

Table S1. Definitions of clinical characteristics collected from patients hospitalized due to COVID-19.

Variable	Definition	Unit
Demographics		
Gender	male or female	
Age		years
Symptoms		
Time between onset of symptoms and hospitalization	indicated as reported by the patient upon admission	days
Cough		
Fever	body temperature >38°C	°C
Headache		
Chest pain		
Dyspnea		
Myalgia, arthralgia, malaise		
Nasal congestion		
Gastrointestinal symptoms		
Sore throat		
Anosmia		
Vital signs		
Systolic blood pressure	as documented upon hospital admission	mmHg
Diastolic blood pressure		mmHg
Heart rate		/min.
Oxygen saturation without supplemental oxygen	oxygen saturation under room air without administration of supplemental oxygen	%
Respiratory rate		/min.
Temperature	body temperature measured by ear thermometer	°C
GCS	Glasgow coma scale indicating patients' consciousness, calculated from sum of the following points: ocular response (1 = does not open eyes, 2 = opens eyes in response to pain, 3 = opens eyes in response to voice, 4 = opens eyes spontaneously) oral response (1 = makes no sounds, 2 = makes sounds, 3 = words, 4 = confused, disoriented, 5 = oriented, converses normally) motoric response (1 = makes no movements, 2 = extension to painful stimuli, 3 = abnormal flexion to painful stimuli, 4 = flexion / withdrawal to painful stimuli, 5 = localizes to painful stimuli, 6 = obeys commands)	
Comorbidities		
Arterial hypertension	as documented in patients' personal history or diagnosed during hospital stay	
Diabetes mellitus	systolic blood pressure ≥ 140 mmHg or a diastolic blood pressure ≥ 90 mmHg	
Cardiovascular disease	Hemoglobin A1c (HbA1c) $\geq 6.5\%$ or fasting glucose ≥ 7.0 mmol/l or oral glucose tolerance test ≥ 11.1 mmol/l	
Chronic pulmonary disease	presence of coronary artery disease, occlusive peripheral artery disease, cerebrovascular disease (transient ischemic attack or stroke) and chronic heart failure	
Malignant disease	Chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, obstructive sleep apnea syndrome (OSAS), bronchial asthma	
eGFR <30 ml/min	any current or preexisting hematologic or solid malignancy	
Obesity	estimated glomerular filtration rate <30 ml/min/1.73 m ² according to chronic kidney disease epidemiology collaboration (CKD-EPI) formula	
	BMI (body mass index) >30 kg/m ²	
Laboratory results		
NLR	indicated as measured upon hospital admission	
PLR	Neutrophil-to-lymphocyte ratio	
Neutrophil granulocytes	Platelet-to-lymphocyte ratio	10 ⁹ cells/l
Lymphocytes		10 ⁹ cells/l
Platelets		10 ⁹ cells/l
CRP	C-reactive protein	mg/l

Outcomes	indicated as documented in medical report, worst classification reached during hospital stay
Disease severity	disease severity classification of COVID-19 according to World Health Organization (WHO) [8]:
- Mild disease:	<p>uncomplicated illness:</p> <p>Patients with uncomplicated upper respiratory tract viral infection, may have non-specific symptoms such as fever, cough, sore throat, nasal congestion, malaise, headache, muscle pain or malaise. The elderly and immunosuppressed may present with atypical symptoms. These patients do not have any signs of dehydration, sepsis, or shortness of breath.</p>
- Moderate disease:	<p>Mild pneumonia</p> <p>Patients with pneumonia and no signs of severe pneumonia. (No need for supplemental oxygen)</p>
- Severe disease:	<p>Severe pneumonia</p> <p>Patients with fever or suspected respiratory infection, plus one of the following: respiratory rate >30 breaths/min, severe respiratory distress, or peripheral capillary oxygen saturation (SpO2) <90% on room air.</p>
- Critically ill:	<p>Acute respiratory distress syndrome (ARDS):</p> <p>Onset: new or worsening respiratory symptoms within one week of known clinical insult.</p> <p>Chest imaging (radiograph, (computed tomography (CT) scan) bilateral opacities, not fully explained by effusions, lobar or lung collapse, or nodules.</p> <p>Origin of oedema: respiratory failure not fully explained by cardiac failure or fluid overload.</p> <ul style="list-style-type: none"> - Mild ARDS: $200 \text{ mmHg} < \text{partial pressure of oxygen in blood (PaO}_2\text{) / inspired fraction of oxygen (FiO}_2\text{)} \leq 300 \text{ mmHg}$ (with positive endexpiratory pressure (PEEP) or continuous positive airway pressure (CPAP) $\geq 5 \text{ cmH}_2\text{O}$,7 or non-ventilated) - Moderate ARDS: $100 \text{ mmHg} < \text{PaO}_2\text{/FiO}_2 \leq 200 \text{ mmHg}$ with PEEP $\geq 5 \text{ cmH}_2\text{O}$,7 or non-ventilated) - Severe ARDS: $\text{PaO}_2\text{/FiO}_2 \leq 100 \text{ mmHg}$ with PEEP $\geq 5 \text{ cmH}_2\text{O}$,7 or non-ventilated8) <p>• When PaO2 was not available, SpO2/FiO2 ≤ 315 suggests ARDS (including in non-ventilated patients)</p>
Unfavorable outcome	Composite outcome of need for non-invasive ventilation (NIV), mechanical ventilation, extracorporeal membrane oxygenation (ECMO) or death
Death/Mortality	all-cause in-hospital mortality

Figure S1. Individual slopes of summary measure analysis (slope of NLR measurement of 244 survivors and 29 non-survivors): red dot showing each slope of survived patient and blue dot of non-survived patient, black dots representing the median slope in each group. Value of median slope is shown below the figure.

