Pemivibart Administration Process
V2.0, 5/15/24

Background
On March 22, 2024 the US Food and Drug Administration granted an emergency use authorization for pemivibart (Pemgarda), a recombinant human monoclonal IgG1lambda antibody that targets the SARS-CoV2 spike protein receptor binding domain, there by inhibiting virus attachment to the human ACE2 receptor on host cells, as pre-exposure prophylaxis of Covid-19. Pemivibart, developed by Invivyd, Inc, is NOT meant for the treatment of Covid-19 or for post-exposure prophylaxis. The basis of approval was the CANOPY study.

There are no direct efficacy data to support its use. CANOPY used historical immunobridging data looking at geometric mean titers against JN.1 which is the current dominant variant.

This drug may provide an unmet need for a small group of vulnerable patients who do not respond well to standard vaccines. We will watch the post marketing data closely as well as our own data.

UCLA Health has had prior experience with administering pre-exposure monoclonal antibodies against Covid-19. From January 2022 to December 2022, 1694 high-risk patients received pre-exposure prophylaxis for Covid-19 with Tixagevimab/Cilgavimab (Evusheld). These patients received this preventive treatment while admitted in the hospital and in the outpatient setting (at Connie Frank and CTRC). Tixagevimab/cilgavimab in December 2022 was discontinued given the presence of variants to which the drug was no longer effective.

Indications
Adults and adolescents 12 years and older and weighing at least 40kg who meet the following criteria are eligible for pemivibart:

- Not currently infected with SARS-CoV-2 and who have not had a known recent exposure to an individual infected with SARS-CoV-2 and
- Have moderate-to-severe immune compromise due to a medical condition or receipt of immunosuppressive medications or treatments and are unlikely to mount an adequate response to COVID-19 vaccination

Conditions that meet the criteria for moderate to severe immune compromise include:

- Active treatment for solid tumor and hematologic malignancies
- Hematologic malignancies associated with poor responses to COVID-19 vaccines regardless of current treatment status (e.g., chronic lymphocytic leukemia, non-Hodgkin lymphoma, multiple myeloma, acute leukemia)
- Receipt of solid-organ transplant or an islet transplant and taking immunosuppressive therapy
- Receipt of chimeric antigen receptor (CAR)-T-cell or hematopoietic stem cell transplant (within 2 years of transplantation or taking immunosuppressive therapy)
- Moderate or severe primary immunodeficiency (e.g., common variable immunodeficiency disease, severe combined immunodeficiency, DiGeorge syndrome, Wiskott-Aldrich syndrome)
- Advanced or untreated HIV infection (people with HIV and CD4 cell counts <200/mm^3, history of an AIDS-defining illness without immune reconstitution, or clinical manifestations of symptomatic HIV)
- Active treatment with high-dose corticosteroids (i.e., ≥20 mg prednisone or equivalent per day when administered for ≥2 weeks), alkylating agents, antimetabolites, transplant-

related immunosuppressive drugs, cancer chemotherapeutic agents classified as severely immunosuppressive, and biologic agents that are immunosuppressive or immunomodulatory (e.g., B-cell depleting agents)

Administration
All patients must be given the Pemivibart EUA Fact Sheet prior to administration and agree to administration verbally. Spanish translation will be made available.
For individuals who were recently vaccinated against Covid-19, pemivibart should be administered 2 weeks after vaccination.

Pemivibart is to be administered at a dose of 4500mg intravenously in 0.9% saline over an hour. Patients are to be monitored for 2 hours following administration.

Repeat dosing may be considered every 3 months, pending the efficacy against currently circulating variants.

Dose adjustments
None are needed currently for hepatic or renal impairment. Data are limited for those with hepatic impairment.

Major adverse effects
Anaphylaxis was reported in 0.6% of trial participants. These symptoms included pruritus, flushing, urticaria, erythema, angioedema, diaphoresis, dizziness, tinnitus, wheezing, dyspnea, chest discomfort, and tachycardia.

Hypersensitivity and infusion reactions can occur up to 24 hours after infusion. These include fever, difficulty breathing, chills, fatigue, arrhythmias, etc. If a mild infusion reaction occurs during the infusion, consider stopping the infusion.

Infusion site reactions such as erythema were reported in 2% of study participants. Influenza like illness (3%) nausea (2%) and headache (2%) were also reported as potential adverse effects.

Serious adverse effects must be reported using the FDA Form 3500 (MedWatch).

Cost
$5775 WAC/ $6930 AWP
Pemivibart will be purchased using a regular periodic automatic replacement or based on utilization.

Order panels and infusion therapy plans
Clinicians who work with moderately-severe immunocompromised individuals will have access to the inpatient order panel and outpatient infusion therapy plan. These panels include pemivibart and several prn medications such as diphenhydramine, acetaminophen, methylprednisolone, ondansetron for any adverse reactions. In addition, nurses who administer pemivibart will receive a communication to confirm that the patient has received and reviewed the fact sheet.

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Sites of Administration
Outpatient administration (**effective after 5/13/24**):
Bowyer- exclusively for patients with hematologic malignancies, post BMT/SCT
Connie Frank- for SOT and other immunosuppressed patients (prioritize those on B cell depleting agents), scheduled Mon-Fri 12p-5p, average 6-8 patients a day.

- Currently has 2 infusion rooms.
- Transplant MD present Mon-Thurs
- Transplant NP present Mon-Friday
- Inpatient transplant ID MD will be available as needed for questions.

Clinicians are to place order as infusion therapy plan and email TXConnieFrankInsu@mednet.ucla.edu to schedule patient.

Please advise your patients that the process may be up to 4 hours from the time they arrive. This includes preparing the medication, administering the medication (1h) and the observation time (2h).

Inpatient administration (**effective 5/8/24**):
Patients who meet the criteria for pemivibart may be offered it in the inpatient setting. Specific populations to potentially target are those who are admitted for organ transplant or chemotherapy and those on B cell depleting agents.

Nurses are undergoing specific training in processes with the assistance of Sarah Philipps, DNP, MSN-Ed, RN, RGN, EDP-C.

For further questions please contact Tara Vijayan, MD, MPH tvijayan@mednet.ucla.edu and the infectious disease pharmacists PharmacyInfectiousDiseaseRPH@mednet.ucla.edu