What’s New in the Guidelines

Last Updated: July 21, 2023

The *Coronavirus Disease 2019 (COVID-19) Treatment Guidelines* is published in an electronic format that can be updated in step with the rapid pace and growing volume of information regarding the treatment of COVID-19.

The COVID-19 Treatment Guidelines Panel (the Panel) is committed to updating this document to ensure that health care providers, patients, and policy experts have the most recent information regarding the optimal management of COVID-19 (see the Panel Roster for a list of Panel members).

New Guidelines sections and recommendations and updates to existing Guidelines sections are developed by working groups of Panel members. All recommendations included in the Guidelines are endorsed by a majority of Panel members (see Guidelines Development for additional details on the development process).

Major revisions to the Guidelines within the past month are as follows:

**July 21, 2023**

**A New Section of the Guidelines**

**Vilobelimab**

On April 4, 2023, the Food and Drug Administration (FDA) issued an Emergency Use Authorization (EUA) for vilobelimab, an anti-C5a monoclonal antibody. The EUA allows vilobelimab to be used to treat COVID-19 in hospitalized adults when it is administered within 48 hours of mechanical ventilation or extracorporeal membrane oxygenation. A new section was added to the Guidelines to discuss the available clinical data on the use of vilobelimab for the treatment of COVID-19. The Panel determined that there is insufficient evidence to recommend either for or against the use of vilobelimab for the treatment of COVID-19.

**Key Updates to the Guidelines**

**Updates Regarding the Management of Patients Who Are Immunocompromised and Have Prolonged COVID-19 Symptoms and Evidence of Ongoing Viral Replication**

Some patients who are immunocompromised have prolonged, symptomatic COVID-19 with evidence of ongoing SARS-CoV-2 replication despite receiving a course of antiviral therapy. Without definitive data, some Panel members would use 1 or more of the following treatment options:

- Longer and/or additional courses of ritonavir-boosted nirmatrelvir (Paxlovid)
- Longer and/or additional courses of remdesivir
- High-titer COVID-19 convalescent plasma from a vaccinated donor who recently recovered from COVID-19 likely caused by a SARS-CoV-2 variant similar to the variant causing the patient’s illness

The following sections have been updated to include this information:

- Special Considerations in People Who Are Immunocompromised
- Therapeutic Management of Nonhospitalized Adults With COVID-19
• Ritonavir-Boosted Nirmatrelvir (Paxlovid)
• Remdesivir
• COVID-19 Convalescent Plasma

**Therapeutic Management of Hospitalized Adults With COVID-19**

The Panel clarified the role of remdesivir in patients who are hospitalized and require high-flow nasal canula oxygen or noninvasive ventilation. The Panel provides examples of patients who may be particularly likely to benefit from adding remdesivir to immunomodulator therapies, including patients who are immunocompromised (BIII), patients with evidence of ongoing viral replication (BIII), and patients who are ≤10 days from symptom onset (CIIa).

**Ritonavir-Boosted Nirmatrelvir (Paxlovid)**

The section has been updated to reflect the recent FDA approval of ritonavir-boosted nirmatrelvir. The FDA product label lists calcium channel blockers as the second most common drug class associated with serious adverse reactions when coadministered with ritonavir-boosted nirmatrelvir. As a result, these drugs have been moved from the category of Continue Concomitant Medication and Monitor for Adverse Effects to the category of Adjust Concomitant Medication Dose and Monitor for Adverse Effects in Box 2 of *Drug-Drug Interactions Between Ritonavir-Boosted Nirmatrelvir (Paxlovid) and Concomitant Medications*.

Patients who are immunocompromised may need to receive longer courses of ritonavir-boosted nirmatrelvir. The Panel added a discussion of drug-drug interaction considerations for patients who require extended courses of ritonavir-boosted nirmatrelvir.

**Remdesivir**

The Panel revised this section to reflect the FDA’s update to the remdesivir prescribing information. The update allows remdesivir to be used without dose adjustment in patients with an estimated glomerular filtration rate of <30 mL/min, including those on dialysis.

**Special Considerations in People Who Are Immunocompromised**

This section includes guidance from the Centers for Disease Control and Prevention (CDC) on the use of COVID-19 vaccines in people who are moderately or severely immunocompromised.

The clinical trials that evaluated the efficacy of remdesivir, molnupiravir, and ritonavir-boosted nirmatrelvir for the treatment of COVID-19 only enrolled a small number of people who were immunocompromised. The results from some large retrospective studies that included people who were immunocompromised have been added to this section.

**Special Considerations in Children**

The Panel revised this section to reflect updated data on COVID-19 vaccination and post-COVID conditions in children. In addition, the definition of multisystem inflammatory syndrome in children (MIS-C) was updated to match the new case definition for MIS-C issued by the CDC and the Council of State and Territorial Epidemiologists.

**Therapeutic Management of Hospitalized Children With COVID-19**

This section provides recently published data to support the Panel’s recommendations for the use of anticoagulation in children with COVID-19.
**Therapeutic Management of Hospitalized Children With MIS-C, Plus a Discussion on MIS-A**

The Panel continues to recommend using a combination of intravenous immunoglobulin (IVIG) and low to moderate doses of glucocorticoids for the treatment of MIS-C. The Panel updated this section with recently published observational data that supports the recommendation for using glucocorticoid monotherapy in children with MIS-C, but only if IVIG is unavailable or contraindicated (BIIa). In addition, recently published data were added to support the Panel’s recommendations for the use of antithrombotic therapy in children with MIS-C.

**Corticosteroids**

The Corticosteroids section is now divided into 2 separate sections: Systemic Corticosteroids and Inhaled Corticosteroids.

Systemic Corticosteroids and Table 5a contain reviews of recent studies that used higher doses of corticosteroids for the treatment of COVID-19. The Panel’s recommendations on the use of systemic corticosteroids remain the same.

In Inhaled Corticosteroids and Table 5b, the Panel reviews the data from 2 large, randomized, placebo-controlled trials that enrolled nonhospitalized patients with COVID-19. The TOGETHER trial evaluated the use of inhaled budesonide plus oral fluvoxamine, and the ACTIV-6 trial evaluated the use of inhaled fluticasone.

**Antithrombotic Therapy in Patients With COVID-19**

This section includes data from clinical trials on the use of direct oral anticoagulant therapy for venous thromboembolism (VTE) prophylaxis or prevention of disease progression in hospitalized adults with COVID-19. In addition, this section discusses the continuation of VTE prophylaxis after hospital discharge in these patients.

The Panel makes the following recommendations:

- There is insufficient evidence for the Panel to recommend either for or against the use of a therapeutic dose of apixaban for VTE prophylaxis or the prevention of COVID-19 progression.
- The Panel **recommends against** the use of a therapeutic dose of rivaroxaban for VTE prophylaxis or the prevention of COVID-19 progression (AIIa).
- The Panel **recommends against** routinely continuing VTE prophylaxis in patients with COVID-19 after hospital discharge unless they have another indication for anticoagulation (AIIa).

**Minor Updates to the Guidelines**

Minor updates were made to the following Guidelines sections:

- Overview of COVID-19
- Prevention of SARS-CoV-2 Infection
- Zinc
- Special Considerations During Pregnancy and After Delivery
- Special Considerations in Adults and Children With Cancer
- Special Considerations in People With HIV