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Summary of Clinical Trial Results

For Laypersons

A study to learn how effective and safe the study drugs ombitsavir, paritaprevir, ritonavir, with or without dasabuvir and with or without ribavirin are for children with long-lasting hepatitis C virus

Overall Summary

- Hepatitis C infection is a global health problem caused by a virus in the blood stream. Hepatitis C can cause liver disease, liver damage, and cancer.
- In this study, doctors tested medicines called ombitsavir (OBV), paritaprevir (PTV), ritonavir (RTV), dasabuvir (DSV), and ribavirin (RBV) for treating hepatitis C virus (HCV) infection.
- The medicines were tested in 64 young patients between the ages of 3 and 17 who had long-lasting HCV genotype 1 or 4 infection.
- This study was done in three parts. The main goals were to see how the body processed the study drug in patients with HCV genotype 1, to see if patients with HCV genotypes 1 or 4 achieved sustained virologic response (SVR), which means HCV was no longer found in the bloodstream of patients 12 weeks after taking the last dose of study drugs, and to see if patients who achieved SVR had a relapse (HCV found in the bloodstream after achieving SVR) or a new HCV infection.
- The study took place from October 2015 to November 2020 in 4 countries.
- Across the whole study, 98.4% of patients (63 patients) had no detectable HCV in the bloodstream 12 weeks after they finished treatment and there were no relapses or new HCV infections.
- The study showed that the level of drugs (drug concentration) in the blood stream in children were consistent with the safe and effective levels seen in adults.
- About 39.1% (25 patients) had side effects considered possibly related to OBV, PTV, or DSV and about 37.5% (24 patients) had side effects considered possibly related to RBV. The most common side effects were headache, itchiness, nausea, and tiredness.
- The results of this study may be used by researchers to further develop these medicines.
- If you participated in this study and have questions about your individual care, contact the doctor or staff at your study site.

1. General information about the study

1.1. What was the main objective of this study?

Hepatitis C virus (HCV) is a virus in the blood that can cause liver disease, liver damage, and cancer. Worldwide, around 11 million children under the age of 15 are infected with HCV. Although children represent a small part of the overall HCV population, many children have long-lasting HCV and are at risk for complications. Researchers are looking for a better way to treat HCV in young patients.

The medicines in this study are ombitsavir (OBV), paritaprevir (PTV), ritonavir (RTV), dasabuvir (DSV) and ribavirin (RBV).

OBV, PTV, and DSV are direct-acting antiviral agents (DAAs) which help stop the virus from multiplying. RTV is a booster drug for PTV which means that it helps the body break down PTV more slowly, so it stays in the body longer. RBV is an anti-viral medicine that works to treat HCV when taken with other medicines, like DAAs.

Researchers planned this study as a Phase 2/3 study which means the study included both a Phase 2 part and a Phase 3 part. Phase 2 studies test potential new treatments in a small number of patients with a condition or disease while Phase 3 studies test potential new treatments in a larger number of patients. This study was “open-label”, which means that both patients and study doctors knew which medicines were given to patients.

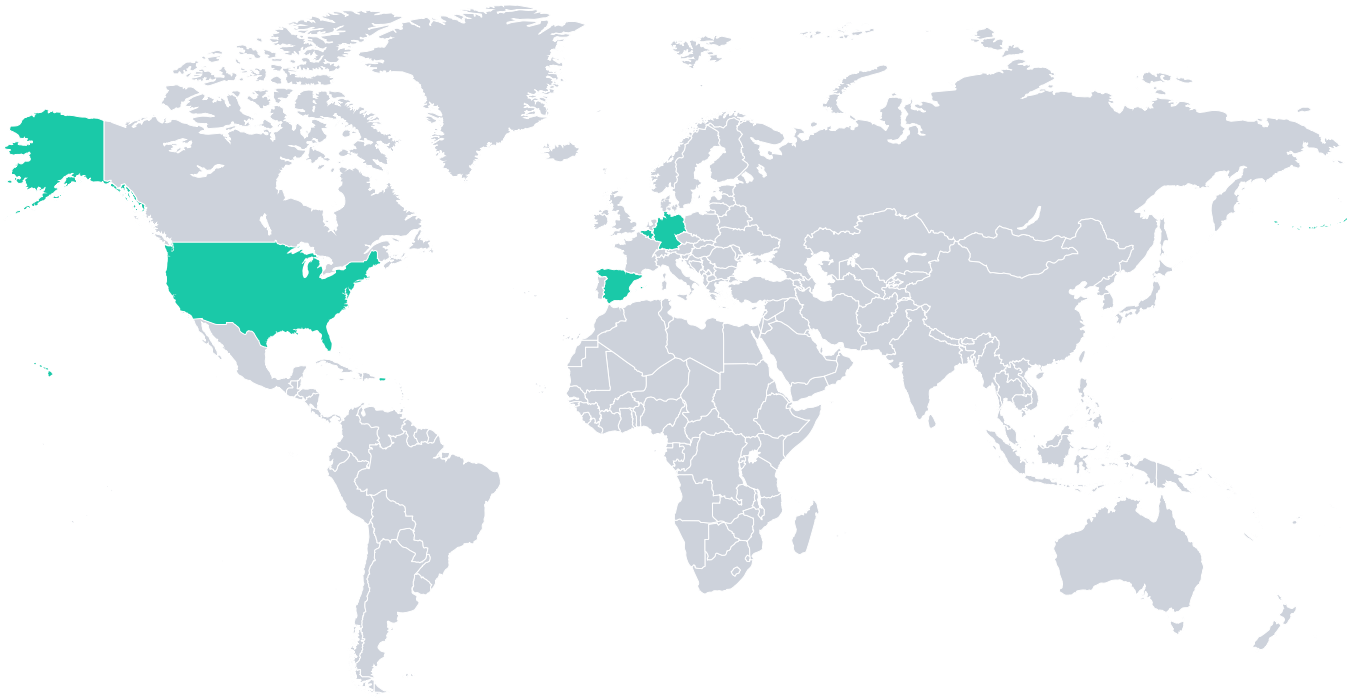
The main goals of the study were:

- To find out how the body processed the study drugs in patients with HCV genotype 1.
- To see if patients with HCV genotypes 1 or 4 achieved SVR 12 weeks after taking the last dose of study drug.
- To see if patients who achieved SVR had a relapse (HCV found in the bloodstream after achieving SVR) or a new HCV infection.

The study doctors also looked for any unwanted side effects patients may have had after starting treatment.

1.2. When and where was the study done?

This study took place from October 2015 to November 2020 in the following countries: Belgium, Germany, Spain, and the United States (including Puerto Rico).



2. What patients were included in this study?

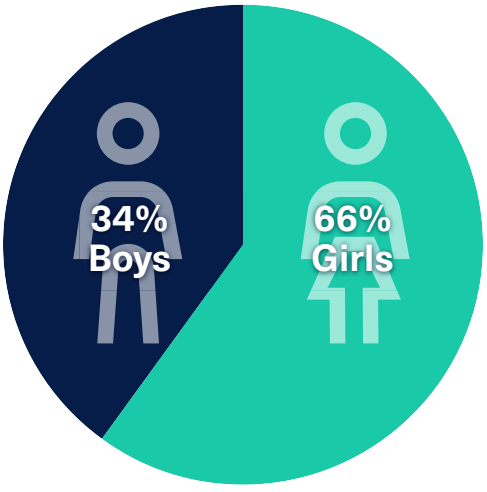
This study included 64 young patients with a confirmed diagnosis of HCV.

For Part 1, patients had HCV genotype 1, had never received prior treatment for their HCV, and did not have scarring of the liver (cirrhosis).

For Part 2, patients had HCV genotypes 1 or 4, and had either never received prior treatment for their HCV or received treatment with interferons (a type of medication for HCV), did not have scarring of the liver or had scarring of the liver without symptoms (compensated cirrhosis).

Part 3 included patients who completed Part 1 or Part 2.

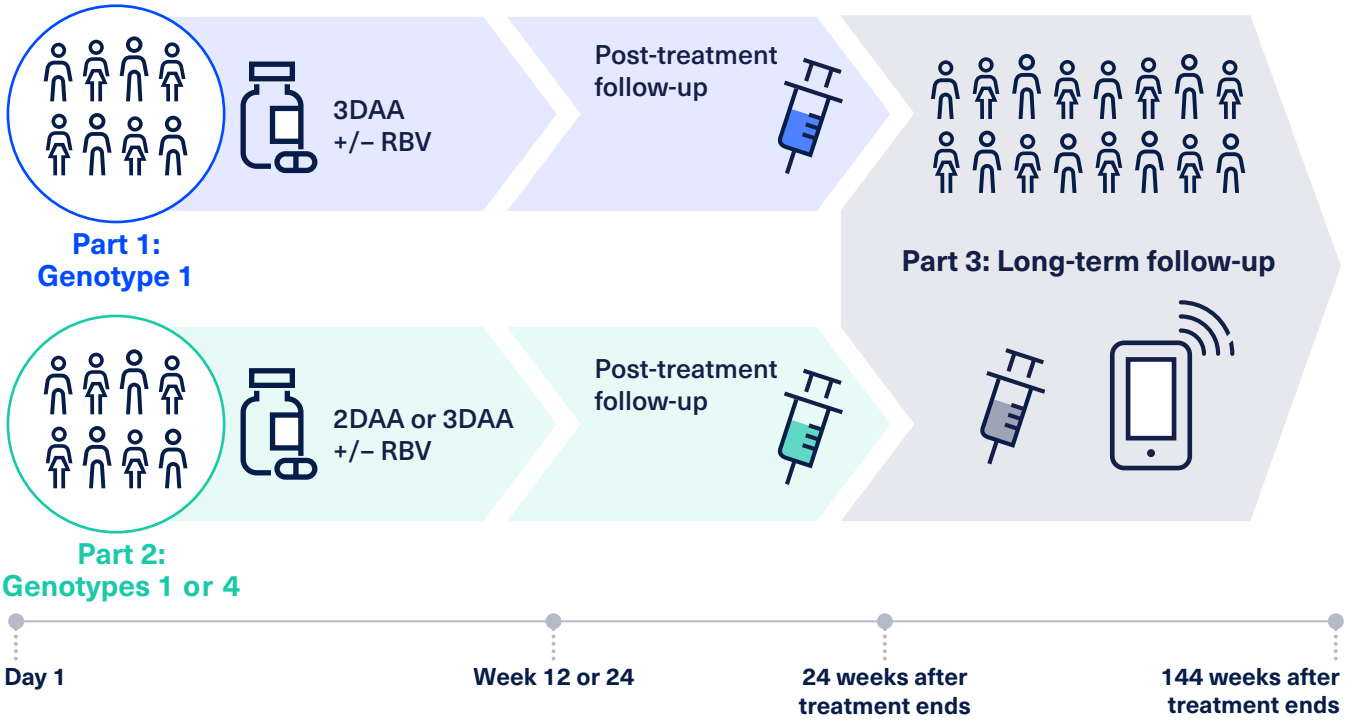
There were more girls (66%) than boys (34%) in this study with an age range of 3 to 17 years old.



3. Which medicines were studied?

The medicines in this study are ombitsavir (OBV), paritaprevir (PTV), ritonavir (RTV), dasabuvir (DSV) and ribavirin (RBV). The medicines were given as a tablet in either the adult formulation (set dose for each patient) or as a mini-tablet (dose based on body weight). Young patients between the ages of 3–11 were given RBV as an oral solution (liquid dose).

The diagram below shows how the study was organized.



4. What were the side effects?

Side effects are unwanted medical events that were considered by the study doctor to be at least possibly related to study drugs.

A side effect is serious if it leads to death, is life-threatening, puts a patient in the hospital, keeps a patient in the hospital for a long time, or causes a disability that lasts a long time.

- No patient had serious side effects during the study.
- No patient stopped taking the study drug because of side effects during the study.
- No patient died during the study.

About 39.1% of patients (25 patients) had side effects to DAA drugs (OBV, PTV, and DSV). About 37.5% of patients (24 patients) had side effects to RBV. The most common side effects were headache, itchiness, nausea, and tiredness.

	Adult Tablet or Mini-Tablet (64 Patients)	
	Related to DAA	Related to RBV
Number of patients with at least one side effect	25 (39.1% of patients)	24 (37.5% of patients)
Common Side Effects Side effects occurring in at least 2 patients		
• Tiredness	8 (12.5%)	9 (14.1%)
• Headache	8 (12.5%)	7 (10.9%)
• Itchiness	4 (6.3%)	6 (9.4%)
• Nausea	4 (6.3%)	5 (7.8%)
• Abdominal pain	3 (4.7%)	2 (3.1%)
• Decreased appetite	3 (4.7%)	3 (4.7%)
• Diarrhea	3 (4.7%)	2 (3.1%)
• Vomiting	3 (4.7%)	2 (3.1%)
• Cough	2 (3.1%)	2 (3.1%)
• Low red blood cell count (anemia)	1 (1.6%)	2 (3.1%)
• Rash	1 (1.6%)	2 (3.1%)
• Upper abdominal pain	2 (3.1%)	2 (3.1%)

5. What were the overall results of the study?

The study was completed as planned. Study doctors learned that the levels of study drugs in the blood stream (drug concentration) in patients weighing 15 kilograms (approximately 33 pounds) or more, were similar regardless of the weight of the child or adolescent and consistent with the safe and effective levels seen in adult patients. Drug concentration levels can impact clinical benefits of treatment and some side effects.

Of the 64 patients in the study, 63 had no detectable HCV in the blood stream 12 weeks after finishing treatment, called a sustained virologic response (SVR). Of the 63 patients who achieved sustained virologic response, no patient had HCV come back or new HCV infection during the course of the study.

6. How has the study helped patients and researchers?

The results of this study showed that HCV treatment with the adult tablets (for patients 12–17 years old) or mini-tablets (for patients 3–11 years old) was highly effective and well tolerated in young patients.

This summary only shows the results from this study, which may be different to the results from other studies.

7. Are there any plans for future studies?

There is a possibility for future studies of hepatitis C virus.

8. Who sponsored this study?

This study was sponsored by AbbVie. This summary was reviewed for readability by a patient advocacy group.

9. Where can I find out more information about this study?

Title of Study	An Open-Label, Multicenter Study to Evaluate the Pharmacokinetics, Safety, and Efficacy of Ombitasvir (OBV), Paritaprevir (PTV), Ritonavir (RTV) With or Without Dasabuvir (DSV) and With or Without Ribavirin (RBV) in Pediatric Subjects With Genotype 1 or 4 Chronic Hepatitis C Virus (HCV) Infection (ZIRCON)
Protocol Number	M14-748
Clinicaltrials.gov	NCT02486406 https://clinicaltrials.gov/ct2/show/NCT02486406?term=m14-748&draw=2&rank=1
EudraCT	2015-000111-41 https://www.clinicaltrialsregister.eu/ctr-search/search?query=2015-000111-41
Study Sponsor	AbbVie, Inc. Phone: +1 800-633-9110 Email: abbvieclinicaltrials@abbvie.com

Thank You

AbbVie wants to thank all the participants for their time and effort that went into making this study possible.

Clinical study participants help advance science!