AGS67E Sponsor: Astellas Study Number: AGS67E-14-1 EudraCT number: NA ClinicalTrials.gov Identifier: NCT02175433

Plain Language Summary of Study Results

Astellas is grateful to the people who took part in this clinical study. Thank you.

What was the Study Called?

A Phase 1 Study Evaluating Safety, Tolerability, and Pharmacokinetics of Escalating Doses of AGS67E Given as Monotherapy in Patients with Refractory or Relapsed Lymphoid Malignancies.

Why was the Study Needed?

People with lymphoid malignances have a type of blood cancer. Lymphoid malignancies are cancers of the white blood cells. These cells, also called lymphocytes, are part of the immune system.

People with lymphoid malignancies have different treatments, depending on the type of cancer they have, their age and their symptoms. Standard treatments include chemotherapy, radiotherapy, or both. These treatments might not work well for all patients and might cause medical problems for some patients.

AGS67E is a new medicine that could help people with lymphoid malignancies. This study will provide more information on AGS67E.

This was a phase 1 study. The aim of a phase 1 study is to learn the best dose for a study medicine. This is usually the dose that people can receive without getting medical problems from the medicine. Phase 1 studies usually include healthy people but can include people with certain health conditions. In this study, the study medicine was AGS67E.

The study started in October 2014. The sponsor (Astellas) stopped the study in January 2019. The study was stopped earlier than planned for reasons that were not related to AGS67E. The sponsor of this study (Astellas) reviewed all the study information and created a report of the results. This is a summary of that report. 1 person stayed in the study until October 2019. This summary will be updated when the results are available for that person.

What were the main questions the study helped answer?

- How much of AGS67E could people with lymphoid malignancies receive without having medical problems from AGS67E?
- How much AGS67E stays in the blood of these people over time?
- Did these people have any medical problems from AGS67E?

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What Kind of Study was this and Who Took Part in It?

This was an "open-label" study. That means that each person and the study doctors knew that person had received AGS67E.

This study included people who were 18 years or older with refractory or relapsed cancers with lymphoid malignancies. These cancers were chronic lymphocytic leukemia, prolymphocytic leukemia, hairy cell leukemia or Non-Hodgkin lymphoma.

In this study, refractory meant the previous cancer treatment did not work. Relapsed meant the cancer came back after it had disappeared after previous cancer treatment.

	Number of People	
Age Group		
Aged less than 65 years	42	
Aged 65 years to 75 years	17	
Aged 75 years or older	12	
Sex		
Men	39	
Women	32	

What Happened during the Study?

People in the study received different doses of AGS67E. Any medical problems from each dose of AGS67E were noted. Also, blood tests showed how much AGS67E stayed in the blood of these people, over time.

This study had 2 parts:

1st PART (29 people)

Different small groups of people with lymphoid malignancies received lower to higher doses of AGS67E without growth factors.

The highest dose without medical problems was 0.9 mg/kg AGS67E.

Then the next group of people received 0.9 mg/kg AGS67E.



2nd PART (42 people)

Different small groups of people with lymphoid malignancies received lower to higher doses of AGS67E with growth factors.

The highest dose without medical problems was 1.5 mg/kg AGS67E.

Then the next group of people received 1.5 mg/kg AGS67E with growth factors.

Doses of AGS67E are given in milligrams (mg) for each kilogram (kg) of the person's body weight. This is also known as mg/kg AGS67E.

Growth factors are natural substances, given by a doctor, that help to make certain blood cells.

In both parts of the study, people received AGS67E in the same way. They received AGS67E slowly through a tube inserted into their vein. This is called an infusion.

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In the 1st part of the study, the different groups received AGS67E in the following order:

• $0.05 \text{ mg/kg} \implies 0.1 \text{ mg/kg} \implies 0.3 \text{ mg/kg} \implies 0.6 \text{ mg/kg} \implies 0.9 \text{ mg/kg} \implies 1.2 \text{ mg/kg}.$

In the 2nd part of the study, the different groups received AGS67E with growth factors in the following order:

• 1.2 mg/kg → 1.5 mg/kg → 1.8 mg/kg.

People received AGS67E once every 3 weeks. They continued treatment at the same dose unless they had medical problems, their cancer got worse or the study doctor decided that person should stop treatment. The first time people received AGS67E is called the 1st cycle. The second time they received AGS67E (3-weeks later) is called the 2nd cycle and so on.

Blood tests are important to learn how much AGS67E stays in the blood of people with lymphoid malignances over time.

During both parts of the study, a blood sample was taken from people just before they received each AGS67E infusion. Also during the 1st cycle and 3rd cycle of treatment, a few blood samples were taken over time after they received AGS67E.

Where did the Study Take Place?

This study took place at 5 clinics in the USA and Canada.

What Were the Study Results?

79 people were in the study. Out of these, 71 people received at least 1 dose of study medicine.

How much of AGS67E could people with lymphoid malignancies receive without having medical problems from AGS67E?

In the 1st part of the study, people could receive 0.9 mg/kg AGS67E without having medical problems from AGS67E. This was without receiving growth factors.

In the 2nd part of the study, people could receive 1.5 mg/kg AGS67E with growth factors without having medical problems from AGS67E.

How much AGS67E stays in the blood of these people over time?

Tests from blood samples taken during the study showed how much AGS67E stayed in the blood of these people over time.

The blood tests showed the following:

- The amount of AGS67E in the blood of people over time was as expected at the different doses. This happened with growth factors and without growth factors.
- For people on the same repeated dose, the amount of AGS67E staying in their blood was slightly higher after each dose.

This happened for people during both the 1st and 2nd part of the study.

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What Adverse Reactions did People Have in this Study?

A lot of research is needed to know whether a medicine causes a medical problem. So when new medicines are being studied, researchers keep track of all medical problems that people have while they are in the study. These problems are called "adverse events" and are recorded whether or not they might be caused by the treatment taken. An "adverse reaction" is any medical problem or "adverse event" that is judged by the study doctor to be possibly caused by a medicine or treatment used in the study.

49 people (69.0%, or 49 out of 71 people) had adverse reactions in this study.

The table below shows the most common adverse reactions experienced by people who took at least 1 dose of AGS67E in this study.

	AGS67E
Adverse Reaction	(out of 71 people)
Low levels of a type of white blood cell (neutrophil)	22 (31.0%)
Fatigue or tiredness	20 (28.2%)
Decreased number of a type of white blood cell	15 (21.1%)
(neutrophil/granulocyte)	13 (21.170)
Inflammation (swelling and redness) or degeneration of the peripheral	
nerves (those nerves outside of brain and spinal cord) causing	15 (21.1%)
numbness, tingling, burning	
Nausea or the urge to vomit	11 (15.5%)
Fever associated with dangerously low levels of a type of white blood	9 (12.7%)
cell (neutrophils)	9 (12.7/0)

Did any of the people in this study have serious adverse reactions?

An adverse reaction is considered "serious" when it is life-threatening, causes lasting problems or needs hospital care.

13 people (18.3%, or 13 out of 71 people) had a serious adverse reaction to AGS67E. The most common serious adverse reaction was a fever associated with dangerously low levels of a type of white blood cell (neutrophils). This happened in 7 people (9.9%, or 7 out of 71 people).

4 people passed away in the study. Of these, 1 death was judged by the study doctor to be possibly caused by AGS67E.

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Where Can I Learn More About This Study?

This document is a short summary of the main results from this study. You can find this summary and more information about this study online at http://www.astellasclinicalstudyresults.com.

Please remember that researchers look at the results of many studies to find out how well medicines work and which adverse reactions they might cause. This summary only shows the results of this 1 study. Your doctor may help you understand more about the results of this study.

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