

# FACTORS ASSOCIATED WITH SURVIVAL AND FIRST HEPATIC DECOMPENSATION IN A LARGE PROSPECTIVE COHORT OF HIV-HCV CO-INFECTED PATIENTS WITH LIVER CIRRHOSIS

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## BACKGROUND:

- There are limited data about factors associated to survival and first hepatic decompensation in HIV-HCV coinfecting patients with cirrhosis.

## METHODS:

- Prospective multicenter cohort of 331 HIV-HCV coinfecting patients with cirrhosis. Median follow-up time: 18 months.
- Cirrhosis diagnosis (n,%): biopsy (209, 63%), prior decompensation (86, 26%), Bonacini Score  $\geq 8$  (36, 11%).
- Endpoints: death, hepatocarcinoma or liver transplant.
- Survival defined as the time from entering in the cohort until first endpoint occurred.
- The association of survival with different factors was explored in univariate and multivariate Cox proportional hazard models. Variables included: age, sex, time since cirrhosis/HIV diagnosis, alcohol intake, CD4 count (nadir, baseline and <100 at baseline), HIV viremia, suppressed HIV replication, history of anti-HCV therapy, HCV genotype, sustained viral response to anti-HCV therapy, concomitant chronic HBV, history of cirrhosis decompensation, Child Pugh score and HAART (at baseline, continuous/interrupted during follow-up).
- For patients with no history of prior liver decompensation at baseline we explored variables associated with the development of first decompensation.

## RESULTS:

Table 1: Baseline characteristics

Male, N, (%)	258	(78)
Age, median, (IQR)	44	(41-47)
Months of follow-up, median, (IQR)	18	(12-20)
Years since HIV diagnosis, median, (IQR)	16	(11-19)
Years since cirrhosis diagnosis, median, (IQR)	3	(2-5)
CDC C3, N, (%)	93	(28.1)
MDU, N, (%)	292	(88.2)
HAART, N, (%)		
at baseline	287	(87)
non continuous HAART	166	(50)
CD4, median, (IQR)		
at baseline	384	(232-589)
nadir	150	(71-258)
HIV-RNA < BLO*, N, (%)	236	(74)
HBV co-infection, N, (%)	20	(6)
HCV genotype 2 or 3, N, (%)	71	(27)
HCV therapy, N, (%)	191	(57.7)
sustained viral response, N, (%)	37	(11.2)
still non evaluable, N, (%)	52	(15.7)
Alcohol abuse, N, (%)	100	(30.2)

\* Below limit of quantification (50-200) c/ml

## RESULTS:

- Endpoints: 62 (54 deaths, 9 hepatocarcinomas, and 1 liver transplant).  
 Compensated cirrhosis at baseline: 19 (16 deaths, 3 Hepatocarcinomas)  
 Decompensated cirrhosis at baseline: 43 (38 deaths, 6 Hepatocarcinomas, 1 Liver Transplant)

Table 2: Variables associated to survival. Univariate analysis.

Variable	HR (CI 95%) p
Male gender	2.37 (1.078 - 5.21) p = 0.032
Alcohol intake	0.506 (0.306 - 0.838) p = 0.008
CD4 <100 at baseline	3.26 (1.48 - 7.19) p = 0.003
Unsuppressed VL at baseline	2.16 (1.27 - 3.65) p = 0.004
No HCV therapy received	3.01 (1.76 - 5.14) p < 0.0001
No response to HCV therapy	7.31 (1.01 - 52.81) p = 0.048
Non-Continuous HAART during follow up	15.37 (6.15 - 38.46) p < 0.0001
CD4 nadir	0.997 (0.995 - 0.999) p = 0.008
Child Pugh score B	14.46 (6.97 - 29.9) p < 0.0001
Child Pugh score C	39.45 (17.96 - 86.65) p < 0.0001

Fig 1. Multivariate analysis: Hazard ratio of factors associated with decreased survival [HR, (CI), p]

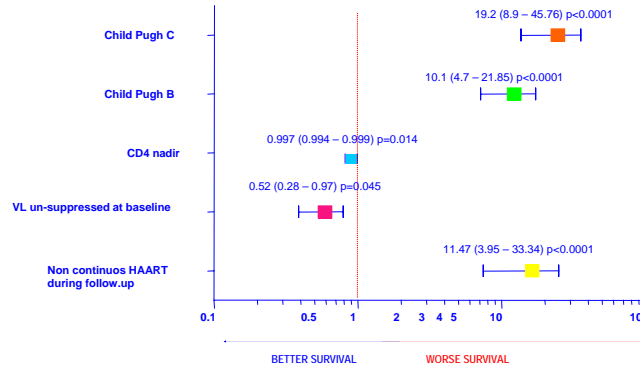
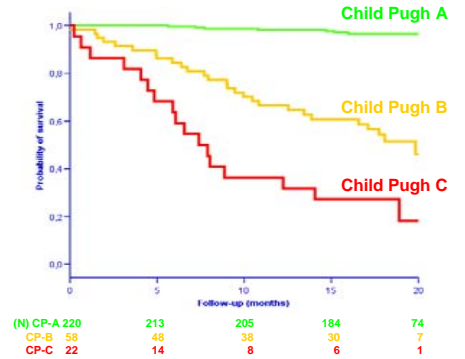


Fig 2. Survival according to Child Pugh Score

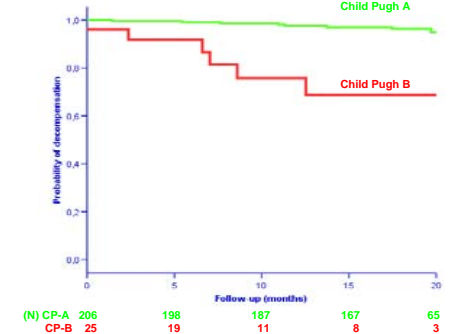


- During a median follow-up of 19 months (total 376,31 patients-years), 27 decompensations occurred in 16 patients (ascites 12, hepatic encephalopathy 9, variceal bleeding 4, spontaneous bacterial peritonitis 2).
- Of the 231 patients in whom a Child-Pugh score was available decompensation occurred in 9/206 (4.4%) of patients with Child-Pugh A and 6/25 (24%) of patients with Child-Pugh B (HR 7.4, p = 0.0001, 95%CI 2.5-22.2).

Table 3. Probabilities of remaining free of decompensation.

Child Pugh Score	ONE YEAR	TWO YEARS
Child Pugh A	0.95	0.95
Child Pugh B	0.76	0.67

Fig 3. Probability of first decompensation according to Child Pugh Score



## CONCLUSIONS:

- Child-Pugh scores B and C are significantly associated with decreased survival in HIV-HCV coinfecting patients with cirrhosis.
- Maintaining HIV viral suppression and receiving continuous HAART are associated with prolonged survival. Our study supports the continuous use of HAART in this population.
- Child-Pugh B is significantly associated with the short-term risk of first hepatic decompensation. HIV-HCV coinfecting patients with compensated cirrhosis and a Child-Pugh B score should be followed closely for the development of decompensation.