# Efficacy of Ramdevsivir

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## About Ramdevsivir

- Remdesivir is an antiviral medication that targets a range of viruses.
- It was originally developed over a decade ago to treat hepatitis C and a cold-like virus called respiratory syncytial virus (RSV).
- Remdesivir wasn’t an effective treatment for either disease. But it showed promise against other viruses.

## Efficacy of Ramdevsivir

- Researchers tested remdesivir in clinical trials during the Ebola outbreak.
- Other investigational medications worked better, but it was shown to be safe for patients.
- Studies in cells and animals suggested that remdesivir was effective against viruses in the coronavirus family, such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).
- Remdesivir works by interrupting production of the virus. Coronaviruses have genomes made up of ribonucleic acid (RNA).
- Remdesivir interferes with one of the key enzymes the virus needs to replicate RNA. This prevents the virus from multiplying.
- Researchers began a randomized, controlled trial of the antiviral in February 2020 to test whether remdesivir could be used to treat SARS-CoV-2, the coronavirus that causes COVID-19.
- By April, early results indicated that remdesivir accelerated recovery for hospitalized patients with severe COVID-19.
- It became the first drug to receive emergency use

authorization from the U.S. Food and Drug Administration (FDA) to treat people hospitalized with COVID-19.

- The final results showed that the antiviral treatment was beneficial, consistent with the preliminary findings.
    - Patients who received remdesivir were quicker to recover, which was defined as being medically stable enough to be discharged from the hospital.
    - The median recovery time was 10 days with remdesivir compared to 15 days for the placebo group. Patients given remdesivir were more likely to have improved by day 15.
    - Remdesivir also improved mortality rates for those receiving supplemental oxygen (4% with remdesivir versus 13% with placebo at day 29 of treatment).
    - All-cause mortality among all patients was 11% with remdesivir and 15% with placebo at day 29, but this difference between the treatment groups was not large enough to rule out chance. The preliminary findings hadn’t shown an effect on mortality.
- The study also suggested that remdesivir treatment may prevent patients from progressing to more severe respiratory disease. Those treated with remdesivir were less likely to need high levels of respiratory support. Remdesivir appeared to most benefit patients who were receiving supplemental oxygen.