### Submission Id: 4627

### Title

Patients Readmitted with COVID-19 Less Likely to Die on Readmission

# Priority 1 (Research Category)

COVID-19

## Presenters

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### Abstract

Context: Understanding the risk of mortality from COVID-19 with readmission is not completely understood. Objective: To determine the epidemiology and mortality risk of patients readmitted with COVID-19. Study Design: Retrospective single-site cohort study of patients diagnosed with COVID-19 during their hospitalization (ICD10-u071) from March 2020 to March 2023. Data were extracted from Vizient's clinical database. Setting or Dataset: Academic medical center. Population studied: Patients admitted with COVID-19. Outcome Measures: Readmission and mortality rates. Results: This retrospective analysis included 3,644 patients admitted with COVID-19 (mean age 55.0 years, 95%CI 54.3 to 55.7 years) with 49.7% (1811) females. There were 48.2% (1,758) blacks, 44.1% (1,606) whites, and 7.7% (other races). The admission rate was 8.1% (3,644/45,238 positive COVID-19 tests). The overall mortality rate was 12.7% (464/3,644). 154 (4.2%) patients were admitted with COVID-19 more than once, representing 370 hospitalizations; 12 (7.8%) patients readmitted with COVID-19 expired. A higher proportion of patients were readmitted with COVID-19 in 2020 (7.4%) compared to 2021 (2.8%) and 2022 (2.8%). Men were more frequently readmitted than women, with an odds ratio of 1.3 (95% CI 1.06 to 1.64), p=0.014. Blacks (55.4%) were significantly readmitted more than whites (38.7%) and other races (6.0%), p=0.013. Patients readmitted were significantly less likely to expire, with an odds ratio of 0.4 (95% CI 0.27 to 0.64), p<0.0001. There was no significant difference in the average age between patients readmitted and those not readmitted, 55.3 and 54.9 years, respectively. Conclusions: This study found that men were more frequently readmitted than women, with blacks being significantly readmitted more than whites and other races. Patients readmitted were significantly less likely to expire, indicating that natural immunity due to infection with COVID-19 appears to provide some protection from death on subsequent readmission with COVID-19. There was no significant difference in the average age between patients readmitted and those not readmitted. The study highlights the need for further research to investigate risk factors for readmission and mortality in patients with COVID-19, particularly those who are readmitted with the disease.