

## Background Summary

# Is remdesivir (Veklury) an effective treatment for COVID-19?



## In the news

### Remdesivir approved by Health Canada

On July 28, 2020, Health Canada [approved the use of remdesivir \(administered intravenously\) for patients with severe cases of COVID-19](#) [1]. The drug's administration is being closely monitored by the Department. They based this decision on a six-week expedited review. The decision follows similar actions by the United States, Europe, Japan, Singapore, and Australia.

### Remdesivir in major trials

Remdesivir remains an active treatment arm of the [Adaptive COVID-19 Treatment Trial \(ACTT\)](#) being run by the National Institutes of Health (NIH) in the US [2]. They have [published preliminary results](#) (May 22, 2020 in NEJM) that

remdesivir accelerates recovery from severe cases of COVID-19 [3].

Gilead—the drug manufacturer of remdesivir—is [currently running or supporting multiple trials of the drug](#) [4]:

- Two Gilead SIMPLE studies: [the first, on severe cases, is already completed and reported on in NEJM](#) (May 27, 2020) [5]; the second, on moderate cases, is ongoing ([NCT04292730](#)) [6]
- Gilead CARAVAN study of pediatric patients, currently ongoing ([NCT04431453](#)) [7]
- REMDACTA Trial of remdesivir plus tocilizumab ([NCT04409262](#)) [8]
- Support of ACTT and WHO's Solidarity Trial

Remdesivir is also an active arm of the [WHO's Solidarity Trial](#). No results have yet been reported or published [9].

## Clinical practice guidelines

On July 30, 2020, the BMJ [published a clinical practice guideline](#) on remdesivir for patients with severe COVID-19 [10]. The guideline includes a clear visual aid. It states that there is weak evidence that the treatment is effective, meaning that most people would want the treatment, and benefits outweigh harms for the majority of people. They highlight the need for additional evidence.

## Evidence syntheses

Although the evidence on the effectiveness of remdesivir for COVID-19 is not consistently positive, as of August 4, 2020, some high-quality evidence synthesis resources report favorable results.

Source	Title	Date	Link	Conclusions
BMJ	Drug treatments for covid-19: living systematic review and network meta-analysis	Last updated July 21, 2020	<a href="#">Link</a>	Conclusions will vary as more studies are added to this living systematic review. Interacting with the diagram shows the strength of evidence for the effectiveness of treatments (including remdesivir) for a number of outcomes, including mortality, mechanical ventilation, adverse events, and time to resolution of symptoms. [11]
Stanford University	SARS-CoV-2 antiviral therapy: Remdesivir	Last updated July 30, 2020	<a href="#">Link</a>	"Remdesivir is the first anti-SARS-CoV-2 compound that appears to be clinically beneficial. The optimal use of this drug will become clearer following the publication of the ACTT trial and two additional Gilead studies. The risks and benefits of using this drug in high-risk persons with mild-to-moderate disease will be important to study. Remdesivir will likely become the main comparator drug in future trials of moderate-to-severe SARS-CoV-2 infections." [12]

## Single studies

On April 29, 2020, [the Lancet published a study by Wang and colleagues](#) reporting that the administration of remdesivir correlated with a numerical reduction in time to clinical improvement for patients with severe COVID-19 [13]. Wang et al. acknowledged that their study was under-powered, and was the subject of [a response by Norrie](#) published the same day [14].

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**Please note: This summary is not being kept up to date,  
and reflects evidence up to and including August 6, 2020 only.**

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## Search Methods

Date searched: 2020-08-04

- Google for news items and clinical trials in progress
- [Stanford University Coronavirus Antiviral Research Database](#) (manual search)
- [Epistemonikos L-OVE on COVID-19](#) (manual search)
- MEDLINE search for articles in major journals:

Search string: (remdesivir or veklury).ti,ab.

COVID-19 filter: MEDLINE built-in

Major journals filter: (cmaj or jama or n engl j med or lancet or science or nature or bmj or ann intern med or plos one).ja.

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