IDSA Guidelines on Treatment of COVID-19 (April 13, 2020) recommend administration of tocilizumab (TOC) only in the context of a clinical trial.1 Per NIH Guidelines there are insufficient clinical data to recommend either for or against use of IL-6 inhibitors (AII).2 Patients receiving TOC are at increased risk of serious infections (bacterial, viral, invasive fungal infections, and tuberculosis) and hepatitis B reactivation.3 Cases of anaphylaxis, severe allergic reactions, severe liver damage and hepatic failure, and intestinal perforation have been reported after TOC administration in patients without COVID-19.1 Limited uncontrolled data in a total of 66 patients are available at this time.3,4,5

**Reference**


3. Xu X, Han M, Li T, et al. Effective treatment of severe COVID-19 patients with tocilizumab. March 2020. In Press. Uncontrolled case series of 21 COVID positive patients treated at two Chinese hospitals with moderate to severe COVID infection. Younger population (mean age 56.8 years). Two of 21 patients were intubated. All patients received lopinavir, methylprednisolone and TOC 400mg, three patients received a second dose of TOC due to sustained fever at 12hours. Survival to discharge: 19/21 patients. Two of 21 patients remained inpatient at the time of publication. Mean LOS: 13.5days after TOC. No adverse effects reported


5. Roumier M, et al. Interleukin-6 blockade for severe COVID-19. In Press. [https://doi.org/10.1101/2020.04.20.20061861](https://doi.org/10.1101/2020.04.20.20061861). Prospective evaluation of TOC in 30 adults (23% in ICU) with weight comparison for age, gender and disease severity control group. IL-6 blockade reduced requirement for mechanical ventilation (OR 0.25 95% CI 0.05-0.95), p=0.04 and ICU admission. Mortality in TOC group at time of publication: 10% (3/30pts). Safety – LFT elevations (n=2) and VAP (n=1) reported.


**Reviewed by:** AAH Antimicrobial Stewardship Program. AAH Critical Care. AAH Pharmacy & Therapeutics Committee.
### Appendix: IL-6 Inhibitors: FDA Approved Indications & Warnings

<table>
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<th>Drug</th>
<th>FDA-approved use(s)</th>
<th>COVID-19 evidence/ clinical experience</th>
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</table>
| Tocilizumab (Actemra) | Rheumatoid arthritis; CAR-T Cytokine Release Syndrome; Juvenile idiopathic arthritis; Giant cell arteritis | In preliminary data from a non-peer-reviewed, single-arm Chinese trial involving 21 patients with severe or critical COVID-19 infection, patients demonstrated rapid fever reduction and a reduced need for supplemental oxygen within several days after receiving tocilizumab (initially given as a single 400-mg dose by IV infusion; this dose was repeated within 12 hours in 3 patients because of continued fever)\(^1\). Currently no other known clinical trial evidence supporting efficacy and safety of tocilizumab against COVID-19. China: Randomized, multicenter, controlled clinical trial evaluating efficacy & safety in 188 patients with COVID-19 under way through 5/10/20. Results not yet available. | IV infusion: China recommends an initial dose of 4–8 mg/kg infused over more than 60 minutes. If initial dose not effective, may administer second dose (in same dosage as initial dose) after 12 hours. No more than 2 doses should be given; maximum single dose is 800 mg. AAH Recommended Dose: 400mg IV x 1 | • May reactivate latent Tb. Order Tb Quantiferon. Note that turnaround time is ~72 hrs. May worsen bacterial, viral infections.  
• Contraindications/warnings:  
  o May cause neutropenia and thrombocytopenia; use caution if already present  
  o Hepatic impairment: may worsen; use with caution  
• Common adverse effects:  
  o Infusion reactions  
  o Transaminitis  
  o Hypercholesterolemia |
| Sarilumab (Kevzara)   | Rheumatoid arthritis                                   | Currently no known published clinical trial evidence supporting efficacy or safety against Coronavirus. A U.S.-based, phase 2/3, randomized, double-blind, placebo-controlled study evaluating efficacy and safety of sarilumab in patients hospitalized with severe COVID-19 is currently under way. | Dosing has not been established for COVID-19. | • May reactivate latent Tb. Order Tb Quantiferon. Note that turnaround time is ~72 hrs.  
• Contraindications/warnings:  
  o May cause neutropenia and thrombocytopenia; use caution if already present  
  o Hepatic impairment: may worsen; use with caution  
• Common adverse effects:  
  o Transaminitis  
  o Injection site reactions |
| Siltuximab (Sylvant)  | Castleman Disease                                      | Currently no known published clinical trial evidence supporting efficacy or safety against Coronavirus. A case-control study is underway in Italy evaluating sarilumab in patients hospitalized with severe COVID-19. | Dosing has not been established for COVID-19. Recent trial in COVID-19: Gritti G, et al. Use of siltuximab in patients with COVID-19 pneumonia requiring ventilatory support. medRxix. 1 avr. | • Common adverse effects:  
  o Edema  
  o Rash; itching  
  o Resp tract infections  
  o Hyperuricemia |