

Supplementary Table S6. Clinical baseline characteristics and routine laboratory data at admission in COVID-19 patients classified according to whether they developed a secondary infection during their hospital stay.

Type	No secondary infection (n=54)	Secondary infection (n=33)	P-value
Baseline characteristics	Sex (male)	19 (35.8)	21 (63.3) 0.02\$
	GCS (<14)	4 (7.4%)	10 (30.3%) 0.01\$
	SOFA score (=0)	36 (66.7%)	8 (33.3%) < 0.01\$
	SpO ₂ /FiO ₂	454.8 (434-462)	< 0.01*
	Heart rate	89 (77.5-102)	< 0.01#
	SBP	126.5 (114-146)	0.01#
Inflammation and other markers	PCT	0.05 (0.02-0.3)	< 0.01*
	CRP	33.25 (6.4-93.7)	0.01*
	Ferritin	251 (121-403)	< 0.01*
	LDH	281.5 (214-352)	0.01*
	pH	7.44 (7.42-7.5)	0.02*
	D-Dimer	600 (366-1108)	< 0.01*
Leukocytes	Hemoglobin	13.95 (12.8-14.95)	< 0.01#
	RBC (%)	42.1 (39-45)	< 0.01#
	ALeC	5700 (4208-7680)	0.02*
	Lympho (%)	18.55 (13.9-25.8)	< 0.01#
	Mono (%)	5.65 (4.4-7.38)	0.01#
	Neut (%)	71.55 (63-78)	< 0.01*
	ANC	4020 (3013-5960)	< 0.01*
	NLR	4.02 (2.35-6.4)	< 0.01*

Data as Median (IQR) or number (Percentage), * in Mann-Whitney test; # in One-way ANOVA and \$ in χ^2 + Cramer's V. In bold, those p-values with high significance (defined by p-value<FDR by Benjamini-Hochberg method). GCS, Glasgow coma score; SpO₂/FiO₂, peripheral blood oxygen saturation to fraction of inspired oxygen ratio; HR, Heart Rate; SBP, Systolic blood pressure; PCT, Procalcitonin; CRP, C-reactive protein; LDH, lactate dehydrogenase; RBC, hematocrit; ALeC, absolute leukocyte count; ANC, absolute neutrophil count; NLR, Neutrophil-Lymphocyte Ratio. Units: PCT, Ferritin and D-Dimer in ng/mL; CRP in mg/L, LDH and; Platelets, ALeC and ANC in counts/mm³; Hemoglobin in g/dL; SBP in mmHg; HR in beats per min.

Supplementary Table S7. Plasma soluble markers at admission in COVID-19 patients classified according to whether they developed a secondary infection during their hospital stay.

Type	No secondary infection (n=54)	Secondary infection (n=33)	P-value
CCL2	121.9 (82.8-186)	194.5 (145-364)	< 0.01*
IFN γ	5.27 (0-36.3)	36.05 (19.9-48)	< 0.01
IL-1 β	0 (0-0.4)	0 (0-6.88)	0.02*
IL-2	0 (0-4.35)	5.3 (1.07-17.2)	< 0.01*
Chemokines and IL-4	2.75 (0-17)	19.7 (2.1-30)	0.03*
cytokines	IL-6	23.6 (3.6-78)	< 0.01*
	IL-8	5.8 (0-16)	< 0.01*
	IL-10	0 (0-9.25)	0.02*
	IL-12p70	3.13 (0-10)	< 0.01*
	IL-17a	0.82 (0-6.7)	0.01*
Immune checkpoint	sTim-3	8559 (4915-16147)	0.03*

Data are pg/mL expressed as Median (IQR). IFN, interferon; IL, interleukin; * Mann-Whitney test.