

a series of fact sheets written
by experts in the field of liver
disease

Drugs in Development:

Boceprevir (Victrelis™)

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Boceprevir (Victrelis™) is an HCV protease inhibitor that recently completed two phase 3 clinical trials. The top-line results from two studies were released in July 2010 and this fact sheet will provide the information that was released by Merck. It is important to know that the data that was released is limited and it doesn't really give us the information that we need to completely understand the efficacy, safety and tolerability of boceprevir. But the information is a good starting point and as more data is released I will update the fact sheet

Note: HCSP has developed separate fact sheets for telaprevir and boceprevir because the studies were not head-to-head studies—that is they did not directly compare the drugs. Additionally, it is difficult to compare the results of the studies because the clinical trials were designed using different criteria such as differences in on-treatment response guidance rules, lead-in phase vs. no lead-in phase, different brands of pegylated interferon and different periods of treatment duration.

HCV SPRINT- 2

The SPRINT-2 study included 1,097 HCV genotype 1 treatment-naïve patients (never been treated). The treatment protocol consisted of a **4 week lead-in phase of PegIntron plus ribavirin (without boceprevir)**, followed by the triple combination of boceprevir, PegIntron and ribavirin.¹ Duration and continuation of treatment was guided by the type of on-treatment response to the medications.*

All Patients—Treatment Response

The SVR or sustained virological response rates (HCV RNA negative 24 weeks after the last dose of medicine is taken) by different treatment arms are listed below:

- a. If HCV RNA (viral load) negative at week 8 through week 24, triple therapy was continued for a **total treatment duration of 28 weeks**; sustained virological response (SVR) = **63%**
- a. If HCV RNA positive at week 8 but undetectable at week 24, boceprevir was stopped at week 28 and PegIntron/ribavirin combination therapy (without boceprevir) was continued for a **total treatment duration of 48 weeks**; **SVR = 66%**
- a. The control arm was standard of care – PegIntron plus ribavirin—with a **treatment duration of 48 weeks**; **SVR = 38%**

African Americans/Blacks—Treatment Response

There were also 159 African American/Black patients in the study—African Americans/Blacks comprised 15% of the patient population in this trial. The SVR rates by different treatment arms are listed below:

- a. If HCV RNA negative at week 8 through week 24, triple therapy was continued for a **total treatment duration of 28 weeks**; **SVR = 42%**
- a. If HCV RNA positive at week 8 but undetectable at week 24, boceprevir was stopped at week 28 and PegIntron/ribavirin combo therapy without boceprevir) was continued for a **total treatment duration of 48 weeks**; **SVR = 53%**
- a. The control arm was standard of care – PegIntron plus ribavirin—with a **treatment duration of 48 weeks**; **SVR = 23%**

*If any patients were HCV RNA positive at week 24 all treatment was stopped.

HCV RESPOND 2

The RESPOND 2 study included 403 HCV genotype 1 “treatment-failure” patients. The study included a **4 week lead-in phase of PegIntron plus ribavirin (without boceprevir)**, followed by the triple combination of boceprevir, PegIntron and ribavirin¹ and treatment duration was based on type of on-treatment response. The SVR

rates and duration of treatment periods for all patients are listed below.

- a. If HCV RNA negative at week 8 and at week 12 the **total treatment duration was 36 weeks; SVR = 59%**
- a. If HCV RNA positive at week 8, but undetectable at week 12, boceprevir was stopped at week 36 and the combination of PegIntron/ribavirin was continued for a **total treatment duration of 48 weeks; SVR = 66%**
- a. Control arm was standard of care – combination of PegIntron plus ribavirin—for a **total treatment duration of 48 weeks; SVR = 21%**

*If any patients were HCV RNA positive at week 12 all treatment was stopped.

It is important to know that the treatment duration in the boceprevir containing arms were 28, 36 or 48 weeks depending on the type of on-treatment response.


The side effects in both studies were similar across all treatment arms except that anemia was 20 to 27% higher in the arms that included boceprevir. The discontinuation rate from all side effects was similar across arms, including the boceprevir containing arms. The use of erythropoietin (a growth factor used to treat anemia) was allowed, which may explain the low discontinuation rate due to anemia.

Merck/Schering announced that boceprevir has been granted expedited review in the United States and Europe.

For more information about hepatitis C, hepatitis B and HCV coinfections, please visit www.hcvadvocate.org.

• *hcsPFACTsheet* •
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HCV ADVOCATE
www.hbvadvocate.org

Approval of the boceprevir, pegylated interferon plus ribavirin treatment combination is expected mid-2011 in the United States.

¹ Boceprevir (800 mg three times a day), PegIntron (1.5 mcg/kg/week) and ribavirin (600-1,400 mg day)

Quick Reference Guide:

Summary—Top Line Results:

- **Both trials included** a 4 week lead-in phase of pegylated interferon plus ribavirin (without boceprevir)
- **In the two studies**, boceprevir increased the rate of anemia, but it did not mean that more people stopped taking therapy. The use of a growth factor to control anemia was allowed.
- **Only people with Genotype 1 were treated** – either treatment-naïve (people who had never been treated) or people who had “failed” a previous course of HCV therapy.

Treatment Naïve (never been treated):

- The 4 week lead-in was followed by the triple combination of boceprevir, pegylated interferon, ribavirin—treatment duration was guided by on-treatment response—either 28 weeks or 48 weeks
- SVR or cure rates:
 - ◆ 63% SVR in the group of people who received a total of 28 weeks of treatment
 - ◆ 66% SVR in the group of people who received a total of 48 weeks of treatment

Treatment failure (people who failed a previous course of therapy)

- The 4 week lead-in phase was followed by the triple combination of boceprevir, pegylated interferon, ribavirin—treatment duration was guided by on-treatment response—either 36 weeks or 48 weeks
- SVR or cure rates:
 - ◆ 59% SVR in the group of people who received a total of 36 weeks of treatment
 - ◆ 66% SVR in the group of people who received a total of 48 weeks of treatment

Source: Merck press release
