# Retreatment with sofosbuvir/velpatasvir/voxilaprevir in patients with chronic hepatitis C virus infection and prior DAA failure – an analysis from the German Hepatitis C-Registry (DHC-R)

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## BACKGROUND AND AIMS

Chronic hepatitis C virus (HCV) infection can be cured with all-oral direct-acting antivirals (DAAs) in >90% of patients. There are only few patients in whom DAA treatment fails. Re-treatment options for patients with DAA failure are limited. In Europe, the fixed dose combination of sofosbuvir/velpatasvir/voxilaprevir (SOF/VEL/VOX) given for 12 weeks is the only approved DAA regimen for patients in whom HCV NS5A inhibitor-based therapy has failed.

Aim of the present analysis was to evaluate the efficacy and tolerability of SOF/VEL/VOX under real-world conditions.

## METHODS

The DHC-R (German Hepatitis C-Registry) is a national multicenter real-world cohort including about 15,500 patients recruited by more than 250 centers (approx. 90% physicians in private practice). For the present analysis, all consecutive patients enrolled in the DHC-R who were retreated with SOF/VEL/VOX were analyzed (as of Jan 20, 2019).

## RESULTS

Retreatment with SOF/VEL/VOX was initiated in 110 patients with prior DAA failure. Among these, four patients received RBV (GT1b, n=2; GT3, n=2) as part of their treatment.

Patients were infected with HCV genotypes (GT) 1, 3, and 4 in 65%, 31% and 5%, respectively (Table 1).

Prior DAA regimens included among others LDV/SOF±RBV (n=35), PrOD±RBV (n=30), VEL/SOF±RBV (n=18), GZR/EBR (n=8), DCV+SOF±RBV (n=13), SOF±RBV (n=2), SMV+SOF+RBV (n=1), and G/P (n=1).

The median age was 54.0 years, 86% were male and 27% had compensated cirrhosis. So far, end-of-treatment virological response was 98,6% (data available for 69 patients).

At the time of data analysis, 94,9% (74/78) had achieved SVR12 (ITT). No FU12 HCV RNA results were available in 4 patients. The PP SVR12 rate was 100% (Figure 1).

**Table 1: Baseline characteristics**

| | N=110 (100%) |
|---|---|
| Age, median (IQR) | 54.0 (16) |
| Sex, male, n (%) | 94 (86) |
| BMI (kg/m²), mean | 28.3* |
| HCV Genotype, n (%) | |
| 1 | 71 (65)** |
| 3 | 34 (31) |
| 4 | 5 (5) |
| Cirrhosis, n (%) | 30 (27) |
| decompensated, n/N (%) | 10/30 (33)*** |
| Pre-treatment, n (%) | |
| SOF/LDV±RBV | 35 (32) |
| PrO±D±RBV | 30 (27) |
| SOF/VEL±RBV | 18 (16) |
| Other# | 27 (25) |
| Months since pre-treatment | 21.2±11.4 |

Abbreviations: IQR, interquartile range; BMI, body mass index; HCV, hepatitis C virus; RBV, ribavirin; SOF/LDV, sofosbuvir/ledipasvir; PrOD, ombitasvir/paritaprevir ± dasabuvir
*mean BMI of all DHC-R patients (n=12,037): 25.9 kg/m²
**GT1a: n=36, GT1b: n=34, GT1 subtype unknown=1) #SOF±RBV, simeprevir (SMV)+SOF+RBV, grazoprevir/elbasvir, glecaprevir/pibrentasvir, daclatasvir (DCV)+SOF±RBV, DCV+SMV, telaprevir+interferon+RBV
*** SOF/VEL/VOX is not recommended in patients with decompensated cirrhosis

SOF/VEL/VOX was well-tolerated and adverse events were comparable to those seen in patients treated with other DAAs (Table 2). The most frequent adverse events included fatigue (14%) and headache (10%), nausea (9%), and diarrhea (9%).

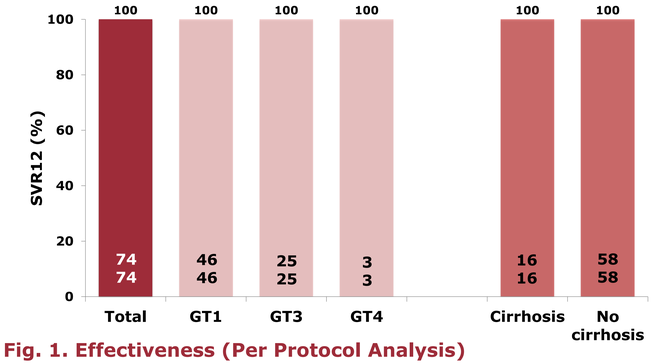


**Fig. 1. Effectiveness (Per Protocol Analysis)**

**Table 2: Safety summary**

| | N=110 (100%) |
|---|---|
| No adverse event | 55 (50) |
| Fatigue | 15 (14) |
| Headache | 11 (10) |
| Nausea | 10 (9) |
| Diarrhea | 10 (9) |

Severe adverse events were documented in 6 patients and included urothelial carcinoma, abdominal hernia, cholecystectomy, acute-on-chronic liver failure, hepatorenal syndrome, and variceal bleeding. One patient discontinued therapy prematurely and died two months later (no causal relationship with SOF/VEL/VOX documented).

**CONCLUSIONS**

- **Retreatment with SOF/VEL/VOX was highly effective.**
- **No virologic failures have been reported so far.**
- **SOF/VEL/VOX was well-tolerated, AEs were comparable to those seen in patients treated with other DAAs.**

DHC-R Deutsches Hepatitis C-Register — Leberstiftungs-GmbH

Data were derived from the **German Hepatitis C-Registry** (Deutsches Hepatitis C-Register), a project of the German Liver Foundation (Deutsche Leberstiftung), managed by Leberstiftungs-GmbH Deutschland in cooperation with the Association of German gastroenterologists in private practice (bng).

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**DISCLOSURES**

Details of individual authors`disclosures can be found in the abstract book.

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