

**Supplementary Table S5.** Outcomes and their prevalence upon administration and occurrence after treatment with tocilizumab in studied groups.

Outcome	Prevalence upon administration			Occurrence after administration		
	Clinical responders	Non-responders	<i>P</i> value	Clinical responders	Non-responders	<i>P</i> value
death*	-	-	-	-	20 (58.8%)	<0.001 ^a
ICU transfer due to ARDS progression*	-	-	-	-	20 (58.8%)	<0.001 ^a
PE	2 (2.3%)	2 (5.9%)	0.317 ^b	1 (1.2%)	3 (8.8%)	0.068 ^b
DVT	-	-	-	2 (2.3%)	-	0.511 [*]
CAC*	-	2 (5.9%)	0.078 ^b	31 (36.1%)	22 (64.7%)	0.004 ^a
DIC	-	-	-	-	1 (2.9%)	0.283 ^b
severe lymphopenia	28 (32.6%)	13 (38.2%)	0.554 ^a	21 (24.4%)	11 (32.4%)	0.376 ^a
haemolytic anemia	-	-	-	1 (1.2%)	3 (8.8%)	0.068 ^b
neutropenia	15 (17.4%)	3 (8.8%)	0.233 ^a	13 (15.1%)	2 (5.9%)	0.140 ^b
agranulocytosis	-	-	-	10 (11.6%)	2 (5.9%)	0.282 ^b
thrombocytopenia	29 (33.7%)	9 (26.5%)	0.441 ^a	10 (11.6%)	9 (26.5%)	0.045 ^a
severe thrombocytopenia	-	-	-	6 (7.0%)	5 (14.7%)	0.165 ^b
major bleeding	-	-	-	-	1 (2.9%)	0.283 ^b
minor bleeding	-	-	-	3 (3.5%)	6 (17.7%)	0.015 ^b
MACE	8 (9.3%)	11 (32.4%)	0.001 ^a	3 (3.5%)	9 (26.5%)	<0.001 ^b
AMI	7 (8.1%)	11 (32.4%)	<0.001 ^a	2 (2.3%)	8 (23.5%)	<0.001 ^b
ACS	-	-	-	-	1 (2.9%)	0.283 ^b
myocarditis	1 (1.2%)	-	0.716 ^b	-	-	-
new onset of AF	1 (1.2%)	-	0.716 ^b	1 (1.2%)	-	0.716 ^b
HF decompensation	1 (1.2%)	-	0.716 ^b	1 (1.2%)	-	0.716 ^b
liver injury	28 (32.6%)	9 (26.5%)	0.515 ^a	18 (20.9%)	15 (44.1%)	0.010 ^a
cholestatic	27 (31.4%)	7 (20.6%)	0.236 ^a	8 (9.3%)	5 (14.7%)	0.289 ^b
hepatocellular	1 (1.2%)	2 (5.9%)	0.193 ^b	5 (5.8%)	5 (14.7%)	0.113 ^b
mixed	5 (5.8%)	3 (8.8%)	0.406 ^b	11 (12.8%)	5 (14.7%)	0.494 ^b
DILI	-	-	-	1 (1.2%)	-	0.716 ^b
SLD	-	-	-	-	6 (17.7%)	<0.001 ^b
patients with secondary infections	2 (2.3%)	4 (11.8%)	0.033 ^a	6 (7.0%)	10 (29.4%)	0.002 ^b
UTI	1 (1.2%)	1 (2.9%)	0.488 ^b	4 (4.7%)	6 (17.7%)	0.029 ^b
VAP (<i>A. baumannii</i>)	-	-	-	-	6 (17.7%)	<0.001 ^b

bacteraemia	-	-	-	2 (2.3%)	8 (23.5%)	<0.001 ^b
sepsis	-	-	-	-	8 (23.5%)	<0.001 ^b
septic shock	-	-	-	-	5 (14.7%)	0.001 ^b
sinusitis	-	2 (5.9%)	0.078 ^b	-	-	-
otitis media	1 (1.2%)	1 (1.2%)	0.488 ^b	-	-	-
candidiasis	-	-	-	-	2 (5.9%)	0.078 ^b
<i>S. pneumoniae</i> pneumonia	-	-	-	5 (5.8%)	3 (8.8%)	0.406 ^b
<i>L. pneumonophila</i> pneumonia	-	-	-	-	2 (5.9%)	0.078 ^b
AKI	-	-	-	6 (7.0%)	17 (50%)	<0.001 ^a
prerenal	-	-	-	5 (5.8%)	11 (32.4%)	<0.001 ^b
renal	-	-	-	1 (1.2%)	6 (17.7%)	<0.001 ^b
AKI demanding RRT	-	-	-	-	13 (38.2%)	<0.001 ^b
acute tubulointerstitial nephritis	6 (7.0%)	-	0.182 ^b	4 (4.7%)	2 (5.9%)	0.547 ^b
proteinuria	40 (46.5%)	15 (44.1%)	0.812 ^a	2 (2.3%)	9 (26.5%)	<0.001 ^b
sterile pyuria	34 (39.5%)	20 (58.8%)	0.056 ^a	5 (5.8%)	9 (26.5%)	0.003 ^b
acute confusional state	1 (1.2%)	2 (5.9%)	0.193 ^b	-	-	-
COVID-19 encephalopathy	-	-	-	-	2 (5.9%)	0.078 ^b
hypotension	-	1 (2.9%)	0.283 ^b	9 (10.5%)	2 (5.9%)	0.726 ^b
haemodynamic instability	-	-	-	6 (7.0%)	3 (8.8%)	0.711 ^b
respiratory deterioration	-	-	-	13 (15.1%)	26 (76.5%)	<0.001 ^a
COV-HI	50 (58.1%)	23 (67.7%)	0.336 ^a	8 (9.3%)	14 (41.2%)	<0.001 ^a
cHIS	65 (75.6%)	30 (88.3%)	0.124 ^a	4 (4.7%)	3 (8.8%)	0.313 ^b
CCS	10 (11.6%)	13 (38.2%)	<0.001 ^a	4 (4.7%)	3 (8.8%)	0.313 ^b

*P<0.05 - ^a χ^2 test or ^b Fisher's exact test.

ICU – intensive care unit, PE – pulmonary embolism, DVT – deep vein thrombosis, CAC – COVID-19 associated coagulopathy, DIC – disseminated intravascular coagulation, MACE – major adverse cardiovascular event, AMI – acute myocardial injury, ACS – acute coronary syndrome, AF – atrial fibrillation, HF – heart failure, DILI – drug-induced liver injury, SLD – severe liver dysfunction, UTI – urinary tract infection, VAP – ventilator-associated pneumonia, AKI – acute kidney injury, RRT – renal replacement therapy, COV-HI – COVID-19 hyperinflammation syndrome, cHIS - COVID-19-associated Hyperinflammation Syndrome score, CCS - COVID-19 cytokine storm.