NOVARTIS

## Clinical Trial Results Summary

# A clinical trial to learn about the effects and safety of CMK389 in people with chronic pulmonary sarcoidosis

## Thank you!

Thank you to the participants who took part in the clinical trial for chronic pulmonary sarcoidosis. Every participant helped the researchers learn more about the trial drug **CMK389**.

Novartis sponsored this trial and believes it is important to share what was learned from the results of this trial with the participants and the public. We hope this helps the participants understand their important role in medical research.

### Trial information

**Trial number:** CCMK389X2201

**Novartis drug studied:** **CMK389**

**Sponsor:** Novartis

If you were a participant and have any questions about the results, please talk to the doctor or staff at the trial site.

This summary only shows the results of a single clinical trial. Other clinical trials may have different results.

# What was the main purpose of this trial?

The purpose of this trial was to learn about the effects and safety of **CMK389** in people with chronic pulmonary sarcoidosis. To find this out, researchers compared the effects of **CMK389** to a placebo.

**Chronic pulmonary sarcoidosis** is a rare, long-term lung disease. People with chronic pulmonary sarcoidosis have inflammation in the lungs. This inflammation can cause coughing, trouble breathing, and wheezing.

**Inflammation** involves many cells and proteins in the immune system that work to remove harmful things and protect the body. Too much inflammation can harm the body.

**CMK389** is a trial drug designed to block a protein in the immune system that may play a role in chronic pulmonary sarcoidosis.

A **placebo** looks like the trial drug but does not have any trial drug in it. Using a placebo helps researchers better understand the effect of a trial drug.

**The trial's purpose was to answer these main questions:**

- Could the participants breathe easier after receiving CMK389 for about 4 months?
- What medical problems, also called adverse events, happened during this trial?
  - ↳ An **adverse event** is any sign or symptom that participants have during a trial. Adverse events **may** or **may not** be caused by treatments in the trial.

# How long was this trial?

The trial began in September 2020 and ended in December 2023.

# Who was in this trial?

62 participants with chronic pulmonary sarcoidosis received treatment in this trial – 42 men and 20 women. Participants' ages ranged from 31 to 67 years. Their average age was 51 years.

The number of participants by race is shown below.

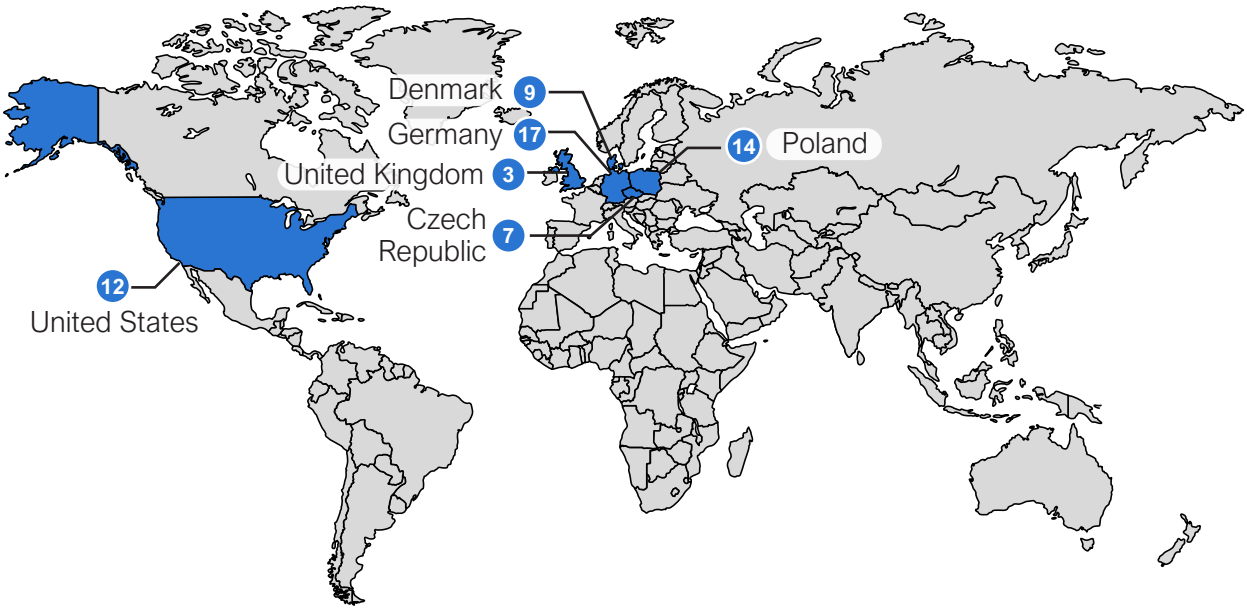
**Race**

| | |
|---|---|
| 5 | Black or African American |
| 56 | White |
| 1 | Unknown |

The participants could take part in this trial if they:

- Had pulmonary sarcoidosis for more than 1 year
- Had taken common treatments for their chronic pulmonary sarcoidosis for at least 6 months. This included steroids and medicines to lower the immune system's activity, called methotrexate or azathioprine.
- Did not smoke cigarettes
- Did not have certain health conditions that could weaken their immune system

62 participants from 6 countries received treatment. The map below shows the number of participants who took part in each country.



# What treatments did the participants receive?

The treatments in this trial were:

**CMK389**, which was received through a needle in a vein, called an intravenous (IV) infusion, every 4 weeks. Participants received 10 milligrams of **CMK389** for every kilogram of body weight. Each infusion lasted for about 1 hour.

**Placebo**, which was received as an IV infusion, every 4 weeks. Each infusion lasted for about 1 hour.

Along with the treatments above, participants could continue to take some of their usual medicines for chronic pulmonary sarcoidosis, including steroids and hydroxychloroquine. Participants stopped taking methotrexate and azathioprine when they joined the trial.

Researchers used a computer to randomly assign participants to their treatment.

The participants, researchers, and trial staff did not know what treatment the participants were receiving. Some trials are done this way because knowing what treatment the participants receive can affect the results of the trial. Doing a trial this way helps to make sure that the results are looked at with fairness across all treatments.

# What happened during this trial?

## Before treatment

**About 2 months**

The trial staff checked to make sure the participants could be in this trial.

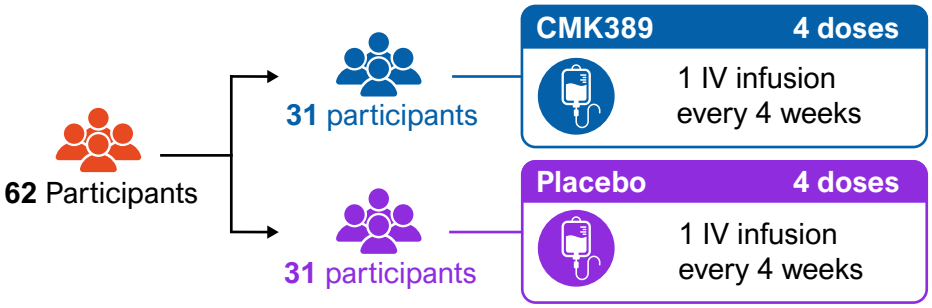
Participants stopped taking certain medicines for chronic pulmonary sarcoidosis. The trial doctors also lowered the amount of steroids the participants took.

## During treatment

**About 4 months**

The graphic below shows how many participants were assigned each treatment.

62 participants received one of these treatments for a total of 4 doses:




Trial doctors continued to adjust the amount of steroids for each participant throughout the trial.

## After treatment

**Up to about 5 months**

After their last dose of treatment, participants returned to the trial site up to 3 times for trial staff to check their health.

Trial staff also checked for pregnancy once a month for up to about 5 months.

Trial staff checked the participants' general health throughout the trial.

# What were the main results of this trial?

## Could the participants breathe easier after receiving CMK389 for about 4 months?

The participants who received **CMK389** did not have a meaningful change in how easily they could breathe compared to those who received the placebo.

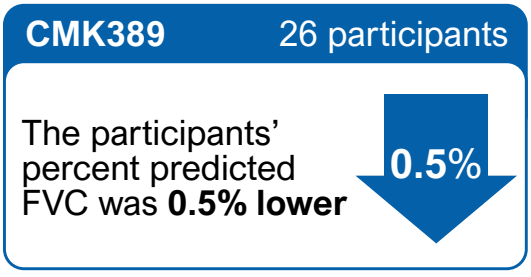
To learn this, researchers measured each participant's Forced Vital Capacity, also called FVC. **FVC** is how many milliliters (mL) of air a person can blow out. Then, the researchers calculated each participant's **percent predicted FVC**.

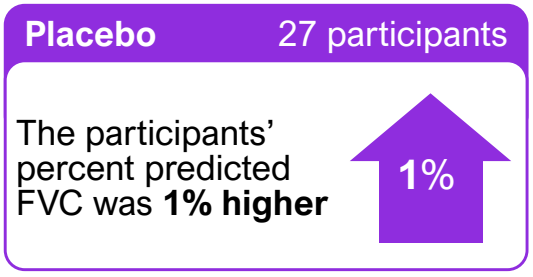
Researchers measured each participant's FVC before treatment and after about 4 months of treatment. The researchers compared the average change in percent predicted FVC for participants who took **CMK389** to those who took the placebo.

**What is percent predicted FVC?**
Percent predicted FVC compares a participant's FVC to the FVC researchers would expect if that same person had no lung conditions. A **higher percent** predicted FVC means it is **easier for a person to breathe.**

### Change in percent predicted FVC

The results below show the average change in the participants' percent predicted FVC after about 4 months of treatment.




This graphic only includes participants who received their treatment as planned.

# What were the other results of this trial?

## Did CMK389 affect how many participants got more steroids?

About the same number of participants who received **CMK389** or placebo needed more steroids.
Trial doctors decided if a participant needed more steroids to lessen their chronic pulmonary sarcoidosis symptoms.

To learn this, researchers kept track of the number of participants who got more steroids. The researchers measured the amount of and how often participants took steroids before treatment and after about 4 months of treatment.

## Did CMK389 affect other measures of chronic pulmonary sarcoidosis?

**CMK389** did not affect all other measures of chronic pulmonary sarcoidosis more than the placebo. **CMK389** did affect inflammation around the lungs, however, the researchers could not conclude if this effect was meaningful.

To learn this, researchers measured:

- **Inflammation in and around participants' lungs** using imaging scans
- **Forced expiratory volume in one second**, or **$FEV_1$**, which is another measure of how easily participants could breathe
- **Diffusing capacity of the lungs**, or **DLCO**, which measures how well the lungs work
- **6-minute walk distance**, or **6MWD**, which measures how far the participants could walk in 6 minutes

They looked at the changes in these measures from before treatment and after about 4 months of treatment.

## Did CMK389 affect the number of participants whose chronic pulmonary sarcoidosis got worse?

About the same number of participants who received either **CMK389** or placebo had their chronic pulmonary sarcoidosis get worse after about 4 months.

To learn this, researchers measured:

- **FVC**
- **$FEV_1$**
- **DLCO**
- **6MWD**

They looked at how many participants in each treatment group had these measures change after about 4 months of treatment.

# What medical problems, also called adverse events, happened during this trial?

Trial doctors keep track of all medical problems, also called **adverse events**, that happen in trials. They track adverse events even if they think the adverse events are not related to the trial treatments.

Many trials are needed to know if a drug or treatment causes an adverse event.

This section is a summary of the adverse events that happened from the start of treatment until about 3 months after the last dose of treatment.

An **adverse event** is:

- Any **sign or symptom** that the participants have during a trial
- Considered **serious** when it is life-threatening, causes lasting problems, the participant needs hospital care, or results in death

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

More than half of the participants (42 of 62) had adverse events. 2 participants had adverse events that were considered serious. No participants died. No participants left the trial due to an adverse event. The researchers concluded there were no new safety concerns for **CMK389** in this trial.

## How many participants had adverse events?

| | CMK389<br>31 participants | Placebo<br>31 participants |
|---|---|---|
| Had at least 1 **serious adverse event** | 2 of 31<br>6% | 0 of 31<br>0% |
| Had at least 1 **other adverse event** | 21 of 31<br>68% | 19 of 31<br>61% |
| **Left the trial** due to an adverse event | 0 of 31<br>0% | 0 of 31<br>0% |
| **Died** | 0 of 31<br>0% | 0 of 31<br>0% |

## What serious adverse events did the participants have?

No participants died. 2 participants who received **CMK389** had serious adverse events:

- **Head injury** from a fall
- **Skin cancer** (squamous cell carcinoma of skin)

## What other adverse events did the participants have?

40 participants had other adverse events.

The table below shows the other adverse events that happened in **6 or more** participants. Additional adverse events happened in fewer participants.

| | CMK389<br>31 participants | Placebo<br>31 participants |
|---|---|---|
| **Joint pain**<br>Arthralgia | 4 of 31<br>13% | 4 of 31<br>13% |
| **Feeling weak and tired**<br>Fatigue | 4 of 31<br>13% | 4 of 31<br>13% |
| **COVID-19** | 3 of 31<br>10% | 4 of 31<br>13% |
| **Shortness of breath**<br>Dyspnea | 4 of 31<br>13% | 3 of 31<br>10% |
| **Cough** | 2 of 31<br>6% | 4 of 31<br>13% |
| **Headache** | 2 of 31<br>6% | 4 of 31<br>13% |
| **Infection in the ear, nose, throat, or airways**<br>Upper respiratory tract infection | 4 of 31<br>13% | 2 of 31<br>6% |

# What was learned from this trial?

Researchers learned about the effects and safety of **CMK389** in people with chronic pulmonary sarcoidosis.

The researchers concluded:

- The participants who received **CMK389** did not have a meaningful change in how easily they could breathe compared to those who received the placebo
- There were no new safety concerns for **CMK389** in this trial

The researchers also concluded that, compared to those who received the placebo, participants who received **CMK389**:

- Had the same number of participants who needed more steroids
- Had no meaningful changes in other measures of chronic pulmonary sarcoidosis
- Had about the same number of participants whose chronic pulmonary sarcoidosis got worse

When this summary was written, the sponsor had no plans for future trials of **CMK389** in people with chronic pulmonary sarcoidosis.

# Where can I learn more about this trial?

More information about the results and adverse events in this trial can be found in the scientific summary of the results available on the Novartis Clinical Trial Results website **www.novctrd.com**

Follow these steps to find the scientific summary:


For more information about this trial, go to <any of these websites/this website>:

- **clinicaltrials.gov** – search using the number **NCT04064242**
- **clinicaltrialsregister.eu/ctr-search/search** – search using the number **2018-000381-11**

Other trials of **CMK389** may appear on the public websites above. When there, search for **CMK389**.

**Full clinical trial title:** A subject and investigator blinded, randomized, placebo-controlled, repeat-dose, multicenter study to investigate efficacy, safety, and tolerability of CMK389 in patients with chronic pulmonary sarcoidosis

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