Clinical Study Results

1. Study Name

Title of the Study:	A Phase 3, Multicenter, Randomized, Placebo-controlled, Double-blind Study of the Efficacy and Safety of Apremilast (CC-10004) in Subjects With Mild to Moderate Plaque Psoriasis
Brief Title:	Apremilast as a Direct Treatment for Mild-to-Moderate Plaque Psoriasis Versus Placebo: an Analysis of Clinical Safety and Efficacy (ADVANCE)
Protocol Number:	CC-10004-PSOR-022 (20200061)
EU Trial Number:	Not applicable
Other Identifiers:	NCT03721172
Date of This Summary:	17 February 2021

What does this summary cover?

This summary shows the main results from one clinical study. The results are only for this study. Other studies may find different results. Researchers and health authorities look at the results of many studies to decide which medicines work best and are safest for participants.

Amgen has committed to make research results available to the public. This summary has been provided as part of that commitment and should not be used for any other purpose. It should not be considered to make a claim for any product or to guide treatment decisions.

Some information in this summary may be different from the approved labelling for apremilast. Your healthcare professional should refer to the full prescribing information for proper use of apremilast.

2. Who Sponsored This Study?

Amgen Inc.
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Amgen Inc. is the sponsor of the study and makes apremilast, the medicine tested in the study. **Amgen would like to thank everyone who participated in this study and feels it is important to share the results of this study.**

3. General Information About the Clinical Trial

Where and when was the study done?

- This study took place in Canada and the United States.
- The study began in March 2019 and ended in July 2020.
- The study was completed as planned.

Why was the study done?

Plaque psoriasis is an autoimmune skin condition that causes “plaques”, raised red patches covered with dead skin cells that appear white. These plaques can be itchy and painful. Plaque psoriasis occurs when the immune system mistakes normal cells in the body as unwanted invaders and attacks these cells. Depending on how bad the condition is, on how many and how big the plaques a person has, this condition can be mild, moderate, or severe. Participants in this study had mild to moderate plaque psoriasis as determined by their doctor.

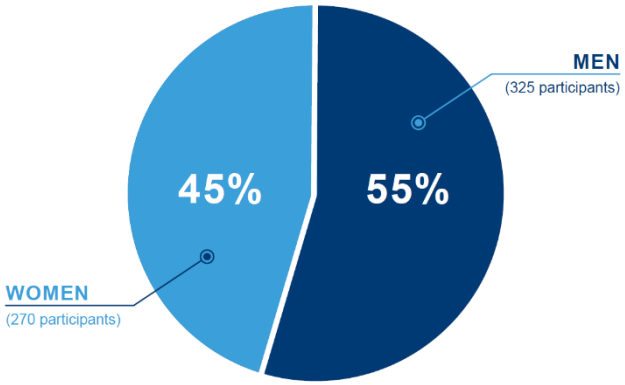
Apremilast works by blocking an enzyme in the body called phosphodiesterase 4 (PDE4) that is usually increased in medical conditions involving inflammation, such as the reddening and itching of the skin in psoriasis. Apremilast is available in the form of tablets and is taken by mouth. Apremilast has been approved for the treatment of moderate to severe plaque psoriasis.

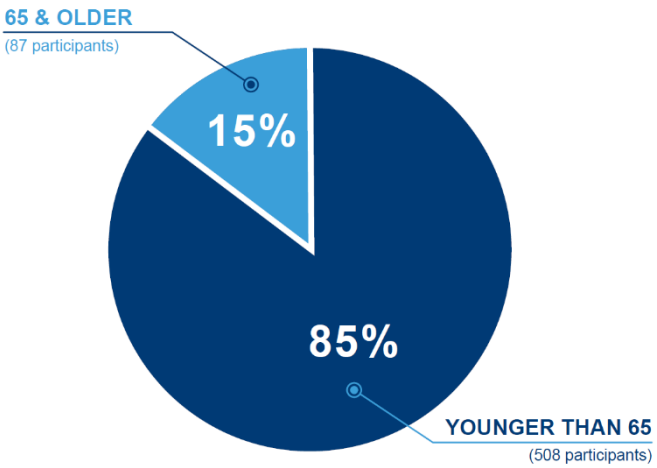
This was a phase 3 study, the late stage of the development process of medicines for humans. Researchers compared the study medicine, apremilast, to a placebo. A placebo does not contain any medicine and helps researchers compare the effects of a study medicine to taking no medicine. The main purpose of this study was to find out if participants who took apremilast saw an improvement in their mild to moderate plaque psoriasis compared to participants who took placebo.

4. Who Was Included in This Study?

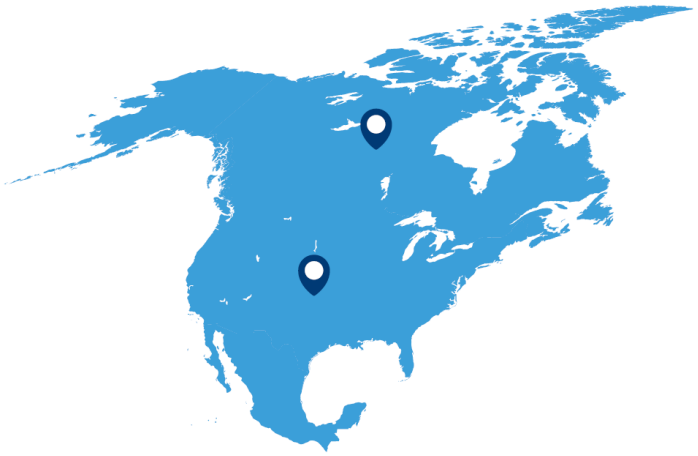
Who took part in the study?

This study included 595 participants with mild to moderate plaque psoriasis. 270 participants (45%, or about 9 out of 20) were women and 325 participants (55%, or about 11 out of 20) were men. They ranged in age from 18 to 85 years. 508 participants (85%, or about 17 out of 20) were younger than 65 years old and 87 participants (15%, or about 3 out of 20) were at least 65 years old or older.





This study took place at 61 study centers across the United States and Canada. The numbers of participants in each country are shown in the map below:



NORTH AMERICA
Canada: 262
United States: 333

Participants were examined by a study doctor and chosen to be in the study if they met certain study requirements:

- were 18 years of age or older;
- were diagnosed with chronic plaque psoriasis for at least 6 months before starting the study;
- had mild to moderate plaque psoriasis as measured by the study doctor;

- had not had success in treating their plaque psoriasis with at least one topical therapy.

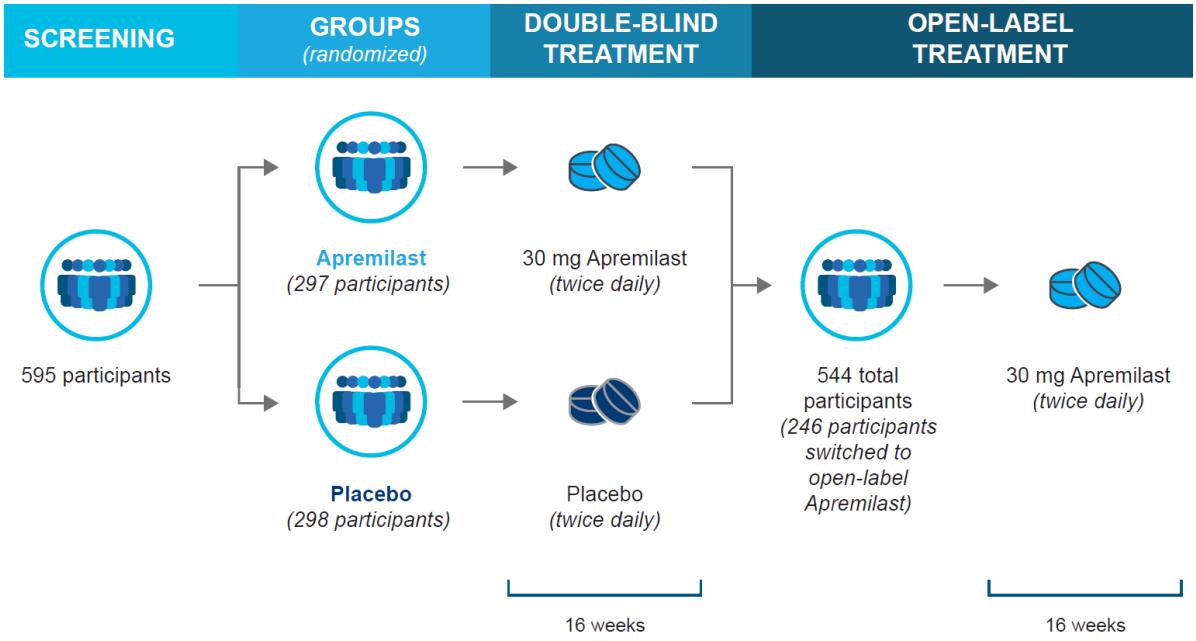
5. Which Medicines Were Studied?

In this study, apremilast was compared to placebo. Participants had an equal chance of receiving either apremilast or a placebo. This study had 2 parts: a 16-week double-blind part, followed by a 16-week open-label part.

In the double-blind part of the study, neither the participants nor the study doctor could choose the medicine the participants received. Participants agreed to be put into a medicine group by chance ("randomized"). This is like flipping a coin or drawing numbers out of a hat.

During the double-blind part of the study, neither the participants nor the doctors knew which medicine each participant was given until after the study was over. This was done to make sure the study results were not influenced in any way. This was known as the double-blind part of the study. Each participant took either 30 mg apremilast or placebo twice a day for 16 weeks.

At the end of 16 weeks, the participants had their plaque psoriasis evaluated by their doctors. Participants could then choose to continue with the study with open-label 30 mg apremilast twice a day for another 16 weeks as shown in the graphic below. Open-label means that both the participants and the study doctors knew what medicine the participants received. The information collected from all subjects at the end of the 16 weeks gave the researchers the information needed to decide if the main aim of the study was met.



6. What Were the Side Effects?

What is a side effect?

All medicines can cause side effects, or unwanted medical problems that may happen when you take a medicine. In this study, doctors reported all the medical problems participants had. Doctors believed some of the problems could have been caused by the study treatment(s). These possible side effects are listed below.

What side effects were seen?

When reporting side effects in this study, the study doctor did not know which medicine a participant was receiving.

The tables below show how many participants had side effects that could have been caused by the study medicine(s).

Side Effects During the Double-blind Part of the Study

	30 mg Apremilast Twice Daily (298 participants)	Placebo (296 participants)
How many participants had serious side effects?	0 participants (0%)	1 participant (less than 1%)
How many participants had non-serious side effects?	110 participants (37%)	35 participants (12%)
How many participants died from side effects?	0 participants (0%)	0 participants (0%)
How many participants stopped taking the study medicine because of side effects?	11 participants (4%)	5 participants (2%)

Side Effects During the Open-label Part of the Study

	30 mg Apremilast Twice Daily (544 participants)
How many participants had serious side effects?	0 participants (0%)
How many participants had non-serious side effects?	186 participants (34%)
How many participants died from side effects?	0 participants (0%)
How many participants stopped taking the study medicine because of side effects?	17 participants (3%)

If a participant had to stay in the hospital or died because of a side effect, the doctor reported that the side effect was serious. No participant died due to a side effect.

The table below shows the serious side effects.

Serious Side Effects During the Double-blind Part of the Study		
Serious side effect	**30 mg Apremilast Twice Daily (298 participants)**	**Placebo (296 participants)**
Pneumonia	0 participants (0%)	1 participant (less than 1%)

There were no serious side effects during the open-label part of the study.

The tables below show the non-serious side effects that occurred in at least 10% of participants in either medicine group (or about 1 out of 10).

Non-serious Side Effects During the Double-blind Part of the Study		
Non-serious side effect	**30 mg Apremilast Twice Daily (298 participants)**	**Placebo (296 participants)**
Diarrhea	47 participants (16%)	14 participants (5%)
Nausea	36 participants (12%)	8 participants (3%)

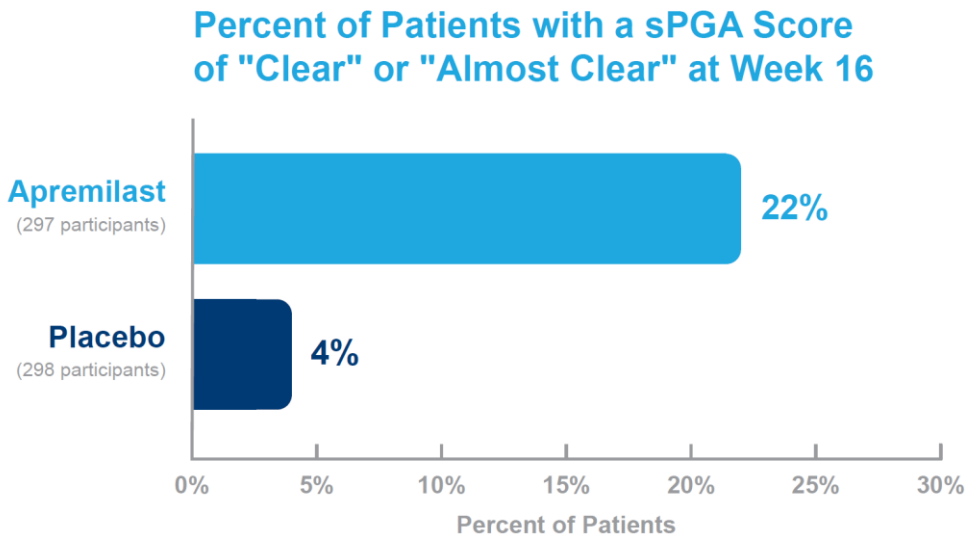
Non-serious Side Effects During the Open-label Part of the Study	
Non-serious side effect	**30 mg Apremilast Twice Daily (544 participants)**
Diarrhea	75 participants (14%)
Nausea	65 participants (12%)

This section only shows the most often reported side effects considered by the study doctor as related to a study medicine. No single clinical study can give a complete picture of the benefits and risks of a medicine. Information about other side effects may be available at the websites listed at the end of this summary.

7. What Were the Overall Results of the Study?

Did participants who took apremilast see their plaque psoriasis improve, compared to participants who took placebo?

- To answer this question, the researchers measured the improvement of plaque psoriasis using the static Physician Global Assessment (sPGA) score to find out how many participants had their plaque psoriasis improve by at least 2 points from the start of the study to 'clear skin' (ie, no plaques) or 'almost clear skin' (score of 0 or 1) after the 16-week double-blind part of the study.
- In this study, 22% of participants in the apremilast group and 4% of participants in the placebo group saw an improvement in their plaque psoriasis of at least 2 points by the end of the double-blind part of the study, as shown in the graph below.
- This result showed that apremilast was more effective than placebo at treating participants with mild to moderate plaque psoriasis.
- These results are based on information that was collected until the researchers had finished gathering the information needed to achieve the main aim of the study.
- These results were not likely due to chance.
- This study was completed as planned.
- More results may be available at the websites listed at the end of this summary.



8. How Has This Study Helped Participants and Researchers?

What else is important to know about these results?

These results are only for this clinical study, which looked at a sample of 595 people with mild to moderate plaque psoriasis. Not all participants in the study had the same results. The results for any single participant could have been better or worse than the results for their group. Other studies may find different results. These results do not explain how a medicine may work in a single person. Many studies are needed to show the benefits and risks of a medicine that is still being tested. This research may help future participants and families by helping doctors understand more about the treatment being studied.

9. Are There Plans for Further Studies?

If more clinical studies are done, they may be listed on public websites, such as those below. Search for apremilast (Otezla®) on the websites below.

10. Where Can I Find More Information About This Study?

To find out more about this study, check these websites:

- www.clinicaltrials.gov. Use the study identifier NCT03721172

If you participated in the study and have questions about the study results, the doctor or staff at your study site may be able to answer them.