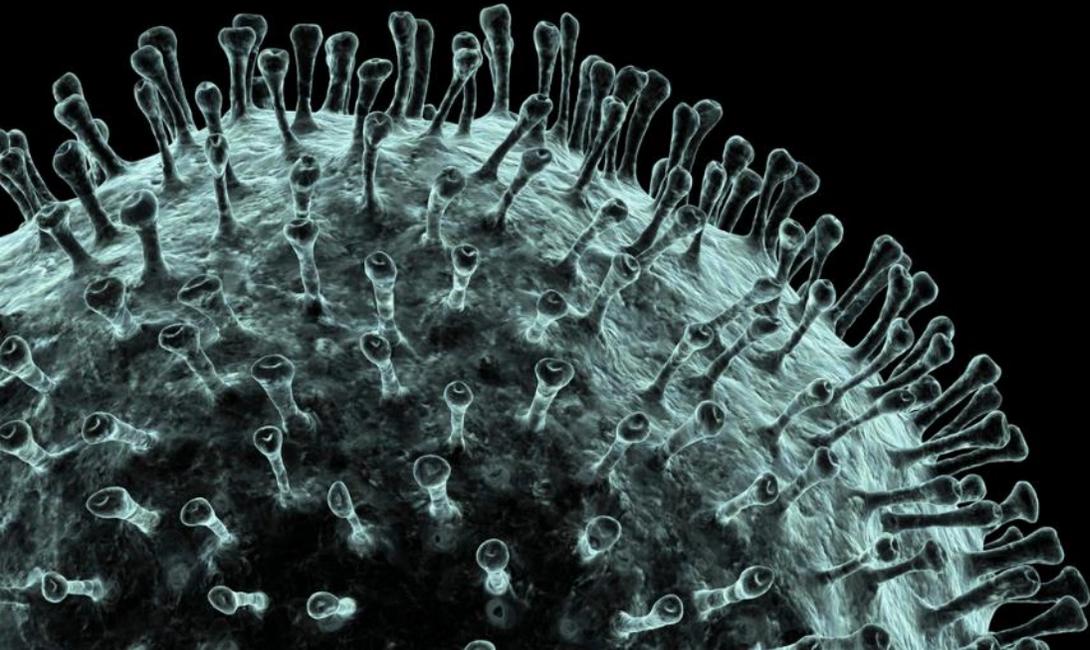


# COVID-19 Conversations



Roy (Trip) Gulick

Weill Cornell Medicine



[COVID19Conversations.org](https://COVID19Conversations.org)

[#COVID19Conversations](https://twitter.com/COVID19Conversations)



# COVID-19 Treatment 2022

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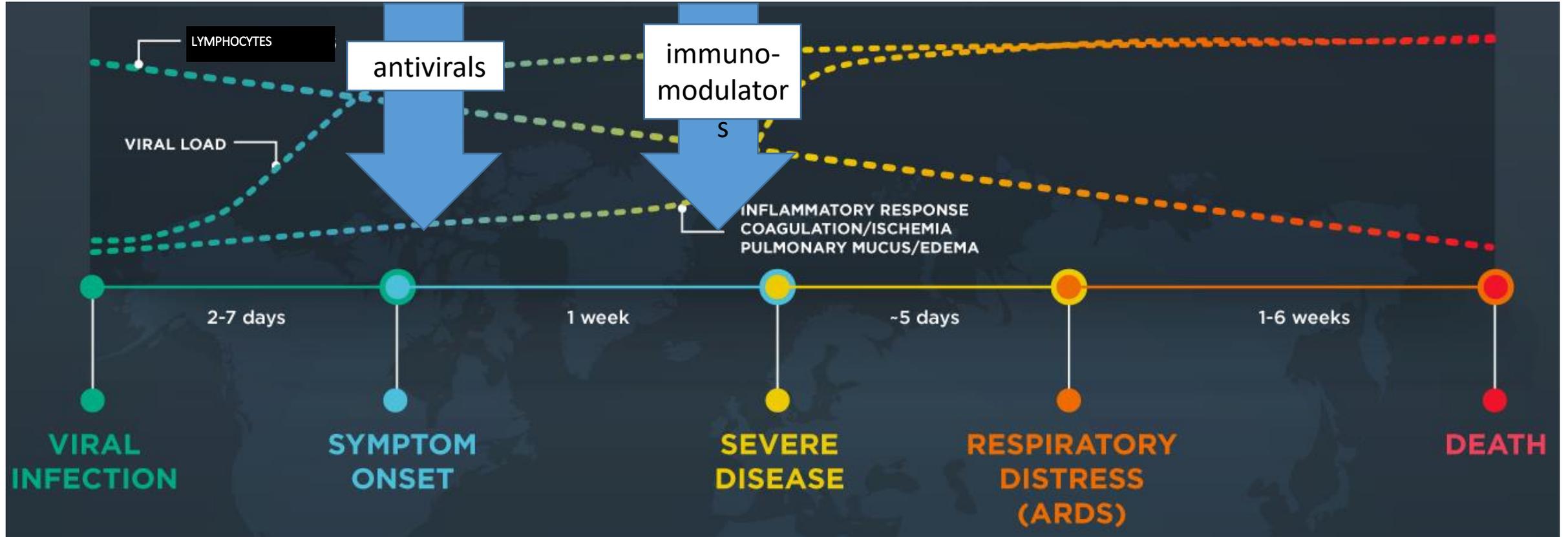
no disclosures



**Weill Cornell**  
**Medicine**

 **New York-Presbyterian**

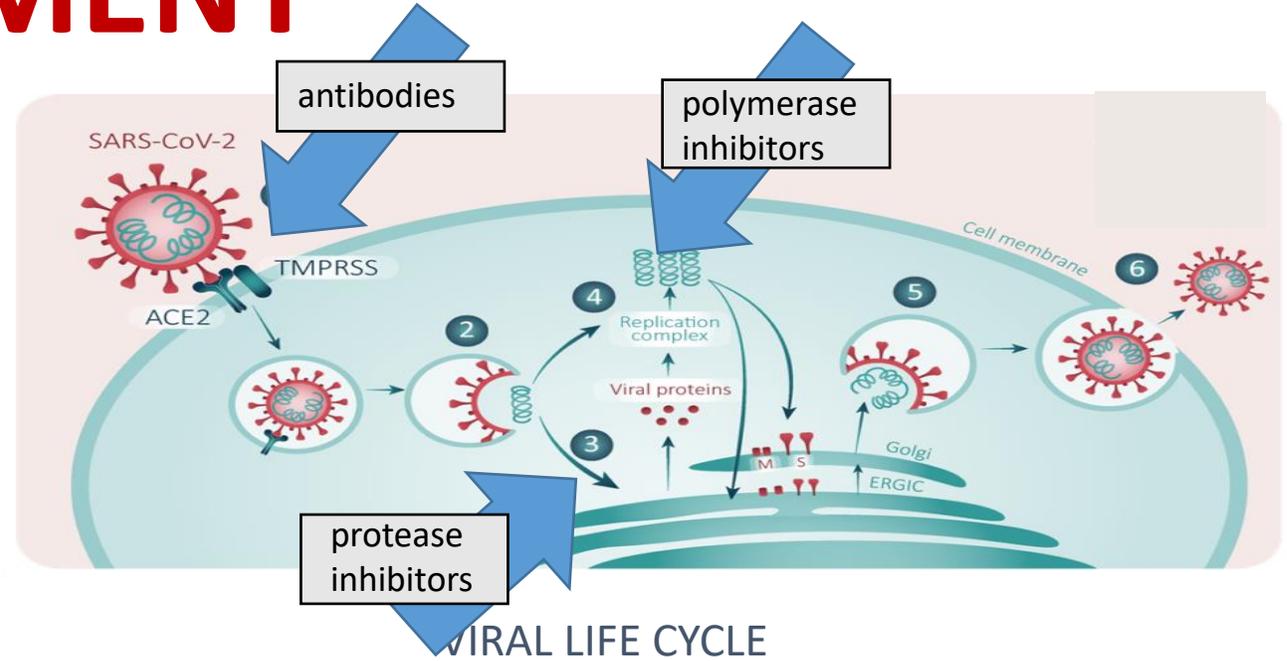
# COVID-19: Clinical Course and Treatments



Modified from: Biocentury

# COVID-19 TREATMENT

## Antivirals



Adapted from <https://www.fpm.org.uk/blog/covid-19-sars-cov-2-pandemic/>

## Immunomodulators



# COVID-19 Treatment: Availability (1/22)

- For inpatients with COVID-19:
  - 1 antiviral drug **remdesivir**: FDA approved 10/22/20
  - 3 immunomodulator drugs demonstrated to ↓ mortality: **dexamethasone, tocilizumab, and baricitinib**
  - FDA Emergency Use Authorization (EUA) for **baricitinib** and **convalescent plasma**

# Coronavirus Disease 2019 (COVID-19) Treatment Guidelines

[VIEW GUIDELINES](#)

Credit NIAID-RML

## Co-Chairs

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National Institutes of Health, Bethesda, MD

National Institutes of Health, Bethesda, MD

# NIH COVID-19 Treatment Guidelines – Inpatients (12/16/21)

For inpatients admitted for COVID-19:

## **Hospitalized not requiring oxygen**

- For high-risk of disease progression: remdesivir (antiviral)
- No immunomodulators

## **Hospitalized and requiring oxygen**

- For minimal oxygen: remdesivir (antiviral)
- remdesivir (antiviral) + dexamethasone (immunomodulator)
- For rapidly increasing oxygen needs and inflammation: add a 2<sup>nd</sup> immunomodulator (baricitinib or tocilizumab)

## **Hospitalized and requiring high-flow oxygen or a respirator**

- dexamethasone (immunomodulator)
- Within 24 hours of ICU admission: add a 2<sup>nd</sup> immunomodulator (tocilizumab)

# COVID-19 Treatment Over Time

- Retrospective Cohort Study from the Premier Health Database
- Hospitalized pts with COVID-19 -- 5/20-11/20
- 190,529 pts / 823 U.S. hospitals
  - mean age 64
  - 53% men
  - 19% Black, 64% White
  - 65% Medicare/Medicaid
  - >20% with other significant illnesses
    - e.g. chronic lung disease, obesity, high BP
- Treatment trends
  - dexamethasone 7% → 77%
  - remdesivir 5% → 47%
  - anticoagulants 32% → 24%
- Results: ↓ length of stay (median)
  - hospital 6 → 5 days
  - ICU 5 → 4 days

# NIH COVID-19 Treatment Guidelines – Outpatients (12/30/21)

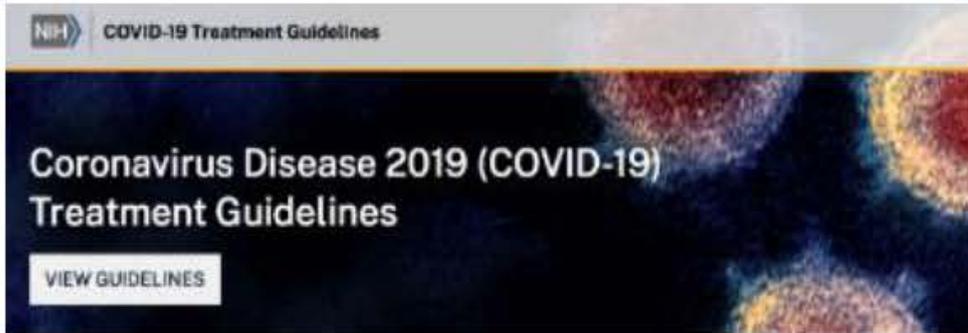
For high-risk outpatients with mild-moderate COVID-19: (listed in order of preference)

- **nirmatrelvir/ritonavir (Paxlovid):** antiviral / protease inhibitor
  - oral X 5 days
  - ↓ clinical progression 89%
  - drug-drug interactions; limited supply
- **sotrovimab:** monoclonal antibody
  - single IV infusion
  - ↓ clinical progression 85%
  - logistics; limited supply
- **remdesivir (Verkury):** antiviral / polymerase inhibitor
  - IV infusion daily X 3 days
  - ↓ clinical progression 87%

(only when the above 3 cannot be used)

- **molnupiravir (Lagevrio):** antiviral / polymerase inhibitor, induces mutations
  - oral X 5 days
  - less effective; ↓ clinical progression 30%; concern with pregnancy, breast-feeding, children

# Prioritization of COVID-19 Outpatient Treatments



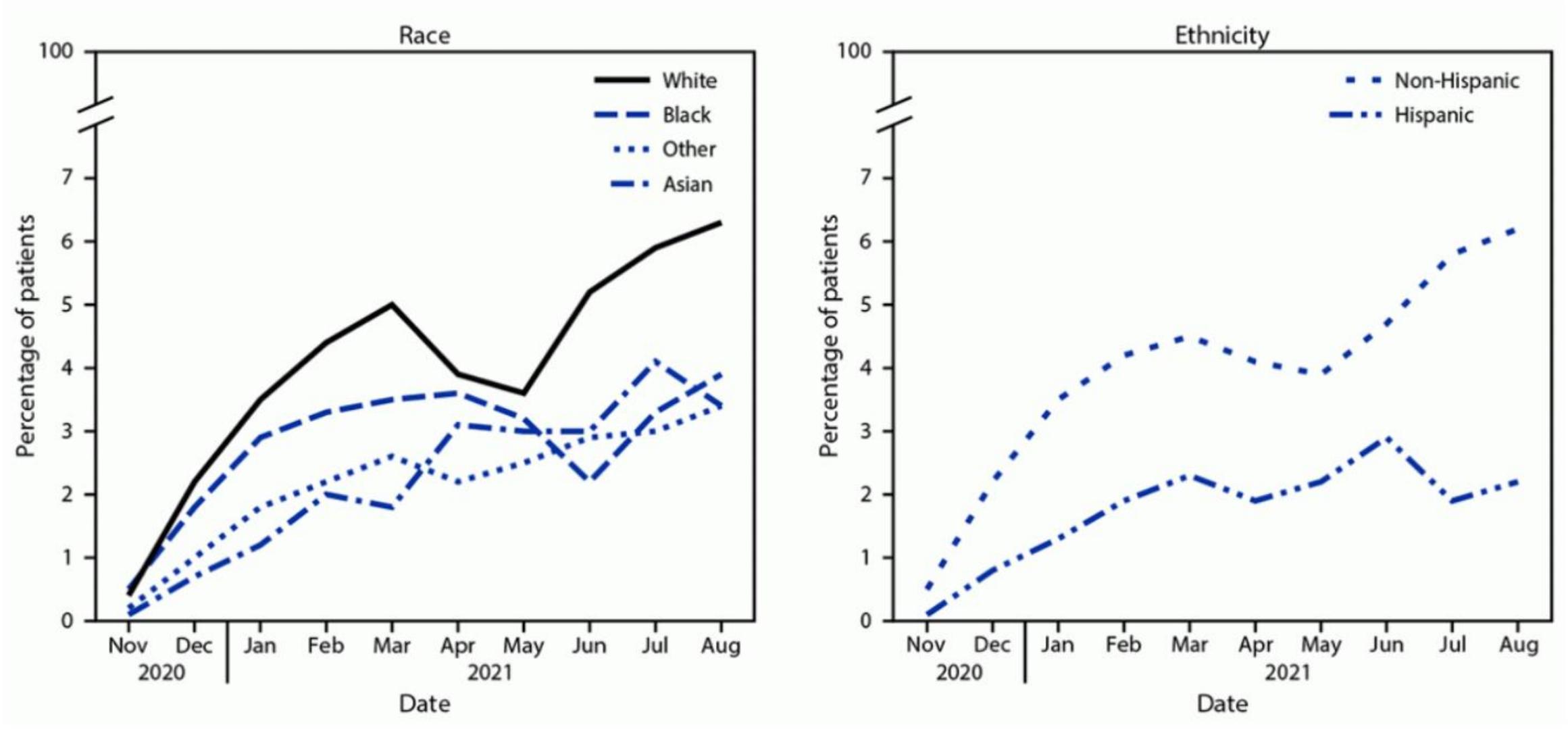
The COVID-19 Treatment Guidelines Panel's Interim Statement on Patient Prioritization for Outpatient Anti- SARS-CoV-2 Therapies or Preventive Strategies When There Are Logistical or Supply Constraints

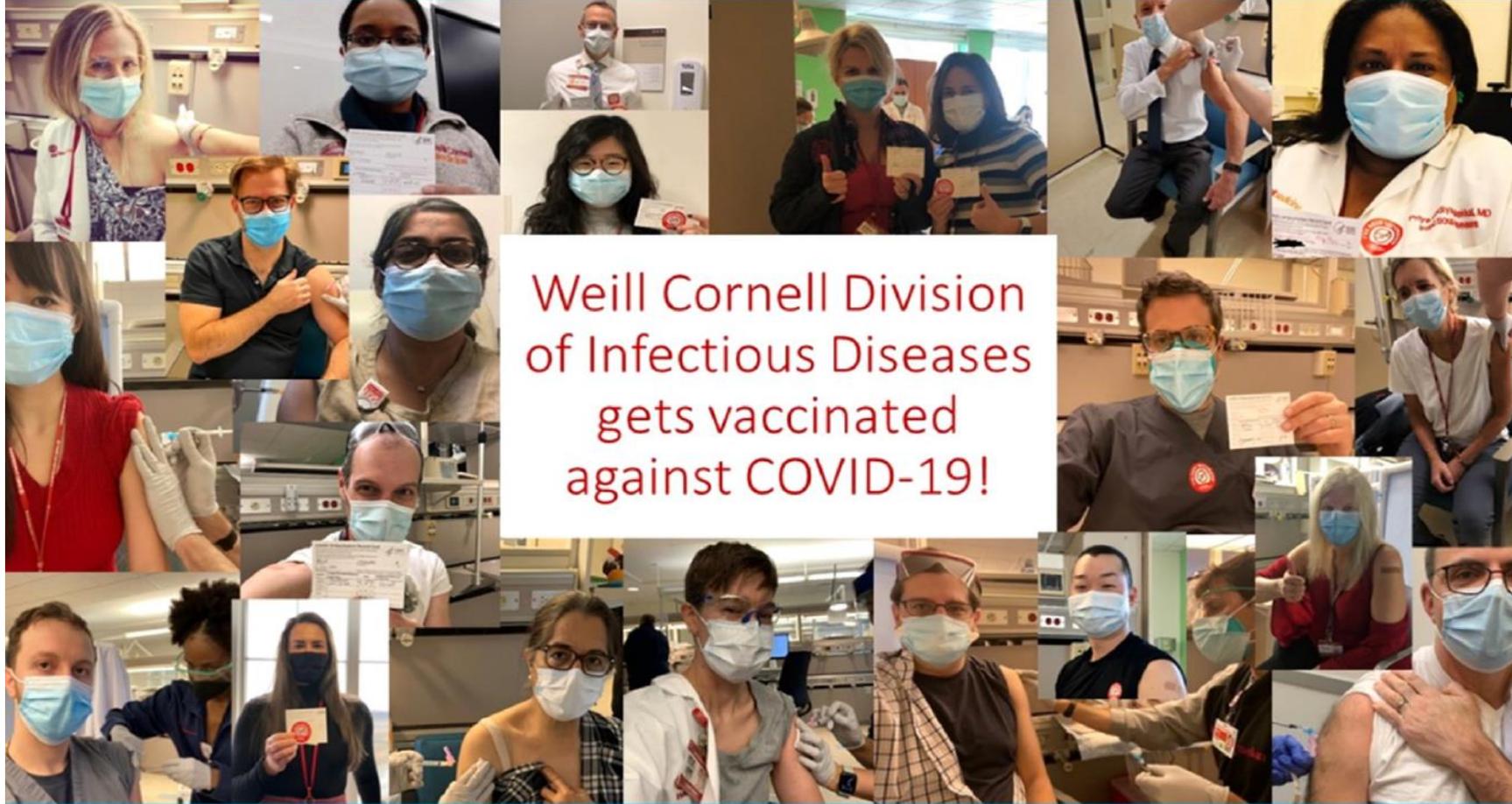
*Last Updated: December 23, 2021*

<https://www.covid19treatmentguidelines.nih.gov/>

Tier	Risk group
1	Immunocompromised individuals regardless of vaccine status <b>or</b> Unvaccinated individuals age $\geq 75$ y or age $\geq 65$ y with additional risk factors*
2	Unvaccinated individuals age $\geq 65$ y or age $< 65$ y with risk factors*
3	Vaccinated individuals age $\geq 75$ y or age $\geq 65$ y with additional risk factors*
4	Vaccinated individuals age $\geq 65$ y or age $< 65$ y with risk factors*

**FIGURE. Monthly\* percentage of COVID-19 patients (n = 805,276) receiving monoclonal antibody treatment,† by race<sup>s</sup> and ethnicity<sup>n</sup> — 41 health care systems in the National Patient-Centered Clinical Research Network — United States, November 2020–August 2021**





Thanks to: Raj Gandhi, Marshall Glesby, Kristie Marks for slides