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Global Real World Evidence of Sofosbuvir/Velpatasvir As a Simple, Effective Regimen for the Treatment of Chronic Hepatitis C Patients: Integrated Analysis of 12 Clinical Practice Cohorts

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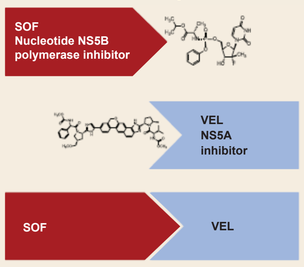
Introduction

- The WHO estimates that 71 million people are chronically infected with hepatitis C (HCV) globally and has a goal to eliminate **HCV by 2030**
- The availability of new **pangenotypic regimens** now provides healthcare practitioners worldwide with the opportunity to considerably simplify, and thereby facilitate, treatment access
- SOF/VEL is a pangenotypic, panfibrotic, protease inhibitor (PI)-free, single duration, single tablet regimen (STR), offering **a simplified treatment** option to address this goal
- **12 weeks of sofosbuvir/velpatasvir** is approved to treat a large variety of patients
- This **integrated analysis of real-world data** from clinical practice cohorts representing a heterogeneous patient population evaluates the efficacy of SOF/VEL for 12 weeks, without ribavirin (RBV), in patients with HCV across all genotypes (GT) and fibrosis stages, including patients with compensated cirrhosis (CC)

Sofosbuvir/Velpatasvir: A Single Tablet Regimen (STR)



- Sofosbuvir (SOF)[4,5]
  - Potent antiviral activity against HCV GT[1-6]
- Velpatasvir (VEL)[6-8]
  - Highly effective in GT[1-6]
  - 2nd-generation NS5A inhibitor with improved resistance profile
- SOF/VEL Single Tablet Regimen (STR)
  - Once daily, single tablet, single duration (Oral (400/100 mg)
  - Take with or without food

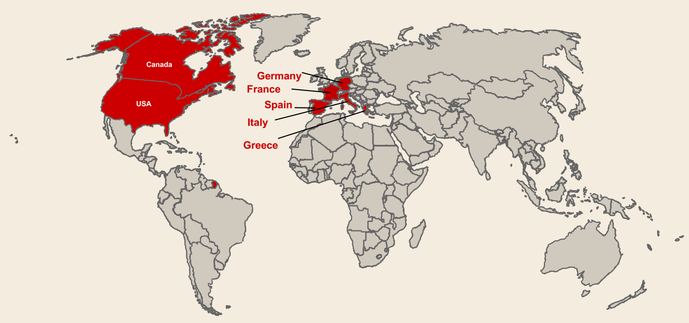
Gilead Sciences Pty Ltd. Epclusa®(sofosbuvir/velpatasvir) Australian Product Information, 21 June 2019.

Objectives

- To evaluate the real world effectiveness of SOF/VEL for 12 weeks as a simple treatment in a large heterogenous patient population covering different countries & geographies

Methods

Collaboration Between 12 Cohorts in 7 Countries Across EU, North-America and Canada



Canada: 3 cohorts; France: ANRS Hepather & HELIOS; US: TRIO & TARGET; Italy: 2 cohorts; Greece: 1 cohort; Germany: DHC-R; Spain: 1 cohort

- Patients were treated in **different clinical settings,** including university hospitals, community centers, outpatient clinics and private practices
- Adults were **treated according to local standards of care**, with CC determined by the treating physician according to local clinical practice
- **GT1-6 patients** with CC or without CC (NC), treatment naïve (TN) or treatment experienced (TE) [pegIFN+RBV ±PI], who initiated SOF/VEL for 12 weeks were included
- Patients with a history of decompensation, prior NS5A inhibitor exposure, treatment duration >12 weeks or addition of RBV were excluded
- For patients who completed treatment and with virological outcome data available before end of February 2019, sustained virological response (SVR; ≥12 weeks after end-of-treatment) was assessed

Country of Origin

5541 patients were included
Country of origin may differ from site and country where patient was treated

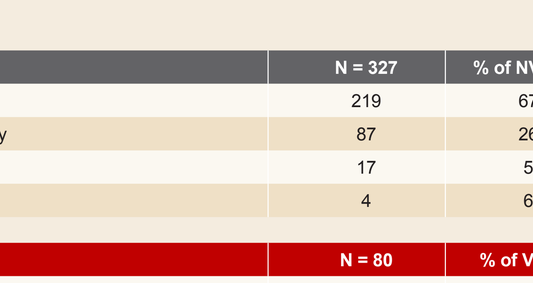
Results

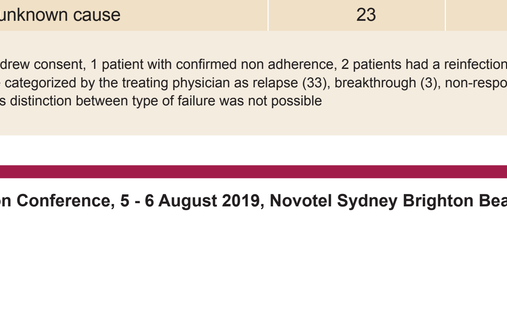
Patient Characteristics

5541 patients were included

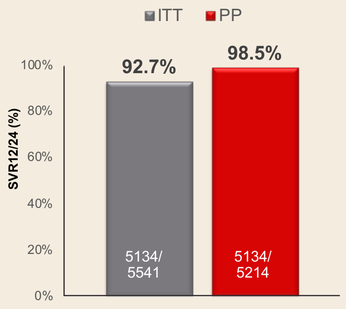
Characteristic – N(%)§	ITT (N=5340*)
Age – mean (SD)	54 (13.1)
Male	2822 (52,8%)
Ethnicity#: Caucasian - White / African American - Black/ Asian / Hispanic / Other¥ / Not documented	3511 (73.2%) / 129 (2.7%) / 99 (2.1%) / 59 (1.2%) / 53 (1.1%) / 946 (19.7%)
Documented HIV/HCV coinfection	196 (3.7%)
Documented former or ongoing IV drug use	706 (13.2%)
Documented PPI use at Baseline	287 (5.4%)
TE (pegIFN + RBV ± PI)	660 (12.4%)
Compensated cirrhosis	1108 (20.7%)
GT3	1771 (33.2%)
GT3 compensated cirrhosis	189 (10.7%)

§Total number of patients varies across the characteristics, due to missing data
*Data from 1 cohort were not included in the ITT demographics analysis, due to missing data
#Ethnicity determined in 4797 patients, due to missing data.
¥Ethnicitiy defined as 'Other': indigenous (4); Hawaiian (3); American-Indian (2)





Overall SVR 12/24 Results



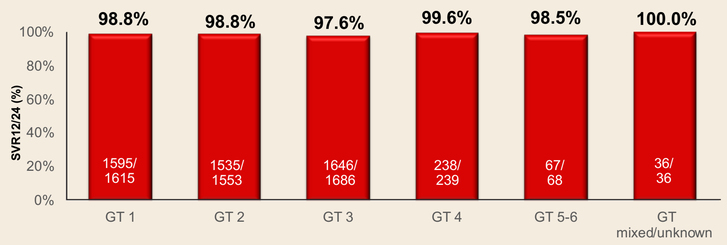
- 407 patients did not achieve SVR12/24 (7.3%)
  - **Overall non-virological failure rate 5.9%** (327/5541)
  - **Overall virological failure rate 1.4%** (80/5541)

Non VF	N = 327	% of NVF Failure
LTFU	219	67.0%
D/C early	87	26.6%
Death	17	5.2%
Other*	4	6.4%

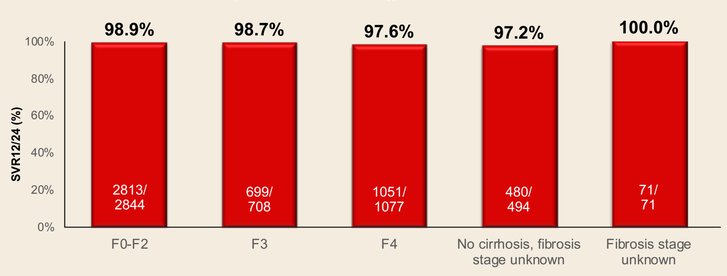
VF	N = 80	% of VF Failure
VF*	57	71.3%
Failure, unknown cause	23	28.7%

#1 patient withdrew consent, 1 patient with confirmed non adherence, 2 patients had a reinfection
*Patients were categorized by the treating physician as relapse (33), breakthrough (3), non-responder (12). For 23 patients distinction between type of failure was not possible

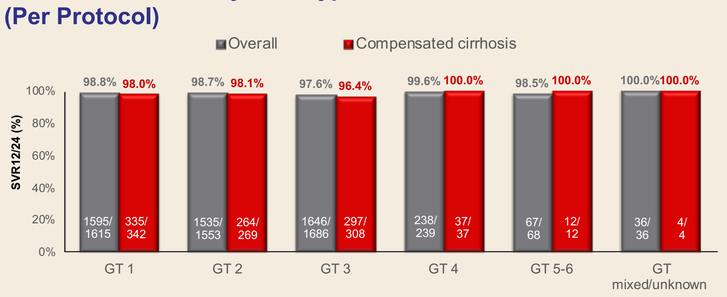
SVR 12/24 Results by Genotype (Per Protocol)



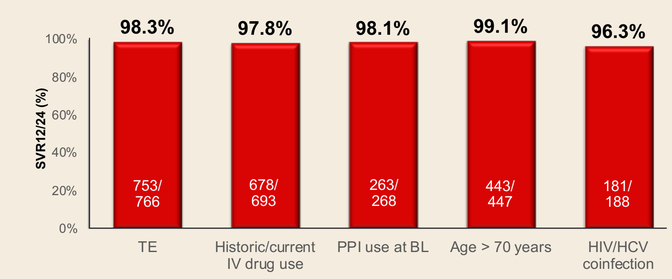
SVR 12/24 Results by Fibrosis Stage (Per Protocol)



SVR 12/24 Results by Genotype and Presence of Cirrhosis (Per Protocol)



SVR 12/24 Results for Other Populations (Per Protocol)



Information on SVR per age category was available for 4557 patients (PP), HIV status unknown in 205 patients (PP), Information on IV drug use missing in 2524 patients (PP), Information on PPI use missing in 2510 patients (PP)

Conclusions

- This is the **largest real world cohort treated with SOF/VEL**
- High effectiveness of SOF/VEL in a large **diverse patient population**, regardless of:
  - Genotype
  - Fibrosis stage
  - Treatment history (pegIFN + RBV ± PI)
  - Patient characteristics (IV drug use, PPI use, older age, HIV/HCV Co-infection)
- Lost to Follow-Up is the main reason for not achieving SVR (4%)
- **Simplification of HCV Care Cascade** is possible with SOF/VEL
- A Test and Treat strategy with SOF/VEL may further improve HCV care

Abbreviations

BL = baseline
CC = compensated cirrhosis
D/C = discontinuation
F = fibrosis score
FN = pegylated interferon
GT = genotype
IV = intravenous
LTFU = lost to follow up
PI = protease inhibitor
PPI = proton pump inhibitor
RBV = ribavirin
SD = standard deviation
TE = patients previously treated with pegIFN + RBV ± protease inhibitor
VF = virological failure

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