Epidemiological and demographic data from 150 patients diagnosed with covid-19 pneumonia in intensive care unit- a retrospective, observational study in Istanbul, Turkey.

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Study Protocol

Permission was obtained from Sisli Hamidiye Etfal Training and Research Hospital local Ethics Committee. The study was planned retrospectively, cross-sectionally and observationally with 193 patients hospitalized between 16 March 2020 and 15 May 2020 in five different covid-19 intensive care units in Sisli and Sariyer campuses of our hospital. While the covid-19 diagnosis of the patients was made by the Polymerase Chain Reaction (PCR) test, the disease was pre-diagnosed based on the criteria published by WHO on 12 January 2020 and the PCR results were concluded within 24 hours. Health workers, patients hospitalized less than 24 hours, patients with negative PCR tests, and patients who returned to intensive care unit after discharge were excluded from the study. The PCR samples were obtained from nasopharyngeal swab samples in non-intubated patients and endotracheal aspiration samples in intubated patients and examined in public health centers established in Ankara and Istanbul and then in the laboratories of our hospital respectively. The patients with intensive care requirements were admitted from emergency department and covid-19 wards to our units. The criteria for intensive care requirement was identified as SpO2<90%, PaO2<70 mmHg, respiratory rate> 30/min or PaO2/FiO2 <300 despite conventional oxygen treatment of 5lt/min. Primary objective was the effect of defined data on 28-day mortality, and secondary objective was the impact of lymphocyte count, LDH, ferritin, D-dimer and procalcitonin levels, and SOFA score on prognosis, which are among the risk factors determined by previous studies. All data were evaluated and recorded using the standardized International Severe Acute Respiratory and Emerging Infection Consortium (ISARIC) case report forms, complemented by electronic records of the hospital, nurse observation records, and missing information was completed by telephone interviews with patients' relatives. Patients' age, gender, BMI, medical history, symptoms at admission (e.g., cough, fever, myalgia, gastrointestinal symptoms, headache),

concomitant diseases (e.g., diabetes mellitus, hypertension, chronic lung disease, cerebrovascular disease, kidney disease, heart disease, cancer, smoking) were recorded. The sequential organ failure assessment (SOFA) and acute physiology and chronic health evaluation score II (APACHE II) were worked out during their intensive care unit stays. Data from arterial blood gas and biochemistry laboratory test results on the first day and the days 7-14-21-28 of hospitalization; antiviral/antibiotic treatments and supportive treatments; all respiratory support methods and complications developed during hospitalization (e.g., acute coronary syndrome, acute renal failure) were recorded. Acute respiratory distress syndrome due to covid-19 infection was defined by 2012 Berlin criteria, acute coronary syndrome by > 99th percentile of troponin I concentration or the presence of dynamic changes in ECG, and the renal failure according to KDIGO criteria. The duration of pre-intensive care hospitalization, intensive care stay and the outcome (discharge or death) were recorded. Statistical data was expressed as standard deviation (SD) for continuously changing data and as percentile (%) for median and categorical variables. Wilcoxon rank-sum test or t-test were used based on parametric or non-parametric data for continuous variables to compare the differences between survivors and non-survivors. The survival rate was shown with the Kaplan-Meier estimator curve. Univariate and multivariate logistic regression models were used to investigate risk factors associated with death in intensive care.