



#### BACKGROUND

Sofosbuvir/Velpatasivr/Voxilaprevir (SOF/VEL/VOX) is approved for retreatment of hepatitis C (HCV) patients with a previous failure to direct-acting antivirals (DAA), however real-life data are still limited.

## OBJECTIVES

Aim of the study was to assess effectiveness and safety of SOF/VEL/VOX combination in an Italian real-life setting.

#### MATERIALS & METHODS

HCV patients consecutive All receiving SOF/VEL/VOX between May-October 2018 in 27 centers in Northern Italy were enrolled.

Bridging fibrosis and cirrhosis were diagnosed by liver stiffness measurement (LSM): >10 and >13 kPa for F3 and F4, respectively.

Sustained virological response (SVR) was defined as undetectable HCV-RNA 4 (SVR4) or 12 (SVR12) weeks after the end of treatment (EOT).

Resistance associated substitution (RAS) testing was performed by direct sequencing (threshold 15%).

#### Epidemiologic the 179 patier

#### Patients

Age, years

Males

BMI, Kg/m<sup>2</sup>

**IFN Experience** 

LSM, kPa

Fibrosis: F0-F2 F3

F4

CPT score: A5 A6

**Esophageal var** Previous HCC

HCV genotype

HCV-RNA, IU/I

Bilirubin, mg/

ALT, U/L

 $PLT, 10^{3}/mm^{3}$ 

Albumin, g/dL

INR

eGFR, mL/min

HIV / HBV

Diabetes / AH

Values expressed as n (%) or median (range); \* Calculated in 79 patients; §Genotype: 1b 58 (32%), 1a 43 (25%), 1nc 2 (1%); °according to MDRD (Modification of Diet in Renal Disease) formula, BMI: Body Mass Index: IFN: Interferon: LSM: Liver Stiffness Measurement: NA: Not Available; CPT: Child Pugh-Turcotte; HCC: hepatocellular carcinoma; PLT: platelets; INR: international standardized ratio; eGFR: estimated glomerular filtration rate; AH: arterial hypertension

#### EFFECTIVENESS AND SAFETY OF SOFOSBUVIR/VELPATASVIR/VOXILAPREVIR FOR **RETREATMENT OF CHRONIC HEPATITIS C PATIENTS WITH A PREVIOUS FAILURE** TO DIRECT-ACTING ANTIVIRALS: A REAL-LIFE STUDY FROM THE NAVIGATORE LOMBARDIA AND VENETO NETWORKS

E. Degasperi<sup>1</sup>, A. Spinetti<sup>2</sup>, A. Lombardi<sup>3</sup>, S. Landonio<sup>4</sup>, P. G. Scotton<sup>5</sup>, L. Pasulo<sup>6</sup>, P. Pozzoni<sup>7</sup>, A. Giorgini<sup>8</sup>, P. Fabris<sup>9</sup>, A. Romano<sup>10</sup>, L. Lomonaco<sup>11</sup>, M. Puoti<sup>12</sup>, M. Vinci<sup>13</sup>, F. Gatti<sup>14</sup>, G. Carolo<sup>15</sup>, A. Zoncada<sup>16</sup>, P. Bonfanti<sup>17</sup>, F. P. Russo<sup>18</sup>, A. Aghemo<sup>19</sup>, A. Soria<sup>20</sup>, R. Centenaro<sup>21</sup>, F. Maggiolo<sup>6</sup>, P. Rovere<sup>22</sup>, S. Piovesan<sup>23</sup>, V. Paon<sup>24</sup>, G. Faggiano<sup>25</sup>, A. Vario<sup>26</sup>, G. Grossi<sup>27</sup>, R. Soffredini<sup>1</sup>, C. Carriero<sup>2</sup>, S. Paolucci<sup>28</sup>, F. Noventa<sup>29</sup>, A. Alberti<sup>23</sup>, P. Lampertico<sup>1</sup>, S. Fagiuoli<sup>6</sup>

cal	and	clinical	characte	eristics	of
nts	enro	lled are	shown ii	n Table	1.

	Overall (n=179)
	57 (18-88)
	132 (74%)
	25 (16-45)
ed	52 (29%)
	10.2 (3.5-63.9)
	57 (32%)
	38 (21%)
	79 (44%)
	64 (81%)*
	14 (18%)
rices	25 (32%)*
	16 (9%)
	103 (58%) <sup>§</sup>
	18 (10%)
	42 (23%)
	16 (9%)
ml	1,081,817
	(482-25,590,000)
dL	0.7 (0.3-5.7)
	54 (10-538)
	154 (35-539)
-	4.2 (2.8-5.1)
	1.0 (0.9-3.5)
n/1.73m²°	93 (41-150)
	25 (14%) / 2 (1%)
	25 (14%) / 47 (26%)

patients carried resistance Overall, 82% OŤ associated substitutions (RAS) in the NS3, NS5A or NS5B regions (Figure 1).



schedules.



<sup>1</sup>CRC A.M. e A. Migliavacca Center for Liver Diseases, Gastroenterology and Hepatology, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Università degli Studi di Milano, Milan, Italy; <sup>3</sup>Infectious Diseases, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Università degli Studi di Milano, Milan, Italy; <sup>4</sup>Infectious Diseases, Sacco Hospital, Milan, Italy; <sup>5</sup>Infectious Diseases, Treviso Hospital, Treviso, Italy; <sup>6</sup>Bergamo HCV Network, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hospital, Vicenza, Italy; <sup>10</sup>Internal Medicine and Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Diseases, Santorso Hepatology, ASST Santi Paolo e Carlo, Milan, Italy; <sup>9</sup>Infectious Dise Department of Medicine, University of Padova, Italy; <sup>11</sup>Gastroenterology, Bussolengo Hospital, Verona, Italy; <sup>12</sup>Infectious Diseases, ASST Grande Ospedale Metropolitano Niguarda, Milan, Italy; <sup>14</sup>Hospital Pharmacy, ASST Ovest Milanese, Legnano (MI), Italy <sup>15</sup>Infectious Diseases, University of Verona, Verona, Italy; <sup>16</sup>Infectious Diseases, ASST Cremona, Verona, Italy; <sup>19</sup>Internal Medicine and Hepatology, IRCCS Humanitas Research Hospital, Humanitas University, Pieve Emanuele (MI), Italy; <sup>20</sup>Infectious Diseases, San Gerardo Hospital, ASST Monza, Monza, Monza, Monza, Monza, Vizzolo Predabissi (MI), Italy; <sup>21</sup>Internal Medicine, ASST Melegnano Martesana, Vizzolo Predabissi (MI), Italy; <sup>24</sup>Internal Medicine, University of Verona, Italy; <sup>23</sup>Department of Molecular Medicine, University of Padova, Italy; <sup>24</sup>Internal Medicine, University of Verona, Italy; <sup>24</sup>Internal Medicine, University of Padova, Italy; <sup>24</sup>Internal Medicine, University of Verona, Italy; <sup>24</sup>Internal Medicine, University, <sup>24</sup>Internal Medicine, <sup>24</sup>Internal Medicine, <sup>24</sup>Internal Medicine, <sup>24</sup>Internal Medicine, <sup>24</sup>Internal Medicine, <sup>24</sup>Inter <sup>25</sup>Infectious Diseases, Rovigo Hospital, Italy; <sup>26</sup>Hepatology, ULSS 17 Veneto Hospital, Este (PD), Italy; <sup>28</sup>Molecular Virology Unit, Microbiology and Virology Department, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy; <sup>29</sup>QUOVADIS no profit Association,

## RESULTS

#### Patients received SOF/VEL/VOX for 12 weeks, Ribavirin (RBV) was added in 22% of treatment

#### Cirrhosis (p=0.03) and detectable HCV-RNA at treatment week 4 (p=0.03) were associated with treatment failure.



hyperbilirubinemia (6%) and anemia (3%).

SOF/VEL/VOX is an effective and safe retreatment for HCV patients failing a previous DAA course in a real-life setting.

Sarrazin C, et al. J Hepatol 2018; 69:1221-1230 Bourlière M, et al. NEJM 2017;376:2134-2146

## **CONTACT INFORMATION**

Division of Gastroenterology and Hepatology, IRCCS Ospedale Maggiore Policlinico, Milan, Italy <u>elisabetta.degasperi@unimi.it</u>



## CONCLUSIONS

# REFERENCES



