

Supplementary materials:

Multiple Imputation: We used multiple imputation of missing HCV and AUDIT-C test data for the cases and controls as part of a sensitivity analysis. The imputation model was based on two regression models relating multiple baseline variables to HCV and alcohol use status. The variables involved in imputation included age, gender, race/ethnicity, birth cohort, HIV status, drug use, depression, and alcohol use (for HCV model) or HCV status (for alcohol model). We generated 100 imputed datasets. We re-matched cases with controls for each of the imputed dataset. We then estimated average count of subjects, person-years at risk, HCC cases and annual incidence of HCC using standard multiple imputation formula. We also examined the association between NAFLD and HCC using Cox proportional hazards model across these 100 imputed datasets.

Reference: Roderick Little and Donald Rubin: Statistical Analysis with Missing Data (2nd ed.), New York, Wiley-Interscience 2002.

Supplementary Table 1. Annual HCC risk in subgroups of patients with cirrhosis	
	Annual Incidence per 1000 PY (95% CI)
Overall Cirrhosis	10.63 (9.46-11.91)
Gender	
Men	11.05 (9.83-12.39)
Women	1.62 (0.20-5.85)
Race	
White	11.94 (9.11-15.37)
African American	11.94 (3.25-30.56)
Hispanic	23.76 (12.27-41.50)
Age	
<65 year	9.74 (8.46-11.17)
≥65 year	13.43 (10.82-16.49)
Age by Race	
<65 year	
White	9.85 (8.55-11.29)
African American	7.43 (3.96-12.71)
Hispanic	15.12 (10.28-21.47)
≥65 year	
White	9.18 (7.76-10.80)
African American	6.37 (2.91-12.08)
Hispanic	12.30 (7.41-19.21)
Diabetes	
Yes	12.36 (10.67-14.24)
No	8.51 (6.96-10.29)

Supplementary Table 2. Annual HCC risk in subgroups of patients without cirrhosis but high FIB-4 (column 2) and those without any evidence of high FIB-4 (column 3)		
	Persistently high FIB-4	No Evidence of High FIB-4
	Annual Incidence per 1000 PY (95% CI)	Annual Incidence per 1000 PY (95% CI)
Overall	0.39 (0.32-0.47)	0.04 (0.03-0.05)
Gender		
Men	0.39 (0.32-0.48)	0.05 (0.04-0.06)
Women	0.20 (0.00-1.09)	0.02 (0.00-0.07)
Race		
White	0.47 (0.35-0.63)	0.14 (0.10-0.19)
African American	0.19 (0.02-0.70)	0.10 (0.01-0.35)
Hispanic	0.91 (0.33-1.99)	0.00 (0.00-0.30)
Age		
<65 year	0.29 (0.20-0.40)	0.02(0.02-0.03)
≥65 year	0.48 (0.37-0.61)	0.14 (0.10-0.18)
Age by Race		
<65 year		
White	0.37 (0.29-0.47)	0.05 (0.04-0.06)
African American	0.38 (0.17-0.72)	0.04 (0.02-0.07)
Hispanic	0.56 (0.23-1.16)	0.00 (0.00-0.03)
≥65 year		
White	0.27 (0.17-0.40)	0.03 (0.02-0.04)
African American	0.52 (0.21-1.07)	0.04 (0.02-0.07)
Hispanic	0.17 (0.00-0.95)	0.00 (0.00-0.04)
Diabetes		
Yes	0.64 (0.49-0.81)	0.08 (0.06-0.11)
No	0.22 (0.15-0.30)	0.03 (0.02-0.04)