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.
Medicine Studied:	Nurtec® ODT (rimegepant, also called PF-07899801 or BHV-3000)
Protocol Number:	C4951014 (BHV3000-202)
Dates of Study:	25 June 2019 to 11 May 2023
Title of this Study:	A Study of Rimegepant in Adults With Refractory Trigeminal Neuralgia [BHV3000-202: Phase 2: A Double-Blind, Placebo Controlled, Crossover Trial of BHV-3000 (Rimegepant) for Treatment Refractory Trigeminal Neuralgia]
Date of this Report:	17 May 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 trigeminal neuralgia?

Trigeminal neuralgia, or **TN**, is a condition that causes severe, shock-like, facial pain. It is caused by irritation of the trigeminal nerve, which carries signals from the face to the brain.

The facial pain caused by TN can be long lasting. After some time, TN can become **refractory** to treatments, which means these treatments can no longer help ease the facial pain caused by TN.

What is rimegepant?

Rimegepant (ri-ME'-je-pant) is a medicine approved for the treatment of migraine (a type of severe headache). It is also known as Nurtec® ODT, which is rimegepant in the form of an **orally disintegrating tablet (ODT)**.

> Medicines in **ODT** form are placed on or under the tongue and dissolve quickly in the mouth even without water.

When people experience a migraine attack, they have high levels of a protein called "calcitonin gene related peptide", also called **CGRP**, released from the trigeminal system. Rimegepant works by blocking CGRP effects, such as transmission of pain signals and swelling of blood vessels, that cause migraine attacks.

> The trigeminal system is responsible for carrying information about touch, pain, and temperature from the face and head to the brain.

Researchers thought that rimegepant can also help people with refractory TN. In this study, rimegepant was considered investigational because it is not approved for treatment of TN outside of research studies.

Rimegepant was taken in this study in 2 forms:

- Immediate release (**IR**) form, which is a tablet that is swallowed
- **ODT** form

What was the purpose of this study?

The main purpose of this study was to learn if rimegepant can help relieve facial pain in adults with refractory TN.

Researchers wanted to know:

- **Did participants feel relief from TN pain after 2 weeks of treatment with rimegepant?**
- **What medical problems did the participants have during the study?**

What happened during the study?

How was the study done?

This study had 2 parts, called the “Double-Blind (or DB)” period and the “Extension” period.

During the DB period, all participants took rimegepant IR and placebo separately in 2 treatment sessions. A placebo does not have any medicine in it, but it looks just like rimegepant. Both study treatments were taken once daily.

They were assigned by chance (like flipping a coin) to 1 of the 2 treatment schedules:

- Two (2) weeks of rimegepant IR first, followed by 2 weeks of placebo
- Two (2) weeks of placebo first, followed by 2 weeks of rimegepant IR

There was a 1-week “washout” period in between treatment sessions. All participants took placebo during this period. This was needed to make sure the first treatment was completely flushed out of the body before the next treatment was started.

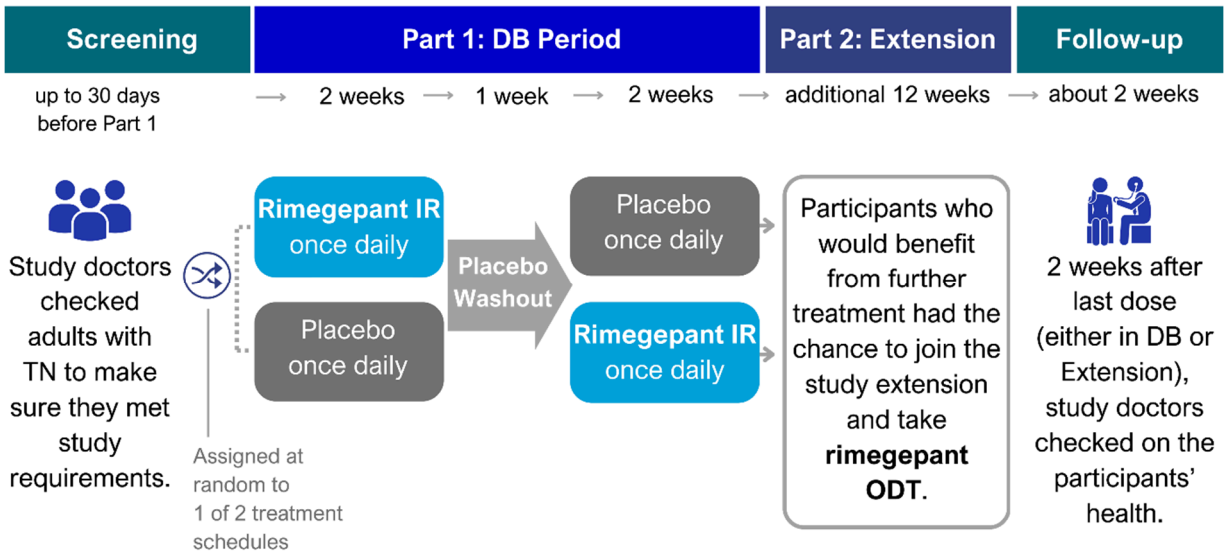
Neither the participants nor the researchers knew the study treatment that participants took in each session. This is known as a “double-blinded” study.

At the end of the DB period, participants had the chance to take rimegepant for 12 more weeks in the **Extension period** if their study doctor thought they would benefit from further treatment with rimegepant. All participants in the Extension period took rimegepant ODT.

Study doctors checked the participants’ health throughout the study.

Figure 1 below shows how the study was done.

Figure 1. How was this study done?



Where did this study take place?

The Sponsor ran this study at 11 locations in the United States.

When did this study take place?

It began on 25 June 2019 and ended on 11 May 2023.

The Sponsor ended the study earlier than planned because their plans for developing rimegepant had changed. This decision was not due to safety concerns with rimegepant.

Who participated in this study?

The study included participants 18 years of age or older who have refractory TN. The participants' TN **could not** be "secondary TN."

> TN is **secondary** when it is caused by other underlying conditions, such as tumors, abnormal skull structure, or a disease of the brain or spinal cord.

- A total of 8 men and 21 women participated.
- All participants were from 37 to 86 years old.

DB period: Of the 29 participants who started the study, 28 participants finished this part of the study. One (1) participant stopped treatment because the participant was not able to follow study requirements.

Extension period: A total of 13 participants entered the Extension period, and 9 participants finished this part of the study. Four (4) participants did not finish the Extension period:

- One (1) left the study by their own choice.
- One (1) left the study because of the Sponsor's decision.
- One (1) left the study as they felt like treatment was not working.
- One (1) did not finish because the study ended earlier than planned.

How long did the study last?

Study participants were in the study for about 2 to 5 months. The study was conducted for about 3 years and 10 months before it was stopped.

When the study ended in May 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?

Did participants feel relief from TN pain after 2 weeks of treatment with rimegepant?

To answer this question, researchers asked participants to rate their TN pain daily from start of the study (called baseline) through the end of the DB period. Participants rated their TN pain on a scale of 0 to 10 (0 means no pain, and 10 means worst pain imaginable).

Researchers checked if there had been a drop in ratings after each 2-week treatment with rimegepant and placebo compared to baseline. A drop in ratings means participants felt relief from TN pain, while an increase would mean they felt worsening of TN pain.

Researchers then compared the results when participants were taking rimegepant to that of when participants were taking a placebo.

On average, TN pain ratings:

- **dropped by a 0.5 point** after 2 weeks of treatment with rimegepant.
- **dropped by 1.2 points** after 2 weeks with placebo.

However, these results do not show whether rimegepant can or cannot help relieve TN pain in adults with refractory TN. This is because the study ended early, and the number of participants was not enough to have a strong statistical analysis of the results.

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 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.

DB period: Seven (7) out of 29 participants (24%) had at least 1 medical problem during this part of the study. Of these participants,

- Six (6) had a medical problem while taking rimegepant.
- One (1) had a medical problem while taking placebo.

Table 1 below lists the medical problems reported by these participants.

Below are instructions on how to read Table 1.

Instructions for Understanding Table 1.

- The **1st** column of Table 1 lists the medical problems that were reported during the DB period of the study.
- The **2nd** column tells how many of the 28 participants reported each medical problem while taking rimegepant. Next to this number is the percentage of these participants who reported the medical problem.

- The **3rd** column tells how many of the 29 participants reported each medical problem while taking placebo. Next to this number is the percentage of these participants who reported the medical problem.
- Using these instructions, you can see that 3 out of the 28 participants (10.7%) reported worsening of TN while taking rimegepant. None of the participants reported worsening of TN while taking placebo.

Table 1. Medical problems reported by study participants during the DB Period

Medical Problem	Rimegepant (28 Participants)	Placebo (29 Participants)
Worsening of TN	3 out of 28 participants (10.7%)	0 out of 29 participants (0%)
Pain in the abdomen	1 out of 28 participants (3.6%)	0 out of 29 participants (0%)
Tenderness in the abdomen	1 out of 28 participants (3.6%)	0 out of 29 participants (0%)
Diarrhea	0 out of 28 participants (0%)	1 out of 29 participants (3.4%)
Dizziness	1 out of 28 participants (3.6%)	0 out of 29 participants (0%)

Table 1. Medical problems reported by study participants during the DB Period		
Medical Problem	**Rimegepant (28 Participants)**	**Placebo (29 Participants)**
Tiredness	0 out of 28 participants (0%)	1 out of 29 participants (3.4%)
COVID-19	1 out of 28 participants (3.6%)	0 out of 29 participants (0%)
Depression	1 out of 28 participants (3.6%)	0 out of 29 participants (0%)

None of the participants stopped treatment with rimegepant or placebo because of a medical problem.

Extension period: Four (4) out of 13 participants (31%) had at least 1 medical problem during this part of the study.

- Three (3) of these participants had worsening of TN.
- One (1) participant had joint pain; 1 had chest pain; and 1 reported an incident of falling.

One (1) participant stopped treatment with rimegepant because of a medical problem.

In both periods, the most common medical problem reported by participants was worsening of TN. No other medical problems were reported by more than 1 participant.

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.

None of the participants had a serious medical problem 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 **C4951014 (BHV3000-202)**

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

www.clinicaltrials.gov	Use the study identifier **NCT03941834**

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!