COVID-19: KEEPING UP WITH A MOVING TARGET
December 16, 2020 UPDATE

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Name of Faculty or Presenter	Reported Financial Relationship
Paul G. Auwaerter, MD, MBA, FIDSA	Scientific Advisor: DiaSorin, Shionogi Inc. JNJ: Ownership equity

Dr. Auwaerter has indicated that he will be referencing the unlabeled or unapproved use of agents currently being investigated in on-going studies and trials, including a remdesivir, baricitinib, and several vaccine platforms.

All activity, content, and materials have been developed solely by the activity directors, planning committee members, and faculty presenters, and are free of influence from a commercial entity.

CME Information

To attest for CME/CE/AAPA credit, please visit

COVID19.dkbmed.com

Learning Objectives

- Discuss efficacy of baricitinib in combination with remdesivir
- Describe similarities and differences of the two mRNA vaccines (Pfizer and Moderna)

Thank You

This activity is made possible by the in-kind support of DKBmed, LLC.

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Please see **COVID19.DKBmed.com** for additional resources and educational activities

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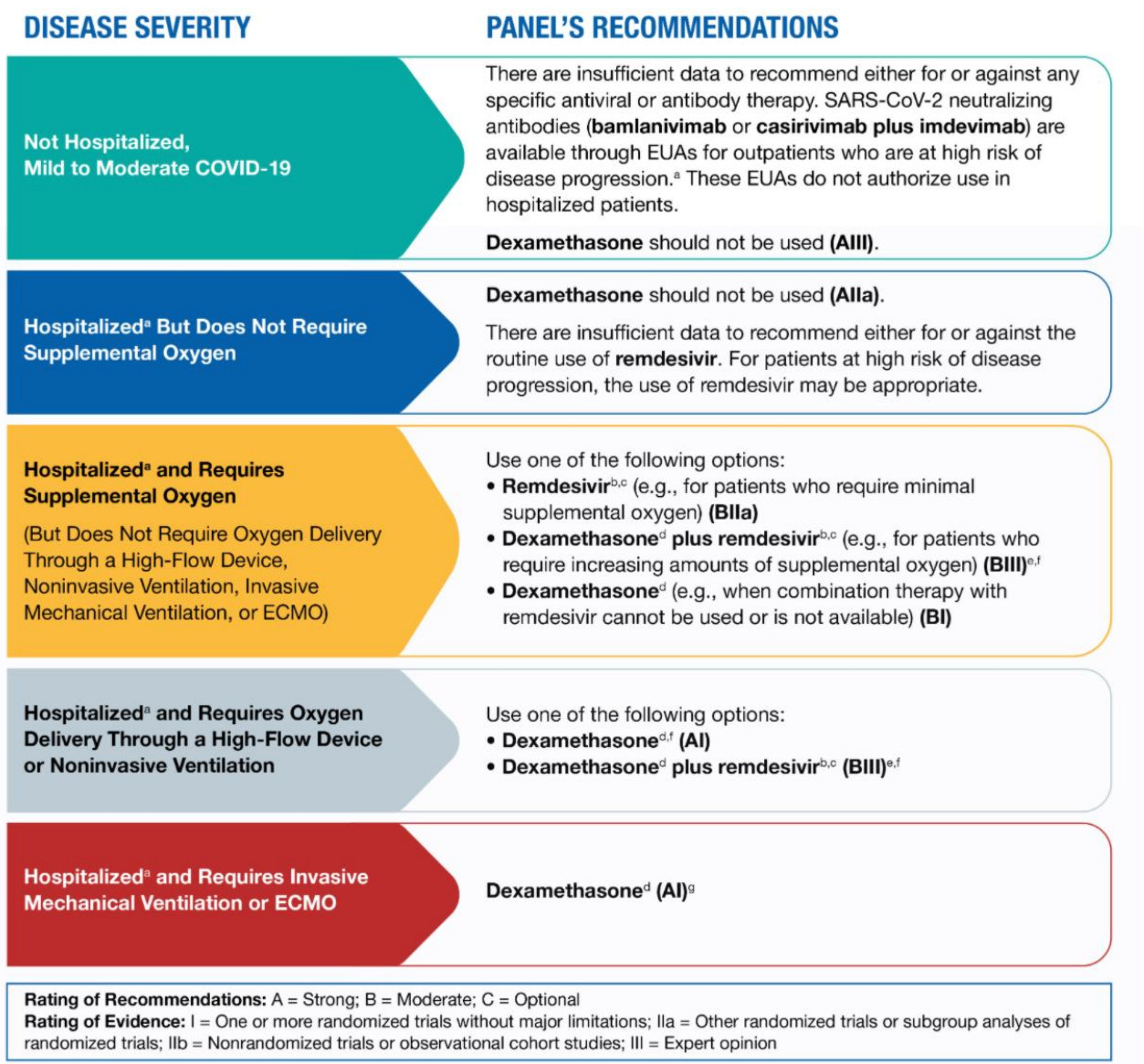


DISEASE SEVERITY	PANEL'S RECOMMENDATIONS
Not Hospitalized, Mild to Moderate COVID-19	There are insufficient data to recommend either for or against any specific antiviral or antibody therapy. SARS-CoV-2 neutralizing antibodies (**bamlanivimab** or **casirivimab plus imdevimab**) are available through EUAs for outpatients who are at high risk of disease progression.[a] These EUAs do not authorize use in hospitalized patients. **Dexamethasone** should not be used **(AIII)**.
Hospitalized[a] But Does Not Require Supplemental Oxygen	**Dexamethasone** should not be used **(AIIa)**. There are insufficient data to recommend either for or against the routine use of **remdesivir**. For patients at high risk of disease progression, the use of remdesivir may be appropriate.
Hospitalized[a] and Requires Supplemental Oxygen (But Does Not Require Oxygen Delivery Through a High-Flow Device, Noninvasive Ventilation, Invasive Mechanical Ventilation, or ECMO)	Use one of the following options: • **Remdesivir**[b,c] (e.g., for patients who require minimal supplemental oxygen) **(BIIa)** • **Dexamethasone**[d] **plus remdesivir**[b,c] (e.g., for patients who require increasing amounts of supplemental oxygen) **(BIII)**[e,f] • **Dexamethasone**[d] (e.g., when combination therapy with remdesivir cannot be used or is not available) **(BI)**
Hospitalized[a] and Requires Oxygen Delivery Through a High-Flow Device or Noninvasive Ventilation	Use one of the following options: • **Dexamethasone**[d,f] **(AI)** • **Dexamethasone**[d] **plus remdesivir**[b,c] **(BIII)**[e,f]
Hospitalized[a] and Requires Invasive Mechanical Ventilation or ECMO	**Dexamethasone**[d] **(AI)**[g]

Rating of Recommendations: A = Strong; B = Moderate; C = Optional
Rating of Evidence: I = One or more randomized trials without major limitations; IIa = Other randomized trials or subgroup analyses of randomized trials; IIb = Nonrandomized trials or observational cohort studies; III = Expert opinion

NIH COVID-19 Guidelines: Some changes regarding standards for hospitalized patients

https://www.covid19treatmentguidelines.nih.gov/therapeutic-management/

NIH and IDSA Guidelines for Remdesivir

NIH (12/4/20)

Hospitalized and requires supplemental oxygen but not through invasive mechanical ventilation or ECMO

IDSA (11/22/20)

Hospitalized with severe COVID-19, defined as SpO_2 ≤94% on room air and requiring supplemental oxygen, mechanical ventilation, or ECMO

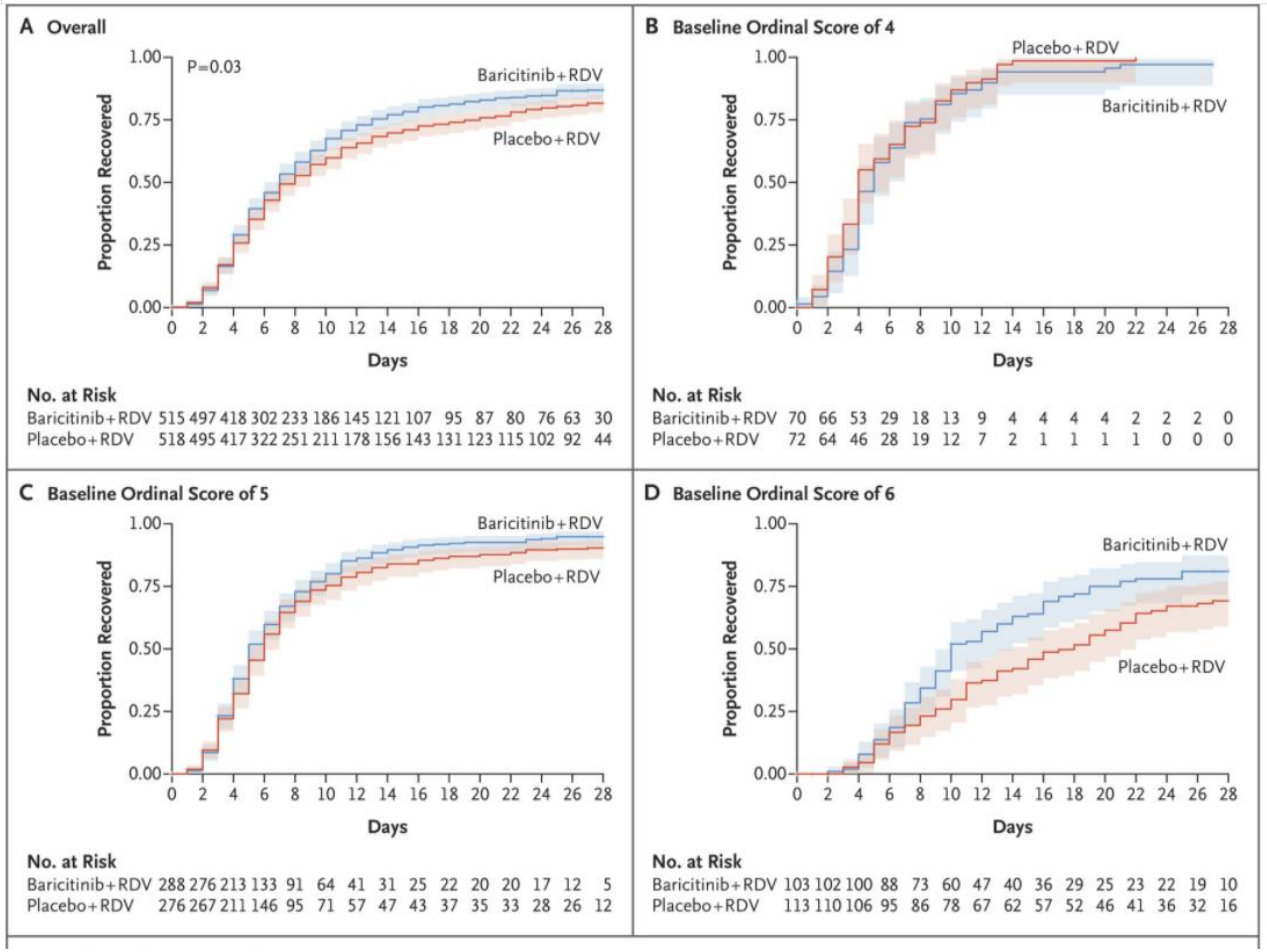
Remdesivir + Baricitinib

- EUA (Nov 19, 2020) for hospitalized patients ≥2 years who require supplemental oxygen, invasive mechanical ventilation, or ECMO

- ACTT-2: Blind, placebo-controlled RCT, n = 1033
  - Remdesivir+baricitinib vs remdesivir+placebo
  - Primary Endpoint median time to recovery:
    - 7 days vs 8 days placebo; HR 1.15 (95% CI 1-1.31, *P* = .047)
  - Proportion of patients progressing to ventilation or death by day 29:
    - 23% vs 28%; OR, .74 (95% CI .56-.99, *P* = .039)
  - Subgroups with most benefit:
    - Ordinal score groups 5 (supplemental oxygen) and 6 (high flow or noninvasive), with 60% lower and 43% lower mortality at day 29

Kalil, NEJM, Dec 11, 2020

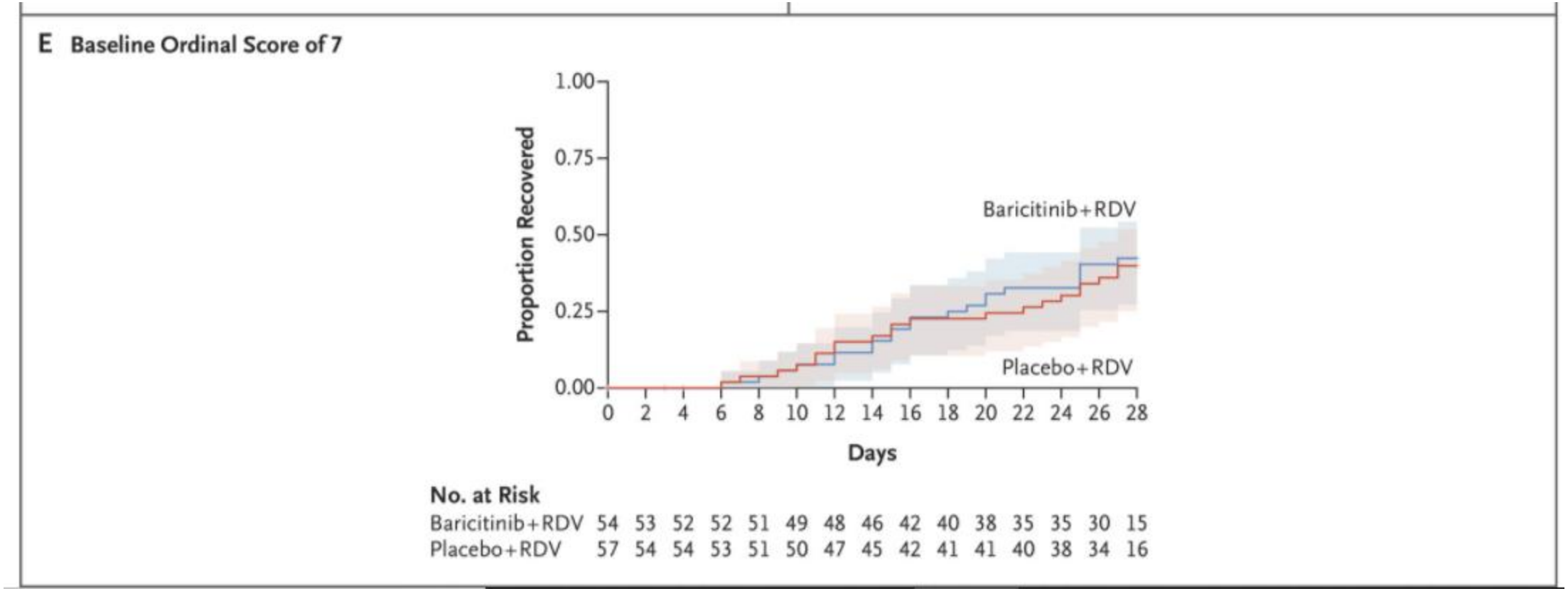
Remdesivir + Baricitinib



Score	Description
1	Ambulatory, no limitation on activities
2	Ambulatory, limitation of activities, home O_2, or both
3	Hospitalized, no O_2 and not requiring medical care
4	Hospitalized, no O_2 but requiring medical care
5	Hospitalized, any supplemental O_2
6	Hospitalized, requiring NIV or HFNC
7	Hospitalized, IMV or ECMO
8	Death

Mild disease shown in grey; severe disease shown in red

Remdesivir + Baricitinib



NIH Recommendations: Baricitinib

- In the rare circumstances where corticosteroids cannot be used, the Panel recommends using baricitinib in combination with remdesivir for the treatment of COVID-19 in hospitalized, nonintubated patients who require oxygen supplementation **(BIIa)**.
- The Panel **recommends against** the use of baricitinib in the absence of remdesivir, except in a clinical trial **(AIII)**.

https://www.covid19treatmentguidelines.nih.gov/whats-new/ (12/14/20)

To submit your own question, please email QA@dkbmed.com

What are some similarities and differences with the Moderna mRNA vaccine compared to the BioNTech/Pfizer vaccine?