Immunomodulators Under Evaluation for the Treatment of COVID-19

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The hyperactive inflammatory response to SARS-CoV-2 infection plays a central role in the pathogenesis of COVID-19. See Therapeutic Management of Hospitalized Adults With COVID-19 for the COVID-19 Treatment Guidelines Panel’s (the Panel) recommendations on the use of the following immunomodulators for hospitalized patients according to their disease severity:

- Corticosteroids: dexamethasone
- Interleukin-6 inhibitors: tocilizumab (or sarilumab)
- Janus kinase (JAK) inhibitors: baricitinib (or tofacitinib)

There is insufficient evidence for the Panel to recommend either for or against the use of the following immunomodulators for the treatment of COVID-19:

- Anakinra
- Fluvoxamine
- Granulocyte-macrophage colony-stimulating factor inhibitors for hospitalized patients
- Inhaled corticosteroids

The Panel recommends against the use of the following immunomodulators for the treatment of COVID-19, except in a clinical trial:

- Baricitinib plus tocilizumab (AIII)
- Canakinumab (BIIa)
- Colchicine for nonhospitalized patients (BIIa)
- Intravenous immunoglobulin (IVIG) (non-SARS-CoV-2-specific) for the treatment of patients with acute COVID-19 (AIII). This recommendation should not preclude the use of IVIG for multisystem inflammatory syndrome in children (MIS-C) or when it is otherwise indicated.
- Bruton’s tyrosine kinase inhibitors (e.g., acalabrutinib, ibrutinib, zanubrutinib) (AIII)
- JAK inhibitors other than baricitinib and tofacitinib (e.g., ruxolitinib) (AIII)
- Siltuximab (BII)

The Panel recommends against the use of the following immunomodulators for the treatment of COVID-19:

- Colchicine for hospitalized patients (AI)

Rating of Recommendations: A = Strong; B = Moderate; C = Weak

Rating of Evidence: I = One or more randomized trials without major limitations; IIa = Other randomized trials or subgroup analyses of randomized trials; IIb = Nonrandomized trials or observational cohort studies; III = Expert opinion