

## Supplemental information

### Time-resolved systems immunology reveals

### a late juncture linked to fatal COVID-19

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	Healthy Control	Moderate-Alive	Severe-Alive	Critical-Alive	Critical-Deceased
<b>Subject Count</b>	14 <sup>^</sup>	3	5	21	4
<b>Age in Years<sup>1</sup></b>	53 [30-77]	55 [35-57]	54 [24-84]	54 [37-79]	74.5 [71-77]
<b>Male</b>	11 (78.6%)	2 (66.7%)	3 (60%)	19 (90.5%)	3 (75%)
<b>Race</b>					
Asian	1 (7.1%)	-	-	1 (4.8%)	-
Black	-	-	-	1 (4.8%)	-
White	3 (21.4%)	3 (100%)	4 (80%)	19 (90.5%)	3 (75%)
Unknown	10 (71.4%)	-	1 (20%)	-	1 (25%)
<b>Days between Symptom Onset and Hospital Admission<sup>1</sup></b>		16 [5-17]	12 [3-16]	7.5 [0-24]	6.5 [3-14]
<b>Ever admitted to ICU</b>		-	-	3 (14.3%)	1 (25%)
<b>Comorbidity *</b>					
Arrhythmia		-	2 (40%)	3 (14.3%)	1 (25%)
Autoimmune/Immunodysregulation Disorders		2 (66.7%)	-	6 (28.6%)	-
Cancer/Heme Malignancy/Lymphoma		1 (33.3%)	-	6 (28.6%)	2 (50%)
Cardiovascular Disease/Congestive Heart Failure		-	3 (60%)	3 (14.3%)	2 (50%)
Diabetes Mellitus		-	-	4 (19%)	-
Endocrinopathy/Thyroid Disease		1 (33.3%)	1 (20%)	-	1 (25%)
GI/Liver Disease		-	1 (20%)	4 (19%)	1 (25%)
HIV		1 (33.3%)	-	4 (19%)	-
Hypertension		-	1 (20%)	8 (38.1%)	2 (50%)
Immunodeficiency (Primary and Secondary)		2 (66.7%)	-	4 (19%)	-
Infectious Disease Disorders (Chronic)		1 (33.3%)	-	6 (28.6%)	1 (25%)
Neurological/Neuropsychiatric disease		-	1 (20%)	3 (14.3%)	-
No Comorbidities		-	2 (40%)	3 (14.3%)	1 (25%)
<b>Symptom *</b>					
Asthenia		2 (66.7%)	1 (20%)	3 (14.3%)	-
Cough		1 (33.3%)	4 (80%)	14 (66.7%)	2 (50%)
Dyspnea		1 (33.3%)	2 (40%)	9 (42.9%)	4 (100%)
Fever		3 (100%)	4 (80%)	19 (90.5%)	3 (75%)
Pneumonia		3 (100%)	5 (100%)	21 (100%)	4 (100%)
Respiratory Distress		2 (66.7%)	4 (80%)	17 (81%)	2 (50%)

**Severity definition:**

Moderate – Fever, respiratory symptoms, and radiological evidence of pneumonia

Severe – SpO<sub>2</sub> at rest ≤ 93%, respiratory rate > 30 breaths/min, or PaO<sub>2</sub>/FiO<sub>2</sub> < 300

Critical – Septic shock, organ damage requiring ICU admission, and/or the need for mechanical ventilation

<sup>^</sup> One healthy individual (w/o demographics) was run on all batches for quality control

\* Phenotypes with less than three total counts across patients are excluded from the list

<sup>1</sup> NA (Not Available) values are excluded from statistics; median [min – max] values shown