

RISK FACTORS FOR PROGRESSION TO SEVERE COVID-19



Ambulatory or Hospitalized 'with' not 'for' COVID with symptoms (not hypoxemic)

Examples of Factors Associated with **HIGH RISK** of Progression

Examples of Health Conditions

- Age \geq 75 years
- Fewer than 1% peripheral B-cells assessed in past 6 months
- Congenital agammaglobulinemia
- Graft versus host disease
- Hematological malignancy on therapy
- HIV infection with CD4 $<$ 200 cells/mm³
- Other severe primary immunodeficiency
- Solid organ transplant
- Solid tumor on immunosuppressive therapy
- Stem cell transplant $<$ 2 years

Examples of Therapeutics

- B-cell depleting agents in past 12 months (e.g., rituximab, ofatumumab, ocrelizumab, others)
- CAR-T therapy in past 12 months
- Abatacept
- Tyrosine kinase inhibitor (e.g., ibrutinib, acalabrutinib, others)
- High-dose corticosteroids (\geq 20mg prednisone or equivalent for \geq 4 weeks)
- Anthracycline derivatives

Examples of Factors Associated with **INCREASED, BUT NOT-HIGH RISK** of Progression

Examples of Health Conditions

- Age 65-74 years
- Atherosclerotic cardiovascular disease
- Asthma
- Cardiomyopathy
- Cerebral vascular disease
- Chronic liver diseases
- Chronic lung diseases
- Cirrhosis
- Dementia
- Diabetes Mellitus
- Disabilities including Down Syndrome
- End stage renal disease
- Heart failure
- HIV with CD4 $>$ 200 cells/mm³
- Inflammatory bowel disease
- Mental health conditions
- Obesity
- Parkinson's Disease
- Physical inactivity
- Pregnancy (current or within 6 weeks of pregnancy)
- Smoking history
- Solid tumor (or immunosuppressive therapy $>$ 12 months prior)
- Tuberculosis

Examples of Therapeutics

- Anti-IL-6
- Anti-IL-12 and 23
- Corticosteroids 10-20mg for \geq 4 weeks

References:



IDSA:
<https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management/>



ASH:
Siegal DM. Blood Adv. 2025 Mar 25;9(6):1247-1260. PMID: 39437797

TREATMENT OPTIONS FOR COVID-19



Ambulatory or Hospitalized 'with' not 'for' COVID with symptoms (not hypoxemic)

**See Reverse Side for Risk Factors*

❌ **SUGGEST AGAINST** Corticosteroids (no benefit and may cause harm)

❌ **SUGGEST AGAINST** Anticoagulants (panel judged benefit was trivial)

***HIGH RISK FACTORS**

✅ **RECOMMEND** Nirmatrelvir/Ritonavir for 5 days (5% fewer hospitalizations) **OR** Remdesivir for 3 days (4.5% fewer hospitalizations for COVID)

***NON-HIGH RISK FACTORS**

✅ **SUGGEST** Nirmatrelvir/Ritonavir for 5 days (0.4% fewer hospitalizations) **OR** Remdesivir for 3 days (0.4% fewer hospitalizations)

WITHOUT RISK FACTORS

❌ **SUGGEST AGAINST** Antivirals without risk factors



Severe, not Critical (needing low flow oxygen)

✅ **SUGGEST** Remdesivir for 5 days (9.7% less need for mechanical ventilation)

✅ **SUGGEST** Dexamethasone for 10 days or until discharge (4.2% less death)

✅ **SUGGEST** the use of therapeutic-intensity over prophylactic/intermediate-intensity **anticoagulation** in select patients

with **PROGRESSIVE DISEASE** and **MARKERS OF INFLAMMATION**

✅ **SUGGEST** Tocilizumab (2.6% fewer deaths) **OR** Baricitinib for up to 14 days (1.8% fewer deaths)



Critically Ill, needing...

- non-invasive ventilation,
- high flow oxygen,
- mechanical ventilation,
- or ECMO

❌ **SUGGEST AGAINST** routine use of **Remdesivir**

✅ **RECOMMEND** Dexamethasone for 10 days or until discharge (9.9% fewer deaths)

✅ **SUGGEST** Tocilizumab (2.6% fewer deaths) **OR** Baricitinib for up to 14 days (1.8% fewer deaths)

✅ **SUGGEST** the use of prophylactic over therapeutic/intermediate intensity **anticoagulation**



at Hospital Discharge

❌ **SUGGEST AGAINST** Anticoagulants at discharge (trivial benefit)