Due to increasing levels of resistance, bebtelovimab (monoclonal antibody) is no longer a first-line option for COVID-19 treatment.

REMDESIVIR (IV daily x 3 days) is first-line for treatment of eligible inpatients and outpatients at OHSU (capacity limited to approximately 10 patients per week). Remdesivir does not have drug-drug interactions with calcineurin inhibitors (eg., tacrolimus). While 3 days of IV treatment is logistically difficult, we are able to offer it on a limited basis.

Who: Patients in NIH Tier 1-4, which includes all of our post-transplant patients, meet high risk criteria. Patients must also meet all of the following criteria:

- Documented + PCR or antigen test
- Symptomatic COVID-19 infection
- Weight > 3kg (if pediatric patient under 12yo, please contact pediatric ID to coordinate, as CHH1 may not be the correct venue for treatment)
- Not on supplemental oxygen or requiring more oxygen than baseline if on chronic O2
- **Maximum time to start treatment from symptom onset is 7 days**

PAXLOVID (nirmatrelvir/ritonavir) is comparable to remdesivir with regard to efficacy, but administration is complicated by extensive drug-drug interactions, including with calcineurin inhibitors (e.g. tacrolimus) as well as anticoagulants, azole antifungals, and a long list of other medications. Therefore, it is considered to be *a close second line option* in this patient population. Please refer to the OHSU SOT guidance document on dosing/management of common immunosuppressants for patients on Paxlovid. Please reach out to your transplant pharmacist to review for potential drug interactions for patients who are to begin Paxlovid. It is important that all medications the patient is on be reviewed for potential drug-drug interactions at the time of initiation of Paxlovid – see COVID-19 drug interactions checker - University of Liverpool.

Who: Patients in NIH Tier 1-4, which includes all of our post-transplant patients, meet high risk criteria. Patients must also meet all of the following criteria:

- Documented + PCR or antigen test
- Symptomatic COVID-19 infection
- Weight > 40kg and age 12 or older
- Creatinine clearance ≥ 30 ml/min
- Not on supplemental oxygen or requiring more oxygen than baseline if on chronic O2
- **Maximum time from symptom onset is 5 days**

Paxlovid is NOT recommended for use in patients with significant liver disease (Child-Pugh Class C).

Dosing:

- CrCl > 60 ml/min: nirmatrelvir 300 mg with ritonavir 100 mg, administered together, twice daily for 5 days
- CrCl ≥ 30 ml/min to < 60 ml/min: nirmatrelvir 150 mg with ritonavir 100 mg, administered together, twice daily for 5 days
- CrCl < 30 ml/min: not recommended (can be given remdesivir)

MOLNUPIRAVIR has significantly lower efficacy in trials for preventing disease progression than either remdesivir and Paxlovid. If at all possible, the remdesivir or Paxlovid are preferred for outpatient treatment.

Who: Patients in NIH Tier 1-4, which includes all of our post-transplant patients, meet high risk criteria. Patients must also meet all of the following criteria:

- Documented + PCR or antigen test
- Symptomatic COVID-19 infection
- 18 years or older
- Not on supplemental oxygen or requiring more oxygen than baseline if on chronic O2
- **Maximum time from symptom onset is 5 days**

Dosing: molnupiravir 800 mg (four 200 mg capsules) taken orally every 12 hours for 5 days

Patients of childbearing potential should be counseled about abstaining from sex or using reliable contraception for the duration of therapy and for up to 4 days after receiving molnupiravir. Reproductive toxicity has been reported in animal studies of molnupiravir, and molnupiravir may be mutagenic during pregnancy. Men of reproductive potential who are sexually active with individuals of childbearing potential should abstain from sex or use a reliable method of contraception for the duration of treatment and for at least 3 months after the last dose of molnupiravir. Avoid feeding an infant breast milk during molnupiravir treatment and for 4 days after the final dose.