535. Comparison of Outcomes in Patients Positive for Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection After Monoclonal Antibody Therapy (MAT) with Bamlamivimab or Casirivimab-Imdevimab

Courtney Nichols, MD[1]; Mark Lustberg, MD, PhD[2]; Mohammad Mahdee Sobhanie, MD[3]; Joy Lehman, MS, PharmD[4]; Erica E. Reed, PharmD, BCPS-AQ ID[3]; Nicholas E. Kman, MD[5]; Mark Conroy, MD[3]; Michael Dick, MD[3]; James N. Allen, MD[6]; Jonathan Parsons, MD, MSc[6]; Carlos Malvestutto, MD[3]; [1]OSU Wexner Medical Center, Columbus, Ohio; [2]The Ohio State University, Columbus, Ohio; [3]The Ohio State University Wexner Medical Center, Columbus, OH; [4]Ohio State University Wexner Medical Center, Columbus, Ohio; [5]The Ohio State University College of Medicine, Columbus, Ohio; [6]Ohio State University, Columbus, Ohio

Session: P-24. COVID-19 Treatment

Background. Limited options currently exist for treatment of patients diagnosed with symptomatic coronavirus 2019 (COVID-19). Monoclonal antibody therapy (MAT) has been investigated as a therapeutic option for symptomatic COVID-19 patients in the outpatient setting at high-risk for progression to severe disease based on emergency use authorization (EUA) criteria. No published studies have compared outcomes for patients treated with different MAT for COVID-19.

Methods. This was a single-center, retrospective cohort study at The Ohio State University Wexner Medical Center to compare COVID-19-related emergency room (ER) visits, admissions, and mortality at 30 days after MAT infusion for adult patients with symptomatic SARS-CoV-2 between November 16, 2020 and February 2, 2021 who received bamlanivimab versus those who received casirivimab-imdevimab. Statistical analysis used logistic regression analysis to determine the odds ratio (OR) to evaluate the relationship between patient characteristics, MAT, and outcomes.

Results. The cohort included 943 patients with SARS-CoV-2 who received MAT, including 658 patients who received bamlanivimab and 285 who received casirivimab-imdevimab. Outcome results between patients who received bamlanivimab and casirivimab-imdevimab showed no statistically significant difference seen in the number of COVID-19 related ER visits (3.2% vs 3.5%, p = 0.80), hospital admissions (4.6% vs 2.8%, p = 0.21), or mortality (0.5% vs 0.7%, p = 0.63). Multivariate analysis showed no statistically significant difference in outcomes between the groups when accounting for potential confounders. As reflected in the Table, chronic lymphocytic leukemia (CLL), gender, and asthma were associated with increased COVID-19 related ER visit within 30 days of infusion and age, chronic obstructive pulmonary disease, CLL, and lupus were associated with increased risk for COVID-19 related admission within 30 days of infusion. Age and obesity with body mass index greater than 35 mg/kg^2 were associated with increased risk for COVID-19 related mortality at 30 days.

Logistic Regression for ER Visit, Hospital Admission, and Mortality for COVID-19 Patients who Received Bamlanivimab versus Casirivimab-Imdevimab

	OR	95% Confidence Interval	p-value
ER Visit			
Bamlanivimab	0.97	0.44 – 2.12	0.94
CLL	11.1	3.29 – 37.4	< 0.001
Asthma	2.98	1.26 – 7.04	0.01
Male	0.33	0.14 – 0.80	0.015
Hospital Admissions			
Bamlanivimab	1.76	0.77 – 3.99	0.18
Age (per ten years)	1.77	1.35 – 2.32	< 0.001
COPD	4.47	1.74 – 11.54	0.002
CLL	7.82	2.55 – 24.0	< 0.001
Systemic Lupus Erythematosus	15.9	2.96 – 85.7	0.001
Mortality			
Bamlanivimab	0.60	0.13 – 2.85	0.52
BMI > 35 mg/kg^2	6.63	1.24 – 35.5	0.03
Age (per ten years)	2.96	1.60 – 5.47	0.001

Conclusion. COVID-19 related outcomes were similar when comparing patients with COVID-19 treated with bamlanivimab versus those treated with casirivimab-imdevimab.

Disclosures. **Mohammad Mahdee Sobhanie, M.D.**, **Regeneron** (Scientific Research Study Investigator)**Regeneron** (Scientific Research Study Investigator, Was a sub-investigator for Regeneron 2066 and 2069) **Carlos Malvestutto, M.D.**, **Lilly** (Scientific Research Study Investigator)**Regeneron Inc.** (Scientific Research Study Investigator)**ViiV Healthcare** (Advisor or Review Panel member)

536. Clinical Outcomes of Hospitalized COVID-19 Patients Treated with Remdesivir-NEAT ID 909REM Study

François Raffi, MD, PhD[1]; Nadir Arber, MD, MSc, MHA[2]; Casper Rokx, MD PhD[3]; Lambert Assoumou, PhD[4]; Pallav L. Shah, MD, MBBS, FERS, FRCP[5]; Nathalie De Castro, MD[6]; Ameet Bakhai, MBBS, MD, FRCP, FESC[7]; Alex Soriano, MD[8]; Lourdes Mateu, MD, PhD[9]; Carlos Lumbreras, MD, PhD[10]; Vicente Estrada, MD, PhD[11]; Adrian Curran, MD, PhD[12]; Pierre-Olivier Sellier, MD, PhD[13]; Annie Duffy, MSc[14]; Carl Fletcher, MSc[14]; Essy Mozaffari, PharmD, MPH, MBA[15]; Richard Haubrich, MD[15]; Paul Hodgkins, PhD, MSc[15]; Anton Pozniak, MD, FRCP[16]; [1]Centre Hospitalier Universitaire de Nantes, Nantes, Pays de la Loire, France; [2]Ichilov Medical Center, Tel Aviv, Israel; [3]Erasmus University Medical Center, Rotterdam, Zuid-Holland, Netherlands; [4]Sorbonne Université, INSERM, Institut Pierre Louis d'Épidémiologie et de Santé Publique (IPLESP), Paris, Ile-de-France, France; [5]Chelsea & Westminster Hospital, National Heart & Lung Institute, Imperial College, London, UK; [6]APHP Hôpital Saint-Louis, Paris, Ile-de-France, France; [7]Royal Free London NHS Foundation Trust, London, UK; [8]Hospital Clinic de Barcelona, Barcelona, Catalonia, Spain; [9]Germans Trias I Pujol Hospital, Barcelona, Catalonia, Spain; [10]12 de Octubre University Hospital, Madrid, Spain; [11]Hospital Clinico San Carlos, Madrid, Spain; [12]Hospital Universitari Vall d'Hebron, Barcelona, Catalonia, Spain; [13]Saint-Louis/Lariboisiere Hospitals, AP-HP, Paris, Ile-de-France, France; [14]Research Organisation (KC) Ltd, London, UK; [15]Gilead Sciences, Foster City, CA; [16]Chelsea and Westminster Hospital, London, UK

Session: P-24. COVID-19 Treatment

Background. There are few real-world data on the use of remdesivir (RDV) looking at timing of initiation in relation to symptom onset and severity of presenting disease.

Methods. We conducted multi-country retrospective study of clinical practice and use of RDV in COVID-19 patients. De-identified medical records data were entered into an e-CRF. Primary endpoints were all-cause mortality at day 28 and hospitalization duration. We assessed time from symptom onset to RDV start and re-admission. We included adults with PCR-confirmed symptomatic COVID-19 who were hospitalized after Aug 31, 2020 and received at least 1 dose of RDV. Descriptive analyses were conducted. Kaplan-Meier methods were used to calculate the mortality rate, LogRank test to compare groups defined by severity of disease. Competing risk regression with discharge and death as competing events was used to estimate duration of hospitalization, and Gray's test to compare the groups.

Results. 448 patients in 5 countries (12 sites) were included. Demographics are summarized (table) by 3 disease severity groups at baseline: no supplemental oxygen (NSO), low flow oxygen ≤6 L/min (LFO), and high-flow oxygen > 6L/min (HFO). No demographic differences were found between groups except for the higher percentage of cancer/chemotherapy patients in NSO group. Corticosteroids use was HFO 73.6%, LFO 62.7%, NSO 58.0%. Mortality rate was significantly lower in NSO, and LFO groups compared with HFO (6.2%, 10.2%, 23.6%, respectively; Fig1). Median duration of hospitalization was 9 (95%CI 8-10), 9 (8-9), 13 (10-15) days, respectively (Fig2). Median time from first symptom to RDV start was 7 days in all 3 groups. Patients started RDV on day 1 of hospitalization in HFO and LFO and day 2 on NSO groups. And received a 5 day course (median). Readmission within 28-days of discharge was < 5% and similar across all 3 groups.

Table 1. Patients baseline characteristics and primary and secondary outcomes

		Disease severity at baseline			
	Overall	High flow oxygen	Low flow oxygen	No supplemental oxygen	P-value
	N=448	N=72	N=295	N=81	
Age (years), median (IQR)	65 (54-76)	63.5 (56-73.5)	66 (54-76)	62 (54-77)	0.695
Male	286 (63.8)	44 (61.1)	193 (65.4)	49 (60.5)	0.623
White caucasian	159 (35.5)	28 (38.9)	106 (35.9)	25 (30.9)	0.459
Body mass index (BMI, kg/m^2), median (IQR)	28.4 (24.9-32.2)	28.8 (26.5-34.6)	28.2 (25.2-32.2)	27.7 (23-31.3)	0.169
Comorbidities, n (%)	355 (79.2)	57 (79.2)	233 (79.0)	65 (80.2)	0.969
Cardiovascular Disease excluding Hypertension	115 (25.7)	19 (26.4)	82 (27.8)	14 (17.3)	0.348
Diabetes at baseline	138 (30.8)	26 (36.1)	95 (32.2)	17 (21.0)	0.200
Hypertension	202 (45.1)	33 (45.8)	130 (44.1)	39 (48.1)	0.977
Asthma	33 (7.4)	6 (8.3)	23 (7.8)	4 (4.9)	0.906
COPD	29 (6.5)	6 (8.3)	20 (6.8)	3 (3.7)	0.801
Severe renal disease	16 (3.6)	2 (2.8)	11 (3.7)	3 (3.7)	0.994
Liver disease	9 (2.0)	2 (2.8)	4 (1.4)	3 (3.7)	0.724
HIV infection	2 (0.4)	1 (1.4)	1 (0.3)	0 (0)	0.745
Chemo/radiotherapy for cancer	46 (10.3)	3 (4.2)	25 (8.5)	18 (22.2)	0.002
Receiving Immuno-Suppressive Agent (Not for Cancer)	19 (4.2)	3 (4.2)	13 (4.4)	3 (3.7)	0.997
Obesity	74 (16.5)	17 (23.6)	48 (16.3)	9 (11.1)	0.308
Dementia	15 (3.3)	1 (1.4)	12 (4.1)	2 (2.5)	0.804
Abnormal Imaging results	395 (88.2)	67 (93.1)	262 (88.8)	66 (81.5)	0.066
Presence of Pulmonary Infiltrates, n (%)	340 (75.9)	52 (72.2)	231 (78.3)	57 (70.4)	0.036
Corticosteroids	285 (63.6)	53 (73.6)	185 (62.7)	47 (58.0)	0.058
Mortality					
Number of deaths by Day 28	52	17	30	5	
Kaplan-Meier estimate of mortality by Day 28 – % (95% CI)	11.6 (9.0-15.0)	23.6 (15.4-35.2)	10.2 (7.2-14.3)	6.2 (2.6-14.2)	<0.001
Hospitalization					
Number of discharges by Day 28	369	52	248	69	
Median duration on hospitalization (95% CI) - days	9 (8-10)	13 (10-15)	9 (8-9)	9 (8-10)	0.011
Remdesivir exposure					
Median (IQR) time from first symptom to use of remdesivir - days	7 (4-9)	7 (5-9)	7 (4-9)	7 (4-11)	0.792
Median (IQR) time from hospitalization to use of remdesivir- days	1 (0-2)	1 (0-1)	1 (0-4)	2 (1-3)	<0.001
Median (IQR) duration of use of remdesivir - days	5 (4-5)	5 (3-6)	5 (4-5)	5 (4-6)	0.522
Readmission					
Total number of discharges at the analysis time point	389	53	261	75	
Total number of readmitted within the 28 weeks of discharge	16	2	11	3	
Proportion of re-admission within 28 days of discharge (95% CI)	4.1 (2.4-6.6)	3.8 (0.5-13.0)	4.2 (2.1-7.4)	4.0 (0.8-11.2)	0.988

Figure 1. Kaplan-Meier estimates of mortality

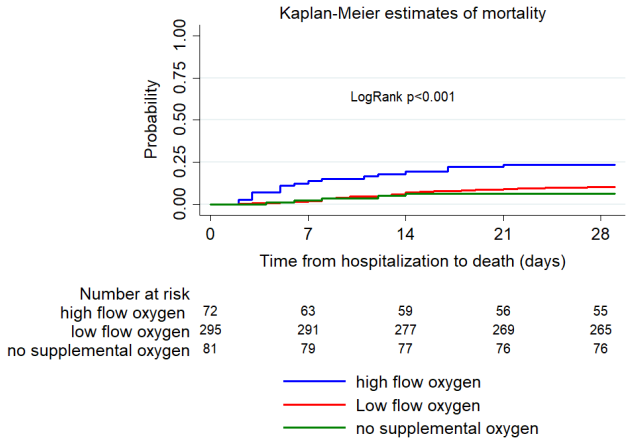
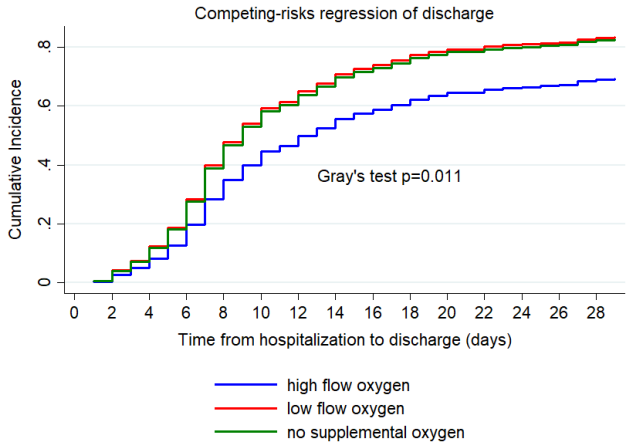


Figure 2. Competing-risks regression of discharge from hospital



Conclusion. In this real-world cohort of COVID-19 positive hospitalized patients, RDV use was consistent across countries. RDV was started within a median of 7 days from symptom within 2 days of admission and given for a median of 5 days. Higher mortality rate and duration of hospitalization was seen in the HFO group and similar rates seen in the LFO and NSO groups. Readmission was consistently low across all 3 groups.

Disclosures. **François Raffi, MD, PhD**, Gilead Sciences (Consultant, Scientific Research Study Investigator, Advisor or Review Panel member)**Janssen** (Consultant) MSD (Consultant, Scientific Research Study Investigator, Advisor or Review Panel member)**Roche** (Consultant)Theratechnologies (Advisor or Review Panel member) ViiV (Consultant, Scientific Research Study Investigator, Advisor or Review Panel member) **Nadir Arber, MD, MSc, MHA**, Check cap (Consultant)**Coved cd 24** (Board Member)**Israel Innovation Authority** (Research Grant or Support)**Nucleix** (Advisor or Review Panel member)**Zion Pharmaceuticals** (Advisor or Review Panel member) **Casper Rokx, MD PhD**, Gilead Sciences (Grant/Research Support, Advisor or Review Panel member, Research Grant or Support)Merck (Grant/Research Support, Research Grant or Support)ViiV (Grant/Research Support, Advisor or Review Panel member, Research Grant or Support) **Ameet Bakhai, MBBS, MD, FRCP, FESC**, Bayer AG (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)Boehringer Ingelheim (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)Bristol-Myers Squibb (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)Daiichi-Sankyo Europe (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)Gilead Sciences (Grant/Research Support, Scientific Research Study Investigator)Janssen (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)Johnson & Johnson (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)MSD (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)Novartis (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor) Pfizer (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)Roche (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor)Sanofi (Consultant, Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau, Independent Contractor) **Alex Soriano, MD**, Angelini (Speaker's Bureau)Gilead Sciences (Research Grant or Support, Speaker's Bureau)**Menarini** (Speaker's Bureau)MSD (Research Grant or Support, Speaker's Bureau)Pfizer (Research Grant or Support, Speaker's Bureau) Shionogi (Speaker's Bureau) **Carlos Lumbreras, MD, PhD**, Gilead Sciences (Grant/Research Support)MSD (Consultant) **Vicente Estrada, MD, PhD**, Gilead Sciences (Consultant, Grant/Research Support)Janssen (Advisor or Review Panel member) MSD (Consultant, Grant/Research Support)Theratechnologies (Consultant)ViiV (Consultant) **Adrian Curran, MD, PhD**, Gilead Sciences (Advisor or Review Panel member, Research Grant or Support)Janssen (Advisor or Review Panel member, Research Grant or Support)MSD (Advisor or Review Panel member, Research Grant or Support)ViiV (Advisor or Review Panel member, Research Grant or Support) **Essy Mozaffari, PharmD, MPH, MBA**, Gilead Sciences (Employee, Shareholder) **Richard Haubrich, MD**, Gilead Sciences (Employee, Shareholder) **Paul Hodgkins, PhD, MSc**, Gilead Sciences (Employee, Shareholder) **Anton Pozniak, MD, FRCP**, Gilead Sciences (Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support)Janssen (Grant/Research Support, Research Grant or Support)Merck (Advisor or Review Panel member)Theratec (Grant/Research Support, Advisor or Review Panel member, Research Grant or Support)ViiV (Grant/Research Support, Scientific Research Study Investigator, Advisor or Review Panel member, Research Grant or Support)

537. Implementation of a Workflow for COVID-19 Monoclonal Antibody Infusions at a Veterans Affairs Medical Center

Pratish C. Patel, PharmD, BCIDP, AAHIVP[1]; Ayne Adenew, PharmD[2]; Angela McKnight, FNP[1]; Kevin Jeng, MD[1]; Angelike P. Liappis, MD, FIDSA[2]; [1]Washington DC VA Medical Center, Potomac, Maryland; [2]Washington DC Veterans Affairs Medical Center, Washington, DC

Session: P-24. COVID-19 Treatment

Background. In the setting of the global pandemic due to COVID-19, high-risk patients with mild to moderate disease were identified as a group who would benefit from COVID-19 monoclonal antibody (mAB) treatment to mitigate progression to severe disease or hospitalization. The U.S. Food and Drug Administration (FDA), under Emergency Use Authorizations (EUA) approved multiple COVID-19 mAB therapies with specific criteria for eligibility of candidates, documentation of discussion with patients, and reporting of all errors and serious adverse events.

Methods. A cross discipline working group implemented a mAB clinic at complexity level 1a VA Medical Center in metropolitan Washington, D.C. through collaboration of personnel committed to patient care. The team successfully persuaded hospital leadership to provide space and leveraged technologies for rapid communication and dissemination of education. A stewardship driven medical center wide surveillance system rapidly identified outpatients for screening; primary care and ED providers were engaged through various electronic methods of education, including email, web-based team communication, intranet webpages and other electronic modalities. Within the EMR, an order panel was implemented to assure that the key requirements of the EUA were met and the provider was guided to the appropriate mAB, nursing, and PRN rescue medication orders.

Results. Of over 17,000 COVID-PCR tests were performed at our medical center, 198 outpatients were screened and 16 received COVID-19 mAB infusions between January 2, 2021 to May 31, 2021. One patient experienced a reaction requiring the infusion to be stopped and supportive medications to be administered; there were no long-term sequalae reported as a result of this event.

Conclusion. A multidisciplinary collaboration is well suited to implement innovative processes and policies for novel therapies in the middle of a pandemic. An agile workflow, regular communications between members of the workgroup, and commitment of institutional leadership helped facilitate the changes necessary to provide our patients the opportunity to receive potentially life-saving therapies.

Disclosures. **All Authors**: No reported disclosures

538. The Role of N-acetylcysteine on Post Covid-19 Pulmonary Fibrosis

Bernard Demot, n/a[1]; Kristin Ivan Mark Hizon, n/a[1]; [1]Baguio General Hospital and Medical Center, Baguio City, Benguet, Philippines

Session: P-24. COVID-19 Treatment

Background. Covid 19 have long lasting complications, from myalgia, body weakness to life debilitating strokes, and pulmonary fibrosis. Several mechanisms had been described but mostly viral or autoimmune which causes damages which leads to Acute respiratory distress syndrome. There is no approved treatment as of this time. Antifibrotic drugs use had been limited due to hepatoxicity, on top of Covid 19 hepatopathy. This study aims to describe the role of N-acetylcysteine on Post COVID 19 pulmonary fibrosis as an alternative treatment.

Methods. Patients are admitted at Baguio General Hospital and Medical Center at the COVID wards. Patients are COVID confirmed by RT PCR nasopharyngeal swab. Patient who are classified as severe were given Dexamethasone, Enoxaparin and Remdesivir for 5-10 days. Patients who are not weaned off from O2 support underwent