Clinical Study Results

This summary reports the results of only one study. Researchers must look at the results of many types of studies to understand if a study medication works, how it works, and if it is safe to prescribe to patients. The results of this study might be different than the results of other studies that the researchers review.

Sponsor:	Pfizer Inc.
Medicines Studied:	Paxlovid™ (nirmatrelvir) and ritonavir
Protocol Number:	C4671052
Dates of Study:	09 June 2023 to 10 August 2023
Title of this Study:	A Study to Learn About the Study Medicine Called Nirmatrelvir/Ritonavir in People Who Are Healthy Volunteers Co-Administered the Medicine Rosuvastatin [A Phase 1, Randomized, Fixed Sequence, Multiple-Dose, Open-Label Study to Estimate the Effect of Nirmatrelvir (PF-07321332)/ Ritonavir on Rosuvastatin Pharmacokinetics in Healthy Adult Participants]
Date of this Report:	01 August 2024

– Thank You –

If you participated in this study, Pfizer, the Sponsor, would like to thank you for your participation.

This summary will describe the study results. If you have any questions about the study or the results, please contact the doctor or staff at your study site.

Why was this study done?

What is COVID-19?

The coronavirus disease (COVID-19) led to a global pandemic that started in 2019. COVID-19 is caused by a virus that is easily spread.

People who test positive for COVID-19 can show symptoms such as fever, dry cough, and shortness of breath. Others can also test positive for COVID-19 without having symptoms.

Although most cases of COVID-19 are mild, some people are at a higher risk of getting sicker. COVID-19 can quickly become severe and result in hospitalization or death.

What are nirmatrelvir and ritonavir?

Nirmatrelvir (also called PF-07321332) is a study medication taken together with another medicine called ritonavir. This combination is called **nirmatrelvir/ritonavir** or Paxlovid™.

- **Nirmatrelvir** (nir-muh-trel-veer) blocks a specific type of enzyme that the COVID-19 virus needs to multiply. Enzymes are proteins that speed things up in the body's cells. If this enzyme stops working, the COVID-19 virus cannot multiply and spread through the body.
- **Ritonavir** (rih-tahn-uh-veer) is usually taken together with another medicine. Ritonavir helps slow down the breakdown of the other medicine it is given with, so that the other medicine can work better in the body.

In this study, participants received nirmatrelvir/ritonavir and rosuvastatin by mouth as tablets.

- **Nirmatrelvir/ritonavir** is approved in Belgium and other countries to treat COVID-19.
- **Rosuvastatin** (also called Crestor®) is a medicine approved in Belgium and other countries to treat high cholesterol and to prevent heart disease.

What was the purpose of this study?

The main goal of this study was to find out how **rosuvastatin** acted in the body when it was taken together (co-administered) with **nirmatrelvir/ ritonavir**.

People who can be helped by taking nirmatrelvir/ritonavir for COVID-19 may already be taking a medicine for another medical condition. Researchers need to understand how different medicines can affect each other. This is to make sure that medicines can be safely taken together and are working properly in the body.

Researchers wanted to know:

- **How did rosuvastatin act in the body when it was taken with nirmatrelvir/ritonavir?**
- **What medical problems did participants have during the study?**

This study did not test if nirmatrelvir/ritonavir helps to treat COVID-19 infection.

What happened during the study?

How was the study done?

Researchers tested 2 treatments in a group of healthy participants to learn how rosuvastatin acted in the body when it was taken with nirmatrelvir/ritonavir.

Two (2) study treatments:

Each participant was to take both treatments, starting with **Treatment A** on Day 1 followed by **Treatment B** from Days 6 to 7.

- Participants stayed at the study site for 11 days and 10 nights during the treatment period.
- For each treatment, the amount of drug was given in milligrams (mg).

Treatment A:	Treatment B:
Rosuvastatin only	**Rosuvastatin with nirmatrelvir/ritonavir**
• **Rosuvastatin** 10 mg tablet, taken 1 time on Day 1 (1 dose only).	• **Nirmatrelvir/ritonavir** 300 mg/100 mg tablets, taken 2 times daily from Days 6 to 7 (a total of 3 doses). • **Rosuvastatin** 10 mg tablet taken 1 time on Day 7 (1 dose only).

Researchers wanted to make sure that any effects seen are due to the study treatments.

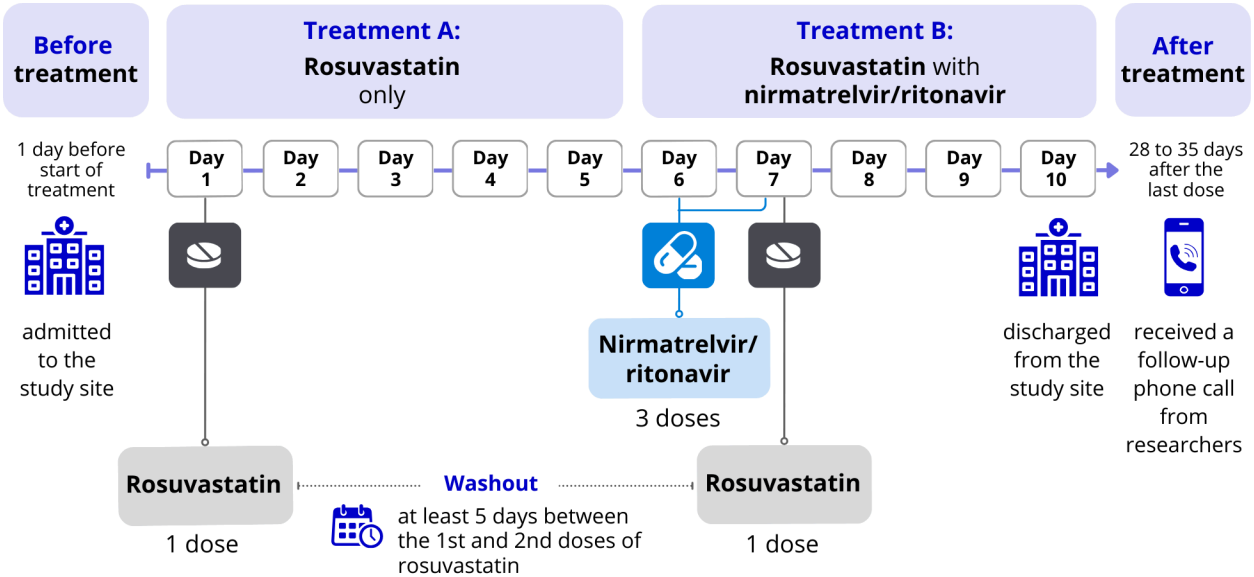
- **Empty stomach**: Participants did not eat any food for a certain number of hours before and after taking each treatment:
  - at least 10 hours overnight before treatment on Days 1 and 7.
  - at least 2 hours before treatment on Day 6.
  - for 4 hours after taking each treatment on Days 1, 6, and 7.

  Taking the treatment on an empty stomach helps to make sure that food will not influence the results.

- **Washout period:** Participants did not take any medicines for at least 5 days between the first dose of rosuvastatin (Treatment A) and the second dose of rosuvastatin (Treatment B).

  The washout period helps to make sure that rosuvastatin from Treatment A is removed from the body before taking rosuvastatin again in Treatment B.

The figure below shows how the study was done.



During the study:

- The participants and researchers knew that participants took both Treatment A and Treatment B. This is called an **open-label** study.
- Researchers took samples of blood and urine from participants.
- Researchers checked the participants' health and asked them how they were feeling.

Where did this study take place?

The Sponsor ran this study at 1 location in Belgium.

When did this study take place?

The study began on 09 June 2023 and ended on 10 August 2023.

Who participated in this study?

The study included healthy adults 18 years of age or older.

A total of 12 participants started and finished the study.

- There were 10 male and 2 female participants.
- All participants were 22 to 60 years old.

How long did the study last?

Each participant was in the study for about 11 weeks. The entire study took 2 months to complete.

When the study ended in August 2023, the Sponsor began reviewing the information collected. The Sponsor then created a report of the results. This is a summary of that report.

What were the results of the study?

How did rosuvastatin act in the body when it was taken with nirmatrelvir/ritonavir?

Researchers measured the amount of **rosuvastatin** in the participants' blood during the treatment period. Researchers compared the following results of participants:

- when they took **rosuvastatin** only (Treatment A).
- when they took **rosuvastatin** with **nirmatrelvir/ritonavir** (Treatment B).

When participants took **rosuvastatin** with **nirmatrelvir/ritonavir**, the **amount of rosuvastatin** in the blood was **higher** than when they took **rosuvastatin** only.

- Researchers considered the difference in these results are likely not due to chance.
- This means that **rosuvastatin** may act differently in the body when it is taken with **nirmatrelvir/ritonavir**. **Nirmatrelvir/ritonavir** may increase the amount of **rosuvastatin** in the blood when these medicines are taken together.

The study results can help to guide researchers on the recommended dose of **nirmatrelvir/ritonavir** when it is taken with medicines similar to **rosuvastatin**.

This does not mean that everyone in this study had these results. This is a summary of just some of the main results of this study. Other studies may have different results.

What medical problems did participants have during the study?

The researchers recorded any medical problems the participants had during the study. Participants could have had medical problems for reasons not related to the study (for example, caused by an unknown underlying disease or by chance). Or, medical problems could also have been caused by a study treatment or by another medicine the participant was taking. Sometimes the cause of a medical problem is unknown. By comparing medical problems across many treatment groups in many studies, doctors try to understand what effects a study medication might have on a participant.

Overall, study participants were able to tolerate well 1 dose of **rosuvastatin** taken by itself or with 3 doses of **nirmatrelvir/ritonavir**.

Table 1 below shows how many participants reported at least 1 medical problem while taking each treatment during the study.

Table 1. Number of participants who reported medical problems during the study

Treatment A	Treatment B
• 5 out of 12 participants (**42%**) had a medical problem while taking **rosuvastatin** only	• 10 out of 12 participants (**83%**) had a medical problem while taking **rosuvastatin** with **nirmatrelvir/ritonavir**

None of the participants left the study because of medical problems they had while taking Treatment A or Treatment B.

Table 2 lists the most common medical problems reported by 2 or more participants while taking each study treatment.

Table 2. Commonly reported medical problems by participants while taking each study treatment

Treatment A	Treatment B
• 4 out of 12 participants (**33%**) reported having a **bruise** while taking **rosuvastatin** only. • Researchers thought this medical problem was not related to rosuvastatin.	• 10 out of 12 participants (**83%**) reported having a **change in the sense of taste** while taking **rosuvastatin** with **nirmatrelvir/ritonavir**. • Researchers thought this medical problem may have been related to rosuvastatin or nirmatrelvir/ritonavir.

Did study participants have any serious medical problems?

A medical problem is considered “serious” when it is life-threatening, needs hospital care, or causes lasting problems.

No participant had serious medical problems or died during the study.

Where can I learn more about this study?

If you have questions about the results of your study, please speak with the doctor or staff at your study site.

For more details on your study protocol, please visit:

www.pfizer.com/research/research_clinical_trials/trial_results	Use the protocol number **C4671052**

The full scientific report of this study is available online at:

www.clinicaltrials.gov	Use the study identifier **NCT05898672**
euclinicaltrials.eu	Use the study identifier **2023-503570-20-00**

Please remember that researchers look at the results of many studies to find out which medicines can work and are safe for patients.

Again, if you participated in this study, **thank you** for volunteering. We do research to try to find the best ways to help patients, and you helped us to do that!