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COMMON ACTION AGAINST HIV/TB/HCV ACROSS THE REGIONS OF EUROPE

Real-world effectiveness and factors associated with SVR12 in a diverse population of HCV infected persons from four large European Cohorts

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INTRODUCTION

Data on HCV treatment outcomes from real-life cohorts have mainly come from single national cohorts of limited size.

AIM

To investigate the effectiveness of direct-acting antivirals (DAA) and factors associated with achieving a sustained virological response (SVR) in a large diverse real-life population of HCV infected persons.

METHODS

We pooled data from four HCV cohorts participating in the CARE Consortium: Georgian National HCV Cohort, n=54,557; InfCare Hepatitis, Sweden, n=15,266; Tuscany, Italy, n=5,053; EuroSIDA, n=1,413 (European cohort of HIV/HCV coinfected.

All participants, who initiated INF-free DAA treatment, and had ≥12 weeks of follow up after end of treatment (EOT) were included. SVR12 was defined as undetectable HCV-RNA ≥12 weeks after EOT. Logistic regression was used to examine factors associated with SVR12 among those with known SVR12 status.

RESULTS

- Among 76,289 persons starting DAA, the median age was 48 years, 75% were males, 48% had genotype 1 and 14% had cirrhosis (F4). The most commonly used DAA regimens were sofosbuvir/ledipasvir without ribavirin (36%) or with ribavirin (33%).
- A total of 58,461 (76.6%) persons had known SVR12 status and were included for further analyses.
- Participants with unknown SVR12 status were generally similar to those with known SVR12 status, but more likely to be from Georgia, male, younger, have F3/F4 fibrosis and started DAA in 2017 or later.
- Overall, 55,427/58461 (94.8%, 95% confidence interval 94.6-95.0) achieved SVR12. The SVR12 rate was 94.4% in Georgia, 96.4% in Italy, 95.7% in Sweden and 92.9% in EuroSIDA.

RESULTS ctd

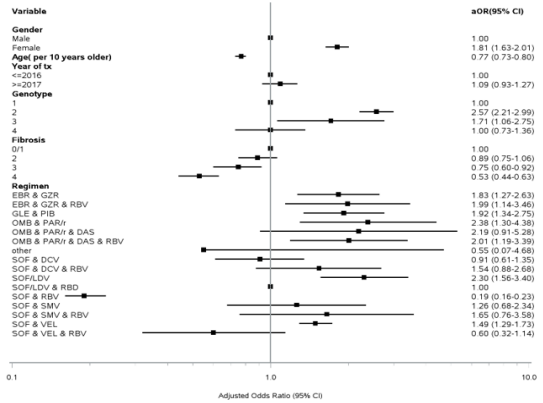
- SVR12 rates were higher among females (96.6%) vs. males (94.1%) and decreased by age (97.2% in <40 years, 95.7% in 40-44 years, 94.3% in 45-49 years, 93.5% in 50-54 years, 93.5% in >55 years) and each stage of fibrosis (F0/F1=96.5%, F2=95.6%, F3=92.9%, F4=85.6%), but did not differ by genotype (GT1: 94.9%, GT2: 94.9%, GT3: 94.5%, GT4: 94.9%). SVR12 for individual DAA regimens are shown in **table 1**.

Table 1. SVR12 for different DAA regimens

	All		Cirrhotics	
	N	SVR12 (%)	N	SVR12 (%)
Elbasvir/grazoprevir	3402	96.1	248	94.0
Elbasvir/grazoprevir & ribavirin	122	95.1	39	100
Glecaprevir/pibrentasvir	1390	97.2	101	95.1
Ombitasvir & paritaprevir/ritonavir	210	96.2	30	90.0
Ombitasvir & paritaprevir/ritonavir & dasabuvir	343	96.2	34	94.1
Ombitasvir & paritaprevir/r & dasabuvir & ribavirin	261	95.4	61	93.4
Other	13	84.6	5	100
Sofosbuvir & daclatasvir	1181	93.1	348	89.9
Sofosbuvir & daclatasvir & ribavirin	942	95.4	446	96.0
Sofosbuvir/ledipasvir	21271	96.9	1853	93.4
Sofosbuvir/ledipasvir & ribavirin	18862	96.0	1886	89.7
Sofosbuvir & ribavirin	3512	71.2	2042	66.1
Sofosbuvir & simeprevir	609	91.6	249	91.2
Sofosbuvir & simeprevir & ribavirin	182	92.9	97	91.8
Sofosbuvir/velpatasvir	5942	97.1	566	93.5
Sofosbuvir/velpatasvir & ribavirin	219	90.0	114	88.6

- Adjusted odds ratios for factors associated with SVR12 are shown in **figure 1.**

Figure 1: Odds of achieving SVR12 in those with a known treatment outcome

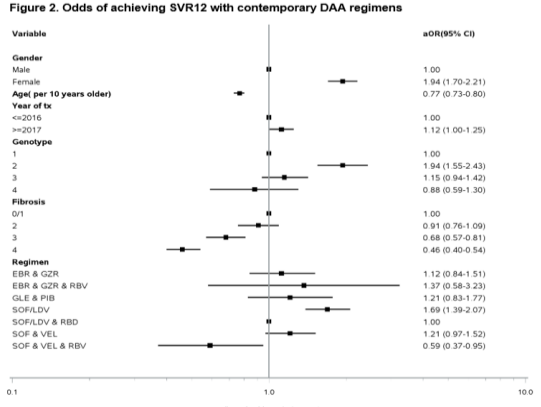


Model is adjusted for factors shown and cohort. Abbreviations: EBR: elbasvir; GZR: grazoprevir; RBV: ribavirin; GLE: glecaprevir; PIB: pibrentasvir; OMB: ombitasvir; PAR/r: paritiitaprevir/ritonavir; DAS: dasabuvir; SOF: sofosbuvir; DCV; daclatasvir; LDV: ledipasvir; SMV: simeprevir; VEL: velpatasvir

RESULTS ctd

- Among 51,208 individuals on contemporary DAA regimens (EBR/GZR, GLE/PIB, SOF/LDV, SOF/VEL) the SVR12 rate was 96.5% overall, and 92.0% among those with cirrhosis.
- Factors associated with achieving SVR12 were similar to the primary analysis (**figure 2**).

Figure 2. Odds of achieving SVR12 with contemporary DAA regimens



Model is adjusted for factors shown and cohort. Abbreviations: EBR: elbasvir; GZR: grazoprevir; RBV: ribavirin; GLE: glecaprevir; PIB: pibrentasvir; SOF: sofosbuvir; DCV; LDV: ledipasvir; VEL: velpatasvir

LIMITATIONS

- SVR12 status could not be determined in 23.4%

CONCLUSIONS

- In a large diverse population of 58,461 HCV infected persons with known SVR12 status, the overall SVR12 rate was 94.8%, and 96.5% among those on contemporary DAA regimens.
- We observed a gradual decrease in SVR12 with older age and fibrosis stage.
- Our findings support early DAA therapy for all HCV infected individuals using DAA regimens recommended by current guidelines to optimize treatment outcomes.

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The CARE Consortium https://www.careresearch.eu/

CONFLICTS OF INTEREST: nothing to disclose