

## **LOW HDL AND HIGH TRIGLYCERIDES PREDICT COVID-19 SEVERITY**

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**TABLE S1.****Baseline clinical data of hospitalized COVID-19 patients sorted by infection severity.****Clinical data at baseline and during hospitalization for COVID-19 infection in patients with lipid profile available before or during infection, sorted by severity of COVID-19 evolution.**

	<b>Patients with lipid values available BEFORE hospitalization</b>				<b>Patients with lipid values available DURING hospitalization</b>			
	<b>All N(%)</b>	<b>Mild N(%)</b>	<b>Severe N(%)</b>	<b>P value</b>	<b>All N(%)</b>	<b>Mild N(%)</b>	<b>Severe N(%)</b>	<b>P value</b>
<b>NUMBER</b>	1305	794	511		297	149	148	
<b>DEMOGRAPHIC AND BASELINE CLINICAL DATA</b>								
<b>Age (SD)</b>	67.4 (14.7)	65.1 (15.0)	71.1 (13.2)	<0.001	64.2 (14.6)	63.5 (15.7)	64.9 (13.5)	0.394
<b>Sex , women</b>	567 (43.4)	374 (47.1)	193 (37.8)	<0.001	100 (33.7)	60 (40.3)	40 (27.0)	0.022
<b>Tobacco</b>	64 (4.90)	34 (4.28)	30 (5.87)	<0.001	20 (6.73)	11 (7.38)	9 (6.08)	0.054

<b>High Blood Pressure</b>	719 (55.1)	399 (50.3)	320 (62.6)	<0.001	149 (50.2)	72 (48.3)	77 (52.0)	0.601
<b>Hyperlipidaemia</b>	601 (46.1)	327 (41.2)	274 (53.6)	<0.001	114 (38.4)	50 (33.6)	64 (43.2)	0.110
<b>Diabetes</b>	368 (28.2)	196 (24.7)	172 (33.7)	0.001	86 (29.0)	43 (28.9)	43 (29.1)	1.000
<b>Obesity</b>	469 (35.9)	287 (36.1)	182 (35.6)	0.892	78 (26.3)	38 (25.5)	40 (27.0)	0.868
<b>Body Mass Index (SD)</b>	31.8 (3.6)	33.1 (4.2)	29.7 (5.99)	0.305	28.2 (3.86)	28.0 (3.78)	28.5 (3.93)	0.233
<b>Coronary Heart Disease</b>	145 (11.1)	80 (10.1)	65 (12.7)	0.163	22 (7.41)	14 (9.40)	8 (5.41)	0.275
<b>Stroke</b>	82 (6.28)	41 (5.16)	41 (8.02%)	0.050	19 (6.40)	11 (7.38)	8 (5.41)	0.646
<b>Peripheral Artery Disease</b>	70 (5.36)	34 (4.28)	36 (7.05)	0.042	14 (4.71)	5 (3.36)	9 (6.08)	0.404
<b>Heart Failure</b>	124 (9.50)	67 (8.44)	57 (11.2)	0.124	17 (5.72)	7 (4.70)	10 (6.76)	0.607
<b>Chronic Obstructive Pulmonary disease</b>	245 (18.8)	125 (15.7)	120 (23.5)	0.001	34 (11.4)	10 (6.71)	24 (16.2)	0.017
<b>Chronic Liver Disease</b>	30 (2.30)	19 (2.39)	11 (2.15)	0.925	9 (3.03)	5 (3.36)	4 (2.70)	1.000

<b>Chronic Kidney Disease</b>	152 (11.6)	72 (9.07)	80 (15.7)	<0.001	19 (6.40)	8 (5.37)	11 (7.43)	0.625
<b>Rheumatic Disease</b>	66 (5.06)	40 (5.04)	26 (5.09)	1.000	9 (3.03)	5 (3.36)	4 (2.70)	1.000
<b>Cancer</b>	147 (11.3)	78 (9.82)	69 (13.5)	0.050	31 (10.4)	13 (8.72)	18 (12.2)	0.436
<b>BACKGROUND PHARMACOLOGICAL THERAPY</b>								
<b>Statins</b>	445 (34.1)	249 (31.4)	196 (38.4)	0.011	80 (26.9)	39 (26.2)	41 (27.7)	0.868
<b>Ezetimibe</b>	33 (2.53)	20 (2.52)	13 (2.54)	1.000	11 (3.70)	6 (4.03)	5 (3.38)	1.000
<b>Fibrate</b>	43 (3.30)	18 (2.27)	25 (4.89)	0.015	15 (5.05)	6 (4.03)	9 (6.08)	0.587
<b>Angiotensin Converting Enzyme Inhibitors</b>	311 (23.8)	178 (22.4)	133 (26.0)	0.154	71 (23.9)	34 (22.8)	37 (25.0)	0.761
<b>Angiotensin Receptor Blockers</b>	205 (15.7)	118 (14.9)	87 (17.0)	0.332	39 (13.1)	23 (15.4)	16 (10.8)	0.313
<b>Insulin</b>	121 (9.27)	61 (7.68)	60 (11.7)	0.018	27 (9.09)	15 (10.1)	12 (8.11)	0.700

<b>Sodium Glucose co-Transporter Inhibitors</b>	29 (2.22)	13 (1.64)	16 (3.13)	0.111	10 (3.37)	5 (3.36)	5 (3.38)	1.000
<b>Glucagon Like Peptide 1 receptor agonists</b>	20 (1.53)	13 (1.64)	7 (1.37)	0.878	3 (1.01)	2 (1.34)	1 (0.68)	1.000
<b>Other Diabetes Therapies</b>	275 (21.1)	149 (18.8)	126 (24.7)	0.013	59 (19.9)	27 (18.1)	32 (21.6)	0.541
<b>Antiplatelet</b>	254 (19.5)	130 (16.4)	124 (24.3)	0.001	47 (15.8)	26 (17.4)	21 (14.2)	0.769
<b>New Oral Anticoagulants</b>	60 (4.60)	35 (4.41)	25 (4.89)	0.001	15 (5.05)	6 (4.03)	9 (6.08)	0.769
<b>Acenocoumarol</b>	79 (6.05)	42 (5.29)	37 (7.24)	0.001	16 (5.39)	8 (5.37)	8 (5.41)	0.769
<b>HEMATOLOGICAL AND BIOCHEMICAL BIOMARKERS DURING HOSPITALIZATION</b>								
<b>Total Leucocytes x10<sup>9</sup>/L[IQR]</b>	6.520 [4.000;8.940]	6.035 [3.800;7710]	7.980 [4.500;11.322]	<0.001	6.900 [4.280;9920]	5.590 [3.420;7750]	8.590 [5.642;12.283]	<0.001
<b>Lymphocytes x10<sup>9</sup>/L [IQR]</b>	0.680 [0.310;0.950]	0.800 [0.420;1.050]	0.520 [0.295;0.753]	<0.001	0.700 [0.420;0.999]	0.800 [0.500;1.121]	0.600 [0.400;0.900]	0.001

<b>Ferritin,µg/L[IQR]</b>	1124 (1083)	805 (695)	1620 (1357)	<0.001	909 [452;1728]	568 [272;1067]	1348 [854;2000]	<0.001
<b>C-Reactive Protein,µg/ml[IQR]</b>	238 [93.9;1050]	168 [69.1;617]	353 [164;1710]	<0.001	201 [93.5;380]	120 [57.1;226]	295 [174;475]	<0.001
<b>D-Dimer,µg/L[IQR]</b>	1080 [530;2633]	808 [448;1630]	2198 [804;4772]	<0.001	1540 [710;3930]	1050 [570;2330]	2587 [1088;5932]	<0.001
<b>PaO2, kPa [IQR]</b>	9.06 [7.86;10.4]	9.48 [8.66;10.7]	8 [6.93;9.46]	<0.001	9.33 [7.42;10.8]	10.25 [8.93;11.4]	7.86 [6.93;9.62]	<0.001
<b>PaO2/FiO2 [IQR]</b>	38.1 [28;45]	42.8 [37.5;47.6]	25.3[14.6;35.3]	<0.001	33.4 [19.5;43]	42.6[36.9;45]	19.7 [13.2;27.3]	<0.001
<b>COVID-19 THERAPY</b>								
<b>Chloroquine</b>	1158 (88.7)	724 (91.2)	434 (84.9)	0.001	267 (89.9)	130 (87.2)	137 (92.6)	0.184
<b>Antibiotics</b>	1154 (88.4)	688 (86.6)	466 (91.2)	0.016	270 (90.9)	130 (87.2)	140 (94.6)	0.045
<b>Anti-retroviral</b>	811 (62.1)	463 (58.3)	348 (68.1)	<0.001	185 (62.3)	81 (54.4)	104 (70.3)	0.007
<b>Corticosteroids</b>	409 (31.3)	153 (19.3)	256 (50.1)	<0.001	116 (39.1)	30 (20.1)	86 (58.1)	<0.001
<b>Immunomodulators</b>	242 (18.5)	69 (8.69)	173 (33.9)	<0.001	59 (19.9)	7 (4.70)	52 (35.1)	<0.001

<b>Immunoglobulins</b>	20 (1.53)	5 (0.63)	15 (2.94)	0.002	7 (2.36)	2 (1.34)	5 (3.38)	0.282
<b>Anticoagulation</b>	149 (11.4)	57 (7.18)	92 (18.0)	<0.001	32 (10.8)	10 (6.71)	22 (14.9)	0.001
<b>COVID-19 CLINICAL OUTCOMES</b>								
<b>Intensive Care unit</b>	212 (16.2)	5 (0.63)	207 (40.5)	<0.001	01 (34.0)	3 (2.01)	98 (66.2)	<0.001
<b>Bilateral alteration in Chest X Ray</b>	981 (75.2)	527 (66.4)	454 (88.8)	<0.001	235 (79.1)	102 (68.5)	133 (89.9)	<0.001
<b>Shock</b>	95 (7.28)	3 (0.38)	92 (18.0)	<0.001	38 (12.8)	1 (0.67)	37 (25.0)	<0.001
<b>Acute Respiratory Distress Syndrome</b>	403 (30.9)	0 (0.00)	403 (78.9)	<0.001	132 (44.4)	0 (0.00)	132 (89.2)	<0.001
<b>Intravascular disseminated Coagulation</b>	21 (1.61)	0 (0.00)	21 (4.11)	<0.001	11 (3.70)	0 (0.00)	11 (7.43)	0.002
<b>Renal Function Alterations</b>	222 (17.0)	64 (8.06)	158 (30.9)	<0.001	62 (20.9)	13 (8.72)	49 (33.1)	<0.001



<b>Liver Enzymes Alterations</b>	41 (3.14)	6 (0.76)	35 (6.85)	<0.001	4 (4.71)	4 (2.68)	10 (6.76)	0.197
<b>High-Flow Mechanical Ventilation</b>	267 (20.5)	0 (0.00)	267 (52.2)	<0.001	80 (26.9)	0(0.00)	80 (54.0)	<0.001
<b>Invasive Mechanical Ventilation.</b>	174 (13.3)	0 (0.00)	174 (34.1)	<0.001	84 (28.3)	0 (0.00)	84 (56.8)	<0.001
<b>Death</b>	218 (16.7)	0 (0.00)	218 (42.7)	<0.001	44 (14.8%)	0 (0.00%)	44 (29.7%)	<0.001