Summary of Study Results

Study Purpose: A study to learn if ixekizumab reduces the severity of symptoms in participants with psoriatic arthritis

Thank you!

Thank you for taking part in the clinical study for ixekizumab, also called LY2439821. You and all of the participants helped researchers learn more about using ixekizumab to help people with psoriatic arthritis, also known as PsA.

Eli Lilly and Company (Lilly) sponsored this study and thinks it is important to share the results of the study with you and the public. We hope it helps you understand and feel proud of your important role in medical research.

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

Why was the research needed?

Researchers are looking for a better way to treat psoriatic arthritis, also known as PsA, in adults. Before a treatment can be approved for patients to take, researchers do clinical studies to find out how it works and how safe it is.

PsA is a type of arthritis that affects some people who have psoriasis. People with psoriasis have inflammation of their skin, which causes red, itchy, and scaly patches, also called plaques. People with PsA may also have inflammation in their joints and tendons, which causes swelling, pain, and stiffness. There are treatments for PsA, but these may not work for some people. In this study, the researchers wanted to learn more about a treatment called ixekizumab. This treatment works by blocking a certain protein in the immune system that is thought to play a role in this disease.

In this study, the researchers wanted to find out if ixekizumab works in a large number of participants with PsA. They also wanted to find out if the participants had any medical problems that might be related to ixekizumab.

The main questions researchers wanted to answer in this study were:

- Did ixekizumab reduce the severity of the participants' symptoms?
- What medical problems did the participants have during the study?

To answer these questions, the researchers asked for the help of men and women with PsA. There are other treatments for PsA called biologic treatments. Biologic treatments are made from living cells. They work by blocking certain proteins in the immune system from causing inflammation. But, these treatments do not work for all people with PsA. The people in this study had not taken a biologic treatment before.

Who participated in this study?

The study included 566 participants in 22 countries:

Argentina	Finland	Italy	Sweden
Australia	France	Mexico	Switzerland
Austria	Germany	The Netherlands	Ukraine
Belgium	Hungary	Poland	The United Kingdom
Canada	India	South Africa	
Denmark	Israel	Spain	

You may have been in the study for up to 80 weeks. But, the entire study took 2 years to finish.

The study started in September 2017 and ended in September 2019.

Lilly reviewed the data when the study ended and created a report of the results. This is a summary of that report.

What treatments did the participants take?

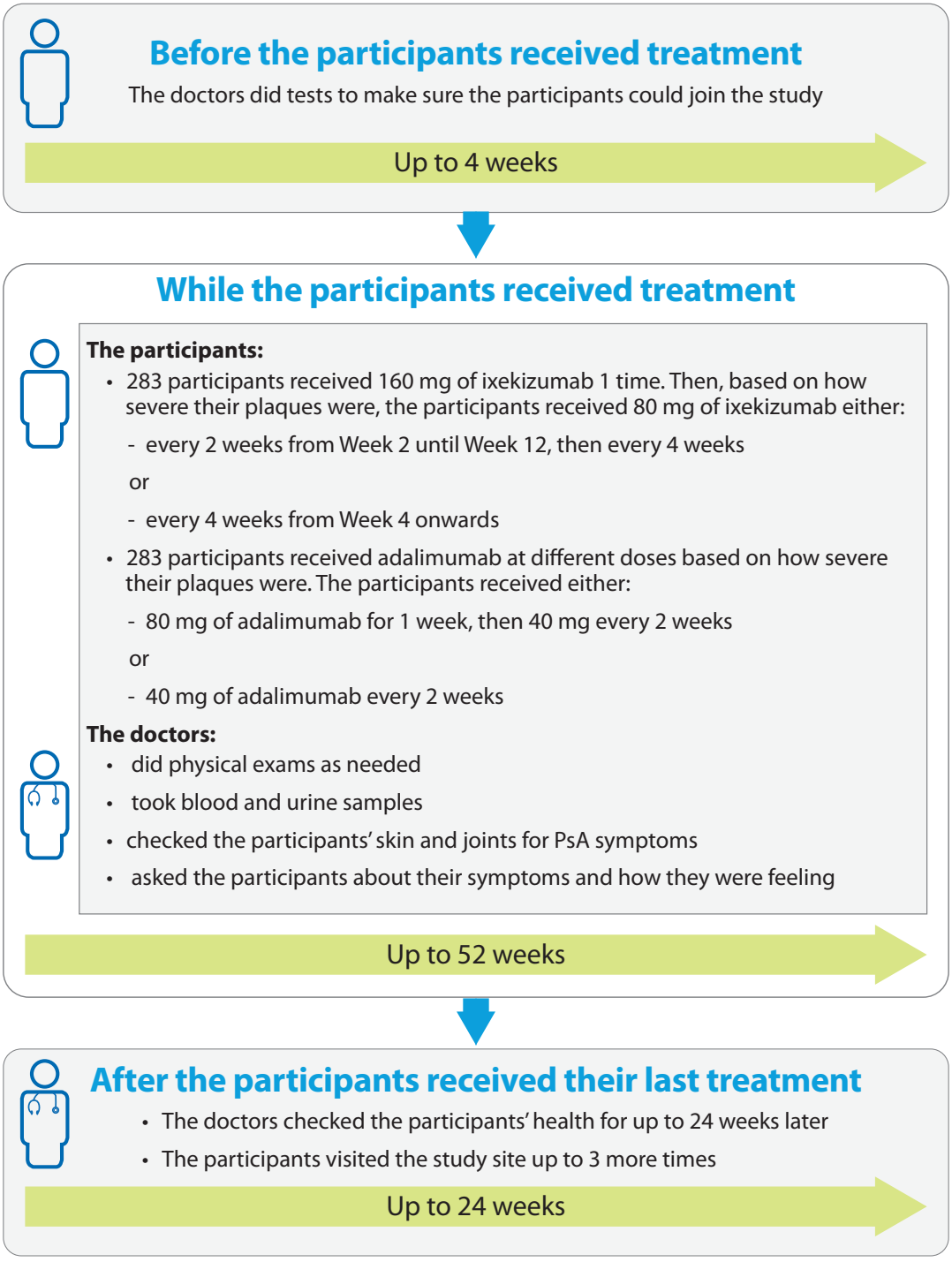
This was an “open-label” study. This means that the researchers and the participants knew what the participant was receiving.

In this study, the participants received ixekizumab or adalimumab. Adalimumab is a commonly used treatment for PsA. Each of the treatments was given through a needle under the skin, also called an injection. The doses of ixekizumab and adalimumab were measured in milligrams, also called mg.

A computer program was used to randomly choose the treatment each participant received. This helps make sure the groups are chosen fairly. Researchers do this so that comparing the results of each treatment is as accurate as possible.

What happened during the study?

The chart below shows how the study was done.



What were the results of the study?

This is a summary of the main results from this study overall. The results each participant had might be different from the overall summary results. A full list of the questions that researchers wanted to answer can be found on the websites listed at the end of this summary. If a full report of the study results is available, it can also be found on these websites.

It takes many studies to decide which treatments work best and are safest. Other studies may provide new information or different results.

Did ixekizumab reduce the severity of the participants' symptoms?

Yes. The researchers found that compared to the participants who received adalimumab, those who received ixekizumab had less severe symptoms.

To answer this question, the researchers used two surveys:

- the American College of Rheumatology, also called the ACR
- the Psoriasis Area and Severity Index, also called the PASI

The researchers used the scores on both the ACR and the PASI to measure how much the participants' symptoms had improved. In this study, the researchers wanted to know how many participants had a 50% improvement in their symptoms using the ACR, also called the "ACR 50 response". The researchers also wanted to know how many participants had a 100% improvement in their symptoms on the PASI, also called the "PASI 100 response".

The ACR was used to check the participants' joints for 7 different types of symptoms:

- tenderness
- swelling
- pain
- how active the participants felt their disease was
- how active the doctors felt the participants' disease was
- how much the participants were able to move their joints
- inflammation

The participants were given a score for each type of symptom using the ACR. A decrease in the score meant that the participants had less severe symptoms. The researchers then looked at how many participants showed an ACR 50 response. An "ACR 50 response" meant that the participants showed a decrease of at least 50% in their scores on tenderness and swelling. The participants also had to show a decrease of at least 50% in any 3 of the other types of symptoms.

The PASI was used to check the participants' skin for 3 different types of symptoms:

- scaly skin
- redness
- thick and leathery skin

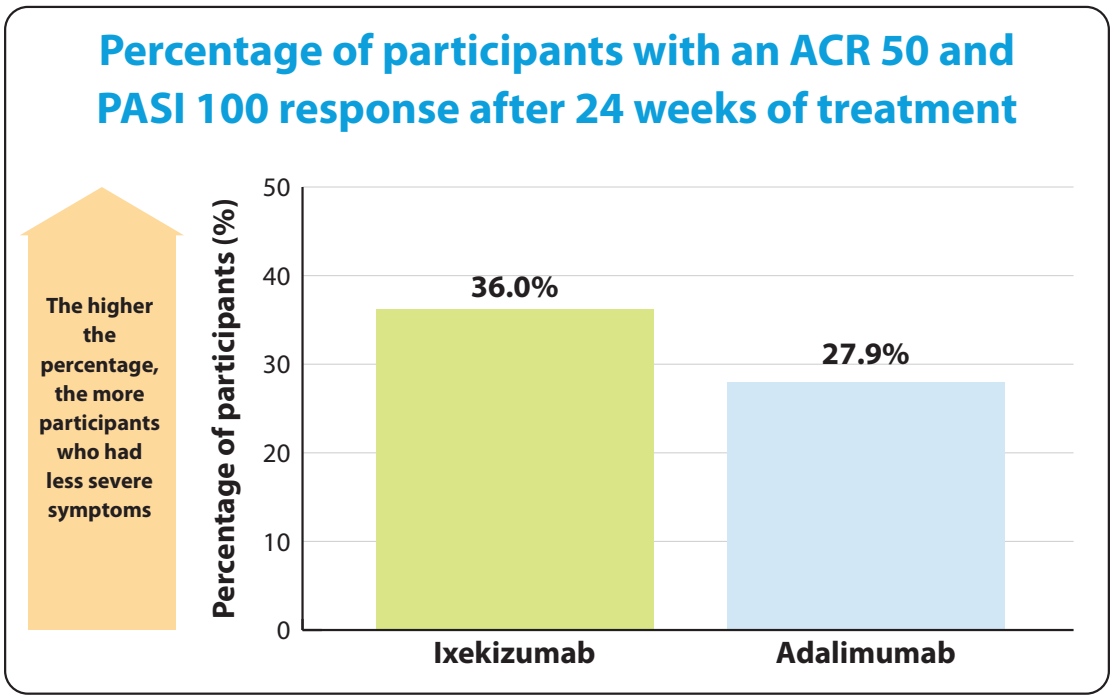
Based on their skin symptoms, each participant was given a score using the PASI. A decrease in the score meant that the participants had less severe symptoms. The researchers then looked at how many participants showed a PASI 100 response. A "PASI 100 response" meant that the participants showed a decrease of 100% in their total score and had completely clear skin.

The doctors checked the participants' joints and skin before they received treatment and after 24 weeks of receiving treatment. Then, the researchers compared the number of participants who had both an ACR 50 response and a PASI 100 response in the ixekizumab and adalimumab groups. A participant who had both responses meant their PsA symptoms were less severe.

After 24 weeks of treatment, the researchers found that the percentage of participants who had both an ACR 50 and a PASI 100 response was:

- 36.0% of the participants who received ixekizumab. This was 102 out of 283 participants.
- 27.9% of the participants who received adalimumab. This was 79 out of 283 participants.

The chart below shows these results.



What medical problems did the participants report?

This section is a summary of the medical problems the participants reported during the study that the doctors thought might be related to the study treatments. These medical problems that doctors thought might be related to the study treatments are called “side effects”. Other medical problems that the doctors did not consider related to the study treatments are not reported in this summary.

A side effect is considered “serious” when it requires hospital care, is life-threatening, or causes lasting problems.

One study is not enough evidence to determine if a side effect is caused by the study treatments. A lot of research is needed to know whether a treatment causes a side effect.

How many participants reported side effects?

There were 32.7% of participants who reported side effects during the study. This was 185 out of 566 participants.

There were 3.5% of participants who stopped treatment because of side effects during the study. This was 20 out of 566 participants.

The table below shows how many participants in each treatment group had side effects during the study.

Side effects during the study

	Ixekizumab Out of 283 participants (%)	Adalimumab Out of 283 participants (%)	Total Out of 566 participants (%)
Overall side effects	98 (34.6%)	87 (30.7%)	185 (32.7%)
Serious side effects	7 (2.5%)	9 (3.2%)	16 (2.8%)
Stopped study treatment because of a side effect	7 (2.5%)	13 (4.6%)	20 (3.5%)

What serious side effects did the participants report?

There were 2.8% of participants who reported serious side effects. This was 16 out of 566 participants.

The table below shows how many participants in each treatment group had serious side effects during the study.

Serious side effects during the study

Serious side effect	Ixekizumab Out of 283 participants (%)	Adalimumab Out of 283 participants (%)	Total Out of 566 participants (%)
Fever	1 (0.4%)	1 (0.4%)	2 (0.4%)
Collection of pus under the skin	0 (0.0%)	1 (0.4%)	1 (0.2%)
Sudden stomach pain	0 (0.0%)	1 (0.4%)	1 (0.2%)
Painful inflammation of the appendix	1 (0.4%)	0 (0.0%)	1 (0.2%)
Infectious arthritis, caused by bacteria	1 (0.4%)	0 (0.0%)	1 (0.2%)
Basal cell carcinoma, a type of skin cancer	0 (0.0%)	1 (0.4%)	1 (0.2%)
An increase of enzymes in the liver, a sign of liver disease	0 (0.0%)	1 (0.4%)	1 (0.2%)
A rash where the injection was given	1 (0.4%)	0 (0.0%)	1 (0.2%)
An infection in the large bowel	1 (0.4%)	0 (0.0%)	1 (0.2%)
Infection of the lower airways	0 (0.0%)	1 (0.4%)	1 (0.2%)
Bacterial infection called tuberculosis that causes pain or swelling of the lymph nodes	0 (0.0%)	1 (0.4%)	1 (0.2%)
Loss of blood supply to the bones, leading to bone tissue death	0 (0.0%)	1 (0.4%)	1 (0.2%)
Blocked or narrowing artery in the leg	0 (0.0%)	1 (0.4%)	1 (0.2%)
Pneumonia	1 (0.4%)	0 (0.0%)	1 (0.2%)
Pneumonia, caused by bacteria	0 (0.0%)	1 (0.4%)	1 (0.2%)
Destruction of the coating around the nerves without any symptoms	1 (0.4%)	0 (0.0%)	1 (0.2%)
A life-threatening reaction to an infection	0 (0.0%)	1 (0.4%)	1 (0.2%)
Mini-stroke	1 (0.4%)	0 (0.0%)	1 (0.2%)

What were the common side effects?

The table below shows the common side effects that happened in at least 5.0% of participants in any group. There were other side effects, but these happened in fewer participants.

Common side effects while receiving study treatment			
Side effect	**Ixekizumab Out of 283 participants (%)**	**Adalimumab Out of 283 participants (%)**	**Total Out of 566 participants (%)**
Reaction where the injection was given	15 (5.3%)	4 (1.4%)	19 (3.4%)

How has this study helped patients and researchers?

The results of this study helped researchers learn more about ixekizumab as a potential treatment to reduce the severity of symptoms in people with PsA.

Researchers look at the results of many studies to decide which treatments work best and are safest. This summary shows only the main results from this one study. Other studies may provide new information or different results.

Always talk to a doctor before making any treatment changes.

Another clinical study of ixekizumab was ongoing at the time this summary was written.

Where can I learn more about this study?

You can find more information about this study on the websites listed below. If a full report of the study results is available, it can also be found here.

- https://clinicaltrials.gov/ Once you are on the website, type **"NCT03151551"** into search box and click **"Search"**.
- www.clinicaltrialsregister.eu Once you are on the website, click **"Home and Search"**, then type **"2016-004585-25"** in the search box and click **"Search"**.

Full Study Title: A 52-Week Multicenter, Randomized, Open-Label, Parallel-Group Study Evaluating the Efficacy and Safety of Ixekizumab Versus Adalimumab in Patients With Psoriatic Arthritis Who Are Biologic Disease-Modifying Anti-Rheumatic Drug Naive

Eli Lilly protocol number: I1F-MC-RHCF

National Clinical Trial Number: NCT03151551

Eli Lilly and Company sponsored this study. The company headquarters are located at Lilly Corporate Center, Indianapolis, Indiana 46285, USA.

The phone number for general information is +1-317-276-2000.

Thank you!

Participants in clinical studies belong to a large community of people who take part in clinical research around the world. Clinical studies help researchers answer important health questions and find medical treatments for patients.