Comparison of Recommended Outpatient Therapies Effective Against COVID-19 Omicron Variant

Texas Medical Association
Physicians Caring for Texans

For locations and allocation amounts, go to the COVID-19 Public Therapeutic Locator for Paxlovid and molnupiravir and the Texas COVID-19 Therapeutics Finder for sotrovimab. For questions on how to obtain products under U.S. Food and Drug Administration (FDA) emergency use authorization (EUA), contact COVID19therapeutics@hhs.gov.

Ranked in order of preference per the National Institutes of Health (NIH)

Ranked from most preferred (1) to least preferred (4)	(1) Nirmatrelvir + Ritonavir (Paxlovid™)	(2) Sotrovimab (Xevudy®)	(3) Remdesivir (Veklury®)	(4) Molnupiravir (Lagevrio®)
Manufacturer	Pfizer	GlaxoSmithKline	Gilead	Merck
Current EUA	Yes	Yes	No (FDA-approved)	Yes
Indication	Individuals with mild to moderate illness who are at high risk for disease progression to severe COVID-19	Individuals with mild to moderate illness who are at high risk for disease progression to severe COVID-19	Currently approved (vs. emergency-use authorized) for individuals with mild to moderate illness who are at high risk for disease progression to severe COVID-19, and for hospitalized individuals.	Individuals: • With mild to moderate illness who are at high risk for disease progression to severe COVID-19; **AND** • For whom alternative COVID-19 treatment options authorized by FDA are not accessible or clinically appropriate
Drug class	Protease inhibitor and CYP3A inhibitor	Monoclonal antibody	RNA polymerase inhibitor	Nucleoside analogue
Mechanism of action	Inhibits mPRO, preventing viral replication	Neutralizing monoclonal antibody	Inhibits viral replication	Viral lethal mutagenesis
Age (in years) limit	≥ 12	≥ 12	≥ 12	≥ 18
Weight limit	≥ 40 kg	≥ 40 kg	≥ 40 kg	N/A

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Can initiate if hospitalized for COVID-19?	No	No	Yes	No
Can continue if hospitalized during therapy?	Yes, if available	No	Yes	Yes, if available
Authorized for preexposure or postexposure prophylaxis?	No	No	No	No
Initiate within # days of symptom onset	≤ 5 days	≤ 10 days	≤ 7 days	≤ 5 days
Dose	Two 150 mg tablets (300 mg) nirmatrelvir with one 100 mg tablet ritonavir every 12 hours for five days, with or without food	Single 500 mg dose after dilution by IV infusion over 30 minutes	200 mg IV infusion on day 1, followed by 100 mg IV infusion daily on days 2 and 3; administer infusions over 30-120 minutes	800 mg (four 200 mg capsules) taken orally every 12 hours for five days, with or without food
Duration of therapy	Five days	One-time infusion	Three days	Five days
Okay to crush?	No	N/A	N/A	No
Renal and hepatic dose adjustments?	Yes	No	No	No
Must provide patient fact sheet?	Yes	Yes	No	Yes
Drug interactions	Yes; see NIH guidelines on Paxlovid™ and concomitant medications.	Clinical drug-drug interaction studies have not been performed.	Clinical drug-drug interaction studies have not been performed.	Clinical drug-drug interaction studies have not been performed.
Contraindications	Patients on drugs that are highly dependent on CYP3A for clearance and for which elevated concentrations are associated with serious and/or life-threatening reactions	None	None	Pregnancy

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Most common adverse reactions	Dysgeusia, diarrhea, hypertension, myalgia	Infusion-related reactions	Nausea, increased AST (aspartate transaminase) and ALT (alanine aminotransferase), prolonged prothrombin time	Diarrhea, nausea, dizziness
Risks/miscellaneous notes	Not recommended with severe renal or hepatic impairment	Patients should be monitored during the infusion and observed for at least one hour after infusion.	Patients should be monitored during the infusion and observed for at least one hour after infusion. • May be considered for immunocompromised patients • Concomitant use with chloroquine phosphate or hydroxychloroquine sulfate not recommended	May affect bone and cartilage growth • NOT recommended for use during pregnancy as it may cause fetal harm, but physicians may use if it is determined that benefits outweigh risks • Breastfeeding not recommended during treatment and four days after final dose
Efficacy in high-risk patients compared with placebo **Hospitalizations or deaths at ~28 days (%)**	88% reduction in hospitalization or death through day 28 PAX 0.8% vs. PL 6.3%	79% reduction in hospitalization or death through day 29 SOT 1% vs.PL 6%	87% reduction in hospitalization or death through day 28 REM 0.7% vs. PL 5.3%	30% reduction in hospitalization or death through day 29 MOL 6.8% vs. PL 9.7%
For the most complete and accurate information, see these FDA links	Paxlovid™ FDA fact sheet	Sotrovimab FDA fact sheet	Remdesivir FDA prescribing information Remdesivir FDA FAQs	Molnupiravir FDA fact sheet

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Notes:

As COVID-19 treatments and therapeutics are constantly changing, please refer to the NIH COVID-19 Treatment Guidelines for the most up-to-date recommendations.

Other treatment considerations not listed in the chart are fluvoxamine and high-titer COVID-19 convalescent plasma for immunocompromised individuals.

Resources:

National Institutes of Health. The COVID-19 Treatment Guidelines Panel's Statement on Therapies for High-Risk, Nonhospitalized Patients With Mild to Moderate COVID-19. Updated Dec. 30, 2021. Accessed Jan. 13, 2022.

Centers for Disease Control and Prevention. Center for Preparedness and Response. What Clinicians Need to Know About the New Oral Antiviral Medications for COVID-19. Clinician Outreach and Communication Activity Call: Wednesday, Jan. 12, 2022. Accessed Jan. 14, 2022.

Food and Drug Administration. Coronavirus (COVID-19) | Drugs. Accessed Jan. 16, 2022.

Yek C, Warner S, Wiltz JL, et al. Risk Factors for Severe COVID-19 Outcomes Among Persons Aged ≥18 Years Who Completed a Primary COVID-19 Vaccination Series – 465 Health Care Facilities, United States, December 2020-October 2021. *MMWR Morb Mortal Wkly Rep* 2022;71:19-25.

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