

CURRENT PREVALENCE OF AND RISK FACTORS FOR LIVER CIRRHOSIS IN OPIOID AGONIST THERAPY PATIENTS OF THE SAMMSU COHORT AFTER 5 YEARS OF UNRESTRICTED DAA ACCESS

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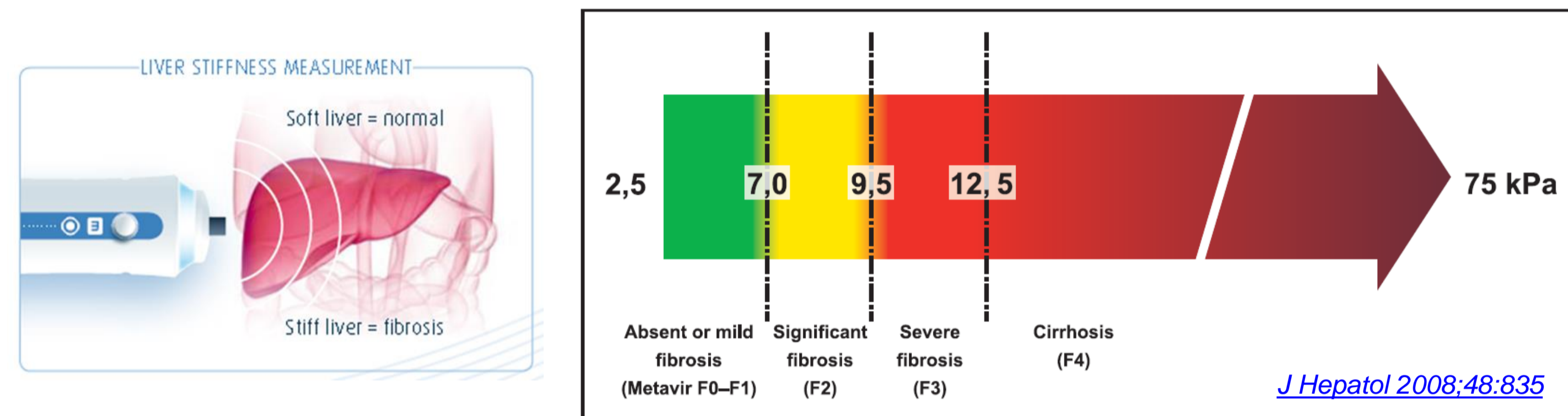
BACKGROUND

- Direct-acting antivirals (DAAs), with chronic hepatitis C cure rates of nearly 100%, are reimbursed without liver fibrosis restriction in Switzerland since 2017.
- With 84% HCV-treatment-uptake, HCV-RNA-prevalence among HCV-antibody-positives has decreased to 12% in the Swiss Association for the Medical Management in Substance Users (SAMMSU) cohort.
- Accordingly, prevalence of and risk factors for liver cirrhosis should be reassessed.

METHODS

- Between 2014 and 02/03/2023, 1346 >18-year-old opioid agonist therapy (OAT) patients were recruited: 62% HCV-antibody-positive, 10% HIV-antibody-positive (thereof 96% HCV-co-infected) (Table 1).
- 15% had alcohol overconsumption ($\geq 49\text{g/d}$) and 20% obesity ($\text{BMI} > 30\text{kg/m}^2$) in at least one follow-up.
- Liver cirrhosis (F4) was defined as Fibroscan® $> 12.5\text{kPa}$ at the last available examination (Figure 1).

Figure 1: Liver fibrosis assessment with Fibroscan® (transient elastography)



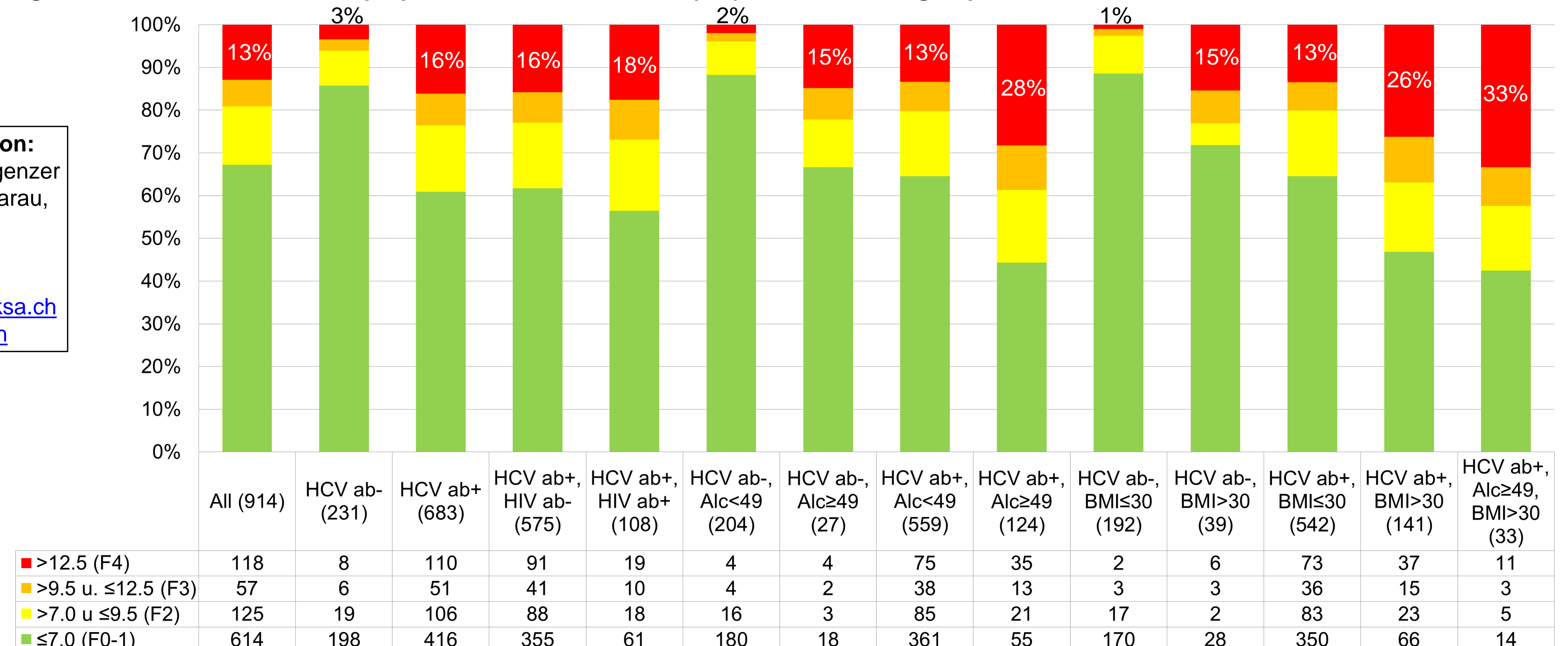
RESULTS – Patient characteristics (1/2)

- Overall, Fibroscan® results were available in 68% (914) of the 1346 patients, significantly more often in HCV-antibody-positive than HCV-antibody-negative patients [82% (683/828) versus 45% (231/518) ($p < 0.001$)] (Table 1).

Table 1: Patient characteristics (overall, with versus without Fibroscan®)

	Overall (n=1346)	With Fibroscan® (n=914) (67.9%)	Without Fibroscan® (n=432) (32.1%)	p
Male (%) (1 missing)	76.2% (1025/1345)	76.5% (699/914)	75.6% (326/431)	0.736
Median age (y) (IQR)	49.8 (40.9-56)	50.9 (42.3-56.5)	47.0 (38.6-54.7)	<0.001
HCV-antibody-pos.	61.5% (828)	74.7% (683)	33.6% (145)	<0.001
Ever chron. HCV	48.3% (650)	62.6% (572)	18.1% (78)	<0.001
HIV-antibody-pos.	10.0% (134)	11.9% (109)	5.8% (25)	<0.001
HBsAg-positive	1.3% (17)	1.3% (12)	1.2% (5)	0.812
Alcohol $\geq 49\text{g/d}$	15.4% (207)	16.5% (151)	13.0% (56)	0.091
Obese ($\text{BMI} > 30\text{kg/m}^2$)	20.3% (273)	19.7% (180)	21.5% (93)	0.435

Figure 2: Fibroscan® results and proportion with liver cirrhosis (red) in different risk groups of the SAMMSU cohort



HCV = hepatitis C virus, HIV = human immunodeficiency virus, ab- = antibody-negative, ab+ = antibody-positive, Alc = alcohol consumption (in g/d), BMI = body mass index (in kg/m²), liver cirrhosis (F4) = Fibroscan® $> 12.5\text{kPa}$

RESULTS – Patient characteristics (2/2)

- Prevalence of HIV-infection and alcohol overconsumption ($\geq 49\text{g/d}$) was significantly higher among HCV-antibody-positive patients (15% versus 1%, and 18% versus 11%, respectively), with no difference regarding obesity ($\text{BMI} > 30\text{kg/m}^2$) (21% versus 19%) (Table 2).

Table 2: Patient characteristics (overall, HCV-antibody-positive versus -negative)

	Overall (n=1346)	HCV-antibody-positive (n=828)	HCV-antibody-negative (n=518)	p
Male (%) (1 missing)	76.2% (1025/1345)	74.5% (617/828)	78.9% (408/517)	0.065
Median age (y) (IQR)	49.8 (40.9-56)	52.8 (46.2-57.5)	43.7 (35.6-51.7)	<0.001
HIV-antibody-pos.	10.0% (134)	15.5% (128)	1.2% (6)	<0.001
HBsAg-positive	1.3% (17)	1.7% (14)	0.6% (3)	0.076
Alcohol $\geq 49\text{g/d}$	15.4% (207)	17.9% (148)	11.4% (59)	0.001
Obese ($\text{BMI} > 30\text{kg/m}^2$)	20.3% (273)	21.1% (175)	18.9% (98)	0.325

RESULTS – Liver cirrhosis prevalence and risk factors

- Overall, 12.9% (118/914) had liver cirrhosis (F4, $> 12.5\text{kPa}$) in their last Fibroscan® (HCV-antibody-positive: 16.1% (110/683), HCV-antibody-negative: 3.5% (8/231), OR: 5.4 (95% CI: 2.6-11.2), $p < 0.001$).
- Cirrhosis prevalence was similar for HIV/HCV-co- and HCV-mono-infected patients (17.6% (19/108) versus 15.8% (91/575), OR: 1.1 (95% CI: 0.7-2.0), $p = 0.647$).
- Obesity ($\text{BMI} > 30\text{kg/m}^2$) and alcohol ($\geq 49\text{g/d}$) were risk factors for liver cirrhosis (23.9% (43/180) versus 10.2% (75/734), OR 2.8 (95% CI: 1.8-4.2), $p < 0.001$, and 25.8% (39/151) versus 10.4% (79/763), OR 3.0 (95% CI: 2.0-4.6), $p < 0.001$).
- Among obese HCV-antibody-positive patients consuming alcohol $\geq 49\text{g/d}$, liver cirrhosis prevalence was highest (33.3%) (Figure 2).

CONCLUSIONS

- In the era of universal antiretroviral therapy and almost 100% HCV cure rates irrespective of HIV-status, HIV-co-infection may no longer be an independent risk factor for liver cirrhosis among HCV-antibody-positive OAT-patients.
- Since alcohol overconsumption and obesity are associated with increased liver cirrhosis prevalence, both in HCV-antibody-positive and HCV-antibody-negative patients, and highly prevalent among OAT-patients, a universal liver fibrosis screening should be considered in the aging population of OAT-patients.

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