# Clinical Study Results

MedImmune
A member of the AstraZeneca Group

**Research Sponsor:** MedImmune, Ltd.

**Drug Studied:** MEDI0382

**Study Title:** A study to learn how MEDI0382 affects the blood and the heart rate in people who are taking blood thinners and heart medicine

## *Thank you!*

Thank you to the participants who took part in the clinical study for the study drug MEDI0382. MedImmune, Ltd. 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 doctor or staff at your study site.

## What is happening with the study now?

The study started in November 2017 and ended in April 2018. The study included 22 participants in the United States at 1 location.

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

## Why was the research needed?

The study drug, MEDI0382, is being developed to treat people with type 2 diabetes.

Type 2 diabetes can lead to medical problems, such as heart disease. In people with heart disease, the body may make too many blood clots. A blood clot is a group of blood cells that the body makes to stop bleeding. High amounts of blood clots can lead to heart attacks, strokes, too much bleeding, and other serious medical problems.

In addition, people with type 2 diabetes can also have high blood pressure. Blood pressure is the force of blood pushing against the walls of the blood vessels. When this force is higher than normal in a person's body, he or she can develop medical problems, such as having a high heart rate.

Many patients with type 2 diabetes are given blood thinners to decrease blood clot formation and heart medicine to control blood pressure and heart rate. So, in this study, the researchers wanted to learn if MEDI0382 affected the body's ability to control blood clotting and heart rate in healthy people who were given blood thinners and heart medicine.

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

- What effect did MEDI0382 have on the body's ability to clot blood?
- What effect did MEDI0382 have on participants' heart rates while they used a treadmill?
- What medical problems did the participants have during the study?

Before a drug can be approved for patients to take, researchers do clinical studies to find out how the drug works in the body and to ensure it is safe. Researchers are looking for a better way to treat people with type 2 diabetes who are taking blood thinners and heart medicine.

To answer the questions in this study, researchers asked for the help of healthy men and women. The participants in this study were 18 to 43 years old.

## What kind of study was this?

This was an "open-label" study. This means the researchers and participants knew the medicine the participants were taking.

All of the participants in the study got MEDI0382, a blood thinner called warfarin, and a heart medicine called esmolol to control blood pressure.

MEDI0382 was given in a subcutaneous injection. A subcutaneous injection means that the injection is given under the skin. Warfarin was taken as a pill by mouth. Esmolol was given through a needle in the vein, also called an intravenous infusion or an IV.

## What happened during the study?

In order for researchers to understand how warfarin and esmolol work in the body, both with MEDI0382 and without, participants took each medicine alone and in combination with MEDI0382.

**Before treatment,** the study doctors checked the participants' health to make sure they could join the study. They asked the participants to give blood and urine samples and run on a treadmill.

**During treatment,** the participants visited their study site up to 13 times over the course of 32 days. At different times during this period, the participants were given MEDI0382, warfarin, and esmolol.

Throughout the study, the doctors checked the participants' heart rates, how well their blood was clotting, how much MEDI0382 was in their blood, and recorded new medical conditions.

**After treatment,** all of the participants visited their study site once. During this visit, the study doctors checked the participants' heart rates, how well their blood was clotting, and how much MEDI0382 was still in their blood. The study doctors also checked the participants' overall health and asked them how they were feeling.

## What were the results of the study?

This is a summary of the main results from this study. 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.

The websites listed at the end of this summary may have a full report of the study results.

### What effect did MEDI0382 have on the body's ability to clot blood?

Overall, MEDI0382 did not affect the body's ability to clot blood. There was little difference in how well participants' bodies clotted blood when they got only warfarin compared to when they got warfarin and MEDI0382 together.

To answer this question, the researchers used a widely accepted test called the international normalized ratio, also called the INR. The INR is a scientific formula that combines several different measurements to track how well a person's body clots blood.

The researchers measured:

- the average of the highest INR scores that participants had during the study
- the total combined INR score that participants had over the course of 144 hours

A higher INR score means that the body takes longer to clot blood. A healthy person who does not take blood thinners should have an INR score of about 1.0. A person who takes blood thinners, such as warfarin, may have an INR score between 1.0 and 3.0.

There were 3 participants who left the study before it was finished. There were 2 participants who left the study for personal reasons, and 1 participant who left the study because of a medical problem. So, the researchers could only study the INR results for 19 of the 22 participants.

Overall, the researchers found that:

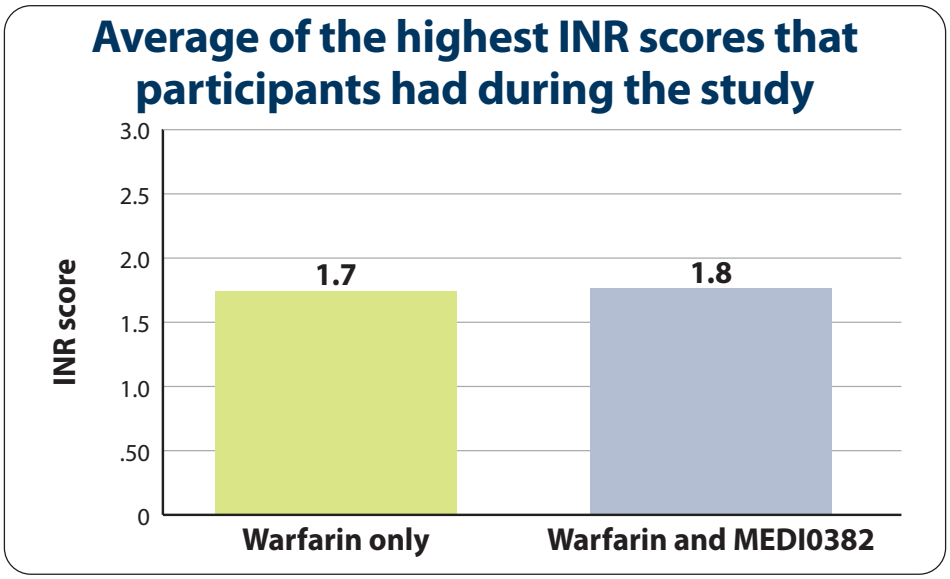
### Average of the highest INR score that participants had during the study

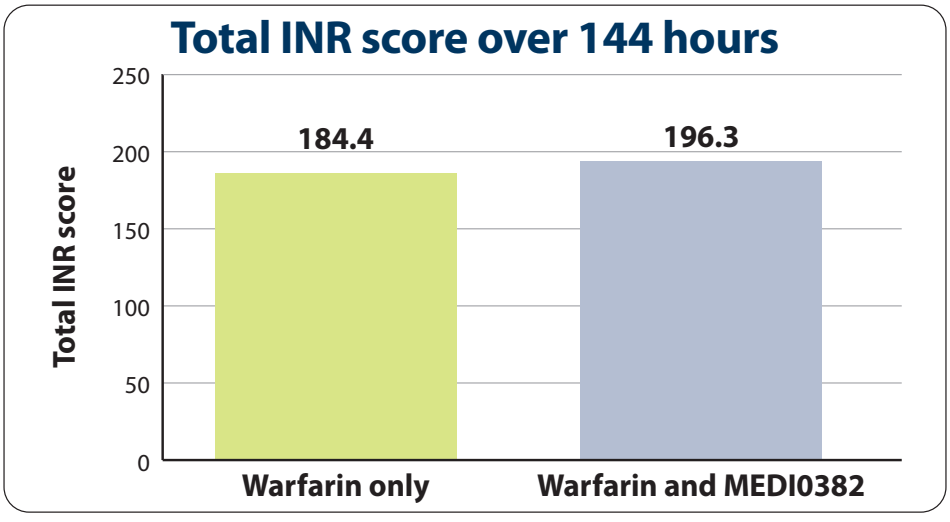
- After participants took only warfarin, the average of the highest INR score was about 1.7.
- After participants took warfarin and MEDI0382 together, the average of the highest INR scores was about 1.8.

### Total INR score that participants had over the course of 144 hours

- After participants took only warfarin, their average total INR score was 184.4.
- After participants took warfarin and MEDI0382 together, their average total INR score was 196.3.

The figures below show these results.



## What effect did MEDI0382 have on participants' heart rates while they used a treadmill?

Overall, the researchers found that MEDI0382 did not affect participants' heart rates while they used a treadmill.

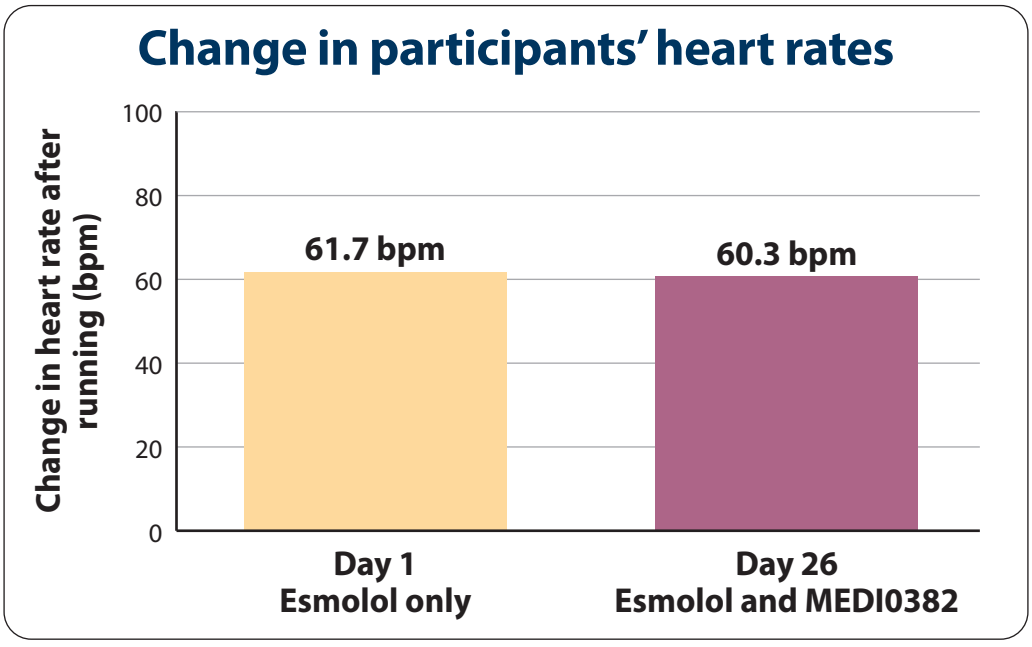
To answer this question, the researchers measured the change in participants' heart rates on both Day 1 and Day 26 of the study. Heart rate is measured in beats per minute, also called bpm. Depending on age, a healthy heart rate while not exercising is about 60 bpm to 100 bpm. Depending on age, a healthy heart rate while exercising is about 90 bpm to 170 bpm.

On Days 1 and 26, the researchers measured the participants' heart rates before and after they ran on a treadmill for 9 minutes. Then, they compared the results. On Day 1, the participants got only esmolol. On Day 26, the participants got esmolol and MEDI0382 together.

Overall, the researchers found that:

- When the participants got only esmolol on Day 1, their average change in heart rate after running was 61.7 bpm. Their average heart rate before running was 67.6 bpm, and their average heart rate after running was 129.3 bpm.
- When the participants got esmolol and MEDI0382 together on Day 26, their average change in heart rate after running was 60.3 bpm. Their average heart rate before running was 84.0 bpm, and their average heart rate after running was 144.3 bpm.

The figure below shows these results.



# What medical problems did the participants have 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 the study drug. 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 the study drug. A lot of research is needed to know whether a drug causes an adverse reaction.

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.

Even though some of the participants left the study before it was finished, the researchers were able to study the medical problems for all 22 participants.

## How many participants had serious adverse reactions?

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

None of the participants died during the study.

## How many participants had adverse reactions?

There were 90.9% of participants who had adverse reactions during the study. This was 20 out of 22 participants.

There were 22.7% of participants who stopped taking MEDI0382 because of an adverse reaction they had during the study. This was 5 out of 22 participants.

The table below shows how many participants had adverse reactions during the study.

**Adverse reactions during the study**

| | After taking the first MEDI0382 dose (out of 22 participants) |
|---|---|
| How many participants had adverse reactions during the study? | 90.9% (20) |
| How many participants had serious adverse reactions during the study? | 0.0% (0) |
| How many participants stopped treatment because of adverse reactions? | 22.7% (5) |

### What adverse reactions did the participants have?

The most common adverse reaction was vomiting.

The table below shows the adverse reactions that happened in at least 5 participants during the study. There were other adverse reactions, but these happened in fewer participants.

**Most common adverse reactions**

| | After taking the first MEDI0382 dose (out of 22 participants) |
|---|---|
| Vomiting | 77.3% (17) |
| Nausea | 63.6% (14) |
| Headache | 45.5% (10) |
| Decreased appetite | 36.4% (8) |
| Dizziness | 22.7% (5) |
| Stomach pain | 22.7% (5) |

## How has this study helped patients and researchers?

This study helped researchers learn how MEDI0382 affects the blood and the heart rate in people who are taking blood thinners and heart medicine.

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.

Further clinical studies with MEDI0382 are planned.

## 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.

- www.clinicaltrials.gov. Once you are on the website, type **"NCT03347968"** into the **"Other Terms"** search box and click **"Search"**.
- www.AstraZenecaClinicalTrials.com. Once you are on the website, type **"D5670C00009"** into the search box, and click **"Find a Study"**.

**Full study title:** A Phase 1, Open-label Study to Compare the Pharmacokinetics and Pharmacodynamics of Warfarin and Esmolol in the Absence and Presence of MEDI0382 in Healthy Subjects

**MedImmune Protocol number:** D5670C00009

**MedImmune, Ltd.,** a member of the AstraZeneca Group, sponsored this study and has its headquarters at 1 Medimmune Way, Gaithersburg, MD 20878.

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

## *Thank you!*

Clinical study participants 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.