

**Supplementary Table 1.** Results of the exploratory factor analysis (EFA) on the available variables evaluated at baseline. Varimax rotation converged in 6 iterations and yielded 5 factors with an eigenvalue > 1. Component loading >0.30 or <-0.30 are reported. Multiple univariate logistic regressions were computed to predict the association between each factor and the likelihood of adverse clinical response or death in TCZ-treated COVID-19 patients. B, beta value; OR, odds ratio; SE, standard error.

Variables at T0	Factor loading matrix					Cumulative
	1	2	3	4	5	
miR-146a-5p	0.975					
miR-21-5p	0.972					
miR-126-3p	0.946					
Age	-0.738					
IL-6		0.853				
Neutrophils		0.843				
Hemoglobin			0.858			
Lymphocytes			0.829	0.34		
Platelets				0.915		
D-dimer					0.918	
PaO2/FiO2				0.539	0.664	
<b>Eigenvalue</b>	3.45	1.85	1.61	1.39	1.02	
<b>Variance explained (%)</b>	31.3	16.8	14.6	12.7	9.3	84.7
<b>Logistic regression</b>						
<b>Non-responder vs Factor</b>						
B (SE)	-0.32 (0.44)	0.59 (0.75)	-0.01 (0.47)	0.11 (0.44)	0.40 (0.42)	
OR (95% CI)	0.74 (0.32 - 1.76)	1.79 (0.41 - 7.78)	0.99 (0.40 - 2.47)	1.12 (0.47 - 2.65)	1.49 (0.65 - 3.41)	
p	0.501	0.435	0.990	0.799	0.349	
<b>Death vs Factor</b>						
B (SE)	-2.63 (1.30)	0.48 (1.00)	-0.55 (0.78)	-0.22 (0.63)	-1.53 (2.07)	
OR (95% CI)	0.07 (0.01 - 0.91)	1.61 (0.23 - 11.34)	0.58 (0.13 - 2.66)	0.98 (0.29 - 3.35)	0.22 (0.00 - 12.60)	
p	<b>0.043</b>	0.633	0.483	0.972	0.461	