

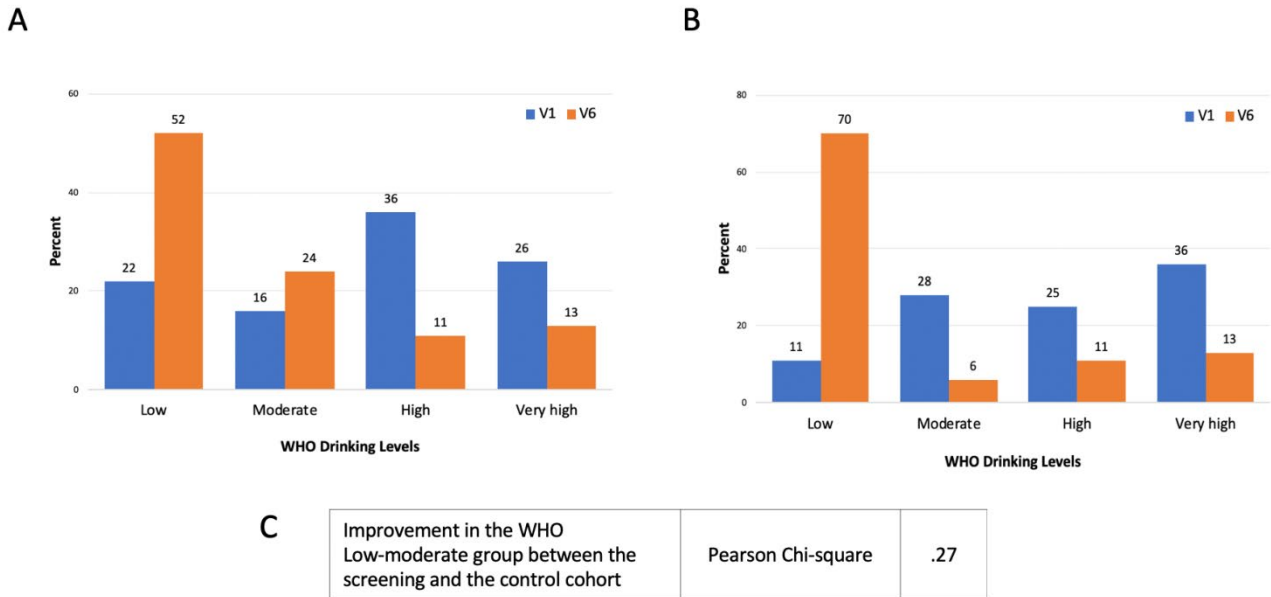
Liver fibrosis screening increases alcohol abstinence

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Fig. S1. Changes in WHO drinking classes at 6 months follow-up in active alcohol consumers in the screening and the control cohorts



WHO, world health organization; V1, baseline visit in the liver unit; V6, follow-up visit at 6 months.

WHO drinking classes are described based on consumption of standard drinks (SD, 10 g of alcohol) per day or per week as follows: Low risk group, 0-4 SD/day or 0-28 SD/week; Moderate risk group, 4-6 SD/day or 28-42 SD/week; High risk group, 6-10 SD/day or 42-70 SD/week; Very-high risk group, >10 SD/day or >70 SD/week.

A. Changes in WHO drinking classes in non-abstinent subjects of the screening cohort between baseline and follow-up at 6 months

B. Changes in WHO drinking classes in non-abstinent subjects of the control cohort between baseline and follow-up at 6 months

C. Comparison of the improvement in the WHO low-moderate group between the screening and the control cohort

Table S1. Baseline characteristics of the screening and control cohort

	SCREENING COHORT (n=334)	CONTROL COHORT (n=137)	p
Age (years)	51 (42-59)	48 (40-59)	.14
Gender (male)	228 (68)	83 (61)	.13
Psychiatric comorbidity	159 (48)	69 (50)	.61
Tobacco consumption	192 (58)	75 (55)	.61
Illicit drugs (active)	89 (27)	48 (35)	.07
Maximum Alcohol consumption (SD/week)	70 (47-105)	70 (45-112)	.97
Alcohol consumption in the previous year (SD/week)	70 (42-98)	50 (35-84)	.04
Duration of alcohol consumption (years)	20 (11-30)	20 (9-30)	.28
Alcohol Use Disorder medication (yes)	89 (27)	25 (18)	.06

Values expressed as median or percentages

SD, standard drink of alcohol

Table S2. Baseline characteristics of the pre-COVID and COVID group in the screening cohort

	Pre-COVID (n=70)	Post-COVID (n=264)	p
Age (years)	51 (41-60)	51 (42-59)	.84
Gender (male)	47 (67)	181 (69)	.89
Diabetes mellitus	7 (10)	21 (8)	.63
Arterial hypertension	17 (24)	56 (21)	.63
BMI (kg/m ²) °	25 (23-29)	26 (22-29)	.94
Metabolic syndrome *	14 (20)	59 (23)	.75
Psychiatric comorbidity	38 (54)	121 (46)	.44
Tobacco consumption	38 (54)	154 (58)	.59
Illicit drugs (active)	17 (24)	72 (27)	.66
Maximum Alcohol consumption (SD/week)	80 (56-140)	70 (45-105)	.05
Alcohol consumption in the previous year (SD/week)	70 (37-126)	64 (41-84)	.18
Duration of alcohol consumption (years)	22 (14-30)	20 (10-31)	.50
Alcohol Use Disorder medication (yes)	17 (24)	72 (27)	.65
AST (IU/L)	23 (18-34)	24 (19-35)	.36
ALT (IU/L)	25 (17-42)	27 (18-44)	.85
GGT (IU/L)	36 (22-63)	33 (20-65)	.31
Bilirubin (mg/dl)	.5 (.4-.7)	.6 (.4-.8)	.06
Alkaline phosphatase (IU/L)	83 (69-99)	76 (63-93)	.15
Albumin (g/L)	46 (44-47)	46 (44-48)	.36
Sodium (mEq/L)	141 (139-144)	140 (139-141)	.07
Platelets (10 ⁹ /ul)	241 (201-303)	233 (196-274)	.28
AUDIT ^	22 (16-28)	19 (14-24)	.02

Values expressed as median or percentages

BMI, body mass index; SD, standard drink of alcohol; AST, aspartate aminotransferase; ALT, alanine aminotransferase; GGT, gamma -glutamyl transpeptidase; AUDIT, Alcohol Use Disorder Identification Test.

° missing values n=80; *missing values n=3; ^ missing values n=137

Table S3. Baseline characteristics of subjects lost to follow-up and those completing the study

	Lost to follow-up (n=80)	Completing the study (n=254)	p
Age (years)	47 (38-56)	51 (43-60)	.01
Gender (male)	63 (79)	165 (65)	.03
BMI (kg/m ²) °	26 (23-29)	25 (23-29)	.69
Metabolic syndrome *	20 (25)	53 (21)	.44
Psychiatric comorbidity	38 (48)	121 (48)	.53
Tobacco consumption	47 (59)	145 (57)	.90
Illicit drugs (active)	27 (34)	62 (24)	.11
Maximum Alcohol consumption (SD/week)	75 (56-130)	70 (45-105)	.43
Alcohol consumption in the previous year (SD/week)	70 (42-89)	70 (42-98)	.89
Duration of alcohol consumption (years)	20 (9-29)	22 (11-31)	.09
Alcohol Use Disorder medication (yes)	19 (24)	70 (28)	.56
AUDIT ^	20 (15-24)	20 (14-25)	.91
AST (IU/L)	24 (20-67)	24 (19-32)	.21
ALT (IU/L)	28 (20-47)	26 (17-42)	.10
GGT (IU/L)	37 (22-73)	32 (20-60)	.11
Bilirubin (mg/dl)	.6 (.4-.8)	.6 (.4-.7)	.59
Albumin (g/L)	46 (44-49)	45 (44-47)	.001
Platelets (10 ⁹ /ul)	241 (200-281)	232 (197-278)	.57

Values expressed as median or percentages

BMI, body mass index; SD, standard drink of alcohol; AST, aspartate aminotransferase; ALT, alanine aminotransferase; GGT, gamma -glutamyl transpeptidase; AUDIT, Alcohol Use Disorder Identification Test.

° missing values n=80; *missing values n=3; ^ missing values n=137

Table S4. Subanalysis of pre-COVID and COVID eras

A – Cross table of abstinence at 6 months in pre-COVID and COVID cohorts

p=.02*		Pre-COVID (n=70)	COVID (n=264)	Total
Abstinence at 6 months	no	30 (43)	155 (59)	185 (55)
	yes	40 (57)	109 (41)	149 (45)
Total		70 (100)	264 (100)	334 (100)

Values expressed as numbers and percentages

*p calculated by Pearson Chi-Square test

B – Univariate and Multivariate Logistic Regression analysis of factors associated with abstinence at 6 months

VARIABLES	UNIVARIATE ANALYSIS			MULTVARIATE ANALYSIS		
	p	OR	95%CI	p	OR	95%CI
Age (years)	.04	1.02	.99-1.04	.01	1.03	1.01-1.05
Alcohol Use Disorder Medication (yes)	.01	1.65	1.11-2.44	.01	2.00	1.18-.3.38
GGT (U/L)	.04	.99	.99-1.00			
AP (U/L)	.03	.99	.98-.99	.01	.99	.98-.99
Albumin (g/L)	.01	.90	.83-.97			
Sodium (mEq/L)	.05	1.10	1.00-1.20	.08	1.09	.99-1.20
Total Cholesterol (mg/dl)	.01	.99	.98-.99	.003	.99	.98-.99
COVID era	.02	.53	.31-.90	.03	.53	.30-.93

Pre-COVID era: from the 1st of July 2019 to the 14th of March of 2020 (starting of lock-down in Spain)

COVID era: from March 15th 2020 until the 31st December 2022 (end of the study).

GGT, gamma -glutamyl transpeptidase; AP, alkaline phosphatase.

Table S5. Factors associated with alcohol abstinence in the screening and control cohorts

A- Baseline Characteristics between subjects who were active consumers and abstinent subjects at 6 months follow-up

VARIABLES	Active consumption (n=282)	Abstinence* (n=189)	p
Group (screening cohort)	185 (66)	149 (79)	.002
Age (years)	48 (41-58)	52 (44-60)	.004
Gender (male)	188 (67)	123 (65)	.77
Tobacco consumption	153 (54)	114 (60)	.22
Illicit drugs (active)	101 (36)	36 (19)	<.001
Maximum Alcohol consumption (SD/week)	70 (49-105)	77 (45-117)	.36
Duration of alcohol consumption (years)	20 (10-30)	20 (10-31)	.33
Alcohol Use Disorder medication	57 (20)	57 (30)	.02

B- Univariate and Multivariate logistic regression analysis^o

VARIABLES	UNIVARIATE ANALYSIS			MULTIVARIATE ANALYSIS		
	P	OR	95%CI	p	OR	95%CI
Group (screening cohort)	.002	1.95	1.28-2.99	.01	1.77	1.14-2.74
Age (years)	.003	1.02	1.01-1.04	.09	1.02	.99-1.03
Illicit drugs (active)	<.001	.42	.27-.65	.004	.50	.31-.81
Alcohol Use Disorder medication	.01	1.71	1.11-2.61	.02	1.72	1.11-2.67

SD, standard drink of alcohol

*Abstinence was defined as total abstinence for at least 3 consecutive months before the 6 months follow-up visit

^oThe table shows only factors with p<.05 at binary logistic regression. Multivariate logistic regression analysis performed by backward stepwise method (Wald).

Table S6. Sensitivity analysis of liver stiffness values based on AST/bilirubin values

A- Cross table of increased LSM among the different AST/bilirubin groups, based on the LSM cut-offs described by Nguyen-Khac

GROUPS	LSM cut-offs corresponding to Liver fibrosis < 2*	LSM cut-offs corresponding to Liver fibrosis ≥ 2*	Total
1st: AST <38.7 IU/L and bilirubin <.53 mg/dl	71 (27%)	6 (23%)	77 (27%)
2nd: AST 38.7-75 IU/L and bilirubin < 53 mg/dl or AST<38.7 IU/L and bilirubin .53-.94 mg/dl	157 (61%)	15 (58%)	172 (60%)
3rd: AST 38.7-75 IU/L and bilirubin .53-.94 mg/dl	25 (10%)	4 (15%)	29 (10%)
4th: AST>75 IU/L and bilirubin >.94 mg/dl	6 (2%)	1 (4%)	7 (3%)
Total	259 (100%)	26 (100%)	285 (100%)

B- Cross table of increased LSM among the different AST/bilirubin groups, based on the classical cut-off of LSM ≥ 8 kPa

GROUPS	LSM <8 kPa	LSM ≥ 8 kPa	Total
1st: AST <38.7 IU/L and bilirubin <.53 mg/dl	75 (29%)	2 (8%)	77 (27%)
2nd: AST 38.7-75 IU/L and bilirubin < 53 mg/dl or AST<38.7 IU/L and bilirubin .53-.94 mg/dl	157 (60%)	15 (60%)	172 (60%)
3rd: AST 38.7-75 IU/L and bilirubin .53-.94 mg/dl	23 (9%)	6 (24%)	29 (10%)
4th: AST>75 IU/L and bilirubin >.94 mg/dl	5 (2%)	2 (8%)	7 (3%)
Total	260 (100%)	25 (100%)	285 (100%)

C- Correlation between LSM≥ 8 kPa and LSM cut-offs corresponding to Liver fibrosis ≥ 2 in the metanalysis

Test	p
McNemar Test	1.00

LSM, liver stiffness measurement; AST, aspartate aminotransferase;

* The liver stiffness cut-offs described in the Nguyen-Khac metanalysis corresponding to liver fibrosis ≥ 2 for each group were used: LSM≥ 6.9 kPa for the 1st group; LSM≥ 8.1 kPa for the 2nd group; LSM≥ 8.8 kPa for the 3rd group and LSM≥11.6 kPa for 4th group.