

**Supplementary Table 1.** Definitions of the Risk Models for NAFLD and Liver Fibrosis

Model	Cutoff points	Equation
Risk models for NAFLD		
Comprehensive NAFLD score	≥40	Probability (in %) of having NAFLD= $1/(1+\exp(-x))\times 100$ . If male, $x=0.016\times\text{age}+0.182\times\text{BMI}+0.089\times\text{WC}+0.391\times\text{alcohol}+0.124\times\text{exercise}+0.018\times\text{fasting glucose}+0.773\times\log_e(\text{triglycerides})-0.014\times\text{HDL cholesterol}+0.145\times\text{uric acid}-0.674\times\log_e(\text{AST})+1.632\times\log_e(\text{ALT})-21.695$ . If female, $x=0.320\times\text{BMI}+0.044\times\text{WC}+0.533\times\text{diabetes (yes=1, no=0)}+0.016\times\text{fasting glucose}+0.951\times\log_e(\text{triglycerides})-0.015\times\text{HDL cholesterol}+0.199\times\text{uric acid}-0.645\times\log_e(\text{AST})+1.302\times\log_e(\text{ALT})+0.255\times\text{menopause}-19.741$ .
NAFLD liver fat score	≥-0.640	$-2.89+1.18\times\text{metabolic syndrome (yes=1, no=0)}+0.45\times\text{diabetes (yes=2, no=0)}+0.15\times\text{fasting insulin}+0.04\times\text{AST}-0.94\times\text{AST/ALT ratio}$
Risk models for significant fibrosis		
NAFLD fibrosis score	≥0.676	$-1.675+0.037\times\text{age}+0.094\times\text{BMI}+1.13\times\text{IFG/diabetes (yes=1, no=0)}+0.99\times\text{AST/ALT ratio}-0.013\times\text{platelet count}-0.66\times\text{albumin}$
BARD score	≥2.0	AST/ALT ratio ≥0.8: 2 points; BMI ≥28 kg/m <sup>2</sup> : 1 point; the presence of diabetes: 1 point

NAFLD, nonalcoholic fatty liver disease; BMI, body mass index; WC, waist circumference; HDL, high-density lipoprotein; AST, aspartate aminotransferase; ALT, alanine transaminase; IFG, impaired fasting glucose.

**Supplementary Table 2.** High Probability of ASCVD According to Cardiometabolic Risk Factors Stratified by Obesity and NAFLD Status Based on the Liver Fat Score

Variable	Subjects without NAFLD OR (95% CI)	Obese subjects with NAFLD		Lean subjects with NAFLD	
		OR (95% CI)	p-value	OR (95% CI)	p-value
Hypertension	1.00 (reference)	4.80 (4.07–5.66)	<0.001	3.75 (3.12–4.51)	<0.001
Diabetes mellitus	1.00 (reference)	13.14 (10.63–16.81)	<0.001	15.06 (11.63–19.49)	<0.001
Chronic kidney disease	1.00 (reference)	1.68 (1.21–2.33)	0.002	1.55 (1.09–2.19)	0.014
Hyper-LDL cholesterolemia	1.00 (reference)	2.38 (2.03–2.78)	<0.001	2.02 (1.69–2.41)	<0.001
Hypo-HDL cholesterolemia	1.00 (reference)	3.85 (3.27–4.53)	<0.001	3.99 (3.30–4.53)	<0.001
Hypertriglyceridemia	1.00 (reference)	8.25 (7.01–7.90)	<0.001	7.49 (6.23–9.00)	<0.001
Proteinuria	1.00 (reference)	3.24 (1.98–5.30)	<0.001	2.15 (1.17–3.94)	0.014

ASCVD, atherosclerotic cardiovascular disease; NAFLD, nonalcoholic fatty liver disease; OR, odds ratio; CI, confidence interval; LDL, low-density lipoprotein; HDL, high-density lipoprotein.

Adjusted for age and sex.

**Supplementary Table 3.** High Probability of ASCVD According to Obesity and NAFLD Based on the Liver Fat Score

Model	Subjects without NAFLD OR (95% CI)	Obese subjects with NAFLD		Lean subjects with NAFLD	
		OR (95% CI)	p-value	OR (95% CI)	p-value
Crude	1.00 (reference)	2.27 (1.95–2.64)	<0.001	3.02 (2.54–3.58)	<0.001
Model 1	1.00 (reference)	5.97 (4.54–7.84)	<0.001	4.98 (2.69–6.70)	<0.001
Model 2	1.00 (reference)	2.22 (1.39–3.53)	0.001	2.03 (1.29–3.20)	0.002

ASCVD, atherosclerotic cardiovascular disease; NAFLD, nonalcoholic fatty liver disease; OR, odds ratio; CI, confidence interval.

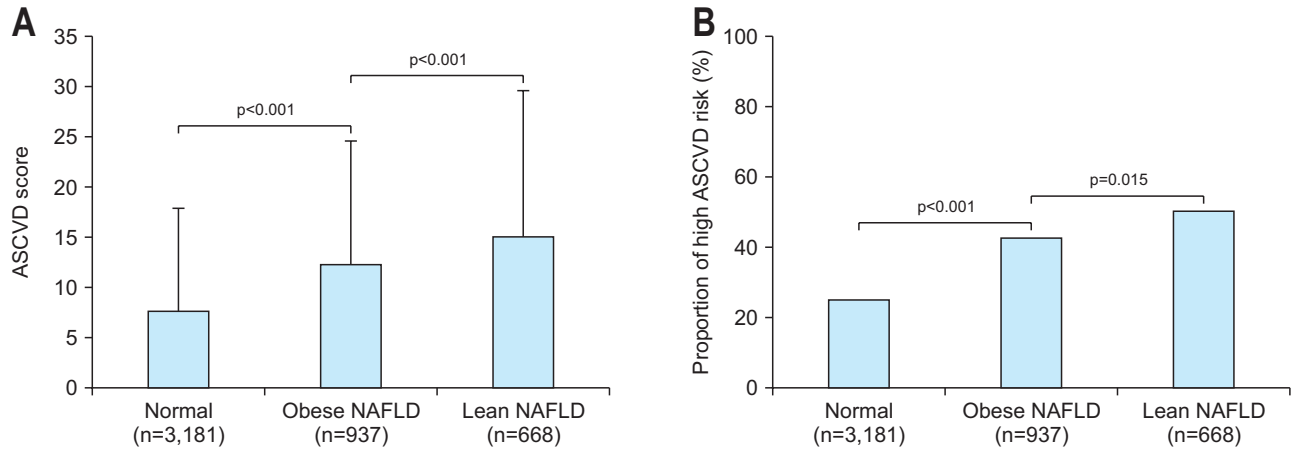
Model 1: adjusted for age and sex and model 2: adjusted for age, sex, smoking, exercise, waist circumference, hypertension, diabetes, homeostasis model assessment of insulin resistance, chronic kidney disease, and hyper-low-density lipoprotein cholesterolemia.

**Supplementary Table 4.** High Probability of ASCVD According to Obesity and Significant Fibrosis Based on the BARD Score

Model	NAFLD with no fibrosis OR (95% CI)	Obese NAFLD subjects with significant fibrosis		Lean NAFLD subjects with significant fibrosis	
		OR (95% CI)	p-value	OR (95% CI)	p-value
Crude	1.00 (reference)	1.58 (1.25–1.99)	<0.001	3.01 (2.26–4.00)	<0.001
Model 1	1.00 (reference)	1.15 (0.93–1.60)	0.398	1.57 (1.06–2.32)	0.026
Model 2	1.00 (reference)	1.31 (0.86–2.00)	0.213	1.65 (0.98–2.78)	0.058

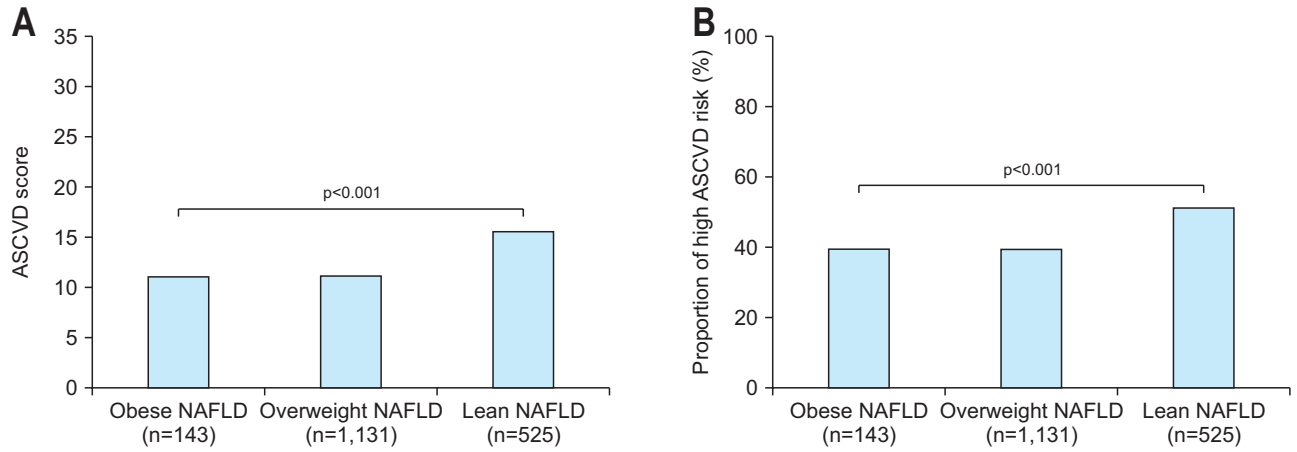
ASCVD, atherosclerotic cardiovascular disease; NAFLD, nonalcoholic fatty liver disease; OR, odds ratio; CI, confidence interval.

Model 1: adjusted for age and sex and model 2: adjusted for age, sex, smoking, exercise, waist circumference, hypertension, diabetes, homeostasis model assessment of insulin resistance, chronic kidney disease, and hyper-low-density lipoprotein cholesterolemia.

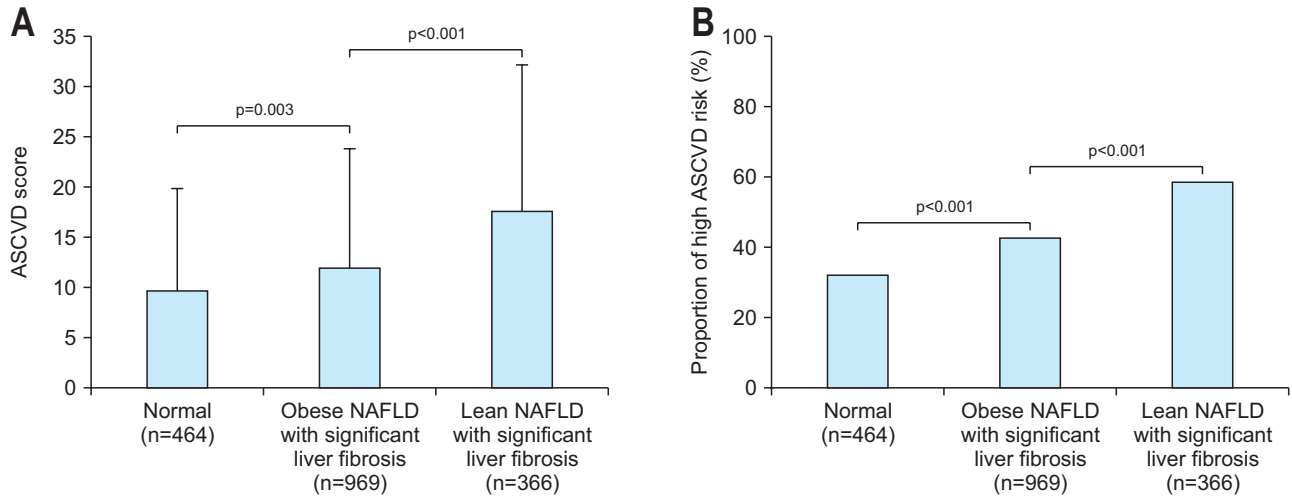


**Supplementary Fig. 1.** ASCVD score and proportion of high ASCVD risk according to LFS-defined NAFLD/obesity status. Lean NAFLD subjects had significantly higher ASCVD scores (A) and prevalence of a high ASCVD risk (B), followed by subjects with obese NAFLD and those without NAFLD (all  $p < 0.05$ ).

ASCVD, atherosclerotic cardiovascular disease; NAFLD, nonalcoholic fatty liver disease; LFS, liver fat score.



**Supplementary Fig. 2.** ASCVD score and proportion of high ASCVD risk according to CNS-defined NAFLD/obesity status (BMI  $\geq 30$  kg/m<sup>2</sup>). Lean NAFLD subjects had significantly higher ASCVD scores (A) and prevalence of a high ASCVD risk (B) than obese subjects (all  $p < 0.001$ ). ASCVD, atherosclerotic cardiovascular disease; NAFLD, nonalcoholic fatty liver disease; CNS, comprehensive NAFLD score; BMI, body mass index.



**Supplementary Fig. 3.** ASCVD score and proportion of high ASCVD risk according to BARD-defined significant liver fibrosis stratified by CNS-defined NAFLD/obesity status. Lean subjects with BARD-defined significant liver fibrosis had significantly higher ASCVD scores (A) and prevalence of a high ASCVD risk (B), followed by obese subjects with BARD-defined significant liver fibrosis and those without BARD-defined significant liver fibrosis (all  $p < 0.05$ ).

ASCVD, atherosclerotic cardiovascular disease; NAFLD, nonalcoholic fatty liver disease; CNS, comprehensive NAFLD score.