

**Research Sponsor:** Novartis  
**Drug Studied:** Secukinumab  
**Protocol #:** CAIN457A2110

---

## ***Thank you!***

Thank you for taking part in the clinical trial for the drug secukinumab, also called AIN457. You helped researchers learn about how secukinumab works in patients with moderate-to-severe plaque psoriasis.

Novartis sponsored this trial and believes it is important for you to know the results of your trial. An independent, non-profit organization called CISCRP prepared this summary of the trial results for you. We hope it helps you understand your important role in medical research.

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

## **What has happened since the trial ended?**

You were in this trial for about 10 months. The trial started in December 2015 and ended in January 2017. The trial included 25 patients from 8 trial sites in the United States. But, only 24 patients received trial treatment.

After the trial ended, the sponsor reviewed the data and created a report of the results. This is a summary of that report.

## Why was the research needed?

Secukinumab is an antibody approved to treat patients with moderate-to-severe plaque psoriasis. Antibodies are normally made by the immune system to fight infection. But, researchers can now use antibodies as medications to treat a variety of conditions like plaque psoriasis.

In this trial, the researchers wanted to find out more about how well the body can break down a second medicine when a patient is already getting secukinumab. To test this, the researchers treated patients with secukinumab and gave them another drug called midazolam at the same time. Midazolam is commonly used to put patients to sleep for certain medical procedures. One of the ways the body breaks down medicine is through proteins called enzymes. Midazolam can only be broken down by a specific enzyme called CYP3A4. The researchers wanted to know if secukinumab changed the ability of CYP3A4 to break down midazolam when both drugs were taken together. This information would help doctors decide if secukinumab could be used safely with other drugs like midazolam.

In this trial, the researchers compared the blood test results from when patients took only midazolam with when patients got both secukinumab and midazolam.

The main questions the researchers asked in the trial were:

- Did secukinumab change the amount of midazolam in the blood?
- What medical problems did patients have during the trial?

To answer these questions, the researchers asked for the help of women and men like you. The patients in this trial were 18 to 68 years old. They all had moderate-to-severe plaque psoriasis that was not successfully treated in the past.

## What kind of trial was this?

This was an “open-label” trial. That means the sponsor staff, the trial staff, and the patients knew that each patient was taking midazolam and secukinumab.

## What happened during the trial?

Before the trial treatment started, the trial staff did tests to make sure you and the other patients could take part in the trial. After joining the trial:

- You took 5 milligrams, also called mg, of midazolam within a week before getting secukinumab.
- The trial staff took blood samples to measure the amount of midazolam in your blood.

During the trial:

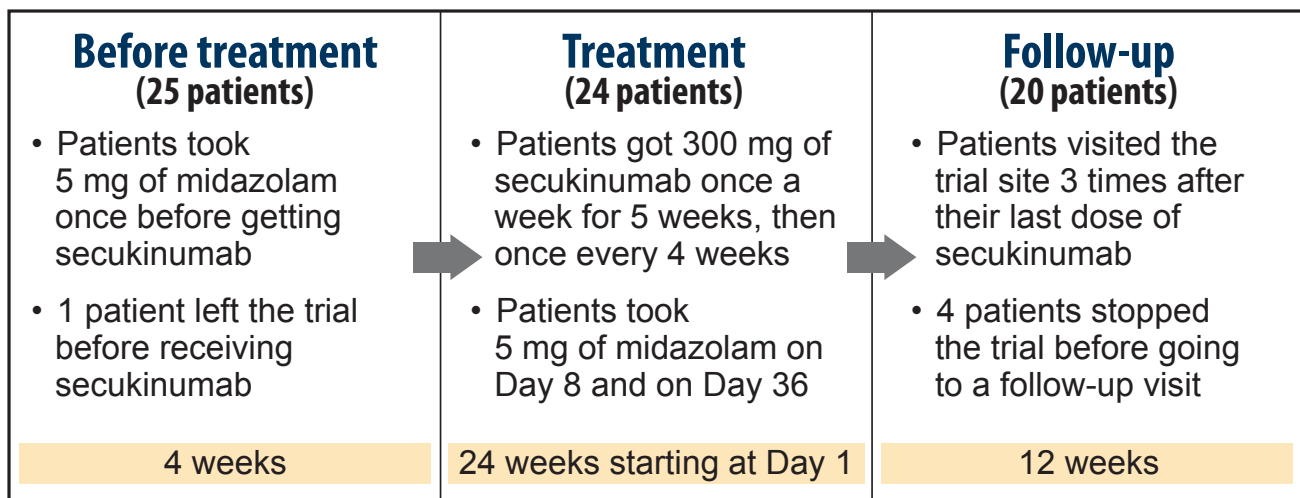
- 24 patients got secukinumab through a needle put under their skin. They also took midazolam by mouth.
- 24 patients got 300 mg of secukinumab every week for 5 weeks starting on Day 1 until Day 29. Then, they received secukinumab every 4 weeks until Day 169. Twenty five patients were planned to get secukinumab. But, 1 patient did not get secukinumab because he or she left the trial early.
- 24 patients also took 5 mg of midazolam again on Day 8 and on Day 36.

To check your health and psoriasis symptoms:

- The trial staff checked your heart health and your psoriasis symptoms before and after getting treatment.
- You gave blood and urine samples.
- You answered questions about how you felt and any other medicines you were taking.

Treatment with both midazolam and secukinumab lasted up to Day 36, but you continued getting secukinumab up to Day 169. This was about 24 weeks of treatment.

The follow-up period lasted 12 weeks and included 3 visits. During this time, the trial staff checked your psoriasis symptoms. They also checked how you were feeling and what medications you were taking. The chart below shows how the trial was done.



## What were the results of the trial?

This is a summary of the overall results of your trial, not your individual results. The results presented here are for this single trial.

Researchers look at the results of many trials to decide which doses of the drug work best and are safest for patients. Other trials may provide new information or different results. You should not make medical decisions based on the results of a single trial without first talking to your doctor. Always talk to a doctor before making any changes to your medications or treatment plans.

### **Did secukinumab change the amount of midazolam in the blood?**

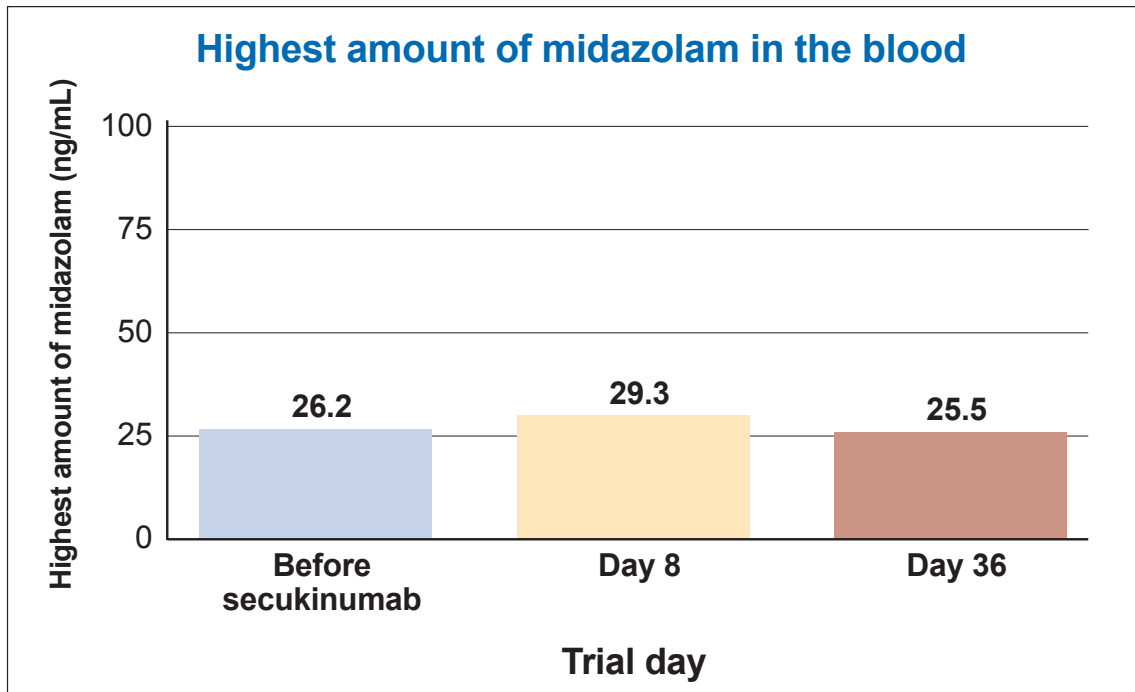
No. The amount of midazolam in the blood was similar when patients took midazolam alone or with secukinumab. The differences seen when taking midazolam alone or with secukinumab on Day 8 and Day 36 could have been due to chance.

The researchers wanted to know how the body breaks down midazolam when patients took midazolam alone compared to when they took midazolam with secukinumab. To answer this question, the researchers compared the amounts of midazolam in the blood before and after treatment with secukinumab.

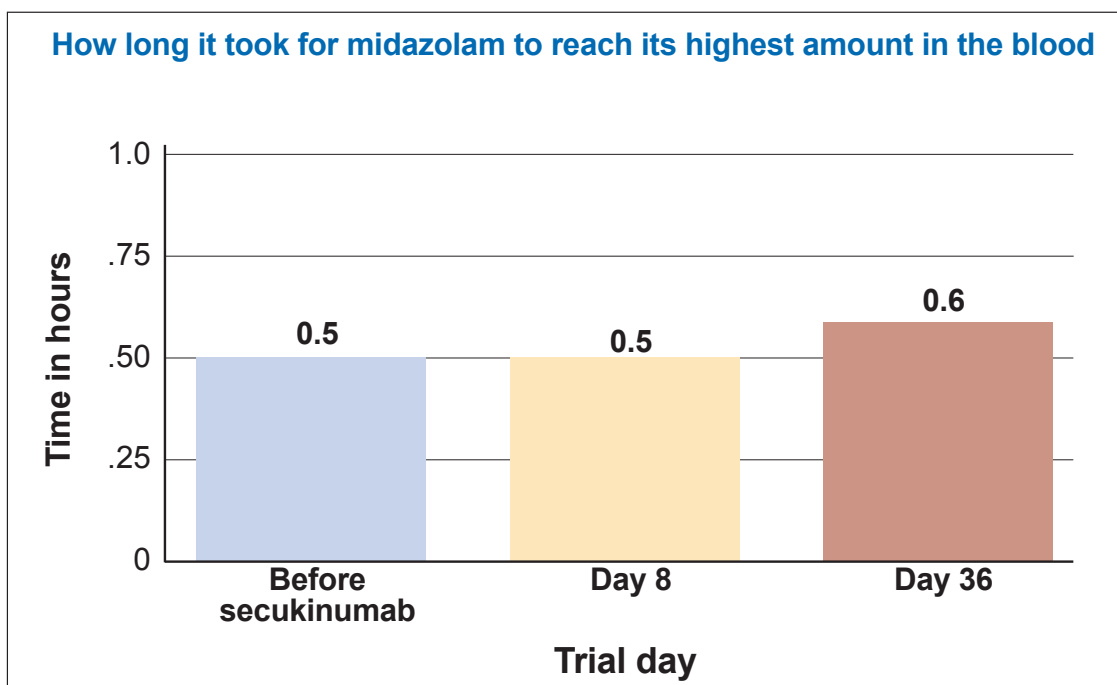
Overall, the researchers found the amount of midazolam in the blood was similar with and without secukinumab when they measured:

- The highest amount of midazolam in the blood
- How long it took for midazolam to reach its highest amount in the blood
- The average amount of midazolam in the blood

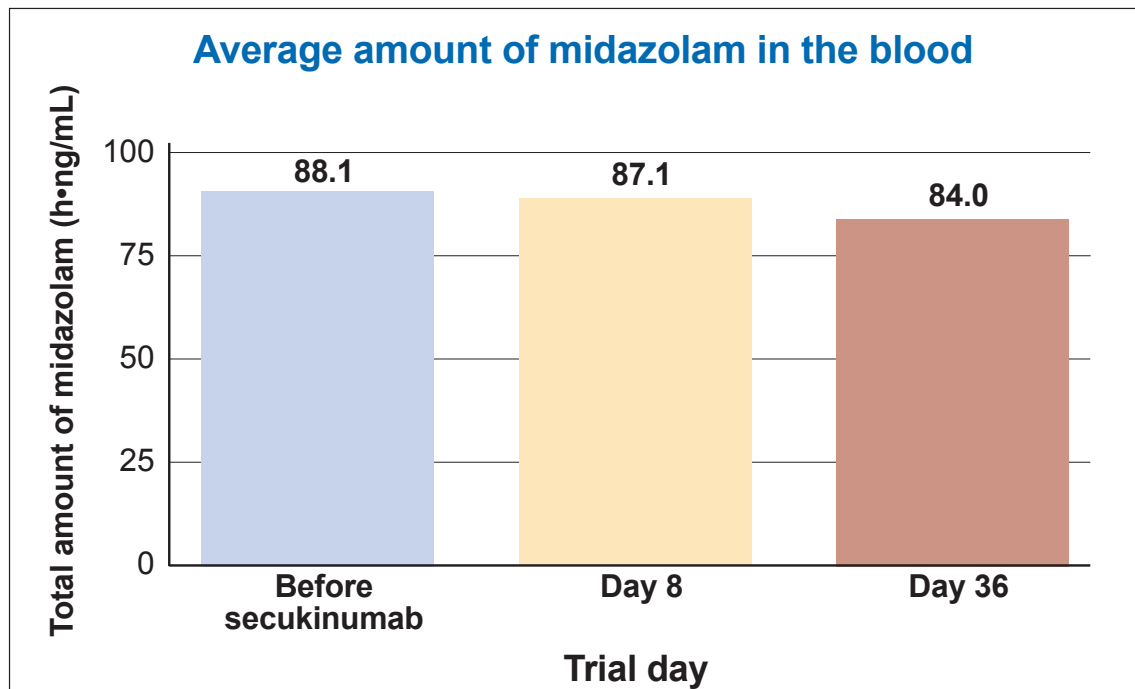
The chart below shows the highest amount of midazolam in the blood before and after getting secukinumab. This amount is measured in nanograms per milliliter of blood, also known as ng/mL.



The researchers also measured how long it took for midazolam to reach its highest amount in the blood. This length of time is measured in hours and is shown in the chart below.



The chart below shows the average amount of midazolam in the blood before and after getting secukinumab. This amount is measured in hours multiplied by nanograms per milliliter of blood, also known as h•ng/mL.



## What medical problems did patients have?

Medical problems that happen in clinical trials are called “adverse events”. An adverse event is any unwanted sign or symptom that patients have during a trial. An adverse event is considered “serious” when it is life threatening, causes lasting problems, or the patient needs hospital care. These problems may or may not be caused by the trial drug.

A lot of research is needed to know whether a drug causes a medical problem. During a trial, all medical problems are reported and written down, whether or not they are caused by the trial drug. So, when new drugs are being studied, researchers keep track of all medical problems that patients have.

This section is a summary of the adverse events that happened during this trial.

### How many patients had adverse events during the trial?

Some patients had adverse events during the trial.

The table below shows how many patients had adverse events during the trial.

Adverse events during this trial			
	Midazolam alone (out of 24 patients)	Secukinumab and midazolam (out of 24 patients)	Total (out of 24 patients)
How many patients had adverse events?	1 (4.2%)	16 (66.7%)	16 (66.7%)
How many patients had serious adverse events?	0 (0.0%)	1 (4.2%)	1 (4.2%)
How many patients stopped getting the treatment because of adverse events?	0 (0.0%)	1 (4.2%)	1 (4.2%)

One patient left the trial because of an adverse event not related to the trial drug.

### What were the most common serious adverse events?

One patient experienced the serious adverse event of gallstones. The doctors did not think this serious adverse event was related to the trial drugs.

No patients died in this trial.

### What were the most common adverse events?

Dehydration and headache were the most common adverse events. The table below shows the most common adverse events that happened in at least 2 patients total. There were other adverse events that happened in 1 patient.

Most common adverse events during this trial			
Adverse event	Midazolam alone (out of 24 patients)	Secukinumab and midazolam (out of 24 patients)	Total (out of 24 patients)
Dehydration	1 (4.2%)	1 (4.2%)	2 (8.3%)
Headache	0 (0.0%)	2 (8.3%)	2 (8.3%)

For more information about the adverse events in this trial, please see the scientific summary that can be found on the website noted at the end of the summary.

## How has this trial helped patients and researchers?

The information described above helped researchers better understand how well the body can break down midazolam in patients with plaque psoriasis who also got treated with secukinumab. The results presented here are for this single trial. Researchers look at the results of many trials to decide which treatments work best and are safest. This summary shows only the main results from this 1 trial. Other trials may provide new information or different results. It takes volunteers in many trials all around the world to advance medical science.

## Where can patients find more information?

More information about the results of this trial can be found in the scientific results summary available on the Novartis Clinical Trial Results website ([www.novctrd.com](http://www.novctrd.com)). Once on the site, click **READ MORE** under “**Clinical trial results**” at the bottom of the page. After agreeing to enter the Novartis website, type **CAIN457A2110** into the keyword search box and click “**Search**”. If you have questions about the results, please speak with the trial doctor or staff at your trial site.

This trial was registered on the following website:

- [ClinicalTrials.gov](http://ClinicalTrials.gov) - National Clinical Trial # NCT02607774

If more clinical trials are planned, they will be listed on the above public website or [www.novartisclinicaltrials.com](http://www.novartisclinicaltrials.com). Search for “**secukinumab**”.

**Short Trial Title:** Investigate Effect of Secukinumab on the PK of Midazolam in Patients with Mod to Sev Plaque Psoriasis

**Full Trial Title:** An Open-label, Single Sequence Crossover, Study Investigating the Influence of Secukinumab Treatment on the Pharmacokinetics of Midazolam as a CYP3A4 Substrate in Patients with Moderate-to Severe Plaque Psoriasis

## Thank you

As a clinical trial patient, you belong to a large community of patients around the world. You helped researchers answer important health questions and test new medical treatments.



The Center for Information & Study on Clinical Research Participation (CISCRP) is a non-profit organization focused on educating and informing the public about clinical research participation.

CISCRP • One Liberty Square, Suite 510 • Boston, MA 02109

1-877-MED-HERO • [www.ciscrp.org](http://www.ciscrp.org)



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

1-888-669-6682 (US);

+41613241111 (EU)

[novartisclinicaltrials.com](http://novartisclinicaltrials.com)