**Conclusion.** Either neutralizing antibody therapy appears to markedly reduce acuity of COVID-19 disease even if patients do progress to requiring hospitalization. However, casirivimab/indivimab therapy also decreased ER visits and hospitalization suggesting better efficacy in our experience.

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**551. Remdesivir and Tocilizumab for the Treatment of Severe COVID-19 in a Community Hospital: A Retrospective Cohort Study**

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**Session:** P-24. COVID-19 Treatment

**Background.** Growing evidence supports the use of remdesivir and tocilizumab for the treatment of hospitalized patients with severe COVID-19. The purpose of this study was to evaluate the use of remdesivir and tocilizumab for the treatment of severe COVID-19 in a community hospital setting.

**Methods.** We used a de-identified dataset of hospitalized adults with severe COVID-19 according to the National Institutes of Health definition (SpO2 < 94% on room air, a PaO2/FiO2 < 300 mm Hg, respiratory frequency > 30/min, or lung infiltrates > 50%) admitted to our community hospital located in Evanston Illinois, between March 1, 2020, and March 1, 2021. We performed a Cox proportional hazards regression model to examine the relationship between the use of remdesivir and tocilizumab and inpatient mortality. To minimize confounders, we adjusted for age, qSOFA score, noninvasive positive-pressure ventilation, invasive mechanical ventilation, and steroids, forcing these variables into the model. We implemented a sensitivity analysis calculating the E-value (with the lower confidence limit) for the obtained point estimates to assess the potential effect of unmeasured confounding.

**Results.** A total of 549 patients were included. The median age was 69 years (interquartile range, 59 - 80 years), 333 (59.6%) were male, 231 were White (41.3%), and 235 (42%) were admitted from long-term care facilities. 394 (70.5%) received steroids, 192...
(34.3%) received remdesivir, and 49 (8.8%) received tocilizumab. By the cutoff date for data analysis, 389 (69.6%) patients survived, and 170 (30.4%) had died. The bivariable Cox regression models showed decreased hazard of in-hospital death associated with the administration of steroids (Figure 1), remdesivir (Figure 2), and tocilizumab (Figure 3). This association persisted in the multivariable Cox regression controlling for other predictors (Figure 4). The E value for the multivariable Cox regression point estimates and the lower confidence intervals are shown in Table 1.

Figure 3. Kaplan-Meier survival curves for in-hospital death among patients treated with and without tocilizumab.

The hazard ratio was derived from a bivariable Cox regression model. The survival curves were compared with a log-rank test, where a two-sided P value of less than 0.05 was considered statistically significant.

Figure 4. Forest plot on effect estimates and confidence intervals for treatments.

The hazard ratios were derived from a multivariable Cox regression model adjusting for age as a continuous variable, qSOFA score, noninvasive positive-pressure ventilation, and invasive mechanical ventilation.

Table 1. Sensitivity analysis of unmeasured confounding using E-values.

Conclusion. Patients who received MAT for COVID-19 in the outpatient setting had a lower rate of COVID-19-related 30 day ER visits and hospitalizations compared to those who did not receive MAT, adjusting for potential confounders.

Disclosures. Mohammad Mahdee Sobhanie, M.D., Regeneron (Scientific Research Study Investigator), Regeneron (Scientific Research Study Investigator, Advisor or Review Panel member).

554. Clinical Impact of Monoclonal Antibody Therapy with SARS-CoV-2

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Session: P-24. COVID-19 Treatment

Background. The novel coronavirus SARS-CoV2 is the causative agent for COVID-19 responsible for the ongoing global pandemic. The spike protein on its surface binds to the angiotensin-converting enzyme 2 receptor helps to enter human cells. Neutralizing antibodies to this protein can be protective and helpful in alleviating