Plain Language Clinical Study

Summary

This summary reports the results of only one study. Researchers must look at the results of many types of studies to understand if a study medicine works, how it works, and if it is safe to prescribe to patients. The results of this study might be different than the results of other studies that the researchers review.

Sponsor: Pfizer Inc.

Medicine Studied: Marstacimab

Protocol Number: B7841005

Dates of Study: 09 March 2020 to 29 April 2025

Title of this Study: A Study to Learn About the Effects and Safety of Marstacimab (PF-06741086) in Teenagers and Adults with Severe Hemophilia A or Moderately Severe to Severe Hemophilia B With or Without Inhibitors

[An Open-Label Study in Adolescent and Adult Severe (Coagulation Factor Activity <1%) Hemophilia A Participants With or Without Inhibitors or Moderately Severe to Severe Hemophilia B Participants (Coagulation Factor Activity ≤2%) With or Without Inhibitors Comparing Standard Treatment to PF-06741086 Prophylaxis.]

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Date(s) of this Report: 21 October 2025

– Thank You –

If you or your child participated in this study, Pfizer, the Sponsor, would like to thank you for your participation.

This summary will describe the study results. Do you have any questions about the study or the results? If so, please contact the doctor or staff at your study site.

Why was this study done?

What is hemophilia?

Hemophilia is a condition, affecting mostly males, where it is difficult for blood to clot. People with hemophilia can bruise easily and bleed for longer than normal after a cut or injury. Bleeding events may also happen inside the body, affecting different parts of the body, such as joints or muscles. This is due to lack of proteins (clotting factors) which help to stop the bleeding.

Hemophilia is said to be severe when “clotting factor activity” levels in the blood are below 1%. In this study, "moderately severe to severe" hemophilia B meant that the required clotting factor activity was 2% or less. Clotting factor activity levels tell how well clotting factors are working in the body to help blood to clot. The normal range of clotting factor activity levels in the blood is between 50% and 150%.

Currently, the standard treatment for hemophilia A and hemophilia B includes on-demand (when needed) or routine prophylaxis (at regular scheduled intervals) treatment by replacement of the missing blood clotting factors. Sometimes, the body makes blockers, called “inhibitors”, against clotting factors, that can stop regular hemophilia treatment from working properly. This makes it harder to treat or prevent bleeding. In people with inhibitors, the treatment is done using bypass therapy or other available treatments. These treatments allow the body to work around the missing clotting factor to form a blood clot and stop or prevent bleeding.

What is marstacimab?

The study medicine under investigation is called marstacimab. Marstacimab stops a protein called "tissue factor pathway inhibitor" (TFPI). TFPI slows the clotting of blood. By stopping TFPI, marstacimab helps form blood clots and does not need blood clotting factors to work. In this study, marstacimab was given under the skin using a pre-filled injection.

What was the purpose of this study?

The purpose of the study was to learn

- how well marstacimab can help to clot blood, and
- how safe and well-tolerated marstacimab is

in people with hemophilia A and hemophilia B, with or without inhibitors for the blood clotting factor replacement treatment.

Researchers wanted to know:

- **How many treated bleeding events happened per year in participants when using marstacimab compared to when they were using the standard hemophilia treatment?**
- **How safe marstacimab was during the study?**

In this study, the standard treatment included replacement with clotting factors or bypass therapy either on-demand or as routine prophylaxis.

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What happened during the study?

How was the study done?

Researchers tested marstacimab on a group of study participants with hemophilia A or hemophilia B to find out how many bleeding events occurred in a year in those participants.

Researchers then assessed the number of bleeding events that were treated in participants with or without inhibitors to blood clotting factors while using standard treatment and then the number of bleeding events that were treated while on marstacimab.

This study had 4 phases: screening, observational phase, treatment with marstacimab and follow-up.

During **screening**, the researchers checked who could take part in this study. The participants were then divided into 2 groups based on whether they had or did not have inhibitors for the blood clotting factor replacement treatment.

Group 1 had 128 participants without inhibitors. Group 2 had 60 participants with inhibitors.

During the **observational phase (Part 1)**, the participants received their standard hemophilia treatment.

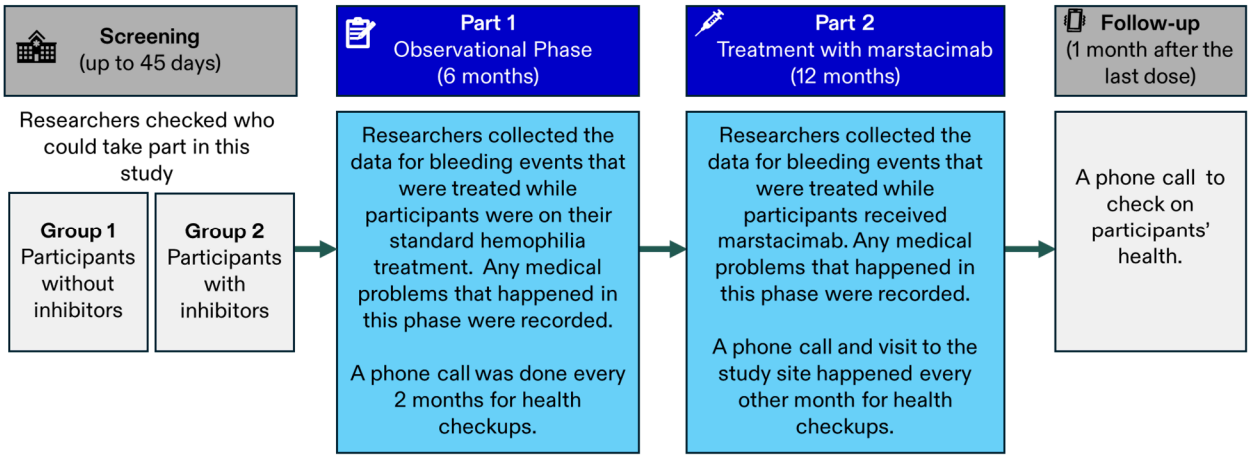
During the **treatment with marstacimab (Part 2)**, all participants received marstacimab. The participants initially received 2 injections, with a total dose of 300 milligram (mg), followed by 1 injection of 150 mg once a week. Both the researchers and the study participants knew that the study participants received marstacimab. This is known as an “open-label” study.

The participants recorded the number of bleeding events and any clotting factors or bypass therapy they took apart from marstacimab in an electronic diary.

For **follow-up**, the participants who stopped marstacimab treatment or did not participate in a following long-term study received a phone call 1 month after their last dose to check on their health.

Figure 1 shows what happened during the study.

Figure 1: What happened during the study



Where did this study take place?

The Sponsor ran this study at 64 locations in 20 countries in Asia, Europe, North America and Africa.

When did this study take place?

It began on 09 March 2020 and ended on 29 April 2025.

Who participated in this study?

The study included male teenagers and adult participants who were diagnosed with severe hemophilia A or moderately severe to severe hemophilia B. They either had or did not have inhibitors to the blood clotting factor replacement treatment. They were receiving either on-demand or routine prophylaxis treatment with either the clotting factors or the bypass treatment.

Figures 2 and 3 show how many participants finished the treatment.

Figure 2: How many participants in Group 1 (without inhibitors) finished the treatment

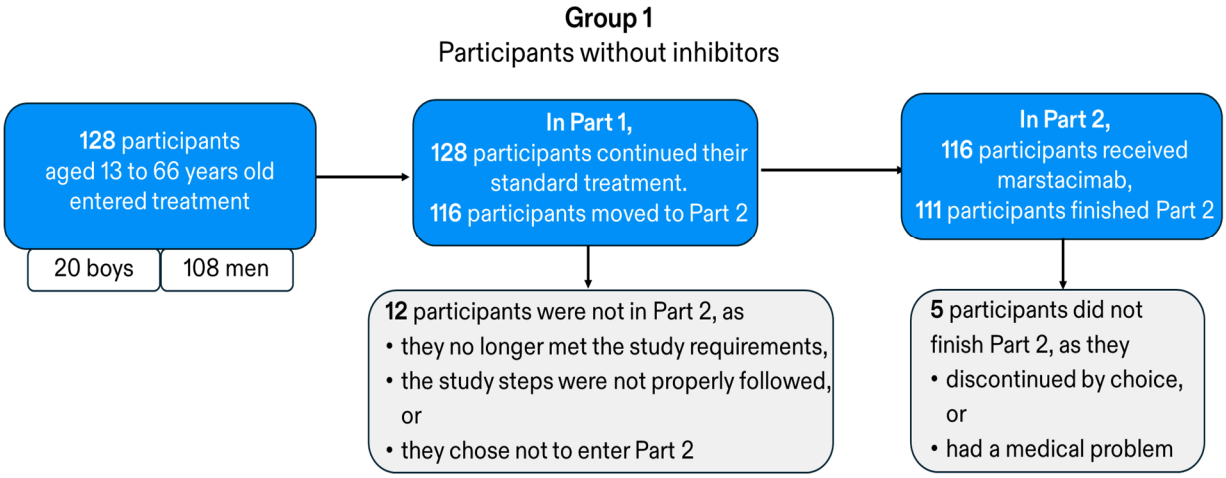
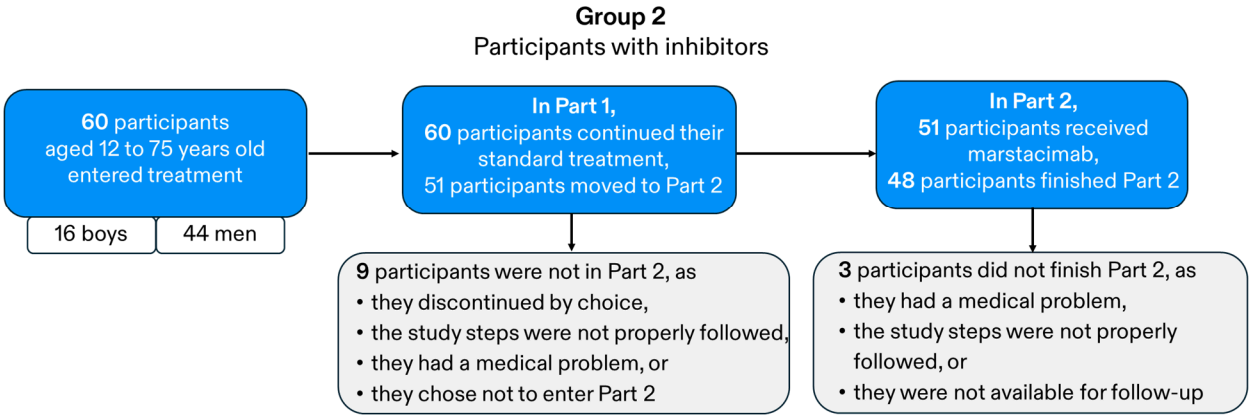


Figure 3: How many participants in Group 2 (with inhibitors) finished the treatment



How long did the study last?

Study participants were in the study for different lengths of time, with the longest being about 1 year and 9 months. The entire study took about 5 years to complete.

When the study ended in April 2025, the Sponsor began reviewing the information collected. The Sponsor then created a report of the results. This is a summary of that report.

What were the results of the study?

How many treated bleeding events happened per year in participants when using marstacimab compared to when they were using the standard hemophilia treatment?

For this study, the average number of bleeding events that happened in a year and were treated, while on marstacimab compared to standard treatment, are shown in Figure 4 and Figure 5 below.

Figure 4: For Group 1 (without inhibitors)

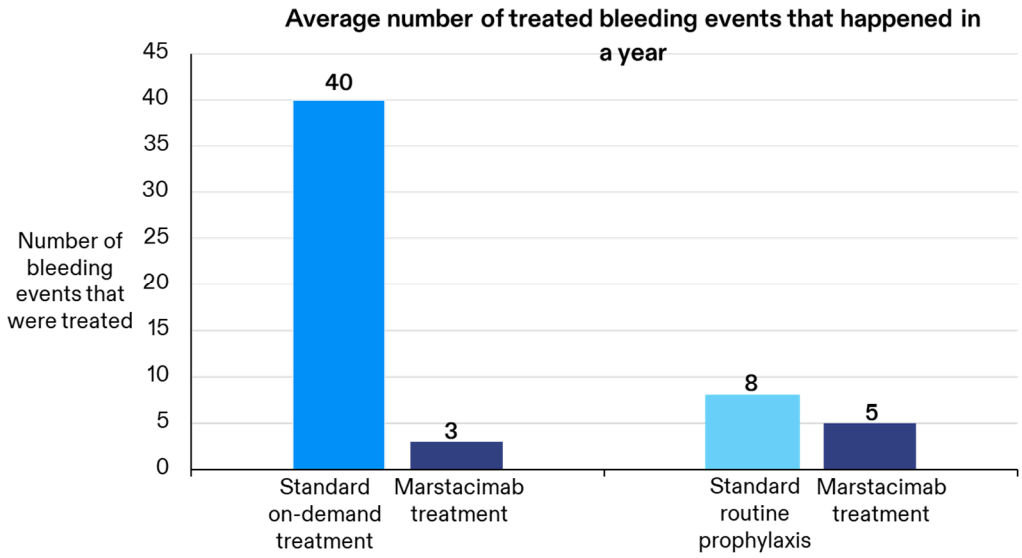
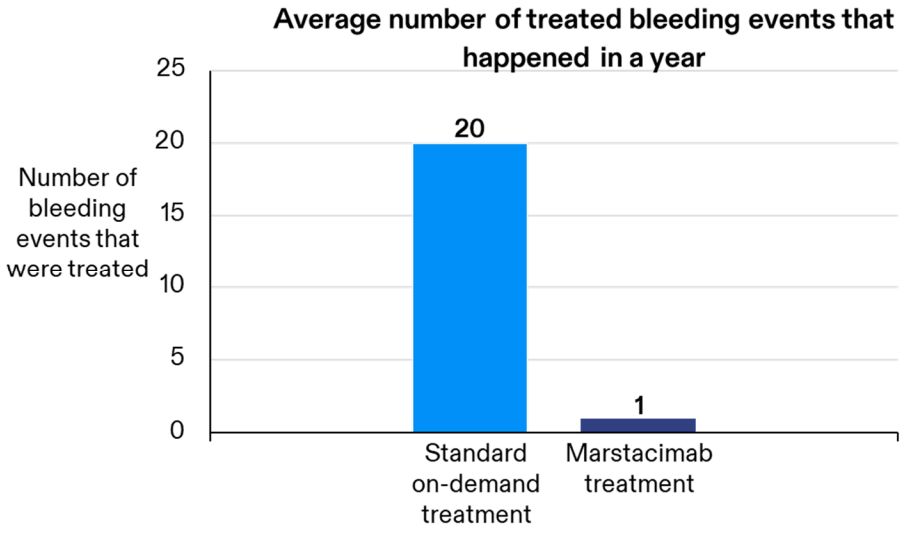


Figure 5: For Group 2 (with inhibitors)



In Group 2 (with inhibitors), there were only a few participants who received standard routine prophylaxis during Part 1 before moving into Part 2 where they received marstacimab. As the number of participants was very small, the researchers did not analyze the data for this group of participants.

This study found that participants who took marstacimab had fewer bleeding events than those who took the standard treatment. The researchers found that the results were similar for Group 1 (without inhibitors) and Group 2 (with inhibitors). Based on these results, the researchers have decided that the results are not likely the result of chance.

This does not mean that everyone in this study had these results. This is a summary of just some of the main results of this study. Other studies may have different results.

How safe marstacimab was during the study?

The researchers found that overall, marstacimab was safe and well-tolerated.

There was no problem due to the formation of blood clots in the blood vessels observed in any group during the study.

There were reactions at the site of injection of marstacimab reported during the study.

In **Group 1 (without inhibitors)**, 2 out of 33 participants (6%) who previously received on-demand treatment reported pain and collection of blood in the body caused by a broken blood vessel, that looked like bruises and 9 out of 83 participants (11%) who were previously received routine prophylaxis reported reactions at the site of injection. The most common reactions were itching, reported by 4 participants and reddening of the skin, reported by 3 participants.

In **Group 2 (with inhibitors)**, 4 out of 48 participants (8%) who previously received on-demand treatment reported reactions at the site of injection. The most common reactions were reddening of the skin, pain and swelling reported by 2 participants each. No participants who previously received routine prophylaxis reported reactions at the site of injection.

What medical problems did participants have during the study?

The researchers recorded any medical problems the participants had during the study. Participants could have had medical problems for reasons not related to the study (for example, caused by an underlying disease or by chance). Or, medical problems could also have been caused by a study treatment or by another medicine the participant was taking. Sometimes the cause of a medical problem is unknown. By comparing medical problems across many treatment groups in many studies, doctors try to understand what effects a study medicine might have on a participant.

For Group 1 (without inhibitors)

During Part 1, 29 out of 128 participants (23%) on standard treatment had at least 1 medical problem. No participants left the study because of medical problems.

During Part 2, 74 out of 116 participants (64%) on marstacimab had at least 1 medical problem. One participant left the study because of a medical problem.

The most common medical problems in Group 1 (without inhibitors) participants that happened during Part 1 and Part 2 of the study–are described in **Table 1** on the following page.

Below are instructions on how to read Tables 1

Instructions for Understanding Table 1.

- The **1st** column of Table 1 lists medical problems that were commonly reported during the study. The common medical problems reported by participants that happened during Part 1 and Part 2 of the study are listed.
- The **2nd** column tells how many of the 116 participants who received marstacimab reported each medical problem. Next to this number is the percentage of the 116 participants who took marstacimab and reported the medical problem.
- The **3rd** column tells how many of the 128 participants who received standard treatment reported each medical problem. Next to this number is the percentage of the 128 participants who received standard treatment and reported the medical problem.
- Using these instructions, you can see that 20 out of the 116 participants (17%) who received marstacimab reported COVID-19. A total of 3 out of the 128 participants (2%) who received standard treatment reported COVID-19.

Table 1. Commonly reported medical problems by study participants in Group 1 (without inhibitors)

Medical Problem	Marstacimab (116 Participants)	Standard treatment (128 Participants)
COVID-19	20 out of 116 participants (17%)	3 out of 128 participants (2%)

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Table 1. Commonly reported medical problems by study participants in Group 1 (without inhibitors)		
Medical Problem	**Marstacimab (116 Participants)**	**Standard treatment (128 Participants)**
Headache	7 out of 116 participants (6%)	0
Bruising	5 out of 116 participants (4%)	0
Tooth decay	4 out of 116 participants (3%)	2 out of 128 participants (2%)
Itching	4 out of 116 participants (3%)	0
Nose and throat infection	3 out of 116 participants (3%)	1 out of 128 participants (less than 1%)
Decrease in range of motion of the joints	2 out of 116 participants (2%)	1 out of 128 participants (less than 1%)

For Group 2 (with inhibitors)

During Part 1, 21 out of 60 participants (35%) on standard treatment had at least 1 medical problem. One participant left the study because of a medical problem.

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During Part 2, 38 out of 51 participants (75%) on marstacimab had at least 1 medical problem. One participant left the study because of a medical problem.

The most common medical problems – those reported by 5% or more participants – are described in **Table 2** on the following page.

Below are instructions on how to read Table 2.

Instructions for Understanding Table 2.

- The **1st** column of Table 2 lists medical problems that were commonly reported during the study. All medical problems reported by 5% or more participants are listed.
- The **2nd** column tells how many of the 51 participants who received marstacimab reported each medical problem. Next to this number is the percentage of the 51 participants who received marstacimab and reported the medical problem.
- The **3rd** column tells how many of the 60 participants who received standard treatment reported each medical problem. Next to this number is the percentage of the 60 participants who received standard treatment and reported the medical problem.
- Using these instructions, you can see that 11 out of the 51 participants (22%) who received marstacimab reported COVID-19. No participant who received standard treatment reported COVID-19.

Table 2. Commonly reported medical problems by study participants in Group 2 (with inhibitors)		
Medical Problem	**Marstacimab (51 Participants)**	**Standard treatment (60 Participants)**
COVID-19	11 out of 51 participants (22%)	0
Nose and throat infection	8 out of 51 participants (16%)	0
Headache	5 out of 51 participants (10%)	1 out of 60 participant (2%)
Increase in protein called Fibrin D dimer. It tells about the formation and breaking of blood clots.	5 out of 51 participants (10%)	3 out of 60 participants (5%)
Fever	4 out of 51 participants (8%)	1 out of 60 participant (2%)
Presence of protein in urine lab test	4 out of 51 participants (8%)	1 out of 60 participant (2%)
Tooth decay	4 out of 51 participants (8%)	1 out of 60 participant (2%)

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Table 2. Commonly reported medical problems by study participants in Group 2 (with inhibitors)		
Medical Problem	**Marstacimab (51 Participants)**	**Standard treatment (60 Participants)**
Increase in lab test value of alanine aminotransferase (ALT). It shows how the liver is functioning.	3 out of 51 participants (6%)	0
Increase in lab test value of a protein called prothrombin fragment 1.2. It tells about the formation of blood clots.	3 out of 51 participants (6%)	0
Infection of the parts of the body that collect and pass out urine	1 out of 51 participant (2%)	3 out of 60 participants (5%)

Did study participants have any serious medical problems?

A medical problem is considered “serious” when it is life-threatening, needs hospital care, or causes lasting problems.

For Group 1 (without inhibitors)

A total 11 out of 128 participants had serious medical problems.

- A total of 7 participants in the marstacimab group reported the following: ruptured eardrum, chest pain, swelling of the calf, infection of the tonsils, bleeding due to injury, bleeding into joint spaces, tumor of the membrane surrounding the brain and spinal cord, and bleeding.
- A total of 3 participants on standard treatment reported the following: bleeding in the stomach, inflammation of the food pipe and a blocked device that helps to access a patient's blood vessels, called veins.
- During screening, 1 participant had blood in the urine.

For Group 2 (with inhibitors)

A total 7 out of 60 participants had serious medical problems.

- One participant in the marstacimab group reported rash.
- A total of 5 participants on standard treatment reported the following: heart disease caused by narrowing or blockage of blood vessels supplying the heart muscle, vomiting, worsening of health condition, infection due to a medical device, bleeding due to injury, bleeding into joint spaces, bleeding into the muscles, and blood in the urine.
- During screening, 1 participant had damage to the joints.

Overall, no participant died during the study.

Where can I learn more about this study?

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

For more details on your study protocol, please visit:

www.pfizer.com/research/research_clinical_trials/trial_results	Use the protocol number **B7841005**

The full scientific report of this study is available online at

www.clinicaltrials.gov	Use the study identifier **NCT03938792**
www.clinicaltrialsregister.eu	Use the study identifier **2018-003660-31**

Please remember that researchers look at the results of many studies to find out which medicines can work and are safe for patients.

Again, if you or your child participated in this study, **thank you** for volunteering. We do research to try to find the best ways to help patients, and you helped us to do that!

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