

SUPPLEMENTARY TABLE S1. Baseline characteristics of the population who developed liver cancer death

	Liver cancer death		<i>P</i> Value
	Without developed	With developed	
Number	200,399	80	
Men, n (%)	96,584 (48.2)	69 (86.3)	<0.001
Age, years	36.42±7.74	49.73±10.25	<0.001
Smoking status			0.001
Non/former smoker	148,337 (74.0)	51 (63.8)	
Current smoker	41,923 (20.9)	29 (36.2)	
Unknown	10,139 (5.1)	0 (0.0)	
Alcohol intake, g/day	4 (0-12)	6 (0-15)	0.755
Obesity	2,434 (1.2)	12 (15.0)	<0.001
BMI, kg/m ²	22.3±2.7	24.13±2.73	<0.001
<25	168,776 (84.2)	51 (63.8)	<0.001
≥25	31,633 (15.8)	29 (36.2)	
Exercise measure, times/week			0.027
<3	168,749 (84.2)	59 (73.8)	
≥3	28,915 (14.4)	20 (25.0)	
Unknown	2,735 (1.4)	1 (1.2)	
Education (%)			<0.001
≤High school	31,902 (15.9)	27 (33.8)	
≥College graduate	113,006 (56.4)	34 (42.5)	
Unknown	55,491 (27.7)	19 (23.7)	

T2DM, %	2,434 (1.21)	12 (15)	<0.001
Glucose, mg/dL	91.75±10.99	98.79±22.36	0.006
HbA1c, %	5.47±0.36	5.81±1.46	0.286
Hypertension, %	17,547 (8.8)	22 (27.5)	<0.001
Systolic BP, mmHg	110.0±13.2	117.89±13.53	<0.001
Diastolic BP, mmHg	70.71±9.64	77.03±9.67	<0.001
Triglycerides, mg/dl	85 (62-120)	102 (82.5-116.5)	0.002
Total cholesterol, mg/dl	188.33±32.55	202.04±39.79	0.003
HDL-C, mg/dl	58.99±13.46	58.4±12.9	0.697
LDL-C, mg/dl	109.21±28.33	117.48±34.38	0.035
FIB-4			<0.001
Low, %	189,117 (94.4)	17 (21.3)	
Intermediate, %	10,796 (5.4)	39 (48.7)	
High, %	486 (0.2)	24 (30.0)	
APRI			<0.001
Low, %	199,805 (99.7)	54 (67.5)	
Intermediate, %	417 (0.2)	19 (23.8)	
High, %	177 (0.1)	7 (8.7)	

Abbreviations: APRI, Aspartate aminotransferase to platelet ratio index; BMI, body mass index; BP, blood pressure; HDL-C, high density lipoprotein cholesterol; LDL-C, low density lipoprotein cholesterol; T2DM, type 2 diabetes mellitus.

SUPPLEMENTARY TABLE S2. Liver cancer mortality according to FIB-4 and APRI score in the general population after excluding individuals with incident HBV* or HCV*

	Deaths	Model 1
FIB-4		
Low	5	1 (reference)
Intermediate	36	57.56 (16.52-200.57)
High	27	880.46 (241.82-3,205.75)
<i>P</i> for linear trend		<0.001
APRI		
1	49	1 (reference)
1-2	12	46.97 (21.75-101.42)
2	7	121.87 (48.48-306.31)
<i>P</i> for linear trend		<0.001

†No lung cancer deaths in high FIB-4, intermediate APRI or high APRI categories.

* Total n=200,479 (exclusion: 3,755 (HBV 3,489 / HCV 251 / both 15))

Model 1 was adjusted for sex, year of screening examination, centre, BMI, smoking status, regular exercise, educational level, history of diabetes, and history of hypertension for LDL-C, HDL-C, triglycerides, systolic blood pressure, glucose, alcohol amount (grams).

Abbreviations: APRI, Aspartate aminotransferase to platelet ratio index; BMI, body mass index; HBV, hepatitis B virus; HCV, hepatitis C virus; HDL-C, high density lipoprotein cholesterol; LDL-C, low density lipoprotein cholesterol.

SUPPLEMENTARY TABLE S3. Liver cancer mortality according to FIB-4 and APRI score in the general population after excluding individuals < 35 years and ≥ 65 years

	Deaths	Model 1	Model 2
Person-years		893,430	893,430
FIB-4			
Low	5	1 (reference)	1 (reference)
Intermediate	36	33.5 (12.69-88.44)	32.3 (12.18-85.67)
High	27	537.64 (195.58-1477.95)	504.01 (181.78-1397.47)
<i>P</i> for linear trend		<.001	<.001
APRI			
1	49	1 (reference)	1 (reference)
1-2	12	41 (20.66-81.37)	41.19 (20.45-82.97)
2	7	87.67 (36.73-209.27)	88.29 (36.77-212.03)
<i>P</i> for linear trend		<.001	<.001

†No lung cancer deaths in high FIB-4, intermediate APRI or high APRI categories.

Model 1 was adjusted for sex, year of screening examination, centre, BMI, smoking status, regular exercise, educational level, history of diabetes, and history of hypertension for LDL-C, HDL-C, triglycerides, systolic blood pressure, glucose.

Model 2 was model 1 + adjustment for alcohol amount grams.

Abbreviations: APRI, Aspartate aminotransferase to platelet ratio index; BMI, body mass index; HDL-C, high density lipoprotein cholesterol; LDL-C, low density lipoprotein cholesterol.

SUPPLEMENTARY TABLE S4. Liver cancer mortality according to FIB-4 and APRI score in the general population > 50 years*

	Deaths	Model 1	Model 2
Person-years		893,430	893,430
FIB-4			
Low	0	N/A	N/A
Intermediate	15	N/A	N/A
High	18	N/A	N/A
<i>P</i> for linear trend			
APRI			
1	25	1 (reference)	1 (reference)
1-2	6	36.19 (13.16-99.52)	41.67 (14.55-119.39)
2	2	35.77 (7.52-170.11)	51.12 (10.76-242.78)
<i>P</i> for linear trend		<.001	<.001

†No lung cancer deaths in high FIB-4, intermediate APRI or high APRI categories.

*Mean age (n=12,516): 57.2 ± 5.5 years

Model 1 was adjusted for sex, year of screening examination, centre, BMI, smoking status, regular exercise, educational level, history of diabetes, and history of hypertension for LDL-C, HDL-C, triglycerides, systolic blood pressure, glucose.

Model 2 was model 1 + adjustment for alcohol amount grams.

Abbreviations: APRI, Aspartate aminotransferase to platelet ratio index; BMI, body mass index; HDL-C, high density lipoprotein cholesterol; LDL-C, low density lipoprotein cholesterol.