AstraZeneca

Clinical Study Results

Research Sponsor: AstraZeneca AB

Drug Studied: Acalabrutinib

Study Title: A study to learn more about how acalabrutinib acts in the blood in healthy participants when taken different ways

Protocol Number: D822FC00004

Thank you!

Thank you to the participants who took part in the clinical study for the study drug acalabrutinib. AstraZeneca AB sponsored this study and thinks it is important to share the results. An independent non-profit organization called CISCRP helped prepare this summary of the study results.

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

Who took part in the study?

The researchers asked for the help of healthy men and women. The participants in this study were 21 to 54 years old when they joined.

The study included 39 participants in the United States.

Why was the research needed?

Researchers are looking for a way to treat the coronavirus disease, also called COVID-19. Before a drug can be approved for people to take, researchers do clinical studies to find out how safe it is and how it works.

COVID-19 can cause swelling in the airways and lungs. This can lead to lung damage, difficulty breathing, and other medical problems. If the swelling is severe, people who have COVID-19 may have a breathing tube inserted and may not be able to swallow a pill. They may also have increased stomach acid while they have a breathing tube in.

The study drug, acalabrutinib, is used to treat certain types of cancer. Based on a study in a small number of people with COVID-19, researchers thought that acalabrutinib might be able to decrease swelling in the lungs and airways. Some people with COVID-19 who go to hospital may need a tube and ventilator to help them breathe.

People who are breathing with a ventilator are often given antacids to prevent ulcers. Earlier studies in healthy volunteers have shown that when there is less stomach acid, it is harder for acalabrutinib to get into the blood. Researchers in that small study gave the participants flat Coca-Cola with their dose of acalabrutinib. The Coca-Cola added some acid to the stomach to help acalabrutinib get into the blood.

The researchers in this study wanted to learn more about how acalabrutinib and its metabolite acted in the blood in healthy participants when given this way. A metabolite is a substance that the body makes when it breaks down a drug. The body removes metabolites through fluids, such as urine or sweat.

In this study, the researchers wanted to compare how much acalabrutinib got into the blood:

- when taken in 2 different ways
- when taken with and without a drug called rabeprazole

Rabeprazole works by decreasing the amount of acid in the stomach. This means that rabeprazole might reduce the amount of acalabrutinib that can get into the blood.

What was the purpose of this study?

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

- How much acalabrutinib and its metabolite got into the blood when taken different ways?
- Did rabeprazole affect how much acalabrutinib and its metabolite got into the blood?
- What medical problems happened during the study?

The answers to these questions are important to know before other studies can be done to find out if acalabrutinib improves the health of people who have COVID-19.

What treatments did the participants take?

There were 3 treatments in this study. The treatment doses were measured in milligrams, also called mg.

- Treatment 1: acalabrutinib in flat Coca-Cola as a liquid through a tube in the nose and rabeprazole as a tablet by mouth
- Treatment 2: acalabrutinib in flat Coca-Cola as a liquid through a tube in the nose
- Treatment 3: acalabrutinib as a capsule by mouth

This was an "open-label" study. This means the participants, researchers, study doctors, and other study staff knew what each participant was taking.

This study was a "crossover" study. The participants in the study took the same treatments, but in a different order.

Of the 39 participants, 4 did not take any treatment. So, the chart below includes information for 35 participants.

There were 2 groups of participants:

- Group 1 had 17 participants. This group took Treatment 1, then Treatment 2, and then Treatment 3.
- Group 2 had 18 participants. This group took Treatment 2, then Treatment 3, and then Treatment 2 again.

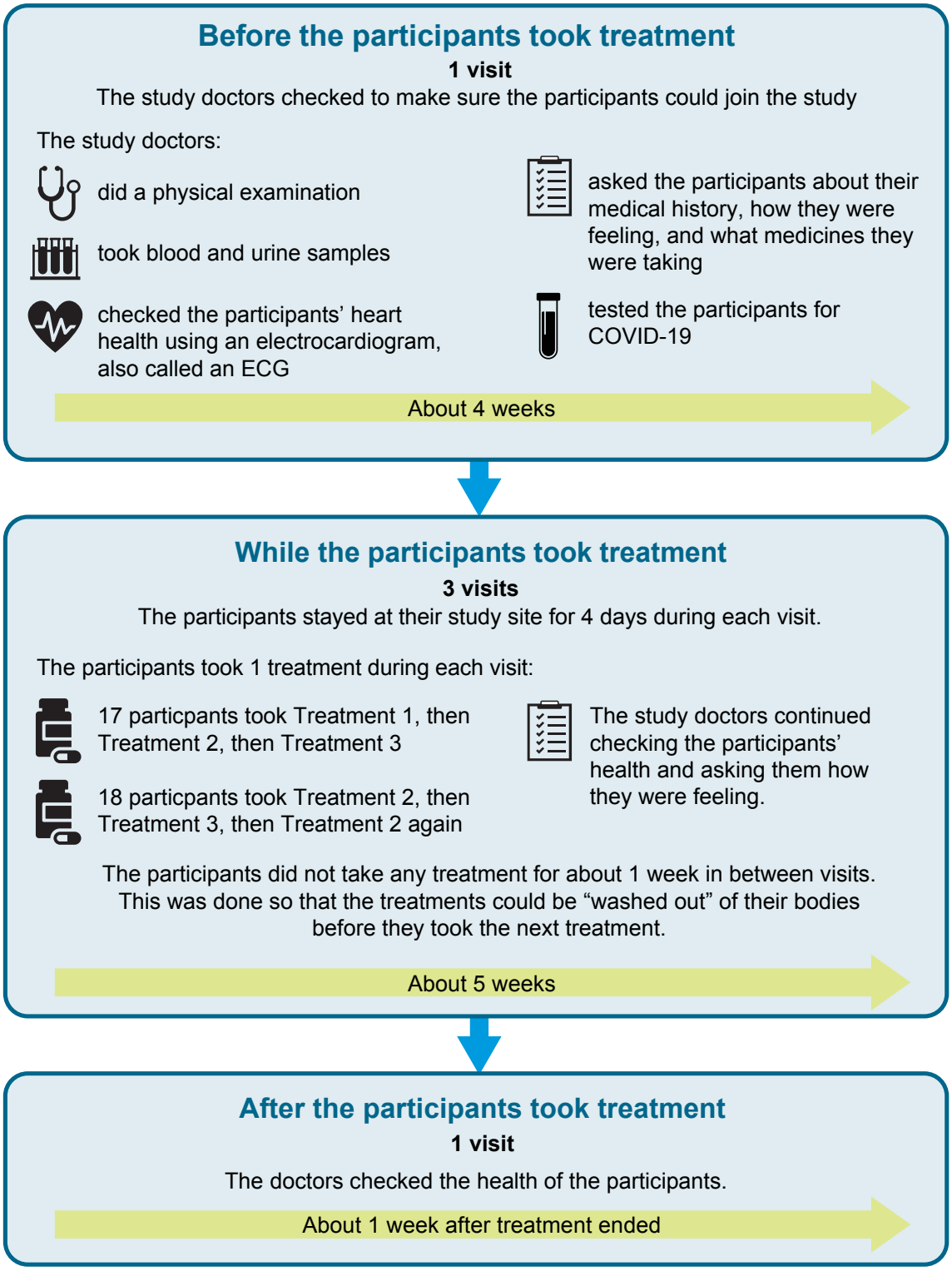
This was done so that the researchers could compare the results when the participants took acalabrutinib in different ways and with and without rabeprazole.

	Treatment 1 (17 participants)	**Treatment 2** (35 participants)	**Treatment 3** (35 participants)
What was the dose?	• 100 mg of acalabrutinib • 20 mg of rabeprazole	• 100 mg of acalabrutinib	• 100 mg of acalabrutinib
How was the treatment taken?	• acalabrutinib in flat Coca-Cola as a liquid through a tube in the nose • rabeprazole as a tablet by mouth	• acalabrutinib in flat Coca-Cola as a liquid through a tube in the nose	• acalabrutinib as a capsule by mouth

What happened during the study?

The study started in May 2020 and ended in June 2020.

The chart below shows what happened during the study.



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 and are not in this summary.

Researchers look at the results of many studies to decide which treatments work best and are safest. Other studies may provide new information or different results. Always talk to a doctor before making any treatment changes.

There were 4 of the 39 participants who did not take any treatment. So, the results below are for 35 of the 39 participants.

The websites listed at the end of this summary may have more information about the study results.

How much acalabrutinib and its metabolite got into the blood when taken different ways?

To answer this question, the study doctors took blood samples from the participants throughout the study.

The study doctors measured:

- the average total amount of acalabrutinib and its metabolite in the blood over the course of treatment
- the average highest amount of acalabrutinib and its metabolite in the blood during treatment

Then the researchers compared the results from when the participants got acalabrutinib through a tube in the nose for Treatment 2 and when they took it by mouth for Treatment 3.

Overall, the researchers found that:

- The average total amounts of acalabrutinib and its metabolite in the blood were similar when the participants took Treatment 2 and Treatment 3.
- The average highest amounts of acalabrutinib and its metabolite in the blood were higher when the participants took Treatment 2 compared to when they took Treatment 3.

Did rabeprazole affect how much acalabrutinib and its metabolite got into the blood?

No. To answer this question, the study doctors measured:

- the average total amount of acalabrutinib and its metabolite in the blood over the course of treatment
- the average highest amount of acalabrutinib and its metabolite in the blood during treatment

The researchers studied these results for the 17 participants who took both Treatment 1 with rabeprazole and Treatment 2 without rabeprazole. Then, they compared the results between the treatments.

Overall, the researchers found that the average total and average highest amounts of acalabrutinib and its metabolite in the blood were similar when taken with or without rabeprazole.

What medical problems happened during the study?

This section is a summary of the medical problems the participants had during the study that the study doctors thought might be related to acalabrutinib. These medical problems are called "adverse reactions". An adverse reaction is considered "serious" when it is life-threatening, causes lasting problems, or requires hospital care.

These adverse reactions may or may not be caused by acalabrutinib. A lot of research is needed to know whether a drug causes an adverse reaction. These adverse reactions have been, and will continue to be, reviewed together with all of the available data for acalabrutinib.

There were 4 of the 39 participants who did not take any treatment. So, the results below are for 35 of the 39 participants.

The websites listed at the end of this summary may have other information about adverse reactions or other medical problems that happened during this study.

Did any adverse reactions happen during this study?

There were 5.7% of participants who had adverse reactions during this study. This was 2 out of 35 participants.

None of the participants left this study due to adverse reactions.

What serious adverse reactions happened during this study?

None of the participants had serious adverse reactions during this study.

None of the participants died due to serious adverse reactions during this study.

What adverse reactions happened during this study?

The table below shows the adverse reactions that happened during this study.

Adverse reactions during this study

Adverse reaction	**Treatment 1:** acalabrutinib in flat Coca-Cola as a liquid through a tube in the nose and rabeprazole (out of 17 participants)	**Treatment 2:** acalabrutinib in flat Coca-Cola as a liquid through a tube in the nose (out of 35 participants)	**Treatment 3:** acalabrutinib as a capsule (out of 35 participants)
Headache	5.9% (1)	0.0% (0)	0.0% (0)
Bloating	0.0% (0)	2.9% (1)	0.0% (0)

How has this study helped patients and researchers?

This study helped researchers learn more about how acalabrutinib acts in the blood in healthy participants.

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 1 study. Other studies may provide new information or different results.

Further clinical studies with acalabrutinib are planned.

Where can I learn more about this study?

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

- www.clinicaltrials.gov. Once you are on the website, type **"NCT04435483"** into the search box and click **"Search"**.
- www.AstraZenecaClinicalTrials.com. Once you are on the website, type **"D822FC00004"** into the search box, and click **"Find a Study"**.

Full Study Title: Phase I, Open-label, Single-dose, Sequential, Randomized, Crossover Study of Acalabrutinib Suspension Delivered via Nasogastric Tube in Healthy Subjects to Evaluate Relative Bioavailability and Proton-pump Inhibitor (Rabeprazole) Effect

AstraZeneca Protocol Number: D822FC00004

National Clinical Trials Number: NCT04435483

AstraZeneca AB sponsored this study and has its headquarters at 151 85 Södertälje, Sweden.

The phone number for the AstraZeneca Information Center is +1-877-240-9479.

Thank you!

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

CISCRP

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 is not involved in recruiting participants for clinical studies, nor is it involved in conducting clinical studies.

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