

## SARS-CoV-2 Infection in Hospitalized Patients with Kidney Disease

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## **METHODS:**

Retrospective observational single-center study. We included all patients with end-stage renal disease on dialysis and kidney transplant recipients admitted to the Nephrology Department of “Hospital 12 de Octubre” (Madrid, Spain) with a laboratory-confirmed diagnosis of SARS-CoV-2 infection between March 9, 2020 and April 6, 2020. Demographic and clinical parameters of interest were collected from medical records. Patients were followed-up until death, hospital discharge or end of the observation period (April 6, 2020). Given the retrospective nature of the study, a waiver of informed consent from individual patients was granted.

### **Study definitions**

Confirmed diagnosis of SARS-CoV-2 was based on a positive real time reverse transcriptase PCR (rRT-PCR) assay performed on oropharyngeal swab (Thermofisher TaqPath™ 1-Step RT-qPCR Master Mix, CG). Charlson comorbidity index [S3] was used for the evaluation of comorbidity burden. CURB-65 score was calculated for estimation of disease severity on admission [S4]. Additionally, the SOAR pneumoniae score was also calculated to avert an overestimation of disease severity in dialysis patients or kidney transplant recipients with suboptimal kidney function [S5]. Acute respiratory distress syndrome (ARDS) was defined as the onset of respiratory failure with bilateral pulmonary consolidation and severe hypoxemia ( $\text{PaO}_2/\text{FiO}_2$  ratio  $\leq 300$  mmHg with positive end-expiratory pressure or continuous positive airway pressure  $\geq 5$  cm H<sub>2</sub>O) in the absence of cardiogenic pulmonary edema [S6]. Acute kidney injury was defined according to the AKIN classification [S7].

The main outcome was in-hospital mortality.

### **Statistical Analysis**

Parametric and non-parametric tests were chosen as appropriate for descriptive comparisons of continuous variables, and chi-squared test for categorical variables. Fisher’s exact test was used for the comparisons in smaller groups. A P-value  $< 0.05$  was considered to be significant. All P-values are reported two-sided. Cox proportional hazards regression model was used to analyze the main determinants of death using a

backwards progressive conditional elimination process. Covariables were selected on the basis of prior knowledge and were categorized into clinically relevant groups, or under/above the median values. Analyses were performed using IBM SPSS Statistics 24.0 (IBM Corp. Armonk, NY, USA).

## SUPPLEMENTARY REFERENCES:

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