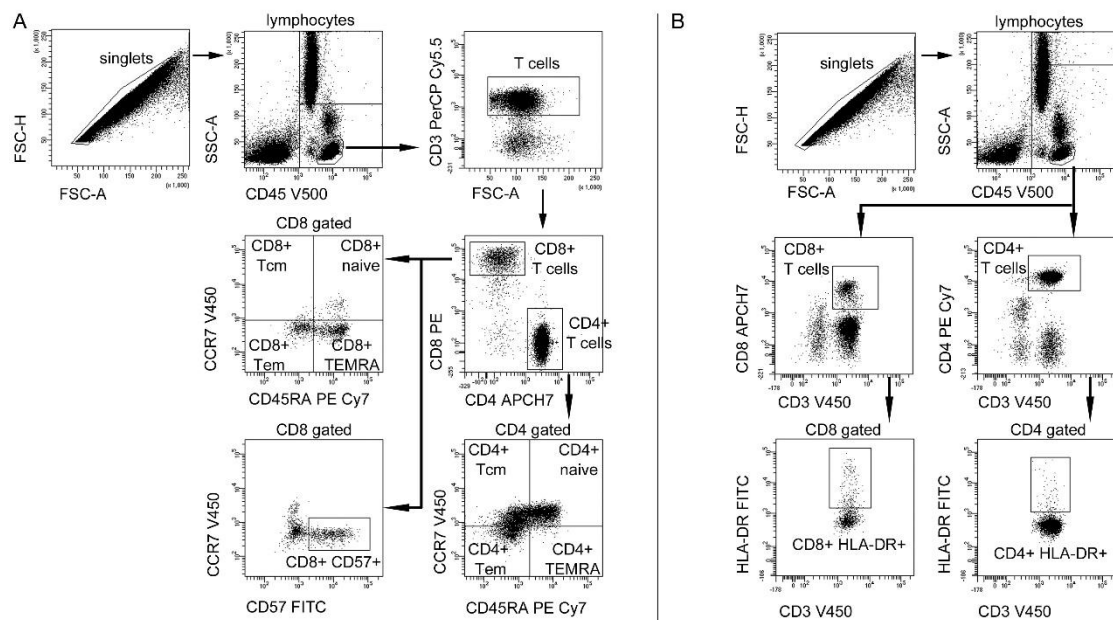


Figure S2. Gating strategy for the identification of CD4+ and CD8+ T cell subsets

In both the indicated panels (A, B) singlets were gated based on FSC-A and FSC-H parameters and then total lymphocytes were identified for CD45 positivity and low SSC-A. (A) T cells were identified as CD3+ cells and further divided in CD4+ and CD8+ subsets. CD4- and CD8-gated T cells were then analyzed for CCR7 and CD45RA expression thus identifying naïve (CD45RA+CCR7+), central memory (CD45RA-CCR7+), effector memory (CD45RA-CCR7-), TEMRA (CD45RA+CCR7-) cells. Senescent cells were finally identified on CD8+ T cells as CCR7- CD57+ cells. (B) Among total lymphocytes, CD3+CD4+ and CD3+CD8+ T cells were gated and evaluated for HLA-DR expression. These plots are representative of one COVID-19 patient.

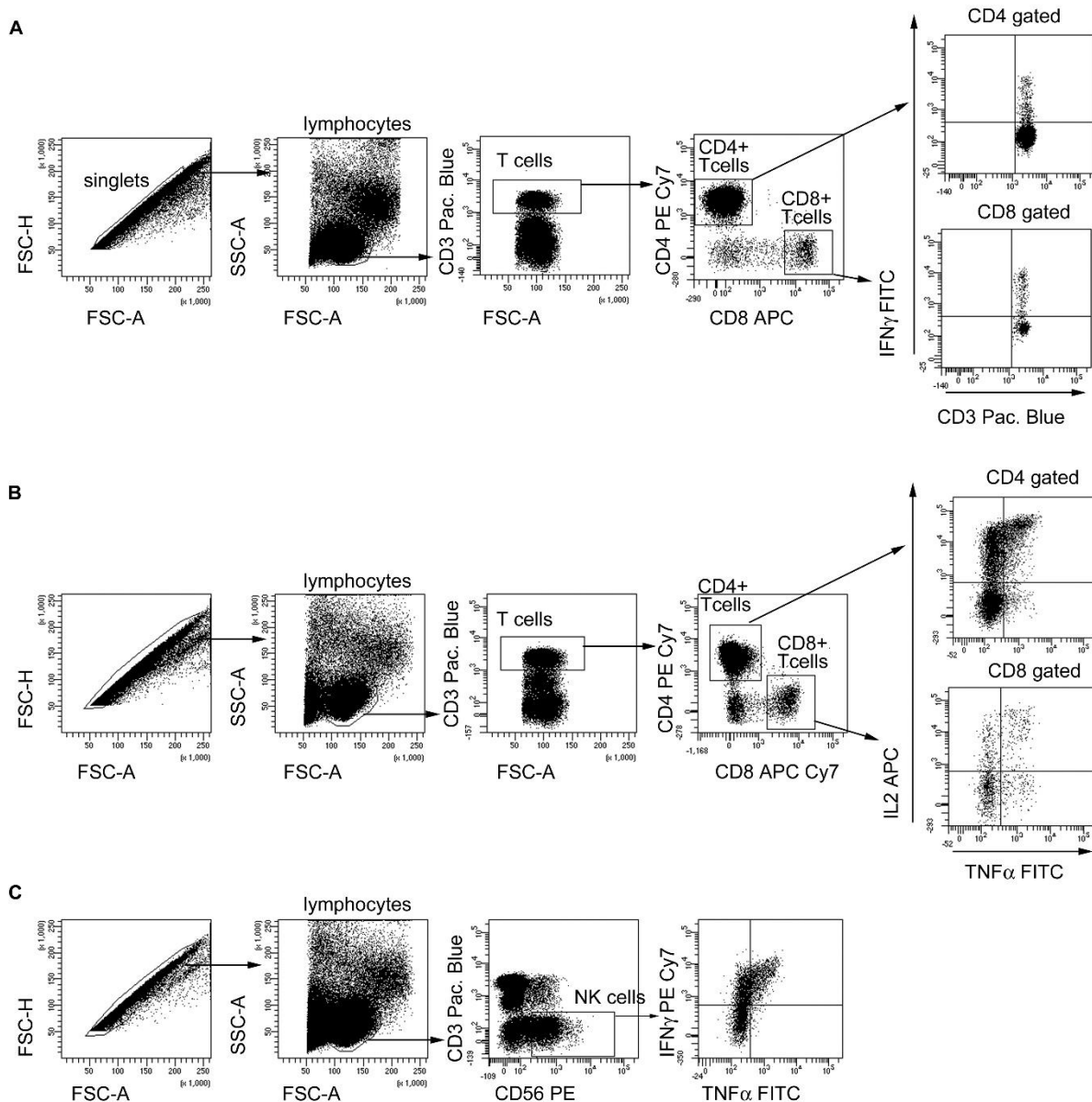


Figure S3. Gating strategy for the identification of cytokine-producing CD4⁺ and CD8⁺ T cells and NK cells

(A) Singlets were gated based on FSC-A and FSC-H parameters and then total lymphocytes were identified based on FSC-A and SSC-A parameters. T cells were gated as CD3⁺ and then further divided in CD4⁺ and CD8⁺. Finally, IFN- γ production was evaluated on these two T cell populations.

(B) Singlets were gated based on FSC-A and FSC-H parameters and then total lymphocytes were identified based on FSC-A and SSC-A parameters. T cells were gated as CD3⁺ and then further

divided in CD4⁺ and CD8⁺. Finally, TNF- α and IL-2 production were evaluated on these two T cell populations. (C) Singlets were gated based on FSC-A and FSC-H parameters and then total lymphocytes were identified based on FSC-A and SSC-A parameters. NK cells were gated as CD3-CD56⁺. Finally, TNF- α and IFN- γ were evaluated.

These plots are representative of one COVID-19 patient.

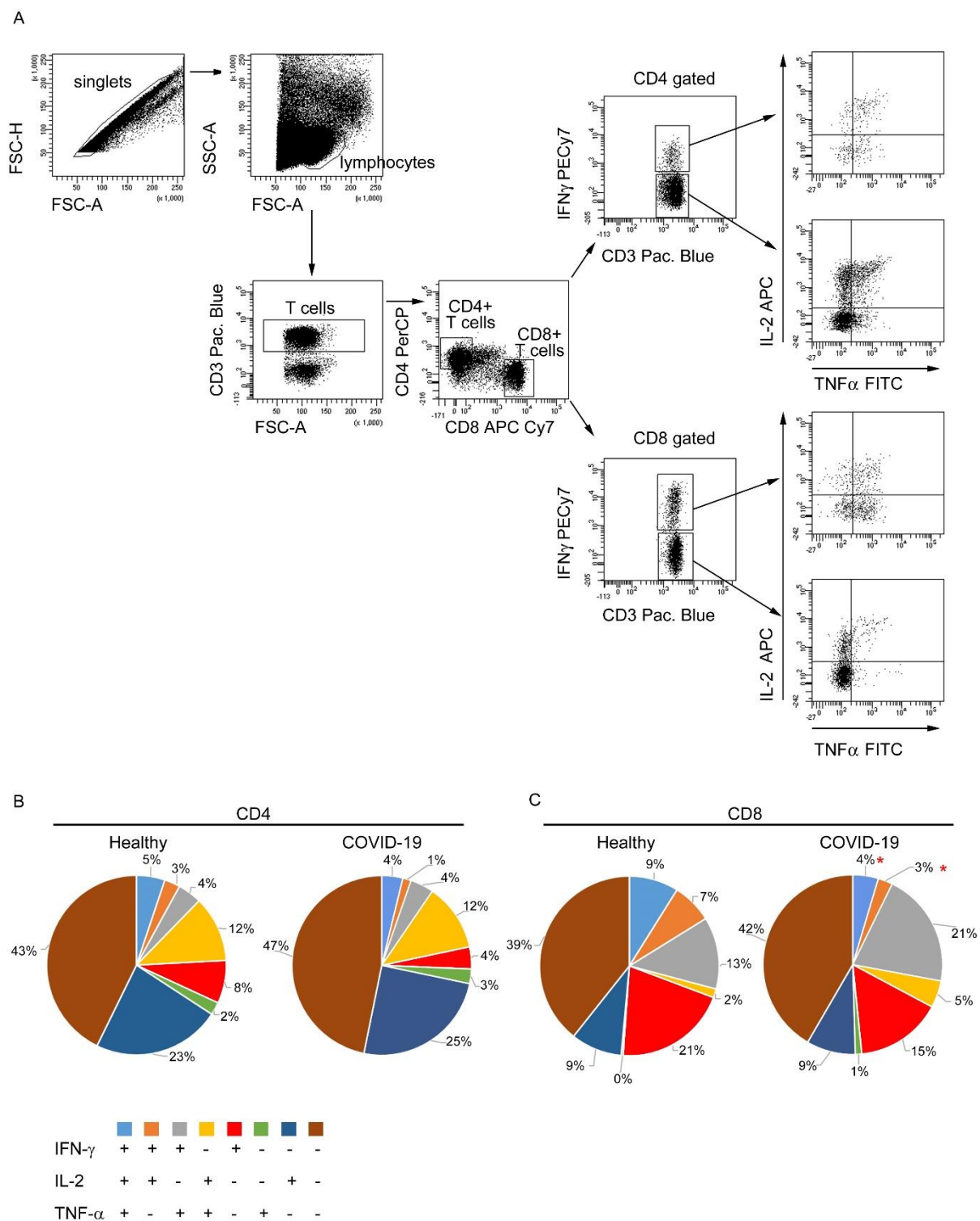


Figure S4. Characterization of T cell polyfunctionality in COVID-19 patients

(A) Gating strategy on a representative COVID-19 patient for the identification of polyfunctional CD4⁺ and CD8⁺ T cells. Singlets were gated based on FSC-A and FSC-H parameters and then total lymphocytes identified by physical parameters. T cells were identified as CD3⁺ cells and further divided in CD4⁺ and CD8⁺ subsets. Among these two populations, we then identified both IFN- γ ⁺ and IFN- γ ⁻ cells. Finally, we evaluated TNF- α and IL-2 production by both IFN- γ ⁺ and IFN- γ ⁻ CD4⁺ and CD8⁺ T cells. Frequency of CD4 (B) or CD8 (C) T cells producing combinations of IFN- γ , IL-2, TNF- α in healthy individuals and COVID-19 patients. Pie charts represent percentages of total CD4⁺ or CD8⁺ T cells. Reported data are mean values obtained from 9 healthy individuals and 12 COVID-19 patients. *p<0.05 healthy versus COVID-19, calculated with Student's T test.

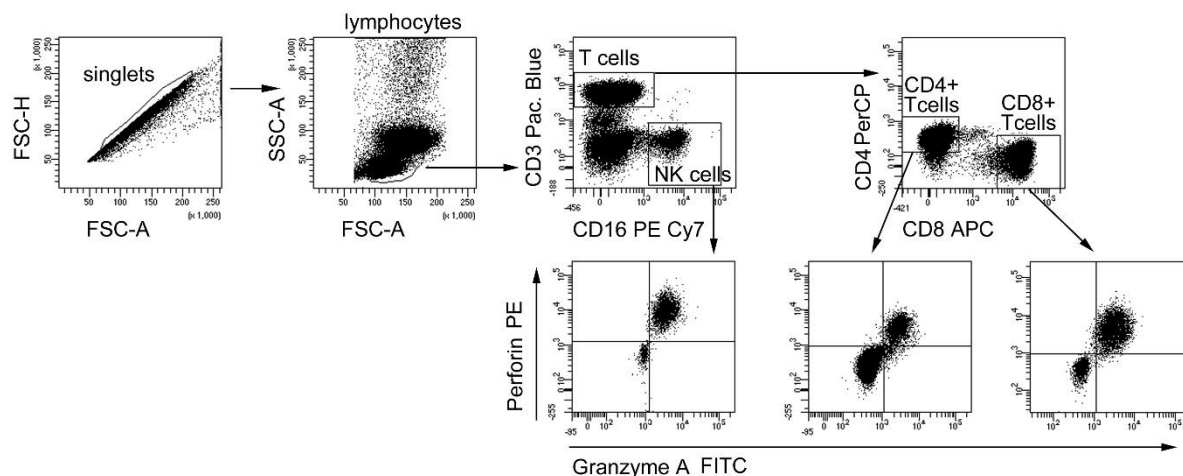


Figure S5. Gating strategy for the identification of cytotoxic molecules expression by CD4+ and CD8+ T and NK cells

Singlets were gated based on FSC-A and FSC-H parameters and then total lymphocytes identified based on physical parameters. T cells were then identified as CD3+ cells and further divided in CD4+ and CD8+ subsets. Among CD3- cells, we identified NK based on CD16 expression. Finally, we evaluated granzyme A and perforin expression on CD4+, CD8+ T lymphocytes and NK cells.

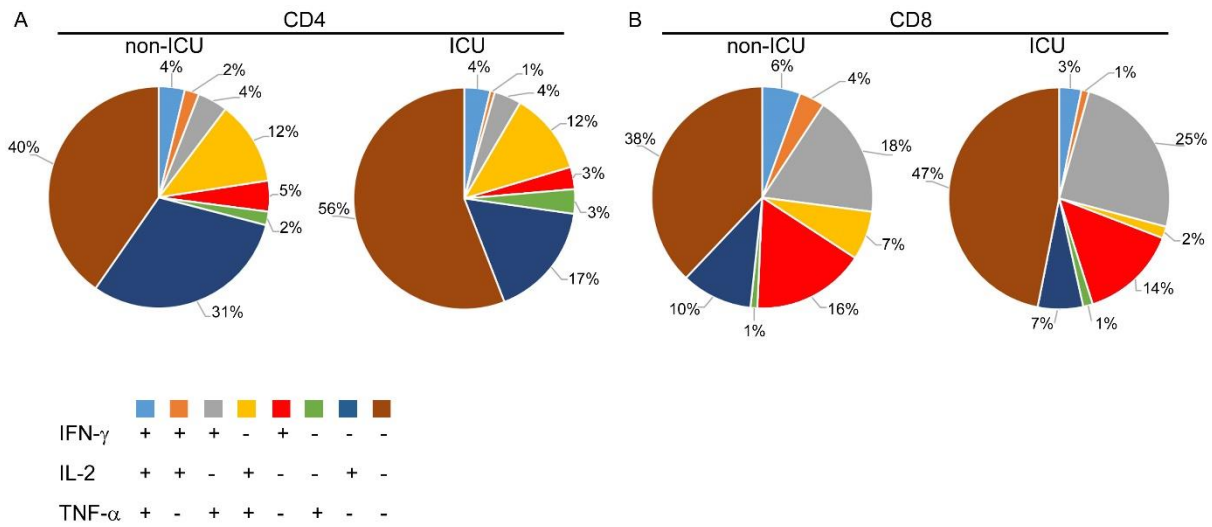


Figure S6. Characterization of T cell polyfunctionality in non-ICU and ICU COVID-19 patients

Frequency of CD4+ (A) or CD8+ (B) T cells producing combinations of IFN- γ , IL-2, TNF- α in non-ICU and ICU COVID-19 patients. Pie charts represent percentages of total CD4+ or CD8+ T cells. Reported data are mean values obtained from 7 non-ICU and 5 ICU COVID-19 patients.

Table S1: Clinical features of COVID-19 patients

A&S: general anaesthetics and sedatives; AF: atrial fibrillation; AI: autoimmune disease; ARDS: acute respiratory distress syndrome; BPH: benign prostatic hyperplasia; C: ceftriaxone; CBV: cerebrovascular disease; CKD: chronic kidney disease; COPD: chronic obstructive pulmonary disease; CT: computed tomography; CVD: cardiovascular disease; CXR: chest X-ray; D/C: darunavir/cobicistat; DBT: diabetes; DYS: dyslipidaemia; H: hypertension; HCQ: hydroxychloroquine; HRTC: high-resolution computed tomography; IV: invasive ventilation; K: malignant tumour; ICU: intensive care unit; P/T: piperacillin/tazobactam; LMWH: low-molecular-weight heparin; L/R: lopinavir/ritonavir; NC: nasal cannula; NIV: non-invasive ventilation; NRB: non-rebreather mask; OSAS: obstructive sleep apnoea syndrome; RIST: recent (<1 month) immunosuppressive therapy; RSP: recent (<1 month) surgical procedure; S: active smoker; SLSN: Senior-Løken syndrome; UCTD: undifferentiated connective tissue disease; US: thoracic ultrasound; VM: venturi mask

Patient	Gender	Age at onset	Days from clinical onset to analysis date	Symptoms/signs on analysis date	Most recent lung imaging findings	Comorbidities/Other states	Complications	Therapy on analysis date	Oxygen therapy on analysis date (FiO ₂)	Mechanical ventilation during the course of the disease	Condition on analysis date (D=day from hospital admission)	Follow-up (d=day from analysis date)
1	F	71	8	Fever, dyspnoea, respiratory distress	Multiple bilateral patchy opacities (CXR)	H	ARDS	L/R, HCQ, C, P/T	VM (50%)	No	Hospitalized (D5)	Clinically recovered, discharged home (d7)
2	M	71	15	Diarrhea	Left lobar consolidation (CXR)	H	None	C	None	No	Hospitalized, clinically recovered (D5)	Discharged home (d7)
3	M	76	15	None	Multiple bilateral patchy opacities (CXR)	H, DBT, RSP (hernioplasty)	None	P/T, linezolid, azithromycin	VM (35%)	No	Hospitalized, clinically recovered (D2)	Discharged home (d7)
4	M	69	2	Fever, dyspnoea, respiratory distress	Multiple bilateral patchy opacities (CXR)	H, CVD, DBT, DYS	ARDS	D/C, HCQ	VM (50%)	Yes, IV	Hospitalized (D2)	Transferred in ICU on d2; in ICU until d19; clinically recovered, discharged home (d33)
5	M	64	5	Fever, dyspnoea, respiratory distress	Ground-glass opacities in the right superior lobe and left inferior lobe(CXR)	CVD, asthma	ARDS	L/R, HCQ, C, azithromycin, bisoprolol, ASA, clopidogrel, losartan	VM (40%)	Yes, IV	Hospitalized (D1), transferred in ICU on the same date	In ICU until d23; clinically recovered, discharged home (d36)
6	F	70	11	Fever, cough, myalgia	Bilateral basal interstitial thickening (CXR)	H, AI (rheumatoid arthritis)	None	D/C, HCQ	NC (28%)	No	Hospitalized (D2)	Clinically recovered, discharged home (d5)
7	M	52	13	None	Peribronchovascular interstitial thickening (CXR)	H, CVD, AF, OSAS	None	C, L/R, HCQ, LMWH	NC (24%)	No	Hospitalized, clinically recovered (D7)	Discharged home (d1)
8	F	63	10	Fever, cough	Multiple bilateral patchy opacities (CXR)	H	None	L/R, HCQ, C, azithromycin	NC (28%)	No	Hospitalized (D2)	Clinically recovered, discharged home (d4)
9	M	72	15	Sedated	Right basal consolidation and interstitial abnormalities (CXR)	CVD, AF, DBT, K (prostate), RSP (prostatectomy)	ARDS	Remdesivir, HCQ, A&S	IV (60%)	Yes, IV	ICU (D7)	Deceased (d28)
10	M	56	1	Fever	Left lobar consolidation (CXR)	Tetraplegia	None	L/R, HCQ, P/T	NC (28%)	No	Hospitalized (D3)	Clinically recovered,

												discharged home (d5)
11	F	36	5	Cough	Right basal consolidation and interstitial abnormalities (CXR)	Renal transplant in SLSN, RIST (tacrolimus)	None	C, low-dose methyl-prednisolone	None	No	Hospitalized (D5)	Clinically recovered, discharged home (d5)
12	M	84	6	Syncope, dyspnoea	Left pleural effusion, signs of pulmonary congestion (CXR)	H, CVD, CBV, DBT	ARDS	D/C, C, azithromycin, insulin	NC (24%)	No	Hospitalized (D5)	Deceased (d7)
13	M	78	23	Fever, cough	Multiple bilateral patchy opacities (CXR)	None	None	L/R, P/T	None	No	Hospitalized, clinically recovered (D9)	Discharged home (d2)
14	F	62	6	Fever	Ground-glass opacities in the left superior lobe and right superior lobe (HRCT)	None	None	D/C, HCQ	None	No	Hospitalized, clinically recovered (D1)	Discharged home (d1)
15	M	80	6	Sedated	Multiple bilateral consolidations and ground-glass opacities, pleural effusion, hilar lymphadenopathy (HRTC)	H, AF, OSAS, BPH	ARDS, acute kidney injury	Meropenem, linezolid, azithromycin, norepinephrine, bisoprolol, amiodarone, insulin, acetylcysteine, LMWH, A&S	IV (30%)	Yes, IV	ICU (D1)	In ICU until d40; hospitalized (d44)
16	M	65	6	Fever, respiratory distress, sedated	Multiple bilateral consolidations (CXR)	None	ARDS	D/C, HCQ, meropenem, linezolid, azithromycin, norepinephrine, LMWH, A&S	IV (80%)	Yes, IV	ICU (D1)	In ICU until d25; hospitalized (d44)
17	M	45	8	Fever, cough	Ground-glass opacities in the left lung, interstitial abnormalities (CXR)	None	ARDS	D/C, HCQ, P/T, azithromycin	NRB 80%	No	ICU (D0)	Clinically recovered, discharged home (d7)
18	F	60	unknown	Cough	Right superior lobe consolidation; right lower lobe opacity (CXR)	H	None	D/C, HCQ	None	No	Clinically recovered (D4)	Discharged home (d2)
19	F	70	9	Fever, cough, myalgia	Multiple bilateral ground-glass opacities (CT)	K, DYS	ARDS	D/C, HCQ	NC (36%)	No	Hospitalized (D3)	Clinically recovered, discharged home (d15)
20	M	74	9	Fever, cough	Left superior lobe consolidations (CXR)	H	Acute respiratory failure (w/o ARDS)	L/R, HCQ	NC (28%)	No	Hospitalized (D2)	Clinically recovered, discharged home (d10)
21	F	73	11	None	Left lung consolidations (CXR)	None	None	L/R, HCQ	None	No	Clinically recovered (D5)	Discharged home (d0)
22	M	72	7	Fever	Multiple bilateral patchy opacities (CXR)	CVD	ARDS	L/R, HCQ, general anesthetics and sedatives	IV (50%)	Yes, IV	Hospitalized (D2), transferred in ICU on the same date	ICU (d43)
23	M	79	unknown	Syncope, subcutaneous emphysema	Right pleural effusion, no consolidations (CXR)	K (lung), RSP (right middle lung lobectomy), H, DBT, DYS, COPD, S	Acute respiratory failure (w/o ARDS)	L/R, HCQ, ASA, bisoprolol, losartan, LMWH, amoxicillin/clavulanic acid	NC (36-44%)	No	Hospitalized (D14)	Clinically recovered, discharged home (d14)

24	F	40	8	Fever, cough	Multiple bilateral consolidations (US)	None / 25 weeks pregnant	ARDS	L/R, HCQ, ertapenem, azithromycin	VM (60%)	Yes, NIV	Hospitalized (D2)	In ICU until d7; clinically recovered, discharged home (d18)
25	M	46	11	Fever	Bilateral interstitial pneumonia (CXR)	AI (psoriatic arthritis), RIST (ustekinumab)	ARDS	L/R, HCQ	NC (28-36%)	No	Hospitalized (D3)	Clinically recovered, discharged home (d5)
26	F	48	8	Cough	Righ inferior lobe consolidation (US)	AI (thyroiditis, UCTD) / 25 weeks pregnant	None	L/R, HCQ	None	No	Hospitalized (D1)	Clinically recovered, discharged home (d10)
27	M	70	9	Respiratory distress	Multiple bilateral patchy opacities (CXR)	H, S	ARDS	L/R, HCQ	NIV (100%) then IV (80%)	Yes, IV	ICU (D2)	In ICU until d12 when transferred to another hospital
28	F	85	9	Dyspnoea, cough, respiratory distress	Bilateral pleural effusion, peripheral patchy opacities, pulmonary congestion (CXR)	H, CVD, AF, CKD, DBT, COPD, S	ARDS, acute on chronic cardiac failure	D/C, HCQ, C, azithromycin, warfarin, furosemide, losartan, acetylcysteine, medium-dose methylprednisolone	NIV (80%)	Yes, NIV	ICU (D6)	Deceased (d27)
29	F	78	17	Respiratory distress	Multiple bilateral consolidations (CXR)	H	ARDS	D/C, HCQ, ramipril, azithromycin, amlodipine, LMWH	NRB (80%) then NIV (80%)	Yes, NIV	ICU (D2)	In ICU until d25; hospitalized (d40)
30	M	70	5	Fever, cough, respiratory distress	Bilateral diffuse interstitial abnormalities, no consolidations (CXR)	H, DYS	ARDS	HCQ, P/T, azithromycin, furosemide, acetylcysteine, LMWH, A&S	NIV (100%)	Yes, NIV	ICU (D1)	Deceased (d9)

Table S2: Laboratory tests in COVID-19 patients on analysis date

Patient	Hematocrit (%) (reference range 42-52)	Hb (g/dL) (reference range 14-18)	MCV (fL) (reference range 81-94)	RBC (x10 ¹² /L) (reference range 4.2-5.4)	WBC (x10 ⁹ /L) (reference range 4000-10000)	Neutrophils (x10 ⁶ /L) (reference range 1500-7500)	Lymphocytes (x10 ⁶ /L) (reference range 500-5000)	Neutrophils to lymphocytes ratio	Monocytes (x10 ⁶ /L) (reference range 30-1200)	Eosinophils (x10 ⁶ /L) (reference range 0-700)	Basophils (x10 ⁶ /L) (reference range 0-200)	Platelets (x10 ⁶ /L) (reference range 140000-400000)	Creatinine (mg/dL) (reference range 0.7-1.2)	Alanino-aminotransferase (U/L) (reference range 10-50)	Gamma-GT (U/L) (reference range 10-71)	Creatine kinase (U/L) (reference range 39-308)	C-reactive protein (mg/L) (normal value <5)	Fibrinogen (mg/dL) (reference range 200-400)	Lactate dehydrogenase (U/L) (reference range 135-225)	Ferritin (ng/mL) (reference range 8-252)	D-dimer (ng/mL) (normal value <500)	IL-6 (pg/mL) (reference range 0-10)
1	38.9	12,6	94	4.14	4390	3640	480	7.6	240	10	20	230000	0.53	33	-	-	201	-	438	-	-	12.4
2	38.9	12.6	91.5	4.16	6440	5220	720	7.3	460	20	20	209000	0.97	24	-	-	55	-	224	-	-	13.3
3	37.7	12.3	88.7	4.25	7610	6620	700	9.5	280	0	10	187000	0.98	31	-	281	108	639	283	-	-	21
4	33.9	10.9	91.1	3.72	3990	3110	520	6.0	300	40	20	151000	-	-	-	-	-	291	398	-	-	20.3
5	40.7	13.6	91.3	4.46	12500	11500	520	22.1	370	90	20	263000	0.84	32	-	72	140	814	433	-	-	38
6	41.4	13.7	95	4.36	6530	5450	560	11.4	480	10	20	172000	0.75	11	-	42	44	510	210	-	-	13.3
7	46.9	15.1	88.5	5.30	6240	4120	1460	2.8	560	80	20	414000	1.08	39	-	-	<5	-	162	-	-	8.6
8	38.6	12.8	92.1	4.19	6440	4800	1070	4.5	410	120	40	393000	0.67	41	-	-	-	-	-	-	-	19.6
9	28.8	9.1	94.4	3.05	4350	-	-	-	-	-	-	-	2.14	-	-	-	432	704	271	-	-	251
10	37.7	12.4	87.1	4.33	4760	3440	830	4.1	400	10	80	159000	0.37	61	-	29	58	383	198	-	-	9.4
11	42.1	13.3	95.7	4.40	19700	17200	1300	13.2	1120	40	40	352000	2.19	10	-	19	70	-	186	453	-	10.3
12	-	-	-	-	-	-	-	-	-	-	-	-	0.86	22	-	467	-	-	271	-	-	18.7
13	38.6	12.1	89.4	4.32	6700	5030	990	5.1	540	100	40	418000	1.4	20	-	-	28	-	-	-	-	0.48
14	40.2	13.2	92.8	4.33	3600	1670	1770	0.9	150	0	10	167000	0.63	42	-	67	11	442	267	-	-	6.8
15	37.6	12.2	91.5	4.13	11800	11230	310	36.2	150	80	30	193000	1.95	94	52	-	92	563	531	-	-	81.9
16	40.4	13.3	93.3	4.33	6310	5220	850	6.1	210	10	20	200000	1.23	57	195	-	62	432	717	-	107 1	270. 2
17	38.8	12.7	89	4.36	12100	10390	910	11.4	750	10	40	232000	0.64	43	35	-	64	531	279	-	265	9.4
18	38.6	12.9	90.6	4.26	3870	1570	1870	0.8	310	100	20	252000	0.59	18	-	78	23	507	228	-	-	5.3
19	40.2	12.8	87.4	4.6	5830	4090	1450	2.8	290	0	0	260000	0.85	35	-	64	47	-	234	-	-	8.6
20	44	14.5	94	4.68	5560	4010	1070	3.7	470	0	10	174000	1.19	14	-	104	59	483	247	430	558	26.4
21	36.8	11.6	90	4.09	3210	1840	940	2	360	40	30	349000	1.08	47	-	67	8	398	206	531	294	5.5
22	38.6	12.9	89.6	4.04	6430	5270	710	7.4	290	140	20	129000	0.94	24	20	290	100	406	369	779	959	46.1
23	26.7	8.6	96.7	2.76	11500	-	-	-	-	-	-	285000	0.7	-	38	-	32	246	238	-	181 3	2.3
24	28.0	8.8	63.9	4.38	10100	8740	920	9.5	390	10	40	226000	0.51	96	24	-	-	-	-	-	-	8.05
25	40.8	14	86.4	4.72	6170	5120	620	8.3	310	110	10	152000	0.89	52	-	-	71	-	341	1118	120 4	13.4
26	33.8	11.1	94.7	3.57	2990	2400	430	5.6	150	10	0	93000	0.71	50	-	18	29	552	165	51	889	5.5
27	43.1	14.9	88.3	4.88	9880	8660	710	12.2	320	180	10	152000	1.12	28	108	-	111	639	483	2394	727	258. 5
28	28.6	8.4	88.5	3.23	8970	8390	260	32.3	310	0	10	257000	2.19	-	39	-	151	-	606	936	117 6	19.9
29	42	13.9	97	4.33	7570	5600	1250	4.5	680	30	10	287000	0.81	38	100	-	46	510	431	811	921	18.9
30	41	13.3	91.3	4.49	8620	7810	510	15.3	280	10	20	138000	0.88	36	48	-	307	846	537	1058	284 26	44.7

Table S3: Arterial blood gas test in COVID-19 patients on analysis date

A. Estimated normal PaO_2 (mmHg) equals to $(100) - (0.3) \times (\text{age in years})$

B. Alveolar-arterial O_2 gradient (mmHg) equals to $[(\text{FiO}_2) \times (\text{Atmospheric Pressure} - \text{H}_2\text{O Pressure}) - (\text{PaCO}_2/0.8)] - (\text{PaO}_2)$

C. Expected Alveolar-arterial O_2 gradient for age (mmHg) equals to $[(\text{age in years})/4] + 4$

Patient	pH (reference range 7.35-7.45)	FiO ₂ (%)	PaO ₂ (mmHg)	PaCO ₂ (mmHg)	SaO ₂ (%) (reference range 95-99)	HCO ₃ ⁻ (mmol/L) (reference range 21-28)	Estimated normal PaO ₂ (mmHg) ^A	PaO ₂ /FiO ₂ ratio	SaO ₂ /FiO ₂ ratio	Alveolar-arterial O ₂ gradient (mmHg) ^B	Expected Alveolar-arterial O ₂ gradient for age (mmHg) ^C
1	7.49	50	71.4	30.5	96.4	25	78.7	143	193	247	22
2	7.45	21	81.1	36.8	97.3	26	78.7	386	463	22.6	22
3	7.41	35	84.2	37.9	97.6	24	77.2	241	279	118	23
4	7.43	50	110	22.1	99.2	23	79.3	220	198	218.9	21
5	7.48	28	58.9	28.6	94	23	80.8	210	336	105	20
6	7.46	21	60.9	34	93.8	25	79.0	290	447	46.3	22
7	7.41	21	84.2	37.9	97.6	24	84.4	401	465	18.2	17
8	7.53	28	70.3	28.7	96.3	24	81.1	251	344	93.5	20
9	7.38	60	82	53	96.5	31	78.4	137	161	279.6	22
10	7.43	28	75.1	32.2	95.6	22	83.2	268	341	84.3	18
11	7.43	21	88.2	26.6	97.8	20	89.2	420	466	28.3	13
12	7.51	24	64.5	27.8	94	22	74.8	269	392	71.9	25
13	7.48	21	71.1	33	96	25	76.6	339	457	37.4	24
14	7.47	21	73.3	33	95	25	81.4	349	452	34.8	20
15	7.46	30	123	40.5	98.6	28	76.0	410	329	40.3	24
16	7.46	80	164	44	98	30	80.5	205	123	351.4	20
17	7.44	80	134	35	98	25	86.5	168	123	392.7	15
18	7.47	21	74.4	37.3	96.6	28	82.0	354	460	28.7	19
19	7.47	36	88.5	40.7	95	30	79.0	246	264	117.3	22
20	7.48	28	76.7	32.5	96	26	77.8	274	343	82.3	23
21	7.49	21	69.7	32.5	96	26	78.1	332	457	39.4	22
22	7.44	50	51.7	31.7	87.8	23	78.4	103	176	265.2	22
23	7.45	44	142	41	99.9	28	76.3	323	227	120.5	24
24	7.46	60	70	35.2	95.8	25	88	117	160	313.8	14
25	7.44	36	132	39.1	99.5	27	86.2	367	276	75.8	15.5
26	7.46	21	84.7	31.7	-	22.7	85.6	403	-	25.4	16
27	7.43	100	69	36.8	95	24	79	69	95	598	21.5
28	7.40	80	147	43	99.4	26	74.5	184	124	369.7	25.25
29	7.44	80	71	38	94.7	26	76.6	89	118	451.9	23.5
30	7.46	100	142	34.4	99	-	79	142	99	528	21.5

Table S4. Demographic characteristics of control subjects

Control	Age	Gender
1	39	M
2	50	F
3	53	M
4	56	M
5	57	M
6	58	F
7	59	F
8	59	M
9	60	M
10	60	F
11	61	F
12	62	M
13	62	F
14	62	M
15	63	F
16	64	M
17	64	M
18	64	M
19	64	M
20	66	F
21	66	F
22	68	F
23	69	F
24	70	M
25	75	F
26	76	F
27	77	F
28	77	M
29	79	M
30	84	F

Table S5. List of all fluorochrome mAbs used for flow cytometric analysis

Marker	Clone	Fluorochrome	Company
CCR7	150503	Horizon™ V450	BDBioscience
CD127	HIL-7R-M21	Horizon™ V450	BDBioscience
CD16	3G8	PE-Cy™7 PerCP-cy5.5	BDBioscience
CD19	SJ25C1	PerCP-cy5.5 APC	BDBioscience
CD20	L27	APC-H7	BDBioscience
CD21	B-ly4	Horizon™ V450	BDBioscience
CD25	2A3	PE-Cy™7	BDBioscience
CD27	L128	APC	BDBioscience
CD3	UCHT1	Pacific Blue™ Horizon™ V450	BDBioscience
CD3	SK7	PerCP-cy5.5	BDBioscience
CD38	HB-7	PE-Cy™7	BDBioscience
CD4	SK3	PE-Cy™7 PerCP APC-Cy™7 APC-H7	BDBioscience
CD45	2D1	Horizon™ V500	BDBioscience
CD45RA	L48	PE-Cy™7	BDBioscience
CD56	MY31	PE	BDBioscience
CD56	NCAM16.2	PE	BDBioscience
CD57	HNK-1	FITC	BDBioscience
CD8	SK1	PE APC-Cy™7 APC APC-H7	BDBioscience
CXCR5	51505	PE	R&DSYSTEMS
Granzyme A	CB9	FITC	BDBioscience
HLA-DR	L243	FITC	BDBioscience
IFN-γ	B27	PE-Cy™7	BDBioscience
IFN-γ	25723.11	FITC	BDBioscience
IgD	IA6-2	PE	BDBioscience
IgM	G20-127	FITC	BDBioscience
IL-2	MQ1-17H12	APC	BDBioscience
Perforin	delta G9	PE	BDBioscience
TCRa/b	WT31	FITC	BDBioscience

TCRg/d	11F2	PE	BDBioscience
TNF- α	6401.1111	FITC	BDBioscience