

# Cardiovascular Disease and 6-month Outcome of COVID-19 Inpatients at a Tertiary Referral Centre

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## Background

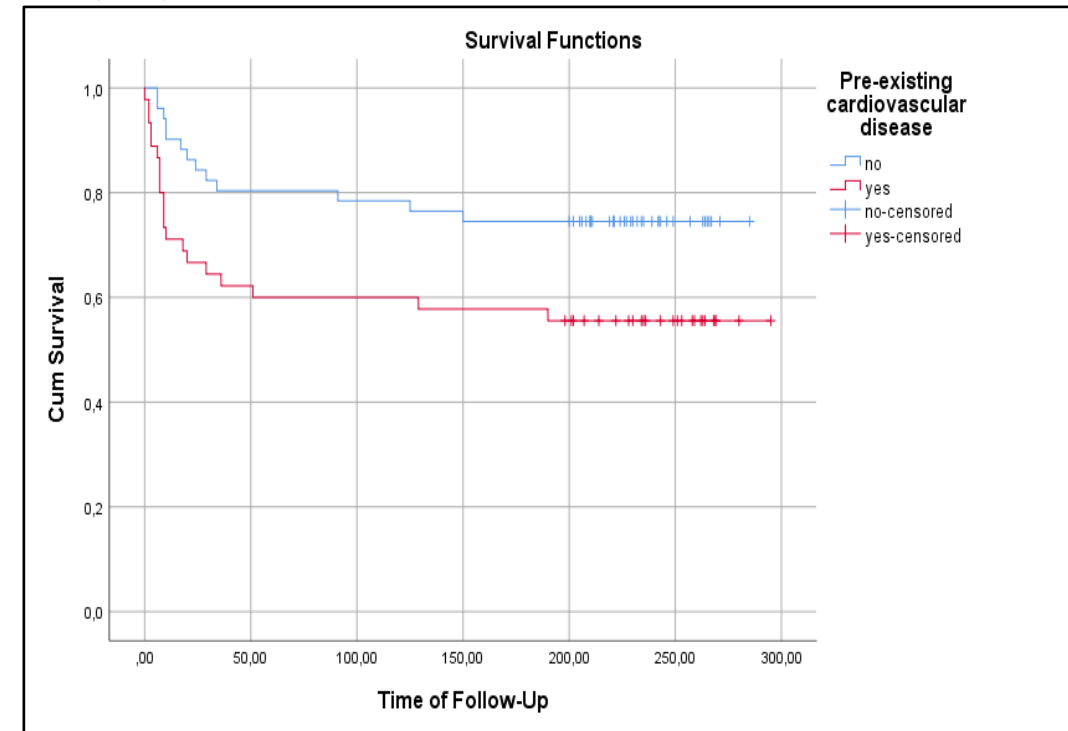
Pre-existing cardiovascular disease and risk factors are common in hospitalized SARS-CoV-2 infected patients and strongly affect outcomes. Furthermore, studies suggest that a considerable proportion of hospitalized patients with COVID-19 develops “Post-COVID-19 syndrome”. Here, we characterize data on cardiovascular disease, risk factors and hospital outcome as well as six months outcome of COVID-19 first-wave inpatients.

## Methods

Registry of 96 patients with PCR-confirmed SARS-CoV-2 infection and prospective follow-up. Patients were characterized regarding pre-existing cardiovascular disease, risk factors, other chronic diseases and laboratory results. Moreover, intra-hospital as well as 3- and 6-month outcome were determined.

## Results

- 74 patients (77.1%) had pre-existing cardiovascular disease (46.9%) and/or cardiovascular risk factors (69.8%). The cumulative survival differed significantly between patients with and without manifest cardiovascular disease (Figure 1).
- The adjusted (sex, age, BMI) odds ratios for death were significantly higher in patients suffering from heart failure (OR: 13.1; 95%-CI: 2.5-67.2; p: 0.002), ischemic heart disease (OR: 5.7; 95%-CI: 1.6-20.1; p: 0.006) and diabetes (OR: 13.2; 95%-CI: 3.4-51.9; p: <0.001).
- Telephone follow-up was possible in 56 cases (80.0%). The most common symptoms that persisted longer than three months after discharge from hospital were dyspnoea (11 patients – 19.6%), weakness (7 patients – 12.5%), decreased physical ability (7 patients – 12.5%), loss of memory (5 patients – 8.9%) and vertigo (5 patients – 8.9%).



**Figure 1.** Survival analysis from admission until end of follow-up in patients with and without manifest cardiovascular disease. Log-Rank p=0.032.

## Conclusion

The prevalence of cardiovascular disease and/or risk factors was high in patients with a PCR-confirmed SARS-CoV-2 infection requiring inpatient care. Heart failure, ischemic heart disease and diabetes were predictors of intrahospital mortality. 10% of all patients that were available for follow-up died within six months after discharge from hospital and all deaths occurred in patients with pre-existing cardiovascular disease and/or risk factors.