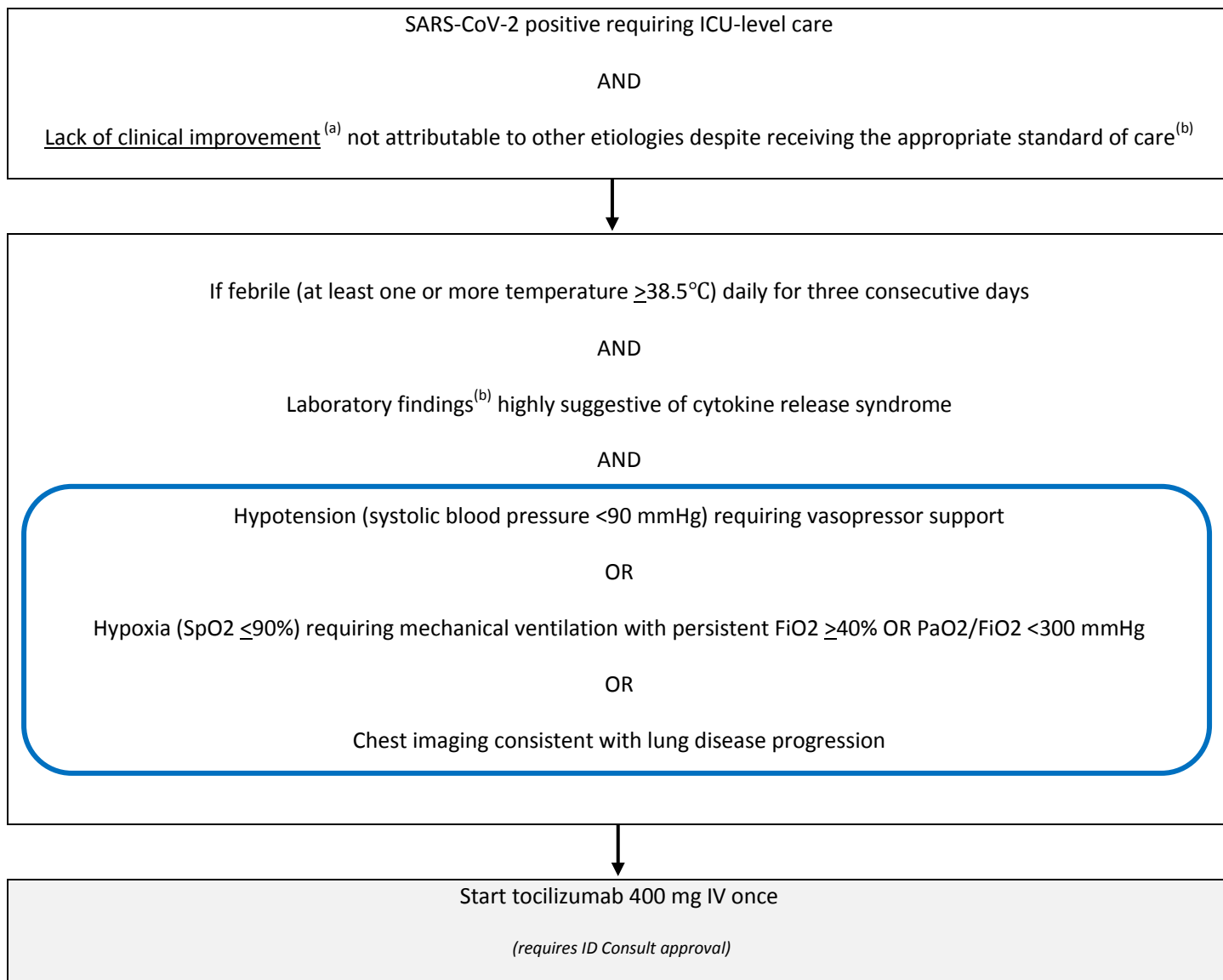


Denver Health Tocilizumab Criteria for Use in COVID-19

This guidance is for patients who test positive for SARS-CoV-2. There is minimal available evidence from randomized clinical trials to support this guidance. This treatment guidance is likely to evolve rapidly.



- (a) Lack of clinical improvement is defined as: unchanged or worsened oxygen requirements, hemodynamic instability with unchanged or increased vasopressor requirements, findings suggestive of organ damage such as acute kidney injury or acute liver injury, clinical signs/symptoms associated with cytokine release syndrome unrelated to another etiology (Supplemental Table 1)
- (b) Standard of care is defined as the indicated supportive care measures for the individual patient and, if applicable, receiving drug therapy for COVID-19 in accordance to the institutional guidance
- (c) Laboratory tests to evaluate risk for cytokine release syndrome: D-dimer > 1.00 mcg/mL, CRP > 10 mg/L either uptrending OR persistently elevated, high-sensitivity cardiac troponin-I > 28 pg/mL, ferritin > 365 ng/mL

EXCLUSION CRITERIA for tocilizumab

- Age < 18 y.o.
- AST or ALT $> 5x$ ULN
- ANC < 500 cells/mL
- Platelet levels $< 50,000$ cells/mL
- Complicated diverticulitis or intestinal perforation
- Concurrent bacterial or fungal infection

Supplemental Table 1: Clinical signs and symptoms associated with cytokine release syndrome

Organ system	Symptoms
Constitutional	Fever+/- rigors, malaise, fatigue, anorexia, myalgias, arthralgias, nausea, vomiting, headache
Skin	Rash
Gastrointestinal	Nausea, vomiting, diarrhea
Respiratory	Tachypnea, hypoxemia
Cardiovascular	Tachycardia, widened pulse pressure, hypotension, increased cardiac output (early), potentially diminished cardiac output (late)
Coagulation	Elevated D-dimer, hypofibrinogenemia +/- bleeding
Renal	Azotemia
Hepatic	Transaminitis, hyperbilirubinemia
Neurologic	Headache, mental status changes, confusion, delirium, word finding difficulty or frank aphasia, hallucinations, tremor, dymetria, altered gait, seizures

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