Clinical Trial Results Summary

A clinical trial to learn more about the effects of secukinumab in participants with plaque psoriasis

Protocol number: CAIN457AUS07

Thank You!

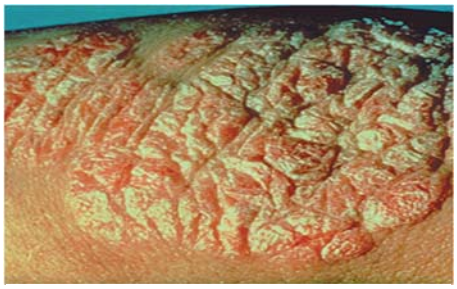
Novartis, the sponsor of this clinical trial, would like to thank you for taking part in this trial for the drug AIN457, also known as secukinumab. You helped researchers learn more about how secukinumab works in people with plaque psoriasis.

As a clinical trial participant, you belong to a large community of people around the world. Your invaluable contribution to medicine and healthcare is greatly appreciated.

Important note: This summary only shows the results of a single clinical trial. Other clinical trials may have different findings. Researchers and health authorities, such as the Food and Drug Administration (FDA) in the United States and the European Medicines Agency (EMA) in Europe, look at the results of many clinical trials to understand which drugs work and if they are safe. It takes many people in multiple clinical trials around the world to advance medical science and healthcare. If you have any questions about these trial results, please talk to the doctor or staff at your trial site.

Why was the research needed?

Researchers were looking for a way to understand the impact of plaque psoriasis on the whole body. Plaque psoriasis is a long-lasting skin condition and can result in patches of thick, red, raised skin covered with a silver-colored white buildup of dead skin cells called scales. These patches, which are called plaques or skin lesions, may be itchy and/or painful. Psoriasis most commonly affects the skin on the elbows, knees, and scalp, though it can happen on any part of the body.



Source: National Psoriasis Foundation (psoriasis.org)

Psoriasis happens when the body's immune system (ability of the body to fight against infections) sends out wrong signals. This causes new skin cells to grow much faster than normal, and they build up in thick patches.

Psoriasis is the sign of inflammation that appears on skin, but often the same inflammation may affect blood, fat cells, and joints. This puts people with psoriasis at risk of developing high blood pressure, diabetes (when a person's blood sugar is too high), high cholesterol, heart attack, stroke (when the blood supply to part of the brain is cut off), psoriatic arthritis (pain and swelling of the joints in people with psoriasis) and other diseases.

In this trial, researchers wanted to see if secukinumab (pronounced as se-cu-KIN-umab) can produce an effect on the different components of psoriasis (which are skin, blood, fat cells) and on the body in general (inflammation, such as redness, swelling, and pain) in people with moderate or severe plaque psoriasis. So researchers looked at the expression of many proteins, and in particular to one called K16, in the skin lesions. K16, when present in psoriasis lesions, can lead to swelling, redness, and pain in the skin.

Trial drugs

The drugs given in this trial were:

Secukinumab

A drug that is approved for treating plaque psoriasis. Interleukin-17a (IL-17a) is a protein, which is found in high levels in participants with psoriasis. Secukinumab binds and reduces the activity of IL-17a which causes swelling, redness, and pain when produced in excess.

Placebo

It looks like the trial drug but does not have any medicine in it. It helps researchers better understand the effect of a trial drug by making sure that the changes were not happening by chance.

Trial purpose

In this trial, researchers looked at the effects of secukinumab on the skin of psoriasis patients. The main questions the researchers wanted to answer in this trial were:

How many participants who took secukinumab did not have K16 protein in their skin lesions compared with placebo after 12 weeks of treatment?

How many participants who took secukinumab had at least 90% improvement in their skin compared with placebo after 12 weeks of treatment?

Other questions the researchers wanted to answer in this trial were:

- How many participants who took secukinumab did not have K16 protein in their skin lesions after 52 weeks of treatment?
- How many participants who took secukinumab had at least 90% improvement in their skin after 52 weeks of treatment?
- Did participants have any medical problems during the trial?

How long was this trial?

The trial started in April 2017 and ended in February 2019. The entire duration, from enrolling the first participant to the last participant completing the trial was approximately 2 years. An individual participant could be in this trial for up to 1 year.

Not all participants joined the trial at the same time but each participant was in the trial for the same duration. Therefore, some participants entered and finished the trial earlier than others.

The researchers completed this trial as planned. When the trial ended, the researchers collected information on the trial treatments (secukinumab and placebo) and created a report of the trial results. This summary is based on that report.

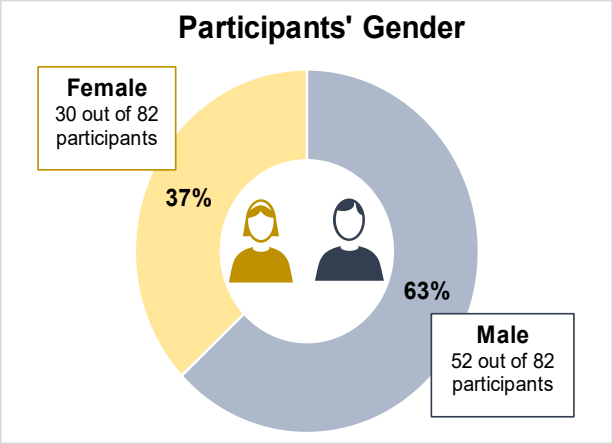
Who was in this trial?

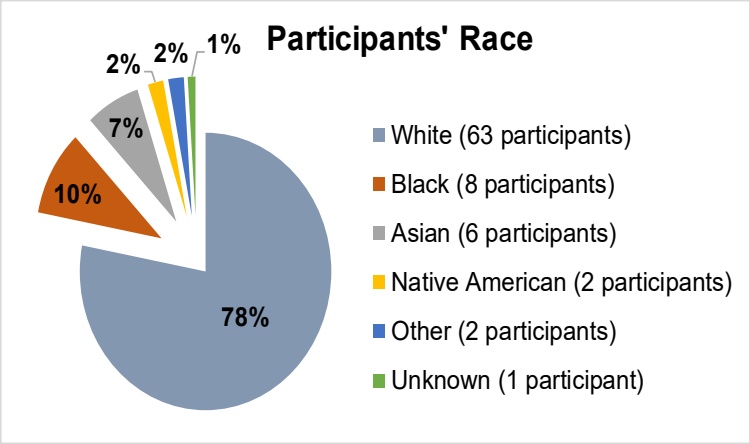
The participants could take part in this trial if they:

- were 18 years of age or above
- had confirmed plaque psoriasis for more than 6 months
- had psoriasis which was partially treated by creams, light therapy, and other treatments
- had not taken secukinumab or a similar treatment in the past

A total of 82 participants at 15 centers in the United States (US) participated in this trial.

The average age of participants was 45 years. Participants' age ranged from 18 to 79 years. The majority of participants 63% (52 out of 82) were male. 77% (63 out of 82) of the participants were white, as shown on next page.





What kind of trial was this?

The first 16 weeks of this trial was double-blinded. This means that none of the participants, trial doctors, or trial staff knew what treatment participants were receiving. Some trials are done this way because knowing what treatment each participant is getting can affect the results of the trial. Doing a trial this way helps to make sure that the results are looked at with fairness towards all treatments.

The remaining 36 weeks of this trial was open-label. This means that both the trial doctors and the participants knew which treatment was being given.

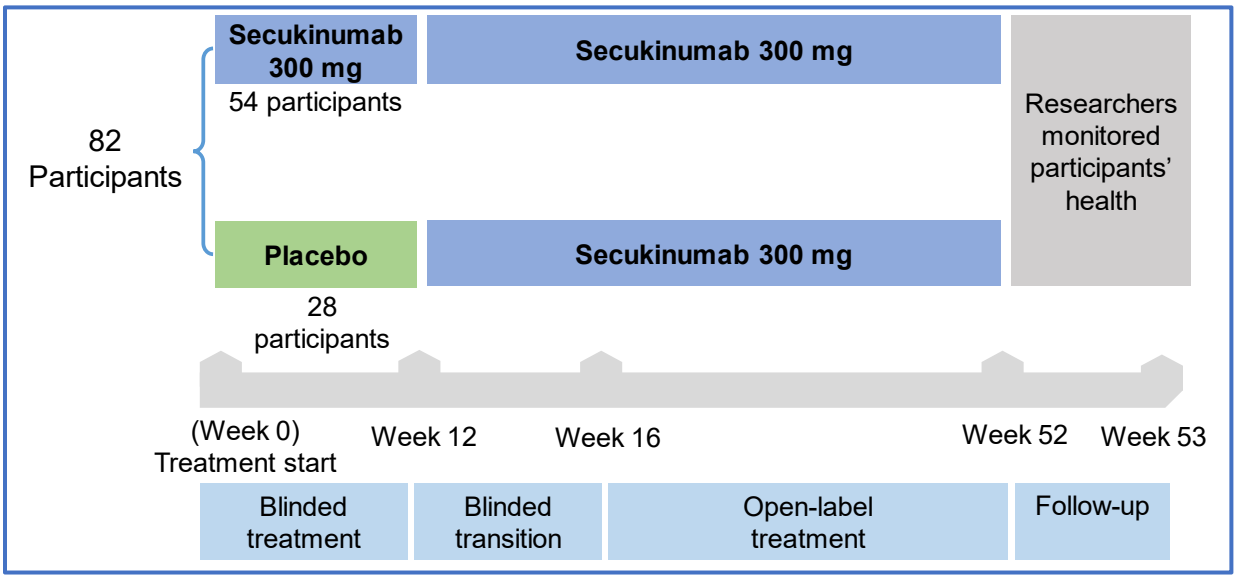
What happened during this trial?

At the start of the trial, the researchers assigned each of the participants randomly into 1 of the 2 treatment groups:

- **Group 1**: participants in this group took secukinumab 300 mg throughout the trial.
- **Group 2**: participants in this group took placebo for the first 12 weeks followed by secukinumab 300 mg for the remainder of the trial.

All participants got injections once a weekly under the skin for the first 5 weeks and then once every 4 weeks for the remainder of the trial.

During the blinded transition period (4 weeks), participants in the placebo group switched to taking secukinumb 300 mg. Participants in the secukinumab group took secukinumab at Week 12 followed by placebo for 3 weeks. This was done to ensure that participants did not know who received what treatment in the blinded transition period. The remaining 36 weeks of this trial was open-label.



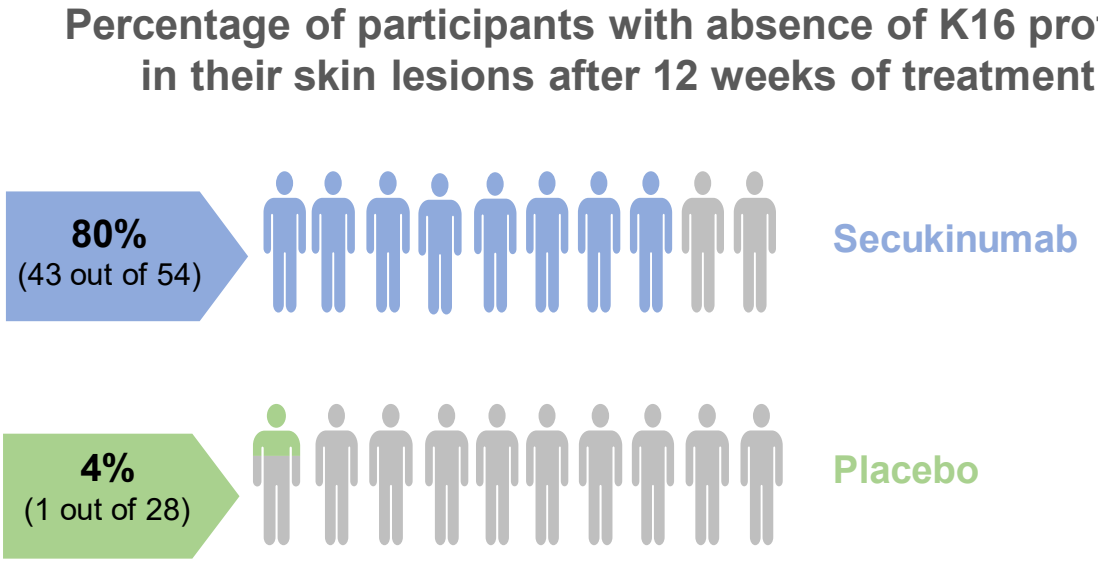
After completing treatment for 52 weeks, participants returned to the trial site 1 week after they stopped taking treatment for a follow-up visit. During the follow-up visit, the researchers monitored participants' health, but they were not given any trial drug.

What were the key results of this trial?

This is a summary of the average results for all participants in different treatment groups. It does not show the results of each individual participant. Results of individual participants could be different from the results of the total group of participants. A detailed presentation of the results can be found on the websites listed at the end of this summary.

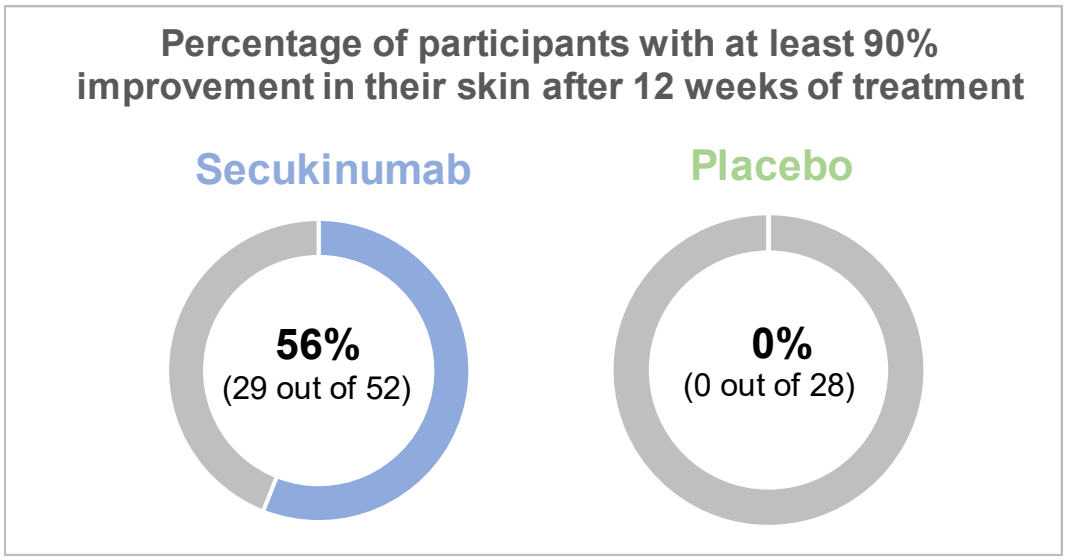
How many participants who took secukinumab did not have K16 protein in their skin lesions compared with placebo after 12 weeks of treatment?

K16 is a protein, which is absent in normal human skin but is present in the skin lesions of the psoriasis patients. It is produced by some skin cells called keratinocytes, and it's the way the keratinocytes express their abnormal activity. So in psoriasis participants, after taking the secukinumab, swelling, redness, and pain should be reduced thereby decreasing the production of K16 in the skin. Therefore, researchers measured the improvement in participants' skin lesions by measuring the absence of K16 in the skin lesions.



How many participants who took secukinumab had at least 90% improvement in their skin compared with placebo after 12 weeks of treatment?

Researchers also wanted to look at improvement in participants' skin. For this, they used a scale called the Psoriasis Area Severity Index, or PASI. It measures the severity of redness, scaling, and thickness of the psoriasis plaques, and how much of the body area is affected. In this trial, researchers used PASI90 that indicates at least 90% improvement in the skin when compared to symptoms at the start of the trial. PASI could not be measured in 2 participants at the start of the trial, therefore only 52 participants were included in the secukinumab group for the measurement of improvement in participants' skin.



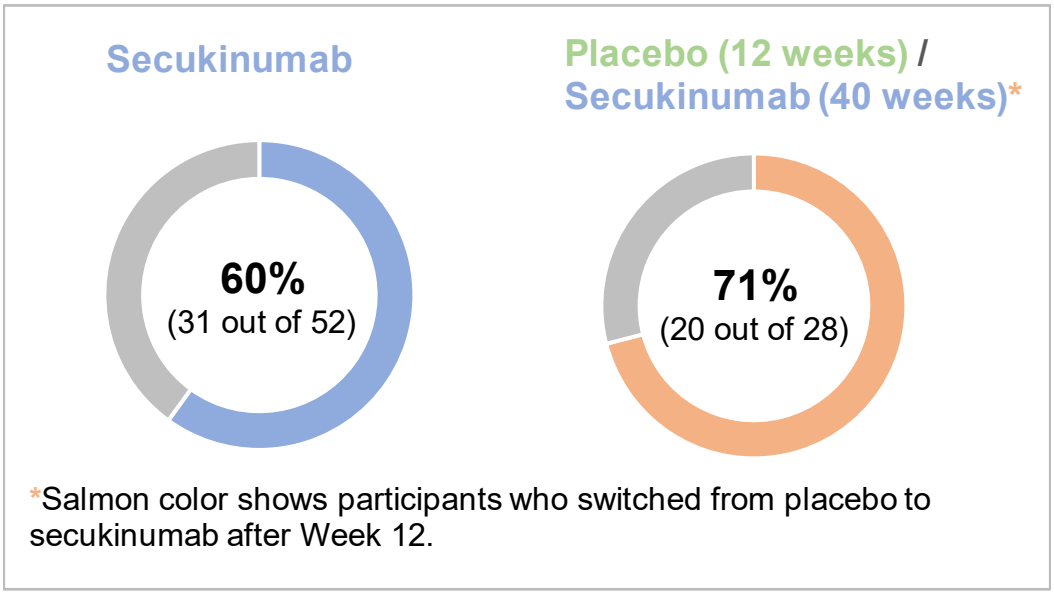
What are the other results of this trial?

How many participants who took secukinumab did not have **K16 protein in their skin lesions** after 52 weeks of treatment?

*Salmon color shows participants who switched from placebo to secukinumab after Week 12.

How many participants who took secukinumab had at least 90% improvement in their skin after 52 weeks of treatment?

PASI could not be measured in 2 participants after the start of the trial, therefore only 52 participants were included in the secukinumab group for the measurement of improvement in participants' skin.



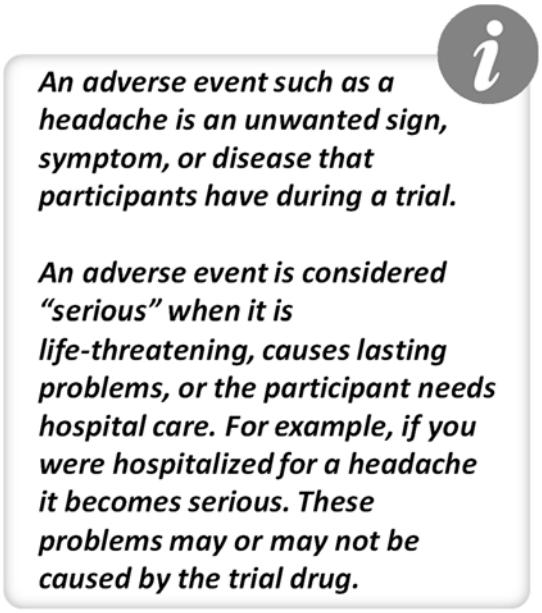
*Salmon color shows participants who switched from placebo to secukinumab after Week 12.

Did the participants have any medical problems during the trial?

Medical problems that happen in clinical trials are called “adverse events”.

A lot of research is needed to know whether a drug causes an adverse event. During every clinical trial, all adverse events are recorded, whether or not they are thought to be caused by the trial drug. When drugs are being studied, researchers keep track of all adverse events participants have.

This section is a summary of the adverse events that happened during this trial. The website listed at the end of this summary may have more information about all the adverse events that happened in this trial.



How many participants had adverse events?

Not all participants in this trial had adverse events. 78% of participants (64 out of 82) had 1 or more adverse events. Serious adverse events happened in 2% of participants (2 out of 82) in the trial.

During the trial, 1% of participants (1 out of 82) stopped the drug early because of adverse events. No participant died during this trial.

Percentage (Number) of Participants With Adverse Events

	Secukinumab (Out of 54 participants)	Placebo/Secukinumab (Out of 28 participants)
Any adverse event	72% (39)	89% (25)
Serious adverse event	2% (1)	4% (1)
Stopped drug early due to an adverse event	0	4% (1)

What were the most common non-serious adverse events?

Most common non-serious adverse events that happened in at least 5% of the participants in any group are presented below.

Percentage (Number) of Participants With Non-Serious Adverse Events

	Secukinumab (Out of 54 participants)	Placebo/Secukinumab (Out of 28 participants)
Nose and throat infection	19% (10)	4% (1)
Common cold	13% (7)	4% (1)
Cough	7% (4)	7% (2)
Back pain	7% (4)	0
Headache	6% (3)	7% (2)
Flu	4% (2)	11% (3)
Urinary tract infection	4% (2)	7% (2)
Failure of a wound to heal properly	2% (1)	7% (2)
High blood pressure	0	11% (3)
Depression	0	7% (2)
High levels of fat particles in the blood	0	7% (2)
Inflammation of the bronchial tubes, which carry air to and from the lungs	0	7% (2)

What were the serious adverse events?

In the secukinumab group, 1 out of 54 (2%) participants had suicidal thoughts and in the placebo/secukinumab group, 1 out of 28 (4%) of the participants had testicular cancer.

How many participants stopped trial drug due to adverse events?

During the trial, 1 out of 28 (4%) participants in the placebo/secukinumab group stopped the trial drug early due to testicular cancer.

How was this trial useful?

This trial helped researchers understand the anti-inflammatory effect of secukinumab in the skin and in other components of the body (such as blood or fat cells) in participants from the US with plaque psoriasis. The results were similar to what has been seen in other trials of secukinumab. Results from this trial may be used in other clinical trials for people with plaque psoriasis.

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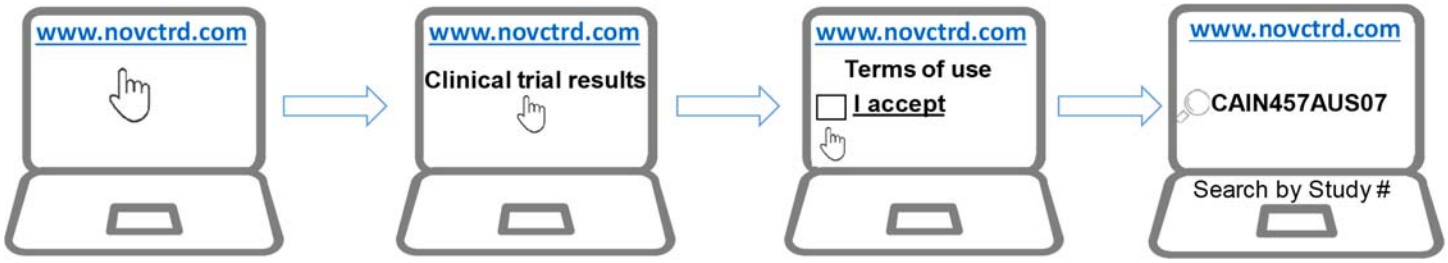
Where can I learn more about this trial?

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).



You can find more information about this trial on the following website:

- www.clinicaltrials.gov Use the NCT identifier NCT03055494 in the search field.

Full clinical trial title: A randomized, double-blind, placebo-controlled, parallel-group, multicenter study to explore changes in subcutaneous adipose tissue and modulation of skin inflammation after 12 weeks of treatment with secukinumab, compared to placebo, and up to 52 weeks of treatment with secukinumab in adult patients with moderate to severe plaque psoriasis (ObePso-S)

Thank you

Thank you for taking part in this trial. As a clinical trial participant, you belong to a large community of people around the world. You helped researchers answer important health questions and test new medical treatments.

NOVARTIS

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

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