

**Supplementary Table 1.**

**Hazard Ratios (95% CI) for Incident Diabetes at Follow Up According to Baseline HOMA-IR Quartiles in Non-Obese Subjects**

<b>HOMA-IR</b>	<b>Q1 (0.3 to 0.66)</b> <b>(n = 17,565)</b>	<b>Q2 (0.66 to 0.97)</b> <b>(n = 17,580)</b>	<b>Q3 (0.97 to 1.38)</b> <b>(n = 17,577)</b>	<b>Q4 (1.38 to 36.69)</b> <b>(n = 17,581)</b>	<b>P for trend</b>
All	1 (reference)	1.87 (1.45 to 2.43)	2.24 (1.75 to 2.88)	4.37 (3.46 to 5.51)	<0.001
Male (n = 34,316 )	1 (reference)	1.89 (1.38 to 2.61)	2.30 (1.69 to 3.14)	4.55 (3.42 to 6.07)	<0.001
Female (n = 35,822)	1 (reference)	1.85 (1.19 to 2.87)	2.14 (1.40 to 3.28)	4.06 (2.73 to 6.01)	<0.001

Adjusted for age, sex, education, exercise, smoking and alcohol intake (g/day), center year, family history of diabetes.

Abbreviations: CI, Confidence interval; HOMA-IR, homeostatic model assessment-Insulin resistance.

**Supplementary Table 2.**

**Hazard Ratios (95% CI) for Incident Diabetes at Follow Up According to Baseline FIB-4 Quartiles in Non-Obese Subjects**

<b>FIB 4</b>	<b>Q1 (0.16 to 0.54)</b>	<b>Q2 (0.54 to 0.66)</b>	<b>Q3 (0.66 to 0.83)</b>	<b>Q4 (0.83 to 21.27)</b>	<b>P for trend</b>
	(n = 17,575)	(n = 17,576)	(n = 17,576)	(n = 17,576)	
All (unadjusted)	1 (reference)	0.89 (0.73-1.09)	1.03 (0.85-1.25)	1.36 (1.13,1.64)	<0.001
All adjusted for age	1 (reference)	0.72 (0.58-0.88)	0.65 (0.53-0.79)	0.47 (0.38, 0.59)	<0.001
Fibrosis-4 (FIB-4)					

Abbreviations: CI, Confidence interval

**Supplementary Table 3**

**Anthropometric and biochemical characteristics at baseline and follow up in subjects with and without incident diabetes at follow up.**

	No diabetes at follow up			Diabetes at follow up			p value
	Baseline	Follow up	p-value†	Baseline	Follow up	p-value†	
<i>N</i>	69,451			852			<0.001
Age (years)	35.5± 6.0	39.2±6.4	<0.001	40.2±7.4	45.2±7.3	<0.001	<0.001
Female, <i>n</i> (%)	35,694 (51.4)	-		286 (33.6)	-		<0.001
BMI (kg/m <sup>2</sup> )	21.7±2.0	22.0±2.2	<0.001	22.8±1.8	23.0±2.1	<0.001	<0.001
Education, <i>n</i> (%)			<0.001			<0.001	<0.001
≤high school	4,401 (6.3)	11,134 (16.0)		56 (6.6)	238 (27.9)		
>high school	33,168 (47.8)	55,670 (80.2)		304 (35.7)	576 (67.6)		
Unknown	31,882 (45.9)	2,647 (3.8)		492 (57.8)	38 (4.5)		
Exercise, <i>n</i> (%)			0.072			0.011	<0.001
<1 time per week	42,730 (61.5)	43,015 (61.9)		468 (54.9)	515 (60.5)		
≥1 time per week	26,156 (37.7)	24,719 (35.6)		379 (44.5)	312 (36.6)		
Unknown	565 (0.8)	1,717 (2.5)		5 (0.6)	25 (2.9)		
Smoking, <i>n</i> (%)			<0.001			<0.001	<0.001
Never/former	52,640 (75.6)	55,552 (80.0)		555 (65.1)	624 (73.2)		
Current	13,481 (19)	9,937 (14.3)		278 (32.6)	169 (19.8)		
Unknown	3,330 (4.8)	3,962 (5.7)		19 (2.2)	59 (6.9)		
Glucose (mg/dL)	92.0±7.7	92.4±7.7	<0.001	104.6±10.5	117.1±27.9	<0.001	<0.001
Insulin (μIU/mL) <sup>a</sup>	4.25 (2.96, 5.93)	5.10 (3.63,7.11)	<0.001	5.12 (3.59, 7.29)	6.04 (4.18,8.93)	<0.001	<0.001
HOMA-IR <sup>a</sup>	0.97 (0.66,1.38)	1.16 (0.813,1.66)	<0.001	1.30 (0.90,1.88)	1.71 (1.11,2.62)	<0.001	<0.001
LDL-C (mg/dL)	108.3±28.9	117.6±30.3	<0.001	119.8±31.4	131.7±33.0	<0.001	<0.001
Triglyceride (mg/dL)	81 (60, 115)	86 (63,123)	<0.001	123 (86, 180)	123 (89,181)	0.142	<0.001
HDL (mg/dL)	58.6±13.8	60.9±15.1	<0.001	51.9±12.5	54.7±14.0	<0.001	<0.001
AST (IU/L)	19 (16, 23)	18 (16,22)	<0.001	22 (19, 27)	21 (17,26)	<0.001	<0.001
ALT (IU/L)	16 (12, 22)	16 (12,22)	<0.001	22 (16, 32)	22 (16,33)	0.383	<0.001
Albumin (g/dL)	4.6±0.24	4.57±0.24	<0.001	4.7±0.23	4.6±0.25	<0.001	<0.001

Platelet (10 <sup>3</sup> /mm <sup>3</sup> )	253.7±54.2	247.6±51.7	<0.001	270.5±60.0	250.0±56.5	<0.001	<0.001
hs-CRP (mg/dL)	0.04 (0.02, 0.07)	0.04 (0.02,0.07)	<0.001	0.05 (0.03, 0.09)	0.05 (0.03,0.10)	0.21	<0.001
IR (HOMA-IR ≥2.0), <i>n</i> (%)	5,355 (7.7)	10,149 (14.6)	<0.001	178 (20.9)	355 (41.7)	<0.001	<0.001
Fatty liver, <i>n</i> (%)	8,899 (12.8)	12,339 (17.8)	<0.001	340 (39.9)	393 (46.1)	<0.001	<0.001
FIB4 Score <sup>b</sup>	0.72±0.29	0.79±0.37	<0.001	0.78±0.38	0.92±0.50	<0.001	<0.001
Family Hx of DM	10,125 (14.6)	9,093 (13.1)	<0.001	203 (23.8)	204 (23.9)	0.881	<0.001

Data are mean ± standard deviation or median (interquartile range) unless otherwise specified.

<sup>a</sup> Median(interquartile)

<sup>b</sup> (age [yr]x AST [U/L]) / ((PLT [10<sup>9</sup>/L]) x (√ALT [U/L]))

AST, aspartate transaminase; ALT, alanine aminotransferase; BMI, body mass index; FU, follow up; HDL, high-density lipoprotein; HOMA-IR, homeostatic model assessment-Insulin resistance; hs-CRP, high-sensitivity c-reactive protein; IR, insulin resistance; LDL, low-density lipoprotein; NAFLD, non alcoholic fatty liver disease.