



Atrium Health

Oral Therapeutics for Treatment of COVID-19

nirmatrelvir-ritonavir (Paxlovid) and molnupiravir

Why would I prescribe Paxlovid?

- My patient has **mild or moderate COVID infection**
 - Patients with mild or moderate COVID-19 are those who have respiratory and systemic symptoms but not hypoxia, tachypnea, or other complications that necessitate hospitalization.
- Because of mutations in the viral spike protein of the Omicron variant, most currently available anti-SARS-CoV-2 monoclonal antibodies have reduced activity. Thus, the only mAb option is **sotrovimab, which unfortunately is in very limited supply.**
- Nirmatrelvir-ritonavir (**Paxlovid**), remdesivir, and molnupiravir are expected to remain active against Omicron.

In a phase 2/3 trial, study participants who received Paxlovid within 5 days of symptom onset, had an 88% reduction in hospitalization or death compared with the placebo group

Why would I prescribe molnupiravir?

- My patient has **mild or moderate COVID infection**
 - Patients with mild or moderate COVID-19 are those who have respiratory and systemic symptoms but not hypoxia, tachypnea, or other complications that necessitate hospitalization.
- My patient has **contraindications to Paxlovid**
- My patient is ≥ 18 *and* is **not pregnant**, breastfeeding, or trying to conceive

In a phase 3 trial, study participants who received molnupiravir within 5 days of symptom onset, had an **30% reduction in hospitalization or death** compared with the placebo group

5-step checklist to prescribe Paxlovid

1) Complete the EUA attestation

2) Verify renal function

3) Remember drug-drug interactions

4) Pregnancy considerations

5) Atrium Pharmacy is not open on weekends

For patients ≥ 12 and ≥ 40 kg

Step 1 of 5 – EUA attestation (Paxlovid)

Paxlovid is only available under Emergency Use Authorization (EUA) so an attestation that this was reviewed with the patient must be in their chart

Ensuring patients meet eligibility criteria *before* prescribing is key

The **Outpatient COVID Treatment** tile on *Physician Connect* will walk you through eligibility – please use this before prescribing

E-prescriptions only (no paper)

Step 2 of 5 – Renal Function (Paxlovid)

Before prescribing, verify your patient has **normal renal function**

If any history of renal insufficiency, GFR should be documented *within the past 6 months*

Dose can be adjusted for renal insufficiency

Step 3 of 5 – Drug interactions (Paxlovid)

The potential for drug-drug interactions is substantial

- ritonavir is a CYP3A inhibitor

Atrium Pharmacists will review all Paxlovid prescriptions

Paxlovid should not be administered with medications such as amiodarone (and several other antiarrhythmic drugs), rifampin, or rivaroxaban.

Other medications, such as **calcineurin inhibitors**, may need dose reduction or close monitoring.

Medications such as **statins** may be temporarily stopped.

Step 4 of 5 – Pregnancy considerations

Paxlovid is safe for pregnancy and breastfeeding

Step 5 of 5 – AH Pharmacy considerations

Paxlovid is only dispensed from our Kenilworth Rd location in Charlotte

Pharmacy hours: Monday-Friday 8a-6p

- **Note:** Patients may *fall out of the treatment window* if their 5th Day of infection falls on a Saturday or Sunday
- Be mindful of closing hours with prescriptions sent later in the day

Note: Kenilworth also is an infusion center site with medically fragile patients

Mitigation strategies to keep COVID+ patients out of the building

- Drug can be easily sent by courier (the preferred method for COVID Safe Passage)
- Ask non-COVID infected friends or family members to come pick up the medication
- Medication can be brought out to the car

Paxlovid vs. molnupiravir

Recommendation...

- **First line** oral therapy: **Paxlovid** Second line: molnupiravir
 - Reduction in hospitalizations: **Paxlovid** >> molnupiravir
 - Pregnancy considerations: only safe option is **Paxlovid**
 - Age: Paxlovid ≥ 12 vs. molnupiravir ≥ 18

However...

- Drug-drug interactions or renal insufficiency: **molnupiravir** >> Paxlovid

Paxlovid: 300 mg nirmatrelvir + 100 mg ritonavir bid x 5 days

Paxlovid (GFR 30-60 ml/min): 150 mg nirmatrelvir + 100 mg ritonavir bid x 5 days

molnupiravir: 800 mg bid x 5 days

*EUA attestation is also required for molnupiravir

Appendix

eTable 1. Comparison of Treatment Options for High-Risk Nonhospitalized Patients With Mild to Moderate COVID-19

	Nirmatrelvir-ritonavir ¹	Sotrovimab ²	Remdesivir ³	Molnupiravir ⁴
Efficacy (prevention of hospitalization or death)	<ul style="list-style-type: none"> Absolute risk reduction: 6.3%→0.8% Relative risk reduction: 88% NNT: 18 	<ul style="list-style-type: none"> Absolute risk reduction: 7%→1% Relative risk reduction: 85% NNT: 17 	<ul style="list-style-type: none"> Absolute risk reduction: 5.3%→0.7% Relative risk reduction: 87% NNT: 22 	<ul style="list-style-type: none"> Absolute risk reduction: 9.7%→6.8% Relative risk reduction: 30% NNT: 35
Advantages	<ul style="list-style-type: none"> Highly efficacious Oral regimen Ritonavir studied (safe) in pregnancy 	<ul style="list-style-type: none"> Highly efficacious Monoclonal antibodies typically safe in pregnancy Few/no drug interactions 	<ul style="list-style-type: none"> Highly efficacious Studied in pregnancy Few/no drug interactions 	<ul style="list-style-type: none"> Oral regimen Not anticipated to have drug interactions
Disadvantages	<ul style="list-style-type: none"> Drug-drug interactions 	<ul style="list-style-type: none"> Requires IV infusion followed by 1-h observation 	<ul style="list-style-type: none"> Requires IV infusion on 3 consecutive days 	<ul style="list-style-type: none"> Low efficacy Concern: mutagenicity Not recommended in pregnancy/children

Abbreviations: IV, intravenous; NNT, number needed to treat.

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Atrium Health

Thank you for your
diligence and care!

Sincerely from the Atrium Health COVID Outpatient Treatment Team