COVID-19 Conversations

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COVID19Conversations.org
#COVID19Conversations
COVID-19 Treatment 2022

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no disclosures
COVID-19: Clinical Course and Treatments

Modified from: Biocentury
COVID-19 TREATMENT

Antivirals

Immunomodulators

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

• For **outpatients** with COVID-19:
  • 3 antivirals demonstrated to ↓ disease progression in ↑ risk pts
    • **remdesivir** (Verklury, IV): FDA approved 1/21/22
    • **molnupiravir** (Lagevrio, oral): FDA EUA
    • **nirmatrelvir/ritonavir** (Paxlovid, oral): FDA EUA
  • 3 monoclonal antibodies demonstrated to ↓ disease progression in ↑ risk pts
    • **bamlanivimab + etesevimab**: FDA EUA (on pause)
    • **casirivimab + imdevimab**: FDA EUA (on pause)
    • **sotrovimab**: FDA EUA
Co-Chairs
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National Institutes of Health, Bethesda, MD
National Institutes of Health, Bethesda, MD
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 2nd immunomodulator (baricitinib or tocilizumab)

**Hospitalized and requiring high-flow oxygen or a respirator**
- dexamethasone (immunomodulator)
- Within 24 hours of ICU admission: add a 2nd immunomodulator (tocilizumab)
COVID-19 Treatment Over Time

- Retrospective Cohort Study from the Premiere Health Database
- 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
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/](https://www.covid19treatmentguidelines.nih.gov/)

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<th>Tier</th>
<th>Risk group</th>
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<tr>
<td>1</td>
<td>Immunocompromised individuals regardless of vaccine status or Unvaccinated individuals age ≥75 y or age ≥65 y with additional risk factors*</td>
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<tr>
<td>2</td>
<td>Unvaccinated individuals age ≥65 y or age &lt;65 y with risk factors*</td>
</tr>
<tr>
<td>3</td>
<td>Vaccinated individuals age ≥75 y or age ≥65 y with additional risk factors*</td>
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<tr>
<td>4</td>
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FIGURE. Monthly* percentage of COVID-19 patients (n = 805,276) receiving monoclonal antibody treatment, † by race§ and ethnicity¶ — 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

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