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| **Supplementary table 1.** Definitions of the risk models for NAFLD and liver fibrosis. |
| Models | Cut-off points | Equations |
| Risk models for NAFLD |  |  |
| Comprehensive NAFLD score | ≥40 | Probability (in %) of having NAFLD = 1 / (1 + exp(-x)) ×100.If male, x=0.016 × age + 0.182 × BMI + 0.089 × WC + 0.391 × alcohol + 0.124 × exercise + 0.018 × fasting glucose + 0.773 × loge(triglycerides) - 0.014 × HDL cholesterol + 0.145 × uric acid - 0.674 × loge(AST) + 1.632 × loge(ALT) -21.695.If female, x=0.320 × BMI + 0.044 × WC + 0.533 × diabetes (yes=1, no=0) + 0.016 × fasting glucose + 0.951 × loge(triglycerides) - 0.015 × HDL cholesterol + 0.199 × uric acid - 0.645 × loge(AST) + 1.302 × loge(ALT) + 0.255 × menopause -19.741. |
| NAFLD liver fat score | ≥-0.640 | –2.89 + 1.18 × metabolic syndrome (yes=1, no=0) + 0.45 × diabetes (yes=2, no=0) + 0.15 × fasting insulin + 0.04 × AST + 0.94 × AST/ALT ratio  |
| Risk models for significant fibrosis |  |
| NAFLD fibrosis score  | ≥0.676 | –1.675 + 0.037 × age + 0.094 × BMI + 1.13 × IFG/diabetes (yes=1, no=0) + 0.99 × AST/ALT ratio – 0.013 × platelet count– 0.66 × albumin |
| BARD score | ≥2.0 | AST/ALT ratio ≥0.8: 2 points; BMI ≥28: 1 point; the presence of diabetes: 1 point  |
| NAFLD, non-alcoholic fatty liver disease; BMI, body mass index; WC, waist circumference; HDL, high-density lipoprotein; AST, aspartate aminotransferase; ALT, alanine transaminase; IFG, impaired fasting glucose. |

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| **Supplementary table 2.** Odd ratios and 95% confidential intervals of a high probability of ASCVD according to cardiometabolic risk factors stratified by obesity and NAFLD status based on the liver fat score. |
| Variables | Subjects without NAFLD | Obese subjects with NAFLD | Lean subjects with NAFLD |
| Hypertension | 1.00 (ref.) | 4.80 (4.07-5.66)*P*<0.001 | 3.75 (3.12-4.51)*P*<0.001 |
| Diabetes mellitus | 1.00 (ref.) | 13.14 (10.63-16.81)*P*<0.001 | 15.06 (11.63-19.49)*P*<0.001 |
| Chronic kidney disease  | 1.00 (ref.) | 1.68 (1.21-2.33)*P*=0.002 | 1.55 (1.09-2.19)*P*=0.014 |
| Hyper-LDL cholestrolemia  | 1.00 (ref.) | 2.38 (2.03-2.78)*P*<0.001 | 2.02 (1.69-2.41)*P*<0.001 |
| Hypo-HDL cholesterolemia  | 1.00 (ref.) | 3.85 (3.27-4.53)*P*<0.001 | 3.99 (3.30-4.53)*P*<0.001 |
| Hypertriglyceridemia  | 1.00 (ref.) | 8.25 (7.01-7.90)*P*<0.001 | 7.49 (6.23-9.00)*P*<0.001 |
| Proteinuria  | 1.00 (ref.) | 3.24 (1.98-5.30)*P*<0.001 | 2.15 (1.17-3.94)*P*=0.014 |

Adjusted for age and sex.

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| **Supplementary table 3.** Odds ratios and 95% confidential intervals of a high probability of ASCVD according to obesity and NAFLD based on the liver fat score. |
| Models | Subjects without NAFLD | Obese subjects with NAFLD | Lean subjects with NAFLD |
| Crude | 1.00 (ref.) | 2.27 (1.95-2.64)*P<*0.001 | 3.02 (2.54-3.58)*P*<0.001 |
| Model 1 | 1.00 (ref.) | 5.97 (4.54-7.84)*P*<0.001 | 4.98 (2.69-6.70)*P*<0.001 |
| Model 2 | 1.00 (ref.) | 2.22 (1.39-3.53)*P*=0.001 | 2.03 (1.29-3.20)*P*=0.002 |
| Model 1: adjusted for age and sexModel 2: adjusted for age, sex, smoking, exercise, waist circumference, hypertension, diabetes, HOMA-IR, chronic kidney disease, and hyper-LDL cholesterolemia. |

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| **Supplementary table 4.** Odds ratios and 95% confidential intervals of a high probability of ASCVD according to obesity and significant fibrosis based on the BARD score. |
| Models | NAFLD with no fibrosis | Obese NAFLD subjects withsignificant fibrosis | Lean NAFLD subjects with significant fibrosis |
| Crude | 1.00 (ref.) | 1.58 (1.25-1.99)*P*<0.001 | 3.01 (2.26-4.00)*P*<0.001 |
| Model 1 | 1.00 (ref.) | 1.15 (0.93-1.60)*P*=0.398 | 1.57 (1.06-2.32)*P*=0.026 |
| Model 2 | 1.00 (ref.) | 1.31 (0.86-2.00)*P*=0.213 | 1.65 (0.98-2.78)*P*=0.058 |
| Model 1: adjusted for age and sexModel 2: adjusted for age, sex, smoking, exercise, waist circumference, hypertension, diabetes, HOMA-IR, chronic kidney disease, and hyper-LDL cholesterolemia. |

**Supplementary figure 1.** ASCVD score and relative risk for ASCVD according to NAFLD/obesity status (A and B). Lean NAFLD subjects had a significantly higher ASCVD score (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, non-alcoholic fatty liver disease.

**Supplementary figure 2.** ASCVD score and relative risk for ASCVD according to NFS-defined significant liver fibrosis stratified by NAFLD/obesity status (A and B). Lean subjects with NFS-defined significant liver fibrosis had a significantly higher ASCVD score (A) and prevalence of a high ASCVD risk (B), followed by obese subjects with significant liver fibrosis and those without significant liver fibrosis (all *P* < 0.005). ASCVD, atherosclerotic cardiovascular disease; NAFLD, non-alcoholic fatty liver disease.