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Long-term changes in liver stiffness after SVR in patients with HCV chronic infection and advanced fibrosis

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BACKGROUND

- In patients with HCV chronic infection, the achievement of sustained viral response (SVR) is related to a marked reduction in liver stiffness (LS), which is associated with a decrease in the incidence of liver events.
- During HCV active infection, LS correlates with the severity of liver damage and adds prognostic information. After SVR, LS also identifies individuals with no risk of developing liver complications in the short term.
- However, Information on long-term changes in LS in patients with HCV chronic infection and advanced fibrosis who achieve cure is scarce.

METHODS

- **Design**: Multicenter ambispective cohort study (17 hospitals, Spain).
- **Patients:** HCV-monoinfected and HIV/HCV-coinfected individuals from the GEHEP-011 cohort [inclusion criteria: 1) LS prior to treatment≥9.5 kPa; 2) Achieved SVR with DAA-based therapy; 3) Available LS measurement at SVR].
- **Main outcome:** LS was evaluated pre-treatment, at RVS and then annually until 60 months. The following LS categories were considered: ≤7.2 kPa; 7.3 to 9.4 kPa; 9.5 to 13.9 kPa; 14 to 20.9 kPa; and ≥ 21 kPa. **LS normalization**: attaining LS values ≤ 7.2 kPa after SVR.

Table 1. Characteristics of the patients (N=1,116)

Characteristic	Value
Previous to treatmen	
Age (years)*	53 (49 – 57)
Male sex, n (%)	901 (81)
HIV infection, n (%)	677 (61)
Cirrhosis (LS ≥ 14 kPa), n (%)	675 (61)
LS ≥ 21 kPa, n (%)	412 (37)
Decompensation, n (%)	63 (7)
After SVR	
Liver stiffness ≥14 (kPa), n (%)	468 (42)
LS ≥ 21 kPa, n (%)	262 (24)
CPT class A, n (%)	1026 (92)
Platelets count (10^9/L)*	152 (109 – 202)

* Median (Q1 - Q3)

After SVR, LS ***decreases significantly***. However in one third of patients, LS ***does not change*** or ***even increases***

RESULTS

Median (Q1-Q3) follow-up time after SVR: 58 (42-69) months

Figure 1. LS evolution during follow-up

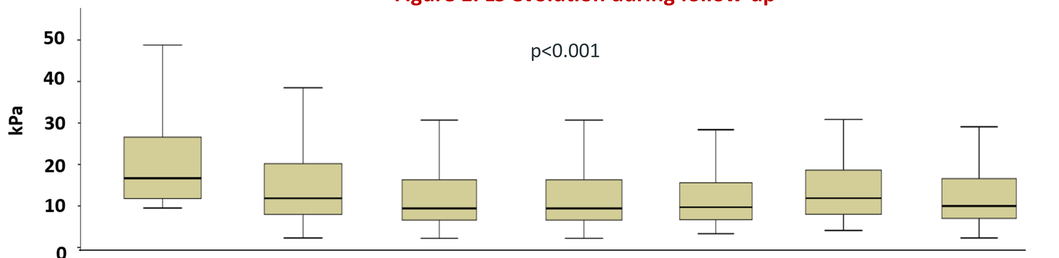


Table 2. LS category in the last available measurement according to the LS pre-treatment category

Median (Q1-Q3) time elapsed between the 2 measurements: 29 (13-48) months

PRE-TREATMENT CATEGORY	FINAL CATEGORY				
	<7.2 (n=317)	7.2-9.4 (n=213)	9.5-13.9 kPa (n=226)	14-20.9 kPa (n=162)	≥ 21 kPa (n=198)
< 14 kPa (n=441)	213 (48%)	128 (29%)	75 (17%)	17 (4%)	8 (2%)
14-20.9 kPa (n=263)	75 (29%)	58 (22%)	76 (29%)	37 (14%)	17 (6%)
≥ 21 kPa (n=412)	29 (7%)	27 (7%)	75 (18%)	108 (26%)	173 (42%)

Figure 2. LS evolution before treatment and at the last available measurement

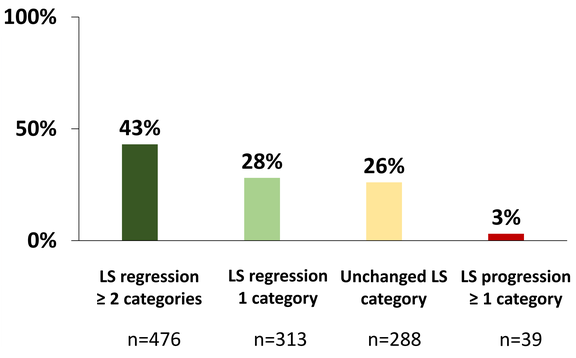
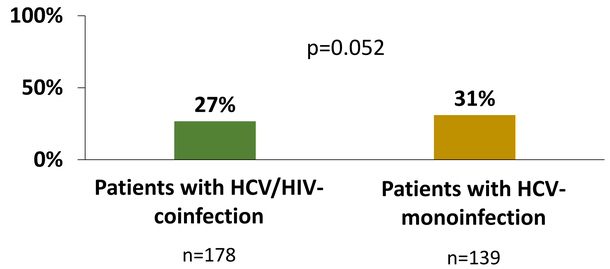


Figure 3. LS normalization according to HIV-coinfection



CONCLUSIONS

- After SVR, LS decreases significantly. This reduction is quantitatively greater at the time of SVR and the following year.
- In a large majority of patients, this improvement also leads to a shift to lower LS categories. Specifically, more than a quarter of individuals achieved LS normalization during the follow-up.
- In one third of patients, LS does not change or even increases. Identification of factors associated with LS progression after SVR and specifically HIV coinfection impact, could be useful to select patients on whom screening measures for liver events after cure should be focused.

ADDITIONAL KEY INFORMATION

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