Clinical Trial Summary

A clinical trial to learn about the effects on pain of trial drug SAF312 after laser eye surgery

Thank you!

Novartis, the sponsor of this clinical trial, thanks you and the other participants who joined and helped make this clinical trial possible.

Trial overview

What was the purpose of this trial?

The clinical trial team wanted to know if eye drops of the trial drug named SAF312 helped lower eye pain after an eye surgery called photorefractive keratectomy, also called PRK. PRK is a type of laser eye surgery that improves vision. After PRK surgery, people often have severe pain and stinging in their eyes for a few days.

Who was in this clinical trial?

- 40 men and women began this clinical trial
- All participants got PRK in both eyes

What treatments were used in this trial?

In this clinical trial, participants received SAF312 or a placebo as eye drops following the PRK. The surgeries were performed on one eye at a time. Participants received SAF312 after one PRK and the placebo after the other.

This trial was designed to learn:

- If SAF312 lowered the amount of eye pain at 6 hours after PRK
- If SAF312 lowered eye pain during the first 12 and 72 hours (3 days) after PRK
- How many participants took pain pills while using SAF312 eye drops
- How much SAF312 got into participant's blood
- The safety of SAF312 during the trial

What were the main results of this clinical trial?

On average, participants felt less eye pain after using SAF312 at 6 hours and during the first 12 hours after PRK. There were no serious safety events. Read more about the safety results on **page 8**.

Table of Contents

Why was this clinical trial needed?

Researchers are looking for a better way to treat eye pain after an eye surgery called photorefractive keratectomy, also called PRK. PRK is a common eye surgery that uses laser to improve vision by adjusting the shape of the cornea that covers the front of the eye.

The goal of PRK is to reduce the need for eyeglasses or contact lenses. PRK surgery addresses nearsightedness, farsightedness, and astigmatism. After PRK, people often feel severe stinging and pain in their eyes for the next few days. Most people need to take pain pills, which can affect the entire body for 3 to 5 days after PRK.

The trial drug SAF312 is designed to be used as eye drops to lessen pain in the eye only. Before a drug can be approved for patients to take, researchers do many clinical trials to find out how safe it is and how it works.

What was the purpose of the clinical trial?

The clinical trial team wanted to learn if SAF312 eye drops could help lower participant's eye pain after PRK.

This clinical trial was designed to learn:

- If SAF312 lowered the amount of eye pain at 6 hours after PRK
- If SAF312 lowered eye pain during the first 12 and 72 hours (3 days) after PRK
- How many participants took pain pills while using SAF312 eye drops
- How much SAF312 got into participant's blood
- The safety of SAF312 during the trial

Who was in this clinical trial?

40 adults, 21 men and 19 women, who got PRK participated in this clinical trial. They were 34 years old on average and all between 18 and 75 years old.

Every participant in this clinical trial needed to wear glasses or contact lenses and got PRK in both eyes. No one could be in this clinical trial if they had any previous eye surgery or were in poor general health. Everyone's eyes were otherwise healthy based on a doctor's exam.

This clinical trial was conducted in the United States.

This clinical trial began in December 2016 and ended in February 2018. The participants in this clinical trial began on different dates. Every participant who began also completed this clinical trial.

For more information about who could and could not be in this clinical trial, visit novctrd.com. Use clinical trial number CSAF312X2201 to find the scientific summary.

What type of clinical trial was this?

This type of clinical trial tests a trial drug's safety and how well it works in a small number of participants.

The clinical trial team used a computer program to randomly assign participants into 2 groups. The 2 groups got the same treatments, but in a different order. The treatments were SAF312 and placebo eye drops. The placebo eye drops were similar to over-the-counter eye drops, also called artificial tears that add moisture to the eye.

A **placebo** looks like medicine but does not have any medicine in it. Using a placebo helps researchers better understand the actual effects of a trial drug. All site staff and participants did not know what treatment each participant received. Some clinical trials are done this way because knowing what treatment people get can affect the results. Not knowing what treatment participants get helps make sure the results are looked at fairly.

What happened during this clinical trial?

Before treatment
Trial doctors checked each participant's overall health and eyes to make sure they could be in this clinical trial. Trial doctors also made sure participants stopped any treatment that wasn't allowed during this clinical trial.

During treatment
The clinical trial team used a computer program to randomly assign participants to 2 groups. They scheduled each participant to have PRK, on one eye at a time, on 2 different days. Each participant had PRK around the same time of day.
During treatment:

- One group used SAF312 eye drops after their first PRK, and used placebo eye drops after their second PRK
- The other group used placebo eye drops after their first PRK, and SAF312 eye drops after their second PRK

Right after each surgery, the trial staff gave the participants their first eye drop of their assigned treatment, either SAF312 or placebo. Then, the participants used their assigned treatment for the next 72 hours (3 days). They returned to the clinic every day during the first 3 days after surgery and at 1 week after surgery. At each visit, the trial doctors examined the participant's eye to monitor healing after surgery and checked the participant's overall health.

After treatment
Participants had a final visit at least 30 days after their last treatment to check their eyes and overall health.

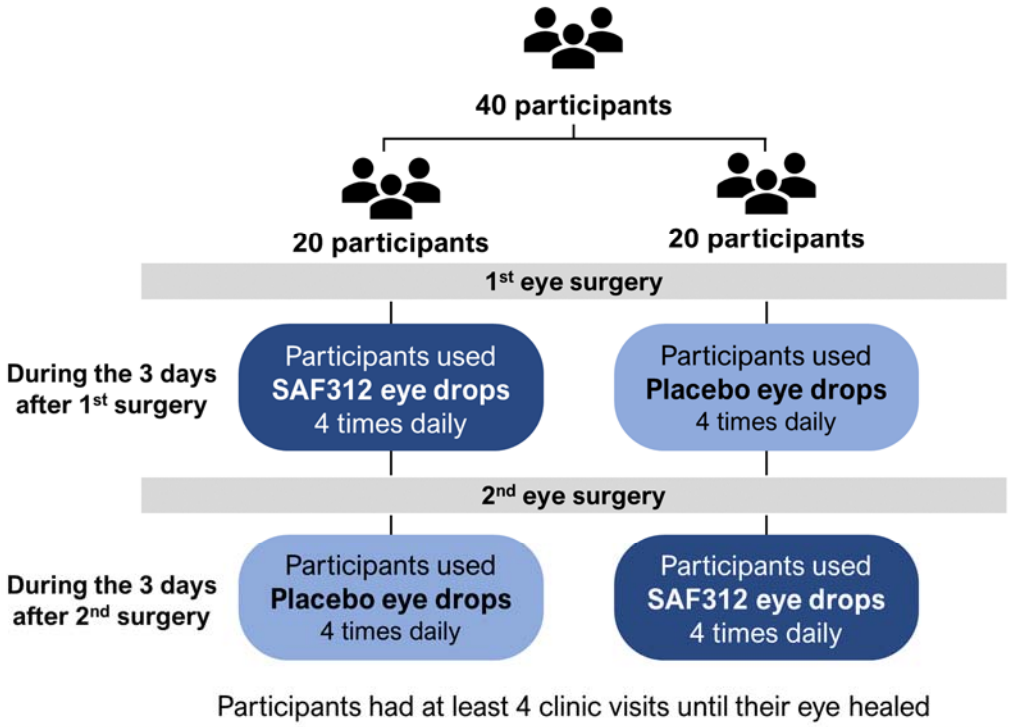
How this trial was designed:

Before treatment

- Trial doctors checked each participant's health and eyes to make sure they could be in this clinical trial
- Trial doctors made sure participants stopped any treatment that wasn't allowed during this clinical trial

During treatment

- Participants received PRK one eye at a time



Participants had at least 4 clinic visits until their eye healed

After treatment

- Participants had a final visit at least 30 days after their last treatment

What were the main results of this clinical trial?

This is a summary of the overall results of this clinical trial. Individual results from each participant may be different and are not included in this summary.

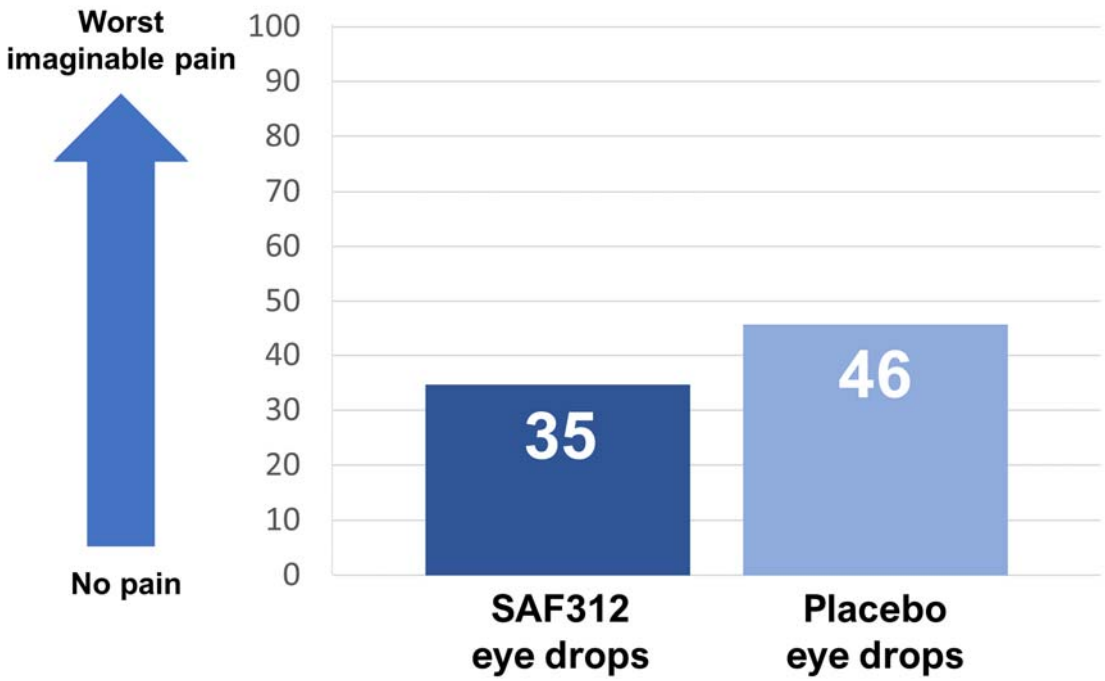
Researchers need many clinical trials to learn if a drug or other treatment is safe and works well. This is a summary of only one clinical trial. You should not use the results of this clinical trial to make decisions about your health care. Always talk to a doctor before making any changes to your health care.

Participants felt less eye pain on average after using SAF312 eye drops, compared to using the placebo eye drops, 6 hours after PRK and during the first 12 hours after PRK.

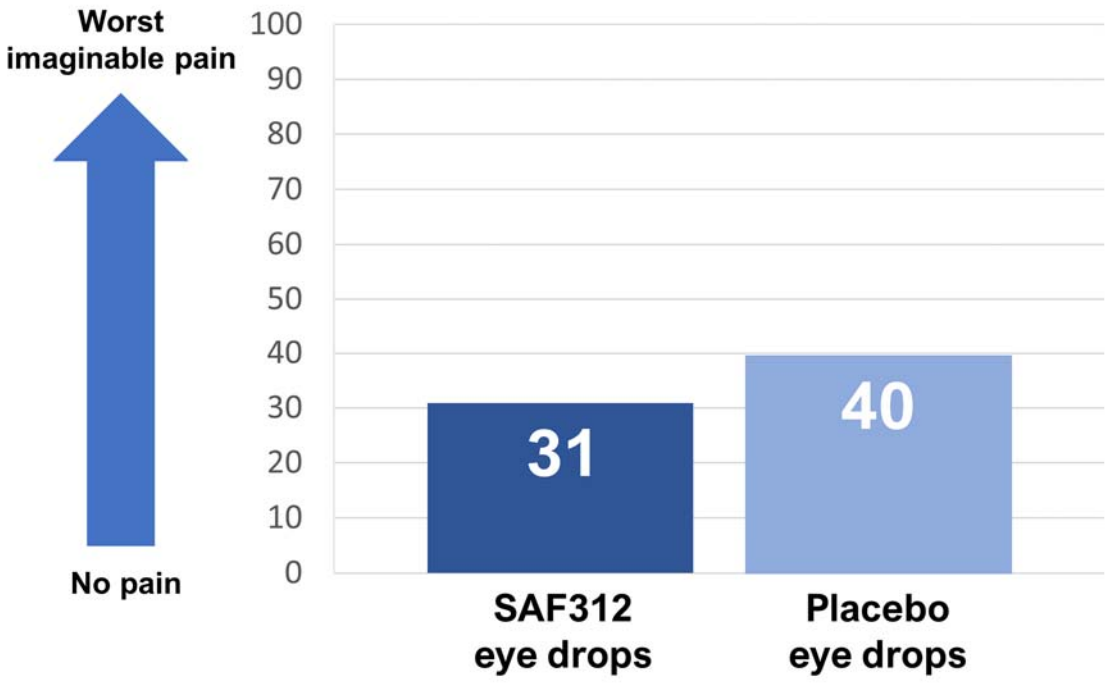
To measure participant's eye pain after PRK, the clinical trial team had participants rate their level of pain by placing a mark on a line between "No pain" to "Worst imaginable pain" using a handheld electronic device. The team assigned the pain ratings a score between 0 and 100 based on where participants placed a mark on the line. Higher scores meant worse pain.

Participants rated their level of pain each time just before using SAF312 or placebo eye drops. They reported their level of pain many times over the 3 days after each surgery. Participants could not see their previous responses. The clinical trial team looked at the levels of pain when participants used SAF312 eye drops compared to the placebo eye drops. Below are the results for 6 hours after PRK and during the first 12 hours after PRK.

Average level of pain participants reported 6 hours after PRK



Average level of pain participants reported during the 12 hours after PRK



What other key results were learned?

- **Fewer participants took pain pills during the first 24 hours after PRK when they used SAF312 eye drops**

  Trial doctors asked participants to report the number of pain pills they took while using SAF312 or placebo eye drops. During the first 24 hours, fewer participants reported they took pain pills when they used SAF312 compared to placebo eye drops. After 36 hours, the same number of participants took pain pills whether they used SAF312 or placebo eye drops.

- **SAF312 lowered the pain participants felt during the first 72 hours (3 days) after PRK**

  The clinical trial team averaged the participants' self-reported pain ratings over the first 72 hours (3 days) after PRK and found that average pain scores were lower when participants used SAF312 compared to the placebo eye drops.

- **How much SAF312 got into participants' blood**

  The clinical trial team wanted to know how much of the trial drug would leave the eye and enter participants' blood. They found low levels of SAF312 in their blood. The team concluded the low levels didn't have any effects.

What medical problems happened during the trial?

Medical problems that happen in clinical trials are called “adverse events”. An **adverse event** is any unwanted sign or symptom that participants have during a trial. An adverse event is considered “**serious**” when it is life-threatening, causes lasting problems, or the participant needs hospital care.

Adverse events may or may not be caused by treatments in the trial.

Many trials are needed to know if a drug or treatment causes an adverse event. Trial doctors keep track of all adverse events that happen in trials, even if they do not think the adverse events might be related to the trial treatments.

The clinical trial team concluded SAF312 and the placebo eye drops had similar safety results during this trial.

Trial doctors kept track of adverse events. They looked for any adverse events when they checked participant’s pain levels, eyes, and blood samples. Participants also reported any adverse events.

Some adverse events were in the eye and others were elsewhere in the body. This summary reports all adverse events during and after treatment.

Participants who had adverse events during this clinical trial

	SAF312 40 participants	**Placebo** 40 participants
Participants who had adverse events	20% (8)	13% (5)
Participants who had a serious adverse event	0% (0)	0% (0)
Participants who left this trial due to adverse events	0% (0)	0% (0)

What serious adverse events happened during this trial?

During this clinical trial, no one reported serious adverse events and no one died.

What types of adverse events happened during this trial?

Some participants reported medical problems or adverse events that were not serious. This section reports all adverse events reported by the trial doctors and participants in this trial.

Trial doctors kept track of all adverse events reported during this trial, and if they happened when the participant used SAF312 or placebo eye drops. They then divided the events into those in the eye and those not in the eye.

Descriptions of adverse events reported in an eye:

- **Corneal opacity** – temporary cloudiness of the cornea
- **Punctate keratitis** – temporary damage to tiny areas of cells on the top layer of the cornea
- **Corneal infiltrates** – temporary collections of immune cells in the cornea
- **Vitreous detachment** – gel inside the eye pulls away from the back of the eye

Adverse events in the eye

	SAF312 eye drops out of 40 participants	Placebo eye drops out of 40 participants
Corneal opacity	3% (1)	3% (1)
Punctate keratitis	3% (1)	3% (1)
Corneal infiltrates	0% (0)	3% (1)
Vitreous detachment	3% (1)	0% (0)

Adverse events not in the eye

	SAF312 eye drops out of 40 participants	Placebo eye drops out of 40 participants
Common cold Nasopharyngitis	5% (2)	0% (0)
Joint pain Arthralgia	3% (1)	0% (0)
Fever Pyrexia	3% (1)	0% (0)
Headache	3% (1)	3% (1)
Mouth or throat pain Oropharyngeal pain	3% (1)	0% (0)
Ringing in the ears Tinnitus	0% (0)	3% (1)
Sinus congestion	3% (1)	0% (0)
Sinus infection Sinusitis	3% (1)	0% (0)
Throwing up	3% (1)	0% (0)

One participant had 5 of the above adverse events that did not happen in the eye.

How has this clinical trial helped patients and researchers?

The results of this clinical trial helped us learn more about the effects and safety of SAF312 eye drops. The clinical trial team learned that participants felt less eye pain on average after taking SAF312 at 6 hours and during the first 12 hours after PRK. They concluded SAF312 and the placebo eye drops had similar safety results during this trial.

These results are from one clinical trial. One clinical trial can not give a complete picture of the benefits and risks of a trial drug. The results of many trials are needed to find out which treatments can be used for people with eye pain related to PRK. This summary shows only the main results from this trial. Other clinical trials may provide new information or different results.

Where can I learn more about this and future clinical trials?

If you were in this clinical trial and have questions about the results, speak with the doctor or staff where you took part in this clinical trial.

This is a summary of the results for one clinical trial.

You can find detailed results and more information about this clinical trial on the Novartis Clinical Trial Results website:

1. Visit novctrd.com
2. Click on “Clinical trial results and trial summary for patients” at the top right of the page
3. Read and scroll down, then click “I accept” to agree to use the information and the website
4. Select “Search by study number” on the bottom left of the page
5. Type **CSAF312X2201** in the search box and click search

This clinical trial was registered on the following website:

- ClinicalTrials.gov – https://clinicaltrials.gov/

To find this trial, type **CSAF312X2201**in the **Other terms** search box

If more clinical trials on this trial drug are planned, they will appear on the public website listed above or at www.novartisclinicaltrials.com. When there, search for SAF312.

Full trial title: A Randomized, Vehicle-controlled, Subject and Investigator-masked, Proof-of-concept Study to Evaluate the Use of Topical Ocular SAF312 in the Treatment of Postoperative Ocular Pain in Patients Undergoing Photorefractive Keratectomy (PRK) Surgery

Thank you!

Novartis would like to thank all of the trial participants that made this clinical trial possible. The trial participants helped researchers answer important health questions and test a possible medical treatment. Many volunteers and many clinical trials are needed to advance medical science.

Health Literacy Media

911 Washington Ave., Suite 625,
St. Louis, Missouri, 63101
Email: info@healthliteracy.media

Phone: (314) 361-9400
www.healthliteracy.media

NOVARTIS

Novartis is a global healthcare company based in Switzerland that provides solutions to address the evolving needs of patients worldwide.

1-888-669-6682 (USA)
+41613241111 (EU)
www.novartisclinicaltrials.com