NOVARTIS

Clinical Trial Results Summary

A clinical trial to learn more about the effects of MBG453 in people with acute myeloid leukemia who have a small number of cancer cells left after a bone marrow transplant

Thank you!

Thank you to the participants who took part in the clinical trial for **acute myeloid leukemia**. Every participant helped the researchers learn more about the trial drug **MBG453**, also called sabatolimab.

Novartis sponsored this trial and believes it is important to share what was learned from the results of this trial with the participants and the public. We hope this helps the participants understand their important role in medical research.

Trial information

Trial number: CMBG453F12201

Novartis drug studied: **MBG453**, also called sabatolimab

Sponsor: Novartis

If you were a participant and have any questions about the results, please talk to the doctor or staff at the trial site.

This summary only shows the results of a single clinical trial. Other clinical trials may have different results.

What was the main purpose of this trial?

The purpose of this trial was to find the best dose of **MBG453** for further testing. It also aimed to help researchers learn about the effects of **MBG453** in people with **acute myeloid leukemia (AML)** after a bone marrow transplant to help prevent or delay their **AML** from coming back when given alone or in combination with **azacitidine**.

Acute myeloid leukemia (AML) is a fast-growing cancer that starts in the cells that turn into blood cells in the bone marrow, most often in the cells that turn into white blood cells. Bone marrow is the tissue inside of bones that helps make blood cells. The cancer cells build up and slow down the making of normal blood cells.

AML can be treated with a **bone marrow transplant**, also called a stem cell transplant, which is a procedure that replaces damaged bone marrow with healthy bone marrow.

MBG453, also called sabatolimab, is a trial drug designed to help the immune system fight cancer by blocking a protein called TIM-3. TIM-3 is thought to lower the immune system's activity, which prevents it from killing cancer cells.

Azacitidine (pronounced as a-zuh-si-tuh-deen) is a drug that is approved to use alone for the treatment of **AML** in certain countries, including the United States and Europe.

Trial drug
MBG453 also called sabatolimab

Pronounced as
Saba-To-li-mab

The trial's purpose was to answer these main questions:

- What was the best dose of **MBG453** alone that was safe for adult participants with AML after a bone marrow transplant to take and was this dose also safe for adolescent participants?
- How many adult participants did not show signs of their cancer coming back 6 months after treatment with 800 mg **MBG453** alone and in combination with **azacitidine**?
- What medical problems, also called adverse events, happened during this trial?

  ↳ An **adverse event** is any sign or symptom that participants have during a trial. Adverse events **may** or **may not** be caused by treatments in the trial.

How long was this trial?

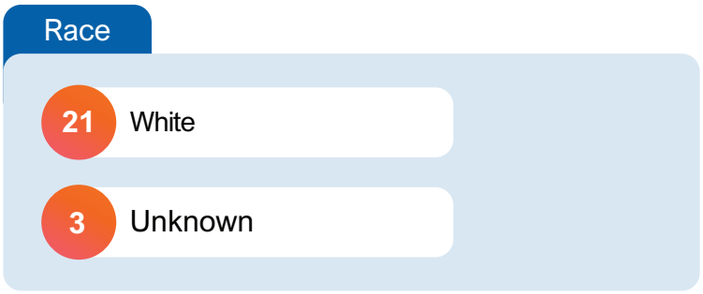
The trial began in September 2021 and ended early in August 2024. Each participant was in the trial for about 3 years.

In August 2024, the sponsor decided to end this trial early due to business reasons. This decision was not based on any safety concerns with **MBG453**.

Who was in this trial?

24 participants with **AML** received treatment in this trial – 10 men and 14 women. Participants' ages ranged from 15 to 81 years. The average age was 61 years for adults and 15 years for adolescents.

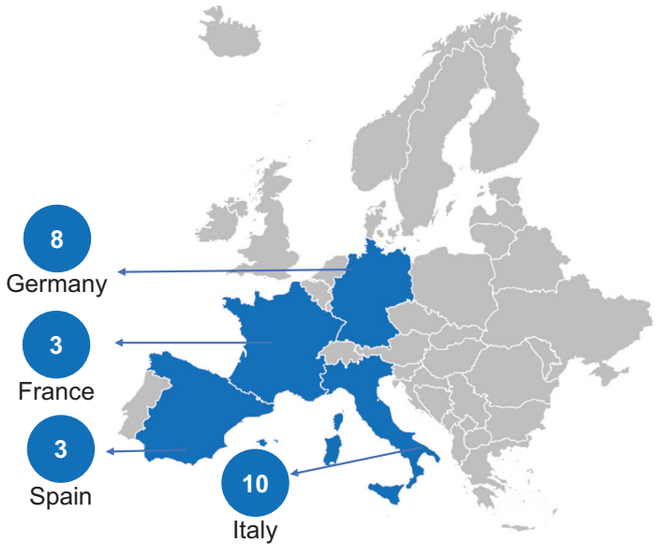
The number of participants by race is shown below.



The participants could take part in this trial if they:

- were at least 12 years of age
- were diagnosed with primary **AML** (which was not due to other types of cancers or health conditions) or secondary **AML** (which developed due to the treatment of other types of cancer)
- had received 1 prior bone marrow transplant to control their **AML**
- had no signs of **AML** other than a few cancer cells at least 60 days after transplant

24 participants from 4 countries received treatment. The map of Europe below shows the number of participants who took part in each country.



What treatments did the participants receive?

The treatments in this trial were given in 28-day **cycles**:

When given alone, **MBG453** 400 milligrams (mg) or 800 mg was given as an infusion into a vein once on Day 1 of each treatment cycle. When given in combination with **azacitidine**, **MBG453** 800 mg was given as an infusion into a vein, once, on Day 5 of each treatment cycle.

Azacitidine, 50 **mg/m²** as an infusion into a vein or injection under the skin on Days 1 to 5 of each treatment cycle.

A **cycle** is a treatment period that is repeated.

mg/m² is a unit for measuring the amount of trial drug per unit of body surface area.

The participants, researchers, and trial staff knew what treatment the participants were receiving.

What happened during this trial?

Before treatment

Up to 1 month

The trial staff checked to make sure the participants could be in this trial.

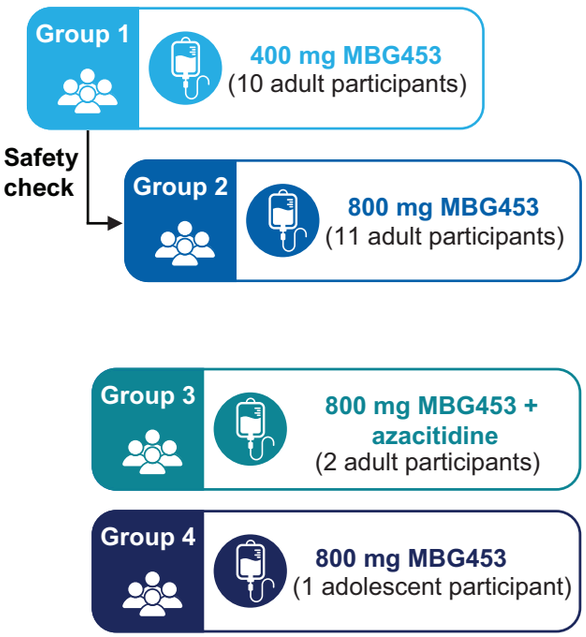
During treatment

Up to 2 years

This trial was designed to have 2 parts:

Part 1: Adult participants in **Group 1** started treatment first and received a lowest dose (400 mg) of **MBG453** once every 4 weeks. If there were no safety concerns after participants completed 8 weeks of treatment, **Group 2** received a higher dose (800 mg) of **MBG453**. Based on the results of Part 1, researchers decided to test 800 mg of **MBG453** further in Part 2 of the trial.

Part 2: Participants received 800 mg of **MBG453** either alone or in combination with **azacitidine**. Researchers also included adolescents (aged between 12 and 17 years) in this part who were given **MBG453** alone during the trial.



After treatment

Up to 1 year

- **Safety follow-up:** Trial staff checked participants' general health and for any medical problems for up to 5 months after the participant's last dose of trial treatment.
- **Post-treatment follow-up:** If a participant's cancer did not get worse during trial treatment, they had follow-up visits with trial staff for up to 1 year, until their cancer got worse, or the trial ended.

Trial staff checked the participants' general health throughout the trial.

What were the main results of this trial?

What was the best dose of MBG453 alone that was safe for adult participants with AML after a bone marrow transplant to take and was this dose also safe for adolescent participants?

Researchers found that **MBG453 800 mg** could be safely given to adult and adolescent participants with **AML**.

To answer this, researchers closely monitored participants' health and recorded **dose-limiting toxicities (DLTs).** The number of DLTs helped researchers decide whether the chosen best dose of MBG453 alone could be safely given to the participants.

DLT is an adverse event that occurs at the start of the treatment and is serious enough to prevent the dose of that treatment being increased.

These results were available for 19 participants. Three participants (2 in the **400 mg MBG453** group and 1 in the **800 mg MBG453** group) were excluded from this analysis as they did not receive two full dose infusions of **MBG453** (400 or 800 mg) and had no DLTs during the first 2 months of treatment.

Number of participants with DLTs

	400 mg MBG453 8 adult participants	**800 mg MBG453** 10 adult participants	**800 mg MBG453** 1 adolescent participant
DLTs	0	**1 of 10** 10%	**0**

The participant had **inflammation of the heart** (myocarditis)

How many adult participants did not show signs of their cancer coming back 6 months after treatment with 800 mg MBG453 alone and in combination with azacitidine?

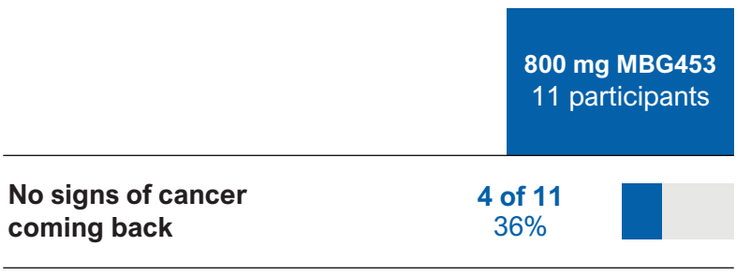
To answer this, researchers conducted various tests such as bone marrow biopsy and blood tests. These results could not be assessed for the adults who received 800 mg **MBG453** in combination with **azacitidine** and the adolescents who received 800 mg **MBG453** alone due to the small number of participants.

4 out of 11 adult participants who received **MBG453 800 mg** alone had no signs of their cancer coming back 6 months after treatment. Due to the small number of participants, no conclusions could be drawn based on these results.

No signs of cancer coming back, or hematologic relapse means:

- no signs of abnormal cells inside the bone marrow at or above 5%
- no abnormal cells reappearing in the blood
- no signs of the disease outside the bone marrow

Number of adult participants who had no signs of cancer coming back



What medical problems, also called adverse events, happened during this trial?

Trial doctors keep track of all medical problems, also called **adverse events**, that happen in trials. They track adverse events even if they think the adverse events are not related to the trial treatments. Many trials are needed to know if a drug or treatment causes an adverse event.

This section is a summary of the adverse events that happened from the start of treatment until 5 months for **MBG453** and 1 month for **azacitidine** after the last treatment.

An **adverse event** is:

- Any **sign or symptom** that the participants have during a trial
- Considered **serious** when it is life-threatening, causes lasting problems, the participant needs hospital care, or results in death

Adverse events **may** or **may not** be caused by treatments in the trial.

- A total of 21 out of 24 participants had adverse events, including serious and non-serious.
- 5 participants had adverse events that were considered serious.
- 3 participants left the trial due to an adverse event.
- 7 participants died.

The researchers concluded there were no new safety concerns for **MBG453** in this trial.

How many participants had adverse events?

	Part 1		Part 2	
	400 mg MBG453 10 adult participants	**800 mg MBG453** 11 adult participants	**800 mg MBG453 + Azacitidine** 2 adult participants	**800 mg MBG453** 1 adolescent participant
Had at least 1 **serious adverse event**	**2 of 10** 20%	**3 of 11** 27%	**0**	**0**
Had at least 1 **adverse event**	**9 of 10** 90%	**9 of 11** 82%	**2 of 2** 100%	**1 of 1** 100%
Left the trial due to an adverse event	**0**	**2 of 11** 18%	**1 of 2** 50%	**0**
Died	**5 of 10** 50%	**2 of 11** 18%	**0**	**0**

What serious adverse events did the participants have?

5 participants had serious adverse events. A participant could have more than one adverse event. The following table shows the serious adverse events that happened during this trial.

	Part 1		Part 2	
	400 mg MBG453 10 adult participants	**800 mg MBG453** 11 adult participants	**800 mg MBG453 + Azacitidine** 2 adult participants	**800 mg MBG453** 1 adolescent participant
Disease of the brain and spinal cord Nervous system disorder	0	1 of 11 9%	0	0
Fever with infection Febrle infection	1 of 10 10%	0	0	0
Hip fracture Femoral neck fracture	1 of 10 10%	0	0	0
Infection of the lungs Pneumonia	1 of 10 10%	0	0	0
Inflammation of the heart Myocarditis	0	1 of 10 10%	0	0
Sudden kidney damage Acute kidney injury	1 of 10 10%	0	0	0
Swelling of the airways in the lungs due to infection Bronchitis	1 of 10 10%	0	0	0
Viral infection of the mouth Oral herpes	0	1 of 11 9%	0	0

What other (not including serious) adverse events did the participants have?

The table below shows the other adverse events that happened in **2 or more** participants in any group. Additional adverse events happened in one participant.

	Part 1		Part 2	
	400 mg MBG453 10 adult participants	**800 mg MBG453** 11 adult participants	**800 mg MBG453 + Azacitidine** 2 adult participants	**800 mg MBG453** 1 adolescent participant
Cough	1 of 10 10%	2 of 11 18%	0	0
COVID-19	2 of 10 20%	2 of 11 18%	1 of 2 50%	1 of 1 100%
Feeling sick Nausea	1 of 10 10%	1 of 11 9%	2 of 2 100%	0
Low blood platelet count Thrombocytopenia	3 of 10 30%	0	0	0
Low white blood cell count Neutropenia	2 of 10 20%	1 of 11 9%	0	0

What was learned from this trial?

This trial ended early after only a small number of participants had been treated, due to business reasons.

The researchers did not find any new safety concerns with the use of **MBG453** alone or in combination with **azacitidine** in this trial. However, they could only learn limited information about the effects of **MBG453** alone or in combination with **azacitidine** in people with **acute myeloid leukemia (AML)** after a bone marrow transplant.

When this summary was written, the sponsor had no plans for future trials of **MBG453**.

Where can I learn more about this trial?

More information about the results and adverse events in this trial can be found in the scientific summary of the results available on the Novartis Clinical Trial Results website, www.novctrd.com.

Follow these steps to find the scientific summary:

For more information about this trial, go to any of these websites:

- clinicaltrials.gov – search using the number **NCT04623216**
- clinicaltrialsregister.eu/ search using the number **2020-000869-17**

Other trials of **MBG453** may appear on the public websites above. When there, search for **MBG453** or sabatolimab.

Full clinical trial title: A phase Ib/II, open label study of sabatolimab as a treatment for patients with acute myeloid leukemia and presence of measurable residual disease after allogeneic stem cell transplantation

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