Table 1. Baseline characteristics

| TABLE 1: Demographics and Clinical Characteristics at Baseline |
|---------------------------------------------------------------|
|                                                                 |
| Overall | Atozavonave (n=41) | Placebo (n=19) | P value |
|---------|--------------------|----------------|---------|
| Gender  |                    |                |         |
| Male    | 38 (63)            | 26 (63)        | 12 (63) | 1.0 |
| White   | 46 (77)            | 31 (76)        | 15 (79) | 1.0 |
| Black   | 8 (13)             | 6 (15)         | 2 (11)  |     |
| Ethnicity|                   |                |         |
| Hispanic| 42 (70)            | 29 (71)        | 13 (68) | 1.0 |
| Age, mean years (IQR) | 50.0 (41.9, 59.6) | 51.64 (42.5, 60.8) | 49.4 (41.9, 59.6) | 0.56 |
| BMI, mean | 32.78 (23.76, 35.9) | 32.65 (27.1, 35.9) | 33.07 (26.8, 37.1) | 0.86 |
| Co-morbidities |                  |                |         |
| Hypertension | 38 (63)            | 26 (63)        | 12 (63) | 1.0 |
| Diabetes | 38 (63)            | 30 (73)        | 8 (42)  | 0.4 |
| Obesity  | 23 (38)            | 15 (37)        | 8 (42)  | 0.78 |
| Chronic kidney disease | 20 (33) | 12 (29) | 8 (42) | 0.38 |
| Lung disease | 12 (20)            | 10 (24)        | 2 (11)  | 0.31 |
| Heart disease | 7 (12)             | 5 (12)         | 2 (11)  | 1.0 |
| Cancer   | 6 (10)             | 3 (7)          | 3 (16)  | 0.37 |
| Transplant | 5 (8)              | 2 (5)          | 3 (16)  | 0.31 |
| Liver disease | 5 (8)              | 4 (10)         | 1 (5)   | 1.0 |
| Vascular | 4 (7)              | 2 (5)          | 2 (11)  | 0.23 |
| Other    | 3 (5)              | 1 (2)          | 2 (11)  | 0.26 |

Oxygen status at baseline

- Room air: 27 (44) 9 (47) 0.26
- Low flow oxygen: 40 (66.7) 29 (70.7) 11 (57.9)
- High flow oxygen: 3 (5) 2 (4) 1 (5.3)

526. Implementation of Use of Monoclonal Antibody Therapy in a Large Academic Center for the Outpatient Treatment of COVID-19: Impact on 30 Day Hospitalization Rates, ED Visits and Death

Azra Bhambri, MD; Vinay Srinivasa, BA, MPH; Stacey Weinstein, MD; Nathan Clemens, PhD, MLS; Quanna Baiste, DNP, MS, RNC, NNA, BAC; Shangyam Yang, PhD, D(ABMM), MLS, ASCP; Omai Garner, PhD, D(ABMM); Taru Vijayan, M.D., M.P.H.; University of California, Los Angeles, Los Angeles, CA

Session: P-24. COVID-19 Treatment

Background. Monoclonal Antibody Therapy (Mabs) has been shown to reduce rates of ED visits and hospitalizations in patients at risk for severe COVID-19 infection in clinical trials. Since November, three Mabs received emergency use authorization: Bamlanivimab (Bam), Bamlanivimab/Etesevimab (Bam/Ete) and Casirivimab/Imdevimab (Cas/Idevi). We describe here the real-world effectiveness of implementing early MAb therapy in the outpatient setting for individuals with Covid-19 at high risk of progression.

Methods. We examined the records of 808 UCLA Health patients with a confirmed positive SARSCoV-2 PCR test who were either referred for outpatient MAb therapy or received Mab treatment in the emergency department (ED) between December 10, 2020, and May 3, 2021. The primary outcome of our analysis was the combined 30-day incidence of emergency department visits, hospitalizations, or death following the date of referral. SARSCoV-2 isolates of hospitalized patients who had received Mabs were sequenced to determine the presence of variants.

Results. Of 808 patients, 383 were referred for treatment but did not receive treatment. 109 received Mabs in the ED and 316 patients were treated in an outpatient setting. Composite 30-day mortality, ED visits and hospital admissions were significantly reduced in the combination therapy group (Bam/Ete or Cas/Imd) compared with monotherapy (Bam alone) or no treatment groups (aHR 0.16, 95% CI 0.038-0.67).

Conclusion. Our data show that in a real-world setting, combination monoclonal antibody therapy, not monotherapy, significantly reduced ED visits and hospital admissions, likely due to the presence of the California variants. High socioeconomic vulnerability and certain medical conditions increased risk of treatment failure.

Disclosures. Omai Garner, PhD, D(ABMM), Beckman Coulter (Scientific Research Study Investigator)

527. Lower Risk of ICU Admission with Remdesivir in Patients Hospitalized with COVID-19 Pneumonia

Sarah Lim, MBBC; Pamela Schreiner, PhD; Alan Lifson, MD, MPH; Erica Bye, MPH, PhD; Kathryn Como-Sabetti, MPH; Ruth Lynfield, MD, MPH; Ruth Lynfield, MD; MN Department of Health, St Paul, Minnesota; University of Minnesota School of Public Health, Minneapolis, Minnesota; University of Minnesota, Minneapolis, Minnesota; Minnesota Department of Health, St. Paul, Minnesota

Session: P-24. COVID-19 Treatment

Background. Remdesivir (RDV) was approved by FDA in October 2020 for treatment of patients hospitalized with COVID-19 with oxygen requirements of 2-5 L/min. Since this time, RDV has been shown to reduce hospitalization duration, length of ICU stay, and mortality in clinical trials. Since November, three Mabs received emergency use authorization: Bamlanivimab (Bam), Bamlanivimab/Etesevimab (Bam/Ete) and Casirivimab/Imdevimab (Cas/Idevi). We examined the association between RDV treatment and ICU admission in patients hospitalized with COVID-19 pneumonia requiring supplemental oxygen (but not advanced respiratory support) in MN.

Methods. COVID-19-Associated Hospitalization Surveillance Network (COVID-NET) is a population-based surveillance of hospitalized laboratory confirmed cases of COVID-19. We analyzed COVID-NET cases 218 years hospitalized between Mar 23, 2020 and Jan 23, 2021 in MN for which medical record reviews were complete. On admission, included cases had evidence of COVID-19 pneumonia on chest imaging with oxygen saturation ≤ 98% on room air or requiring supplemental oxygen. Cases were excluded if treated with RDV after ICU admission. Multivariable logistic regression was performed to assess the association between RDV treatment and ICU admission.

Results. Complete records were available for 8,666 cases (36% of admissions statewide). 1,996 cases were included in the analysis, of which 908 were treated with RDV. 83% of cases were residents of the 7-county metro area of Minneapolis-St. Paul. Mean age was 59.7 years (IQR 48-72), 55% were male, and the mean RDV treatment duration was 4.8 days (range 2-15). The proportion of cardiovascular disease (30.6% vs 23.9%, p=0.003), renal disease (16.6% vs 7.6%, p<.001), and diabetes (34.7% vs 29.5%, p=0.01) was higher in the RDV untreated group, while obesity (22.3% vs 8.4%, p<.001) was lower. Inpatient mortality was significantly reduced in the RDV treated group (18% vs 8.9%, p<.001). Multivariable logistic regression showed that treatment may prevent disease progression in this group.

Conclusion. Our data show that in a real-world setting, combination monoclonal antibody therapy, not monotherapy, significantly reduced ED visits and hospital admissions, likely due to the presence of the California variants. High socioeconomic vulnerability and certain medical conditions increased risk of treatment failure.

Disclosures. Omai Garner, PhD, D(ABMM), Beckman Coulter (Scientific Research Study Investigator)

528. Hospital Course of Patients Receiving Ramanchimab: A Real World Analysis

Madeline Belk, PharmD; Jonathan Edwards, Pharm.D., BCPS-AQ ID, BCGP; Ali Hassoun, M.D., Huntsville Hospital, Huntsville, Alabama