

Clinical Trial Results Summary

A clinical trial to learn about the safety of the drug NJH395 in people with non-breast HER2-positive advanced cancer

Protocol number: CNJH395X2101

Thank You!



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. Thank you for taking part in this trial for the drug NJH395. You helped researchers learn more about the safety of NJH395 in people with non-breast HER2-positive advanced cancer.

This summary only shows the results of this single clinical trial. Other clinical trials may have different findings. Researchers and health authorities, such as the Food and Drug Administration (FDA) in the United States, the European Medicines Agency (EMA) in Europe, and the Pharmaceuticals and Medicinal Devices Agency (PMDA) in Japan look at the results of many clinical trials to understand which drugs work and if they are safe. Websites listed at the end of the summary may have more information about this trial. If you have any questions about these trial results, please talk to the doctor or staff at your trial site.

How long was this trial?

This trial started in December 2018 and ended in October 2020. The entire duration, from enrolling the first participant to the last participant completing the trial was around 1 year and 10 months. An individual participant was in this trial for an average of 8 months.

The trial was planned in 2 parts. In the first part, participants received a single dose of NJH395 and in the second part, participants were supposed to receive multiple doses of NJH395. The sponsor ended this trial early because the initial results of the first part suggested that NJH395 might not benefit the trial participants. Hence, the second part of the trial was not initiated. When the first part of the trial ended, researchers created a report of the trial results. This summary is based on that report.

Why was the research needed?

Researchers were looking for a better way to treat advanced HER2-positive cancer that occurred in organs other than the breast.

Cancer is the abnormal growth of tumor cells in the body. It is considered 'advanced' if it spreads to other parts of the body. Some people with cancer have an increased level of a protein called human epidermal growth factor receptor 2 (HER2), which makes their cells grow and divide very fast. This is called HER2-positive cancer.

Participants enrolled in this trial had any of the following HER2-positive advanced cancers:

- bladder cancer,
- colorectal cancer: cancer of the colon and rectum which are located at the end of the digestive system
- esophageal cancer: cancer of the tube that runs from the throat to the stomach,
- lung cancer,
- nose and throat cancer,
- pancreatic cancer: cancer of the pancreas
- stomach cancer, and
- small intestine cancer: cancer of the long tube which lies between the stomach and the large intestine.

In this trial, NJH395 was tested for the first time in people. The participants taking part in this trial had advanced cancer that could not be treated with other available cancer treatments.

In this trial, researchers wanted to know about the safety of NJH395 in participants with non-breast HER2-positive advanced cancer.

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

What were the dose limiting toxicities related to NJH395?

- i** Dose limiting toxicities are defined as severe side effects that may be related to the trial drug NJH395 (eg, severe nausea and vomiting).

How many participants had medical problems in this trial?

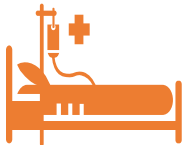
- i** Medical problems that happen during clinical trials are called “adverse events”. Adverse events are defined on [Page 7](#) in this summary.

The other questions researchers wanted to explore in this trial were:

- Did the participants have antibodies against NJH395?
Antibodies are proteins that are produced by the immune system in response to the presence of a foreign substance in the body.
- How many participants had a response to treatment with NJH395?

Trial drug

The drug given in this trial was:



NJH395: A drug that is being tested for the treatment of non-breast HER2-positive advanced cancer. NJH395 is a new class of drug that binds to HER2 on cancer cells and inhibits cell growth. It was given as an infusion into the vein.

Who was in this trial?

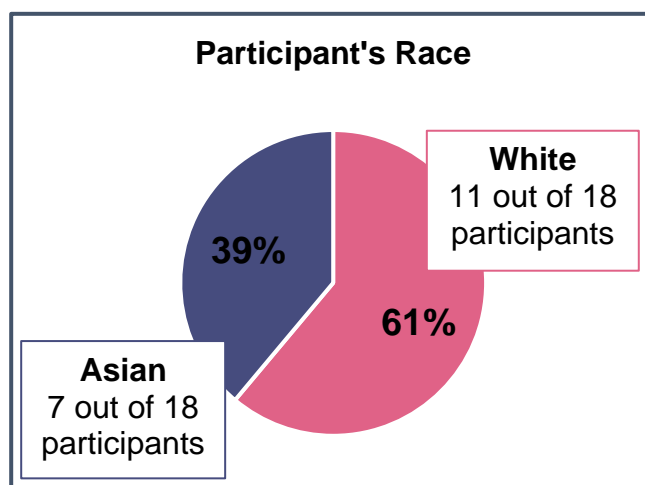
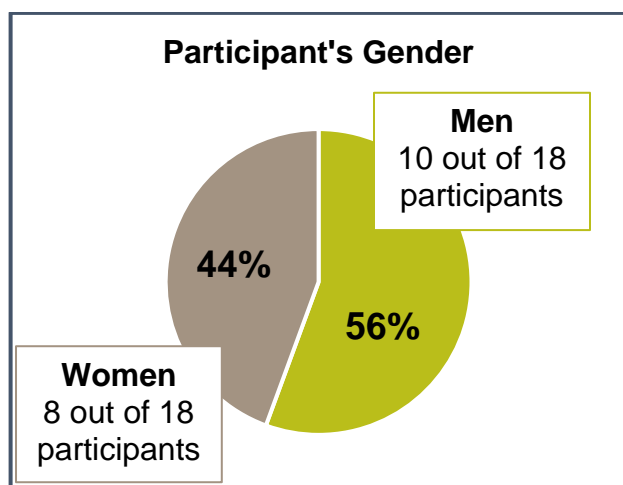
The participants could take part in this trial if they:

- were at least 18 years of age,
- had confirmed HER2-positive non-breast cancer,
- had advanced cancer/cancer that has spread to other parts of the body and had progressed even after other available cancer treatments,
- were fully active, OR unable to do the hard physical activity but able to walk and do light housework or office work, OR unable to work but able to walk and manage self-care and be out of bed for more than 50% of waking hours, and
- their cancer was located in a part of their body from which a tissue sample could be taken before and during the trial treatment.

A total of 18 participants from 4 countries participated in this trial.

Country	Number of Participants
Italy	5
Japan	3
South Korea	4
United States	6

The average age of participants was 55 years. Participants' age ranged from 42 to 74 years. The majority of participants were men, 10 out of 18 (56%).



How was this trial done?

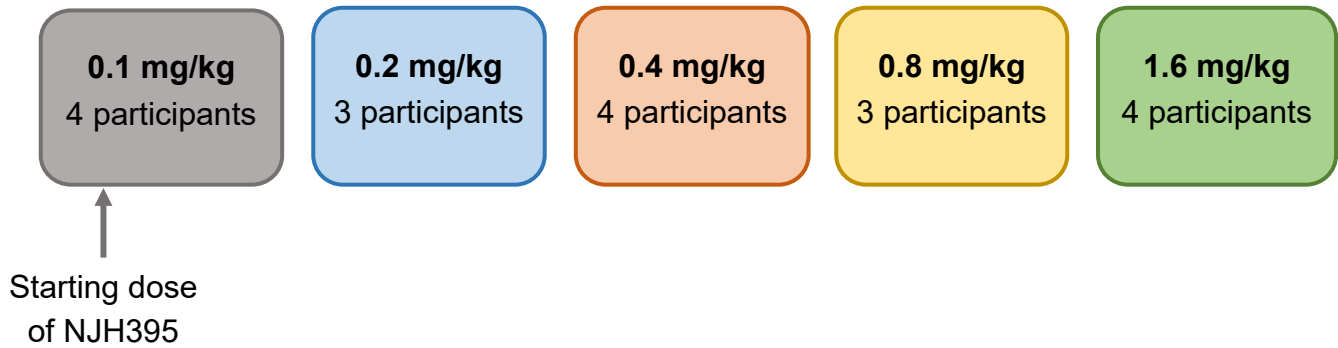
Both the researchers and the participants knew what treatment was given to participants.

During Treatment

The participants received any 1 of the 5 doses of NJH395 once during this trial. In this trial, 18 participants with HER2-positive advanced cancer were assigned to 5 treatment groups. Researchers started by giving 0.1 milligrams/kilogram of total body weight (mg/kg) of NJH395 to the first group of participants. If there were no safety concerns, the next group of participants received a higher dose of NJH395. This test was repeated until the researchers found the highest dose of NJH395 that could safely be given to the participants. The doses given are shown in the figure on the next page.

Researchers closely monitored participants' health throughout the trial.

Dose Groups of NJH395



What were the key results of this trial?

What were the dose limiting toxicities related to NJH395?



In the 0.2 mg/kg NJH395 group

1 participant had a dose limiting toxicity of **increase in a protein called aspartate aminotransferase in the blood** (increased AST*)

In the 1.6 mg/kg NJH395 group

2 participants had dose limiting toxicities:

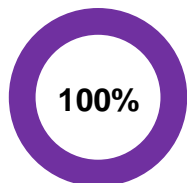
1 participant had **irritation of the protective membranes of brain and spinal cord** (meningism)

The other participant had:

- **increase in a protein called aspartate aminotransferase in the blood** (increased AST*),
- **increase in a protein called alanine aminotransferase in the blood** (increased ALT*), and
- **inflammation of brain and spinal cord membranes** (meningitis).

*Increased AST and ALT indicate damage to the liver.

How many participants had medical problems in this trial?



Medical problems that happen in clinical trials are called “adverse events”.

In this trial, all 18 participants had medical problems. Complete details on medical problems are provided on [Page 7](#) of this summary.

What were the other results of this trial?

Did the participants have antibodies against NJH395?

The researchers wanted to know if the participants had antibodies against NJH395. Antibodies are normally made by the immune system to find anything that the body does not recognize. This is how the body knows to fight infections caused by bacteria and viruses. Sometimes the immune system makes antibodies that bind to the treatments. This can stop the treatment from working.

To answer this question, researchers collected blood samples from the participants. They found that all 18 participants in this trial had antibodies against NJH395.

How many participants had a response to treatment with NJH395?

In clinical trials of cancer treatments, one way to see how well a new treatment may work is by looking at how many people responded to treatment. To answer this question, researchers looked for participants who either had:

- no signs of cancer in their body or
- at least a 30% decrease in the size of the target tumor(s)

The researchers found that no participants had the above defined response to treatment with NJH395.

What medical problems did the participants have during the trial?

Medical problems that happen in clinical trials are called “adverse events”.

A lot of research is needed to know whether a drug causes an adverse event. During a trial, all adverse events are recorded, whether or not they are thought to be caused by the trial drug. When new drugs are being studied, researchers keep track of all adverse events participants have.

This section is a summary of the adverse events that happened during this trial. The websites listed at the end of this summary may have more information about all the adverse events that happened in this trial.



An adverse event is an unwanted sign, symptom, or disease that participants have during a trial.

An adverse event is considered “serious” when it is life-threatening, causes lasting problems, or the participant needs hospital care. These problems may or may not be caused by the trial drug.

How many participants had adverse events?

All 18 participants (100%) had 1 or more adverse events. Serious adverse events happened in 8 out of 18 participants (44%) in the trial. No participants stopped NJH395 early because of adverse events.

8 out of 18 participants (44%) died during this trial. 6 deaths were due to advanced cancer and for 2 deaths, the reason was not known.

Number of Participants (%) With Adverse Events

	Doses of NJH395				
	0.1 mg/kg (Out of 4 participants)	0.2 mg/kg (Out of 3 participants)	0.4 mg/kg (Out of 4 participants)	0.8 mg/kg (Out of 3 participants)	1.6 mg/kg (Out of 4 participants)
At least 1 adverse event	4 (100%)	3 (100%)	4 (100%)	3 (100%)	4 (100%)
At least 1 serious adverse event	0	1 (33%)	2 (50%)	3 (100%)	2 (50%)
Death	3 (75%)	2 (67%)	2 (50%)	1 (33%)	0

What were the most common non-serious adverse events?

The most common non-serious adverse events that happened in more than 20% of the total group of participants are presented below.

Number of Participants (%) With Most Common Non-Serious Adverse Events

Doses of NJH395 (Total number of participants)	0.1 mg/kg (4)	0.2 mg/kg (3)	0.4 mg/kg (4)	0.8 mg/kg (3)	1.6 mg/kg (4)
Feeling cold (Chills)	0	2 (67%)	1 (25%)	1 (33%)	1 (25%)
Feeling sick (Nausea)	0	1 (33%)	2 (50%)	3 (100%)	2 (50%)
Fever (Pyrexia)	1 (25%)	2 (67%)	1 (25%)	1 (33%)	3 (75%)
Inflammatory response characterized by fever and multiple organ dysfunction (Cytokine release syndrome)	2 (50%)	1 (33%)	2 (50%)	0	1 (25%)
Headache (Headache)	0	1 (33%)	1 (25%)	1 (33%)	3 (75%)
Increase in a protein called alanine aminotransferase in the blood (Alanine aminotransferase increased)*	0	1 (33%)	1 (25%)	1 (33%)	2 (50%)
Increase in a protein called aspartate aminotransferase in the blood (Aspartate aminotransferase increased)*	1 (25%)	0	1 (25%)	1 (33%)	2 (50%)
Low levels of potassium in the blood (Hypokalaemia)	0	0	1 (25%)	1 (33%)	2 (50%)
Vomiting (Vomiting)	0	1 (33%)	1 (25%)	2 (67%)	2 (50%)

*Increased AST and ALT indicate damage to the liver.

What were the serious adverse events?

The serious adverse events that happened in any group are shown below.

Number of Participants (%) With Serious Adverse Events

Doses of NJH395 (Total number of participants)	0.1 mg/kg (4)	0.2 mg/kg (3)	0.4 mg/kg (4)	0.8 mg/kg (3)	1.6 mg/kg (4)
Inflammatory response characterized by fever and multiple organ dysfunction (Cytokine release syndrome)	0	0	1 (25%)	3 (100%)	0
Increase in a protein called aspartate aminotransferase in the blood (Aspartate aminotransferase increased)	0	1 (33%)	0	0	0
Inflammation of brain and spinal cord membranes (Meningitis)	0	0	0	0	1 (25%)
Irritation of protective membranes of brain and spinal cord (Meningism)	0	0	0	0	1 (25%)
Partial or complete blockage of the gut (Intestinal obstruction)	0	0	1 (25%)	0	0

How was this trial useful?

This was a first in people trial. It helped researchers to learn about the safety of NJH395 in people with non-breast HER2-positive advanced cancer.

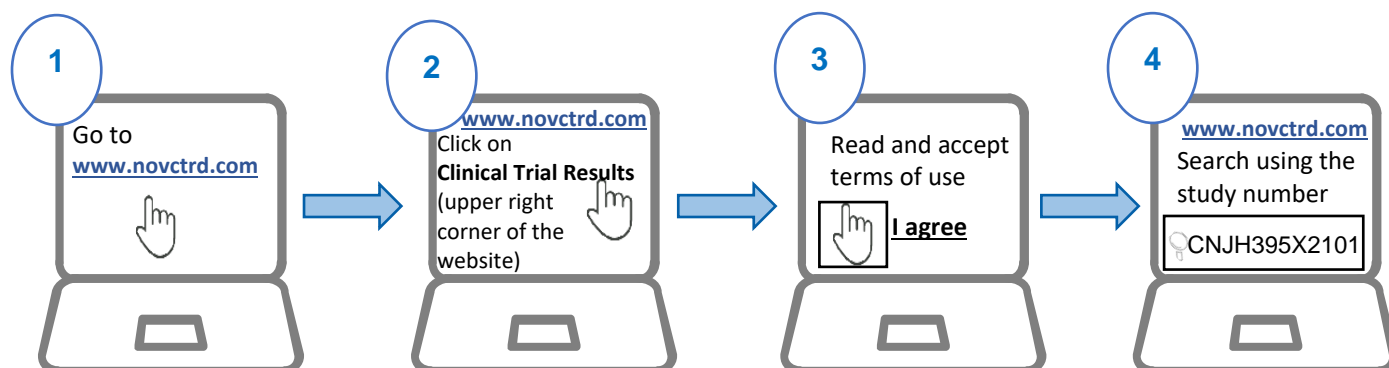
The trial results suggested that NJH395 might not benefit patients with non-breast HER2-positive advanced cancer. This trial may guide the development of newer drugs for advanced cancer. No further studies are planned for NJH395.

If you have any questions about these trial results, please talk to the doctor or staff at your trial site.

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).

Please follow the below steps:



You can find more information about this trial on the following website:

- www.clinicaltrials.gov Use the NCT identifier NCT03696771 in the search field.

Full clinical trial title: A Phase I, multicenter, open-label dose finding study of NJH395, administered intravenously in patients with non-breast HER2+ Advanced Malignancies

Thank you

Thank you for taking part in this trial. As a clinical trial participant, you belong to a large community of people around the world. You helped researchers answer important health questions and test new medical treatments.



Novartis is a global healthcare company based in Switzerland that provides solutions to address the evolving needs of patients worldwide.

1-888-669-6682 (US); +41-61-324-1111 (EU); www.novartisclinicaltrials.com