Supplementary Table 1. Association of the TyG index, TG/HDL-C ratio, lipid parameters, and glycemic with hypertension by sex in Model 2 using generalised estimation equation model (GEE)[†]

Variable	Male OR (95%CI)	p-value	Female OR (95%CI)	p-value
TyG index				
Q1	1.0		1.0	
Q2	1.30 (1.24-1.36)	<0.001	1.32 (1.24-1.42)	<0.001
Q3	1.65 (1.57-1.73)	<0.001	1.71 (1.58-1.84)	<0.001
Q4	2.12 (2.01-2.25)	<0.001	2.42 (2.22-2.64)	<0.001
Q5	3.04 (2.83-3.27)	<0.001	4.08 (3.65-4.57)	<0.001
Per-1	2.31 (2.20-2.43)	<0.001	3.19 (2.94-3.45)	<0.001
TG/HDL-C ratio				
Q1	1.0		1.0	
Q2	1.06 (1.02-1.11)	0.01	1.23 (1.16-1.31)	<0.001
Q3	1.17 (1.11-1.22)	<0.001	1.49 (1.39-1.60)	<0.001
Q4	1.21 (1.15-1.27)	<0.001	1.88 (1.75-2.03)	<0.001
Q5	1.22 (1.16-1.29)	<0.001	2.69 (2.47-2.93)	<0.001
Per-1	1.06 (1.04-1.08)	<0.001	1.54 (1.48-1.60)	<0.001
TG, mmol/L				
Q1	1.0		1.0	
Q2	1.06 (1.02-1.11)	<0.001	1.13 (1.06-1.21)	<0.001
Q3	1.20 (1.14-1.26)	<0.001	1.32 (1.23-1.42)	<0.001
Q4	1.35 (1.27-1.42)	<0.001	1.63 (1.49-1.77)	<0.001
Q5	1.48 (1.37-1.59)	<0.001	2.02 (1.81-2.26)	<0.001
Per-1	1.18 (1.14-1.22)	<0.001	1.50 (1.41-1.61)	<0.001
TC, mmol/L				
Q1	1.0		1.0	
Q2	1.14 (1.08-1.19)	<0.001	1.04 (0.96-1.12)	0.33
Q3	1.24 (1.17-1.32)	<0.001	1.14 (1.04-1.25)	0.01
Q4	1.34 (1.24-1.45)	<0.001	1.20 (1.07-1.34)	<0.001
Q5	1.51 (1.36-1.67)	<0.001	1.30 (1.12-1.50)	<0.001
Per-1	1.72 (1.61-1.85)	<0.001	1.27 (1.12-1.44)	<0.001
LDL-C, mmol/L				
Q1	1.0		1.0	
Q2	0.98 (0.94-1.02)	0.37	0.96 (0.89-1.02)	0.17
Q3	1.02 (0.97-1.07)	0.39	1.00 (0.93-1.07)	0.89
Q4	1.05 (1.00-1.10)	0.05	1.05 (0.98-1.13)	0.16
Q5	1.16 (1.10-1.22)	<0.001	1.19 (1.11-1.28)	<0.001
Per-1	1.07 (1.05-1.09)	<0.001	1.10 (1.07-1.14)	<0.001
HDL-C, mmol/L				
Q1	1.0		1.0	
Q2	1.03 (0.99-1.08)	0.16	0.93 (0.86-1.00)	0.06
Q3	1.08 (1.02-1.13)	0.00	0.89 (0.81-0.97)	0.01
Q4	1.04 (0.98-1.10)	0.20	0.82 (0.74-0.91)	<0.001
Q5	1.10 (1.02-1.18)	0.01	0.80 (0.71-0.91)	<0.001
Per-1	1.26 (1.14-1.40)	<0.001	0.80 (0.68-0.94)	0.01
FPG, mmol/L				
Q1	1.0		1.0	
Q2	0.80 (0.77-0.84)	<0.001	0.81 (0.76-0.87)	<0.001
Q3	1.06 (1.02-1.11)	<0.001	0.95 (0.89-1.01)	0.11
Q4	1.40 (1.34-1.46)	<0.001	1.21 (1.13-1.29)	<0.001
Q5	2.00 (1.91-2.10)	<0.001	1.89 (1.77-2.03)	<0.001
Per-1	1.05 (1.03-1.06)	<0.001	1.08 (1.05-1.12)	<0.001

TyG index: Triglyceride-glucos index; TG/HDL-C ratio: Triglyceride to high-density lipoprotein cholesterol ratio; TG: Triglyceride; TC: Total cholesterol, LDL-C: Low-density lipoprotein cholesterol, HDL-C: High-density lipoprotein cholesterol, FPG: Fasting plasma glucose.

[†]Model was adjusted for the variables of repeated years of medical check-up based on all medical check-up participants by using GEE. Model 2 was adjusted for age; center; body mass index; total cholesterol; total triglyceride; high-density lipoprotein cholesterol; low-density lipoprotein cholesterol; fasting plasma glucose; uric acid.
triglyceride-glucos index and the triglyceride to high-density lipoprotein cholesterol ratio

Supplementary Table 2. Association of the TyG index, TG/HDL-C ratio, lipid parameters, and glycemic with hypertension by age in Model 2 using generalised estimation equation model (GEE)[†]

Variable	<65 years OR (95%CI)	p-value	≥65 years OR (95%CI)	p-value
TyG index				
Q1	1.0		1.0	
Q2	1.57 (1.50-1.65)	<0.001	1.18 (1.06-1.31)	<0.001
Q3	2.32 (2.20-2.44)	<0.001	1.60 (1.41-1.81)	<0.001
Q4	3.60 (3.41-3.80)	<0.001	1.93 (1.65-2.24)	<0.001
Q5	6.36 (5.97-6.79)	<0.001	2.59 (2.10-3.20)	<0.001
Per-1	4.34 (4.15-4.54)	<0.001	2.41 (2.06-2.81)	<0.001
TG/HDL-C ratio				
Q1	1.0		1.0	
Q2	1.42 (1.36-1.49)	<0.001	1.09 (0.97-1.22)	0.15
Q3	1.80 (1.72-1.89)	<0.001	1.19 (1.05-1.34)	0.01
Q4	2.27 (2.16-2.39)	<0.001	1.13 (0.99-1.29)	0.06
Q5	2.51 (2.38-2.65)	<0.001	1.30 (1.12-1.50)	<0.001
Per-1	1.27 (1.24-1.29)	<0.001	1.07 (1.00-1.15)	0.06
TG, mmol/L				
Q1	1.0		1.0	
Q2	1.31 (1.25-1.36)	<0.001	1.02 (0.91-1.14)	0.71
Q3	1.67 (1.59-1.75)	<0.001	1.07 (0.94-1.22)	0.28
Q4	2.15 (2.04-2.26)	<0.001	1.21 (1.04-1.42)	0.02
Q5	2.61 (2.45-2.77)	<0.001	1.16 (0.93-1.43)	0.19
Per-1	1.45 (1.41-1.50)	<0.001	1.13 (0.98-1.31)	0.08
TC, mmol/L				
Q1	1.0		1.0	
Q2	1.07 (1.02-1.11)	<0.001	0.96 (0.83-1.10)	0.53
Q3	1.19 (1.13-1.26)	<0.001	0.92 (0.77-1.11)	0.41
Q4	1.32 (1.23-1.41)	<0.001	0.88 (0.69-1.12)	0.30
Q5	1.60 (1.46-1.75)	<0.001	0.77 (0.56-1.07)	0.12
Per-1	1.69 (1.58-1.81)	<0.001	1.35 (1.01-1.80)	0.04
LDL-C, mmol/L				
Q1	1.0		1.0	
Q2	0.96 (0.93-1.00)	0.03	1.11 (0.98-1.25)	0.10
Q3	1.09 (1.05-1.13)	<0.001	1.03 (0.91-1.16)	0.69
Q4	1.25 (1.20-1.29)	<0.001	1.09 (0.96-1.23)	0.19
Q5	1.64 (1.57-1.70)	<0.001	1.16 (1.01-1.32)	0.04
Per-1	1.27 (1.25-1.30)	<0.001	1.05 (1.00-1.10)	0.05
HDL-C, mmol/L				
Q1	1.0		1.0	
Q2	1.12 (1.08-1.16)	<0.001	1.27 (1.11-1.45)	<0.001
Q3	1.12 (1.07-1.17)	<0.001	1.20 (1.03-1.40)	0.02
Q4	1.11 (1.05-1.17)	<0.001	1.16 (0.97-1.39)	0.10
Q5	1.08 (1.01-1.16)	0.03	1.02 (0.81-1.28)	0.88
Per-1	1.09 (1.00-1.19)	0.06	0.99 (0.71-1.39)	0.97
FPG, mmol/L				
Q1	1.0		1.0	
Q2	0.70 (0.67-0.73)	<0.001	0.55 (0.49-0.62)	<0.001
Q3	0.89 (0.86-0.92)	<0.001	0.76 (0.67-0.87)	<0.001
Q4	1.25 (1.21-1.30)	<0.001	1.02 (0.89-1.16)	0.80
Q5	2.35 (2.27-2.45)	<0.001	1.11 (0.97-1.27)	0.12
Per-1	1.11 (1.09-1.13)	<0.001	0.96 (0.93-0.99)	<0.001

TyG index: Triglyceride-glucos index; TG/HDL-C ratio: Triglyceride to high-density lipoprotein cholesterol ratio; TG: Triglyceride; TC: Total cholesterol, LDL-C: Low-density lipoprotein cholesterol, HDL-C: High-density lipoprotein cholesterol, FPG: Fasting plasma glucose.

[†]Model was adjusted for the variables of repeated years of medical check-up based on all medical check-up participants by using GEE. Model 2 was adjusted for gender; center; body mass index; total cholesterol; total triglyceride; high-density lipoprotein cholesterol; low-density lipoprotein cholesterol; fasting plasma glucose; uric acid.

Supplementary Table 3. Association of the TyG index, TG/HDL-C ratio, lipid parameters, and glycemic with hypertension by sex in Model 2 using generalised estimation equation model (GEE)[†]

Variable	<28 kg/m^2 OR (95%CI)	p-value	≥ 28 kg/m^2 OR (95%CI)	p-value
TyG index				
Q1	1.0		1.0	
Q2	1.35 (1.29-1.42)	<0.001	1.56 (1.43-1.69)	<0.001
Q3	1.75 (1.67-1.85)	<0.001	1.99 (1.80-2.19)	<0.001
Q4	2.45 (2.32-2.59)	<0.001	2.47 (2.19-2.78)	<0.001
Q5	3.80 (3.56-4.05)	<0.001	3.62 (3.06-4.30)	<0.001
Per-1	2.95 (2.82-3.09)	<0.001	3.04 (2.69-3.43)	<0.001
TG/HDL-C ratio				
Q1	1.0		1.0	
Q2	1.36 (1.30-1.42)	<0.001	1.23 (1.14-1.33)	<0.001
Q3	1.71 (1.63-1.80)	<0.001	1.38 (1.26-1.51)	<0.001
Q4	2.24 (2.13-2.35)	<0.001	1.36 (1.24-1.50)	<0.001
Q5	2.79 (2.65-2.94)	<0.001	1.32 (1.17-1.48)	<0.001
Per-1	1.41 (1.38-1.44)	<0.001	1.09 (1.04-1.14)	<0.001
TG, mmol/L				
Q1	1.0		1.0	
Q2	1.13 (1.08-1.18)	<0.001	1.32 (1.21-1.43)	<0.001
Q3	1.31 (1.25-1.38)	<0.001	1.40 (1.27-1.55)	<0.001
Q4	1.58 (1.50-1.66)	<0.001	1.51 (1.34-1.70)	<0.001
Q5	1.86 (1.75-1.98)	<0.001	1.47 (1.25-1.74)	<0.001
Per-1	1.25 (1.21-1.29)	<0.001	1.18 (1.08-1.28)	<0.001
TC, mmol/L				
Q1	1.0		1.0	
Q2	1.11 (1.06-1.16)	<0.001	1.13 (1.02-1.25)	0.02
Q3	1.26 (1.19-1.33)	<0.001	1.25 (1.10-1.43)	<0.001
Q4	1.38 (1.29-1.47)	<0.001	1.35 (1.13-1.60)	<0.001
Q5	1.63 (1.49-1.78)	<0.001	1.36 (1.07-1.72)	0.01
Per-1	2.17 (2.03-2.31)	<0.001	1.60 (1.33-1.91)	<0.001
LDL-C, mmol/L				
Q1	1.0		1.0	
Q2	0.95 (0.92-0.99)	0.02	1.10 (1.01-1.20)	0.03
Q3	1.02 (0.98-1.06)	0.31	1.11 (1.01-1.21)	0.03
Q4	1.09 (1.05-1.14)	<0.001	1.27 (1.16-1.39)	<0.001
Q5	1.28 (1.23-1.34)	<0.001	1.36 (1.24-1.51)	<0.001
Per-1	1.14 (1.12-1.16)	<0.001	1.14 (1.10-1.19)	<0.001
HDL-C, mmol/L				
Q1	1.0		1.0	
Q2	0.99 (0.95-1.03)	0.61	1.11 (1.01-1.22)	0.02
Q3	0.90 (0.86-0.94)	<0.001	1.10 (0.99-1.21)	0.08
Q4	0.77 (0.73-0.82)	<0.001	1.14 (1.02-1.28)	0.02
Q5	0.63 (0.59-0.68)	<0.001	1.12 (0.97-1.30)	0.11
Per-1	0.50 (0.46-0.55)	<0.001	1.05 (0.82-1.33)	0.71
FPG, mmol/L				
Q1	1.0		1.0	
Q2	0.78 (0.74-0.81)	<0.001	1.11 (1.01-1.22)	<0.001
Q3	0.99 (0.95-1.03)	0.63	1.10 (0.99-1.21)	0.20
Q4	1.34 (1.29-1.39)	<0.001	1.14 (1.02-1.28)	<0.001
Q5	2.15 (2.06-2.23)	<0.001	1.12 (0.97-1.30)	<0.001
Per-1	1.11 (1.09-1.13)	<0.001	0.98 (0.96-1.01)	0.18

TyG index: Triglyceride-glucos index; TG/HDL-C ratio: Triglyceride to high-density lipoprotein cholesterol ratio; TG: Triglyceride; TC: Total cholesterol, LDL-C: Low-density lipoprotein cholesterol, HDL-C: High-density lipoprotein cholesterol, FPG: Fasting plasma glucose.
[†]Model was adjusted for the variables of repeated years of medical check-up based on all medical check-up participants by using GEE. Model 2 was adjusted for age, gender; center; total cholesterol; total triglyceride; high-density lipoprotein cholesterol; low-density lipoprotein cholesterol; fasting plasma glucose; uric acid