

# NIH COVID-19 Treatment Guideline Updates:

The [NIH COVID-19 treatment guidelines](#) were further updated on November 18, 2020.

## Key changes include:

- November 18: Panel recommendations on bamlanivimab based on the FDA's recent Emergency Use Authorization
- November 3: FDA product label updates for remdesivir were included and updates related to considerations in pregnancy. (Please refer to the guideline for more information on this topic.)

Recommendations and evidence were rated as follows:

**Rating of Recommendations:** A = Strong; B = Moderate; C = Optional; **Rating of Evidence:** I = One or more randomized trials with clinical outcomes and/or validated laboratory endpoints; II = One or more well-designed, nonrandomized trials or observational cohort studies; III = Expert opinion

Below is a summary of key guideline recommendations for hospitalized adult patients with COVID-19:

**Treatment recommendations based on disease severity can be found [here](#).**

## Anticoagulation

- For a complete list of anticoagulation recommendations, please refer to [Antithrombotic Therapy in Patients with COVID-19](#)
- There are insufficient data to recommend for or against routine deep venous thrombosis screening in patients with COVID-19 who do not have signs and symptoms (BII); however, the possibility of thromboembolic disease should be considered and evaluated in patients with sudden, localized loss of peripheral perfusion or rapid deterioration of pulmonary, cardiac, or neurological function (AIII).
- Patients who are hospitalized with COVID-19 should receive the standard of care venous thromboembolism prophylaxis that is administered to other hospitalized adults (AIII).
- Patients receiving chronic anticoagulant or antiplatelet therapies for other conditions should continue to receive these treatments while receiving care for COVID-19 (AIII).

## Experimental Therapies for COVID-19

- The panel does not recommend pre-exposure prophylaxis or post-exposure prophylaxis for SARS-CoV-2 outside of the clinical trial setting. (AIII)
- In patients with confirmed asymptomatic disease or pre-symptomatic infection, the panel does not recommend any laboratory test or treatment. (AIII)
- Currently, no treatment has been proven safe and effective for the treatment of COVID-19 and there are insufficient data for the panel to recommend for or against the use of antiviral or immunomodulatory therapy in patients with COVID-19, regardless of disease severity. (AIII)
- The guideline discusses the available data for several experimental therapies. Table 1 shares the specific agents discussed and current recommendations, along with stated rationale for the decisions.

**Table 1. NIH Guideline Recommendations for COVID-19 Therapeutics for Adult Patients**

Therapy	NIH Guideline Recommendation for the Treatment of COVID-19	Rating	Stated Rationale
<b>Anti-viral Agents</b>			
Remdesivir	Remdesivir use with or without dexamethasone is now discussed by disease severity in the guideline section entitled <a href="#">Therapeutic Management of Patients with COVID-19</a>		
Chloroquine or Hydroxychloroquine	Recommends <u>against</u> use for treatment of hospitalized COVID-19 patients.	AI	Lack of benefit in randomized clinical trials and risk of potential toxicity.
	Recommends <u>against</u> use for the treatment of non-hospitalized patients, except in the clinical trial setting.	AI	Several randomized trials have not shown clinical benefit in this population.
High-dose chloroquine (e.g. 600 mg BID x 10 days)	Recommends <u>against</u> use	AI	More severe toxicities than with lower doses
Hydroxychloroquine + azithromycin	Recommends <u>against</u> use outside of the clinical trial setting in nonhospitalized patients	AI	Dysrhythmias, QTc prolongation; Since both drugs have long half-lives, use caution even when prescribed sequentially
	Recommends <u>against</u> use in hospitalized patients	AI	
Lopinavir/ritonavir	Recommends <u>against</u> use outside of the clinical trial setting	AI	Clinical trial did not demonstrate efficacy; concern with achieving adequate drug levels to inhibit the SARS-CoV-2 protease with oral dosing regimens
Other HIV protease inhibitors	Recommends <u>against</u> use outside of the clinical trial setting	AIII	Concern with achieving adequate drug levels to inhibit the SARS-CoV-2 protease with oral dosing regimens
Ivermectin	Recommends <u>against</u> use for the treatment of COVID-19 except in the clinical trial setting	AIII	Pharmacokinetic and pharmacodynamic studies are not favorable and the drug is not approved to treat any viral infection

**Table 1.** NIH Guideline Recommendations for COVID-19 Therapeutics for Adult Patients (Continued)

Therapy	NIH Guideline Recommendation for the Treatment of COVID-19	Rating	Stated Rationale
<b>Immune-Based Therapy</b>			
COVID-19 convalescent plasma	Insufficient evidence for or against	--	Clinical data are lacking, risk of transfusion reactions; theoretical risk of antibody enhancement of infection
SARS-CoV-2 immune globulins	Insufficient evidence for or against	--	
Interleukin-1 inhibitors (e.g., anakinra)	Insufficient evidence for or against		No clinical trial data
Interleukin-6 inhibitors or anti-IL-6 monoclonal antibody (e.g., sarilumab, siltuximab, tocilizumab)	Recommends <u>against</u> use outside of the clinical trial setting	BI	Unpublished data from randomized controlled trials of sarilumab or tocilizumab have not demonstrated efficacy in COVID-19. Siltuximab efficacy data are limited to unpublished studies.
Non-SARS-CoV-2-specific intravenous immune globulin (IVIG)	Recommends <u>against</u> use outside of clinical trial setting for the treatment of COVID-19. -Per guideline, this should not preclude use of IVIG if otherwise indicated for complications that arise during the course of COVID-19.	AIII	Broad immunosuppressant effect outweighs potential benefit
Interferons (e.g. Alfa, Beta)	Recommends against the use of interferons for the treatment of severe and critically ill COVID-19 patients, except in a clinical trial.	AIII	Lack of clinical trial data in patients with COVID-19 and no benefit shown in studies for other coronavirus infections; risk of toxicities outweigh potential for benefit
	Insufficient data to recommend either for or against interferon-beta for the treatment of early (< 7 days from symptom onset) mild and moderate COVID-19.		
Janus kinase inhibitors (e.g. baricitinib, ruxolitinib, tofacitinib)	Recommends <u>against</u> use outside of clinical trial setting	AIII	Broad immunosuppressive effects Ongoing trials will help clarify role in treatment
Bruton's kinase inhibitors (e.g. acalabrutinib, ibrutinib, zanbrutinib)	Recommends <u>against</u> use outside of clinical trial setting	AIII	Broad immunosuppressive effects Ongoing trials will help clarify role in treatment
Mesenchymal stem cells	Recommends <u>against</u> use outside of clinical trial setting	All	Insufficient data

**Table 1.** NIH Guideline Recommendations for COVID-19 Therapeutics for Adult Patients (Continued)

Therapy	NIH Guideline Recommendation for the Treatment of COVID-19	Rating	Stated Rationale
<b>Immune-Based Therapy</b>			
<b>Bamlanivimab</b>	There are insufficient data to recommend for or against the use of this agent for the treatment of outpatients with mild to moderate COVID-19.	--	Due to small numbers of study participants and low rates of hospitalizations or emergency room visits, it is difficult to determine the benefit of this drug. More data are needed to determine the population that benefits most from this agent.
	Bamlanivimab should not be considered the standard of care for the treatment of COVID-19 patients.	--	
	Bamlanivimab should not be given outside of a clinical trial for hospitalized patients.	--	
	Patients at highest risk for COVID-19 progression should be prioritized to use bamlanivimab through the EUA.	--	It is possible that supply of this agent will be limited.
	Bamlanivimab should not be withheld from a pregnant individual who has a condition that poses high risk for progression to severe disease if the clinician believes that the benefit of the drug outweighs its potential risk.	--	

**Table 1.** NIH Guideline Recommendations for COVID-19 Therapeutics for Adult Patients (Continued)

Therapy	NIH Guideline Recommendation for the Treatment of COVID-19	Rating	Stated Rationale
<b>Adjunctive Therapies</b>			
Vitamin C	Insufficient data to recommend either for or against the use for the treatment of COVID-19 in non-critically ill patients	--	These patients are less likely to experience severe inflammation or oxidative stress; therefore, no compelling reason for use exists in this population.
	Insufficient data to recommend either for or against the use for the treatment of COVID-19 in critically ill patients	--	Lack of controlled trials and limited, inconclusive observational data Sepsis trials with vitamin C in patients with ARDS have variable efficacy and limited safety concerns
Vitamin D	Insufficient data to recommend for or against the prevention or treatment of COVID-19	--	--
Zinc	Insufficient data to recommend for or against for the treatment of COVID-19	--	--
	Recommend against the use of supplemental zinc above the recommended dietary allowance for COVID-19 prevention outside of a clinical trial	BIII	Zinc has not been shown to have clinical benefit and may be harmful.
<b>Other</b>			
Angiotensin Converting Enzyme (ACE) inhibitors and Angiotensin Receptor Blockers (ARBs)	Recommends <u>against</u> use outside of clinical trial setting	AIII	
HMG CoA-Reductase Inhibitors (Statins)	Recommend <u>against</u> use of these agents outside of clinical trial setting	AIII	
Special Considerations in Pregnancy	Potentially effective treatment for COVID-19 should not be withheld from pregnant women due to theoretical concerns related to safety during pregnancy	AIII	
Special Considerations in People with Human Immunodeficiency Virus	The guideline recommends using the same approach for prevention and treatment of SARS-CoV-2 infection in people with HIV as in those without HIV. Please refer to the guideline for additional recommendations and considerations regarding the management of individuals with HIV who present with SARS-CoV-2 infection.	AIII	

**Table 2.** Recommendations for Administration of Concomitant Drug Therapies in Patients with COVID-19

Therapy	Recommendations	Evidence Level*
ACE inhibitors or ARBs	Patients with COVID-19 should continue these drugs if they are prescribed for cardiovascular disease or other indications	AIII
	Recommend against use of these agents for the treatment of COVID-19 outside of a clinical trial	AIII
<b>Corticosteroids</b>		
For management of COVID-19	Use of corticosteroids is now discussed by disease severity in the guideline section entitled <a href="#">Therapeutic Management of Patients with COVID-19</a>	--
For management of COVID-19 in pregnant patients	Recommends using dexamethasone in pregnant women with COVID-19 who are mechanically ventilated	AIII
	Recommends using dexamethasone in pregnant women with COVID-19 who require supplemental oxygen but are not mechanically ventilated	BIII
For patients on chronic corticosteroids	Oral corticosteroids prescribed for other underlying conditions should be continued in patients with COVID-19 and stress-dose or supplemental steroids may be considered on a case-by-case basis	AIII
	Inhaled corticosteroids for asthma or chronic obstructive pulmonary disease should not be discontinued in patients with COVID-19	AIII
HMG CoA-Reductase Inhibitors (Statins)	Patients with COVID-19 should continue these drugs if they are prescribed for cardiovascular disease	AIII
Non-steroidal Anti-inflammatory Drugs (NSAIDs)	Patients with COVID-19 should continue these drugs if they are prescribed for co-morbid condition	AIII
	Recommend no difference in antipyretic selection (e.g. acetaminophen vs. NSAIDs) in patients with COVID-19	AIII
Non-SARS-CoV-2-specific intravenous immune globulin (IVIG)	IVIG may be used when otherwise indicated to treat complications that arise during COVID-19	--