

### Appendix 1 Supplementary method 1

The self-reported physician-diagnosed medical conditions (diabetes, hypertension, heart disease, kidney disease, liver disease, chronic lung diseases and dyslipidemia), and the use of medications for diabetes, hypertension, and dyslipidaemia were collected by skilled staff. Education level is categorized into three groups: primary school or lower, middle school, and senior high school or higher. Residence is distinguished between rural and urban settings. Living standard is classified into three tiers: high, average, and poor. Marital status is divided into married and other statuses, which include divorced, separated, widowed, or single. Drinking status were never, ever (used to alcohol consumption but quit), current. Alcohol consumption is defined as drinking at least once per week. Smoking status were never, ever (used to smoke but quit), current [1]. Participants, with the exception of those who had an arm injury, were given instructions to take three readings of their left arm blood pressure at 45-second intervals after a 15-minute rest. The average of the three readings was then reported. Before being weighed and having their height measured, participants were instructed to remove their shoes and clothing. Using standardized scales, measurements of height and body weight were made to the closest 0.1 cm and 0.1 kg, respectively.

**Table S1** Methods, coefficient of variation, and detection limits of the bioassays

Biomarkers	Method	Coefficient of variation		Detection limits
		Within assay	Between assay	
hsCRP	Immunoturbidimetric assay	<1.3%	<5.7%	0.1–20 mg/L
HbA1c	Boronate affinity HPLC	1.90%	2.10%	0–40%
TC	Enzymatic colormetric test	0.80%	1.70%	3–800 mg/dL
HDL-C	Enzymatic colormetric test	1.00%	1.30%	3–120 mg/dL
LDL-C	Enzymatic colormetric test	0.70%	1.20%	3–400 mg/dL
TG	Enzymatic colormetric test	1.50%	1.80%	4–1000 mg/dL
BUN	Enzymatic UV method with urease	<4.4%	<4.1%	5–100 mg/dL
Scr	Rate-blanked and compensated Jaffe creatinine method	<1.6%	<2.1%	0.1–25 mg/dL
FBG	Enzymatic colormetric test	0.90%	1.80%	2–450 mg/dL
UA	UA Plus method	1.10%	1.90%	Up to 20 mg/dL
Cystatin C	Particle-enhanced turbimetric assay	<5%	<5%	0.5–8 mg/L

BUN, blood urea nitrogen; Scr, serum creatinine; hsCRP, high sensitivity C-reactive protein; UA, uric acid; FBG, fasting blood glucose; TC, total cholesterol; TG, triglyceride; LDL-C, low-density lipoproteins cholesterol; HDL-C, high-density lipoproteins cholesterol; HBA1c, hemoglobin A1c.

**Table S2** Baseline characteristic according to the quartiles of BRI

Characteristics	Overall (N=6,862)	BRI				P value
		Q1 (N=1,851)	Q2 (N=1,842)	Q3 (N=1,659)	Q4 (N=1,510)	
<b>Demographics</b>						
Age (years)	58.02 (9.66)	57.72 (9.50)	57.68 (9.60)	57.48 (9.51)	59.37 (9.97)	<0.001
Sex						<0.001
Male	3,206 (47%)	1,202 (65%)	984 (54%)	686 (41%)	334 (22%)	
Female	3,650 (53%)	648 (35%)	855 (46%)	973 (59%)	1,174 (78%)	
Education						<0.001
Primary school or lower	4,824 (70%)	1,260 (68%)	1,264 (69%)	1,162 (70%)	1,138 (75%)	
Middle school	1,389 (20%)	406 (22%)	380 (21%)	325 (20%)	278 (18%)	
Senior high school or higher	647 (9.4%)	184 (9.9%)	198 (11%)	172 (10%)	93 (6.2%)	
Smoking						<0.001
Never	4,155 (61%)	829 (45%)	1,019 (55%)	1,104 (67%)	1,203 (80%)	
Ever	535 (7.8%)	134 (7.2%)	173 (9.4%)	144 (8.7%)	84 (5.6%)	
Current	2,172 (32%)	888 (48%)	650 (35%)	411 (25%)	223 (15%)	
Drinking						0.026
Never	5,935 (86%)	1,572 (85%)	1,589 (86%)	1,428 (86%)	1,346 (89%)	
Ever	379 (5.5%)	114 (6.2%)	98 (5.3%)	100 (6.0%)	67 (4.4%)	
Current	548 (8.0%)	165 (8.9%)	155 (8.4%)	131 (7.9%)	97 (6.4%)	
Living standard						0.046
High	173 (2.6%)	38 (2.1%)	46 (2.5%)	43 (2.6%)	46 (3.1%)	
Average	3,627 (54%)	944 (52%)	955 (52%)	911 (56%)	817 (55%)	
Poor	2,966 (44%)	840 (46%)	823 (45%)	677 (42%)	626 (42%)	
Residence						0.006
Urban	6,411 (93%)	1,752 (95%)	1,696 (92%)	1,540 (93%)	1,423 (94%)	
Rural	451 (6.6%)	99 (5.3%)	146 (7.9%)	119 (7.2%)	87 (5.8%)	
Marital						0.003
Married	6,060 (88%)	1,642 (89%)	1,639 (89%)	1,486 (90%)	1,293 (86%)	
Other	802 (12%)	209 (11%)	203 (11%)	173 (10%)	217 (14%)	
<b>Physical examination</b>						
Height (cm)	157.89 (8.58)	160.86 (8.04)	158.65 (8.36)	157.33 (8.36)	153.94 (8.11)	<0.001
Weight (kg)	57.83 (10.65)	52.40 (8.26)	55.84 (9.16)	60.23 (10.03)	64.26 (11.41)	<0.001
BMI (kg/m <sup>2</sup> )	23.14 (3.51)	20.17 (2.28)	22.05 (2.09)	24.17 (2.33)	26.96 (3.24)	<0.001
WC (cm)	83.34 (12.05)	71.04 (12.29)	81.21 (4.59)	87.80 (5.10)	96.10 (6.68)	<0.001
WHtR	0.53 (0.08)	0.44 (0.07)	0.51 (0.01)	0.56 (0.01)	0.62 (0.04)	<0.001
SBP (mmHg)	128.99 (21.20)	124.14 (19.88)	126.49 (19.92)	130.90 (21.25)	135.90 (22.14)	<0.001
DBP (mmHg)	75.21 (12.18)	72.71 (11.74)	73.92 (12.08)	76.54 (12.14)	78.39 (12.01)	<0.001
MAP (mmHg)	93.14 (14.17)	89.85 (13.63)	91.44 (13.76)	94.66 (14.23)	97.57 (13.87)	<0.001

Table S2 (continued)

Table S2 (continued)

Characteristics	Overall (N=6,862)	BRI				P value
		Q1 (N=1,851)	Q2 (N=1,842)	Q3 (N=1,659)	Q4 (N=1,510)	
<b>Laboratory measurements</b>						
WBC (10 <sup>9</sup> /L)	6.25 (2.27)	6.16 (1.93)	6.17 (3.04)	6.27 (1.86)	6.42 (1.91)	<0.001
MCV	90.69 (8.68)	91.28 (9.11)	90.98 (9.14)	90.39 (8.42)	89.95 (7.75)	<0.001
HCT (%)	41.35 (6.29)	41.28 (6.15)	41.41 (6.26)	41.34 (6.60)	41.36 (6.16)	0.8
Platelet (10 <sup>9</sup> /L)	162.56 (38.92)	163.54 (38.54)	162.74 (38.36)	161.07 (39.00)	162.73 (40.09)	0.5
Cystatin C (mg/L)	1.04 (0.28)	1.05 (0.23)	1.04 (0.27)	1.03 (0.36)	1.04 (0.23)	0.001
BUN (mg/dL)	15.69 (4.56)	16.04 (4.63)	15.81 (4.78)	15.48 (4.43)	15.33 (4.31)	<0.001
Scr (mg/dL)	0.88 (0.25)	0.88 (0.14)	0.89 (0.23)	0.90 (0.40)	0.86 (0.14)	<0.001
Hemoglobin (g/dL)	14.32 (2.23)	14.29 (2.08)	14.29 (2.18)	14.37 (2.35)	14.33 (2.33)	0.4
CRP (mg/L)	1.62 (1.06, 3.03)	1.53 (1.00, 3.14)	1.52 (1.00, 2.98)	1.60 (1.03, 2.76)	1.78 (1.16, 3.26)	<0.001
UA (mg/dL)	4.42 (1.23)	4.36 (1.20)	4.41 (1.23)	4.48 (1.30)	4.45 (1.19)	0.065
FBG (mg/dL)	99.85 (11.85)	98.41 (11.73)	99.07 (12.37)	100.48 (11.33)	101.86 (11.58)	<0.001
TC (mg/dL)	177.82 (24.95)	173.94 (25.43)	178.31 (25.18)	179.55 (23.96)	180.66 (24.46)	<0.001
TG (mg/dL)	8.45 (8.13, 8.78)	8.29 (7.99, 8.62)	8.41 (8.09, 8.74)	8.53 (8.23, 8.85)	8.64 (8.33, 8.93)	<0.001
LDL-C (mg/dL)	115.83 (32.38)	109.70 (30.30)	114.11 (31.29)	119.21 (32.76)	121.75 (34.23)	<0.001
HDL-C (mg/dL)	52.34 (14.98)	56.64 (15.47)	53.90 (15.22)	50.15 (14.12)	47.56 (13.08)	<0.001
HbA1c (%)	5.10 (4.80, 5.30)	5.00 (4.80, 5.30)	5.10 (4.80, 5.30)	5.10 (4.80, 5.40)	5.20 (4.90, 5.40)	<0.001
eGFR (mL/min·1.73 m <sup>2</sup> )	91.33 (14.93)	93.81 (14.17)	92.45 (14.85)	90.40 (15.05)	86.99 (15.04)	<0.001
<b>Insulin resistance indices</b>						
BRI	4.04 (1.45)	2.43 (0.89)	3.59 (0.24)	4.52 (0.30)	6.02 (0.91)	<0.001
TyG-BRI	33.83 (12.77)	20.22 (7.49)	30.17 (2.71)	38.48 (3.35)	51.88 (8.32)	<0.001
TyG	8.45 (0.45)	8.31 (0.44)	8.41 (0.45)	8.52 (0.43)	8.61 (0.43)	<0.001
TyG-WC	701.75 (115.01)	590.62 (104.75)	682.49 (56.23)	747.54 (60.51)	825.89 (73.82)	<0.001
TyG-BMI	194.62 (33.61)	167.57 (21.79)	185.08 (21.00)	205.46 (23.43)	231.52 (31.48)	<0.001
TyG-WHtR	4.46 (0.75)	3.67 (0.63)	4.30 (0.26)	4.76 (0.28)	5.38 (0.43)	<0.001
<b>Disease history</b>						
Hypertension	2,424 (36%)	452 (25%)	534 (29%)	644 (39%)	794 (53%)	<0.001
Hyperlipidemia	408 (6.0%)	56 (3.1%)	85 (4.7%)	119 (7.3%)	148 (9.9%)	<0.001
Liver disease	243 (3.5%)	61 (3.3%)	64 (3.5%)	65 (3.9%)	53 (3.5%)	0.8
Kidney disease	399 (5.8%)	133 (7.2%)	102 (5.5%)	101 (6.1%)	63 (4.2%)	0.002
Chronic lung diseases	606 (8.8%)	189 (10%)	179 (9.7%)	125 (7.5%)	113 (7.5%)	0.005

Values are mean (SD), median (IQR), or n (%). BRI, body roundness index; BMI, body mass index; BUN, blood urea nitrogen; CRP, C-reactive protein; DBP, diastolic blood pressure; eGFR, estimated glomerular filtration rate; FBG, fasting blood glucose; HbA1c, glycated hemoglobin; HDL-C, high-density lipoprotein cholesterol; HCT, Hematocrit; IQR, Interquartile range; LDL-C, low-density lipoprotein cholesterol; MAP, mean Arterial Pressure; MCV, mean corpuscular volume; SBP, systolic blood pressure; Scr, serum creatinine; SD, standard deviation; TC, total cholesterol; TG, triglycerides; TyG, triglyceride glucose index; UA, uric acid; WBC, white blood cell count.

**Table S3** Baseline characteristic according to the quartiles of TyG index

Characteristics	Overall (N=7,396)	TyG index				P value
		Q1 (N=2,095)	Q2 (N=1,992)	Q3 (N=1,824)	Q4 (N=1,485)	
<b>Demographics</b>						
Age (years)	57.97 (9.75)	58.15 (10.18)	57.76 (9.95)	58.13 (9.41)	57.78 (9.26)	0.4
Sex						<0.001
Male	3,522 (48%)	1,149 (55%)	978 (49%)	794 (44%)	601 (40%)	
Female	3,868 (52%)	945 (45%)	1,011 (51%)	1,029 (56%)	883 (60%)	
Education						0.041
Primary school or lower	5,116 (69%)	1,472 (70%)	1,352 (68%)	1,302 (71%)	990 (67%)	
Middle school	1,536 (21%)	426 (20%)	432 (22%)	339 (19%)	339 (23%)	
Senior high school or higher	737 (10.0%)	195 (9.3%)	206 (10%)	182 (10.0%)	154 (10%)	
Smoking						<0.001
Never	4,465 (60%)	1,173 (56%)	1,185 (59%)	1,145 (63%)	962 (65%)	
Ever	555 (7.5%)	164 (7.8%)	150 (7.5%)	124 (6.8%)	117 (7.9%)	
Current	2,376 (32%)	758 (36%)	657 (33%)	555 (30%)	406 (27%)	
Drinking						0.7
Never	6,407 (87%)	1,814 (87%)	1,711 (86%)	1,576 (86%)	1,306 (88%)	
Ever	373 (5.0%)	104 (5.0%)	103 (5.2%)	96 (5.3%)	70 (4.7%)	
Current	616 (8.3%)	177 (8.4%)	178 (8.9%)	152 (8.3%)	109 (7.3%)	
Living standard						0.9
High	179 (2.5%)	47 (2.4%)	48 (2.5%)	42 (2.4%)	42 (3.0%)	
Average	3,761 (53%)	1,053 (53%)	1,014 (54%)	947 (54%)	747 (53%)	
Poor	3,092 (44%)	892 (45%)	821 (44%)	761 (43%)	618 (44%)	
Residence						0.067
Urban	6,859 (93%)	1,960 (94%)	1,839 (92%)	1,702 (93%)	1,358 (91%)	
Rural	537 (7.3%)	135 (6.4%)	153 (7.7%)	122 (6.7%)	127 (8.6%)	
Marital						0.4
Married	6,541 (88%)	1,851 (88%)	1,777 (89%)	1,615 (89%)	1,298 (87%)	
Other	855 (12%)	244 (12%)	215 (11%)	209 (11%)	187 (13%)	
<b>Physical examination</b>						
Height (cm)	157.83 (8.60)	158.37 (8.50)	157.95 (8.76)	157.23 (8.50)	157.64 (8.60)	0.002
Weight (kg)	57.36 (10.52)	55.09 (9.44)	56.82 (10.53)	58.03 (10.65)	60.48 (10.97)	<0.001
BMI (kg/m <sup>2</sup> )	22.98 (3.46)	21.92 (3.00)	22.73 (3.54)	23.41 (3.43)	24.30 (3.50)	<0.001
WC (cm)	82.91 (11.94)	79.98 (10.67)	82.36 (11.77)	84.08 (12.22)	86.34 (12.42)	<0.001
WHR	0.53 (0.08)	0.51 (0.07)	0.52 (0.08)	0.54 (0.08)	0.55 (0.08)	<0.001
SBP (mmHg)	128.67 (21.13)	125.66 (20.35)	127.45 (20.43)	130.79 (21.91)	132.00 (21.45)	<0.001
DBP (mmHg)	74.92 (12.15)	73.19 (11.84)	74.33 (11.85)	75.97 (12.30)	76.90 (12.37)	<0.001
MAP (mmHg)	92.84 (14.12)	90.68 (13.79)	92.04 (13.77)	94.25 (14.35)	95.26 (14.23)	<0.001

Table S3 (continued)

Table S3 (continued)

Characteristics	Overall (N=7,396)	TyG index				P value
		Q1 (N=2,095)	Q2 (N=1,992)	Q3 (N=1,824)	Q4 (N=1,485)	
Heart rate (bpm)	71.83 (10.15)	70.74 (10.06)	71.74 (10.07)	72.49 (10.22)	72.72 (10.15)	<0.001
Laboratory measurements						
WBC (10 <sup>9</sup> /L)	6.19 (2.23)	5.97 (1.86)	6.08 (1.84)	6.29 (1.87)	6.51 (3.28)	<0.001
MCV	90.70 (8.65)	90.94 (9.09)	90.35 (8.94)	90.64 (8.49)	90.92 (7.72)	0.02
HCT (%)	41.28 (6.25)	40.89 (6.33)	41.09 (6.38)	41.46 (5.87)	41.90 (6.36)	<0.001
Platelet (10 <sup>9</sup> /L)	162.24 (39.17)	162.63 (38.98)	161.25 (39.46)	161.93 (39.41)	163.53 (38.72)	0.6
Cystatin C (mg/L)	1.04 (0.28)	1.04 (0.26)	1.05 (0.33)	1.05 (0.29)	1.01 (0.22)	0.002
BUN (mg/dL)	15.74 (4.65)	16.36 (5.04)	15.84 (4.66)	15.36 (4.37)	15.19 (4.30)	<0.001
Scr (mg/dL)	0.88 (0.26)	0.88 (0.26)	0.89 (0.38)	0.89 (0.16)	0.89 (0.15)	<0.001
Hemoglobin (g/dL)	14.32 (2.23)	14.19 (2.38)	14.23 (2.17)	14.40 (2.14)	14.54 (2.19)	<0.001
CRP (mg/L)	1.61 (1.05, 3.07)	1.62 (1.02, 3.38)	1.61 (1.04, 2.95)	1.57 (1.05, 2.93)	1.66 (1.08, 3.02)	0.6
UA (mg/dL)	4.38 (1.21)	4.25 (1.13)	4.30 (1.20)	4.44 (1.27)	4.62 (1.24)	<0.001
FBG (mg/dL)	99.25 (11.90)	93.75 (13.40)	99.10 (10.27)	100.77 (10.44)	105.35 (9.70)	<0.001
TC (mg/dL)	176.95 (25.17)	170.59 (25.77)	177.29 (24.62)	180.35 (24.40)	183.27 (23.38)	<0.001
TG (mg/dL)	94.69 (69.92, 130.98)	75.22 (58.41, 100.89)	88.50 (68.14, 121.25)	103.54 (77.88, 136.29)	121.25 (93.81, 157.53)	<0.001
LDL-C (mg/dL)	116.49 (31.34)	106.93 (28.33)	117.19 (29.84)	121.54 (32.08)	122.90 (33.19)	<0.001
HDL-C (mg/dL)	53.42 (14.71)	60.54 (15.14)	55.10 (14.00)	50.27 (12.92)	44.97 (11.28)	<0.001
HbA1c (%)	5.10 (4.80, 5.30)	5.00 (4.80, 5.30)	5.10 (4.80, 5.30)	5.10 (4.90, 5.30)	5.20 (4.90, 5.40)	<0.001
eGFR (mL/min-1.73 m <sup>2</sup> )	91.79 (14.95)	93.57 (14.58)	92.72 (14.59)	90.44 (14.88)	89.75 (15.62)	<0.001
Insulin resistance indices						
BRI	3.99 (1.44)	3.57 (1.24)	3.91 (1.43)	4.18 (1.46)	4.45 (1.50)	<0.001
TyG-BRI	33.83 (12.77)	28.22 (9.94)	32.62 (11.95)	36.32 (12.74)	40.38 (13.65)	<0.001
TyG	8.45 (0.46)	7.90 (0.25)	8.35 (0.10)	8.68 (0.10)	9.08 (0.15)	<0.001
TyG-WC	701.63 (114.91)	632.05 (87.24)	687.69 (99.03)	729.96 (106.76)	784.24 (114.16)	<0.001
TyG-BMI	194.58 (33.60)	173.20 (24.43)	189.82 (29.79)	203.24 (30.00)	220.77 (32.25)	<0.001
TyG-WHtR	4.46 (0.75)	4.00 (0.58)	4.36 (0.65)	4.65 (0.69)	4.98 (0.74)	<0.001
Disease history						
Hypertension	2,199 (35%)	504 (28%)	539 (32%)	621 (40%)	535 (43%)	<0.001
Hyperlipidemia	410 (5.6%)	71 (3.4%)	103 (5.2%)	105 (5.9%)	131 (8.9%)	<0.001
Liver disease	247 (3.3%)	79 (3.8%)	66 (3.3%)	62 (3.4%)	40 (2.7%)	0.4
Kidney disease	418 (5.7%)	119 (5.7%)	122 (6.1%)	102 (5.6%)	75 (5.1%)	0.6
Chronic lung diseases	648 (8.8%)	198 (9.5%)	170 (8.5%)	168 (9.2%)	112 (7.6%)	0.2

Values are mean (SD), median (IQR), or n (%). BRI, body roundness index; BMI, body mass index; BUN, blood urea nitrogen; CRP, C-reactive protein; DBP, diastolic blood pressure; eGFR, estimated glomerular filtration rate; FBG, fasting blood glucose; HbA1c, glycosylated hemoglobin; HDL-C, high-density lipoprotein cholesterol; HCT, Hematocrit; IQR, Interquartile range; LDL-C, low-density lipoprotein cholesterol; MAP, mean Arterial Pressure; MCV, mean corpuscular volume; SBP, systolic blood pressure; Scr, serum creatinine; SD, standard deviation; TC, total cholesterol; TG, triglycerides; TyG, triglyceride glucose index; UA, uric acid; WBC, white blood cell count.

**Table S4** Multivariate-adjusted hazard ratios (95% confidence intervals) for the associations of TyG-BRI, BRI, and TyG with stroke incidence among all participants (including those with and without diabetes).

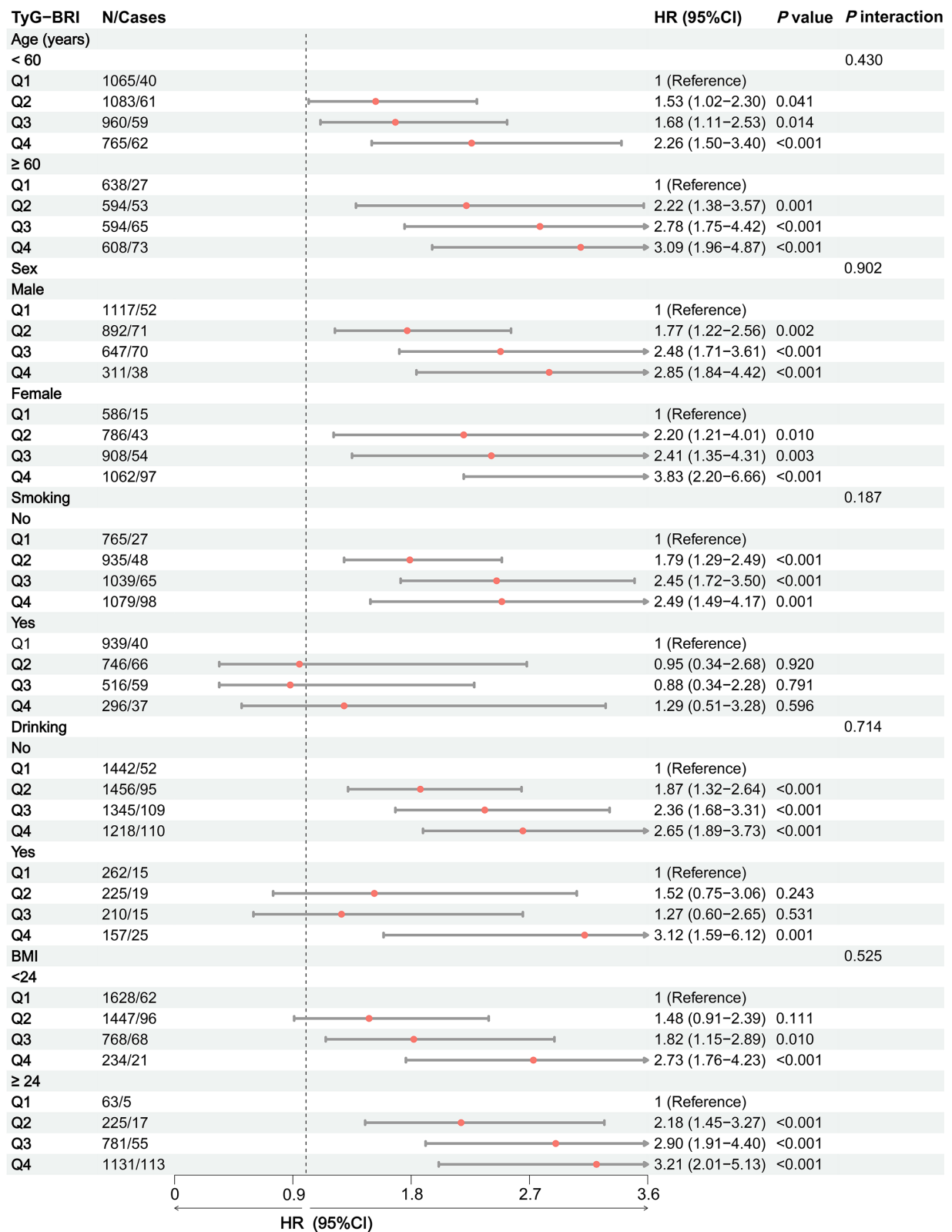
TyG	N/Cases	Crude		Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Model 3 <sup>c</sup>	
		HR (95%CI)	P value	HR (95%CI)	P value	HR (95%CI)	P value	HR (95%CI)	P value
<b>TyG-BRI</b>									
Continues									
Per SD increase	7315/948	1.26 (1.17–1.35)	<0.001	1.20 (1.11–1.29)	<0.001	1.19 (1.10–1.28)	<0.001	1.18 (1.07–1.31)	0.001
Quartiles									
Q1	1954/207	1 (reference)		1 (reference)		1 (reference)		1 (reference)	
Q2	1931/226	1.11 (0.91–1.35)	0.316	1.08 (0.89–1.33)	0.427	1.12 (0.91–1.37)	0.293	1.17 (0.87–1.55)	0.297
Q3	1805/243	1.31 (1.08–1.60)	0.007	1.24 (1.01–1.51)	0.039	1.26 (1.02–1.54)	0.028	1.32 (0.99–1.75)	0.058
Q4	1625/272	1.79 (1.47–2.17)	<0.001	1.57 (1.28–1.93)	<0.001	1.55 (1.26–1.91)	<0.001	1.51 (1.13–2.02)	0.005
P trend			<0.001		<0.001		<0.001		0.001
<b>BRI</b>									
Continues									
Per SD increase	7862/1026	1.24 (1.16–1.33)	<0.001	1.17 (1.09–1.26)	<0.001	1.17 (1.08–1.25)	<0.001	1.16 (1.06–1.28)	0.002
Quartiles									
Q1	2101/223	1 (reference)		1 (reference)		1 (reference)		1 (reference)	
Q2	2092/239	1.07 (0.88–1.30)	0.495	1.05 (0.86–1.27)	0.637	1.07 (0.88–1.30)	0.508	1.11 (0.84–1.46)	0.473
Q3	1909/270	1.39 (1.15–1.68)	0.001	1.32 (1.09–1.60)	0.004	1.35 (1.11–1.64)	0.003	1.37 (1.05–1.79)	0.021
Q4	1760/294	1.77 (1.47–2.13)	<0.001	1.56 (1.28–1.90)	<0.001	1.55 (1.27–1.89)	<0.001	1.52 (1.16–2.00)	0.002
P trend			<0.001		<0.001		<0.001		<0.001
<b>TyG</b>									
Continues									
Per SD increase	8396/1146	1.17 (1.10–1.25)	<0.001	1.16 (1.09–1.23)	<0.001	1.15 (1.08–1.23)	<0.001	1.14 (1.04–1.25)	0.005
Quartiles									
Q1	2345/284	1 (reference)		1 (reference)		1 (reference)		1 (reference)	
Q2	2242/271	1.11 (0.94–1.30)	0.217	1.11 (0.94–1.30)	0.221	1.09 (0.93–1.29)	0.292	1.19 (0.94–1.51)	0.142
Q3	2074/304	1.33 (1.12–1.57)	0.001	1.30 (1.10–1.54)	0.002	1.30 (1.09–1.54)	0.003	1.23 (0.96–1.57)	0.102
Q4	1735/287	1.37 (1.17–1.60)	<0.001	1.35 (1.15–1.58)	<0.001	1.34 (1.14–1.58)	<0.001	1.40 (1.11–1.76)	0.004
P trend			<0.001		<0.001		<0.001		0.023

Model 1 was adjusted for sex and age; model 2 was adjusted for model 1 plus BMI, education, marital status, residence, living standard, smoking status, drinking status, uric acid, serum creatinine, CRP, FBG, SBP, DBP; model 3 was adjusted as model 2 plus history of hypertension, dyslipidemia, liver disease, kidney disease, chronic lung diseases. TyG, triglyceride glucose index; BRI, body roundness index; HR, Hazard Ratio; CI, confidence interval.

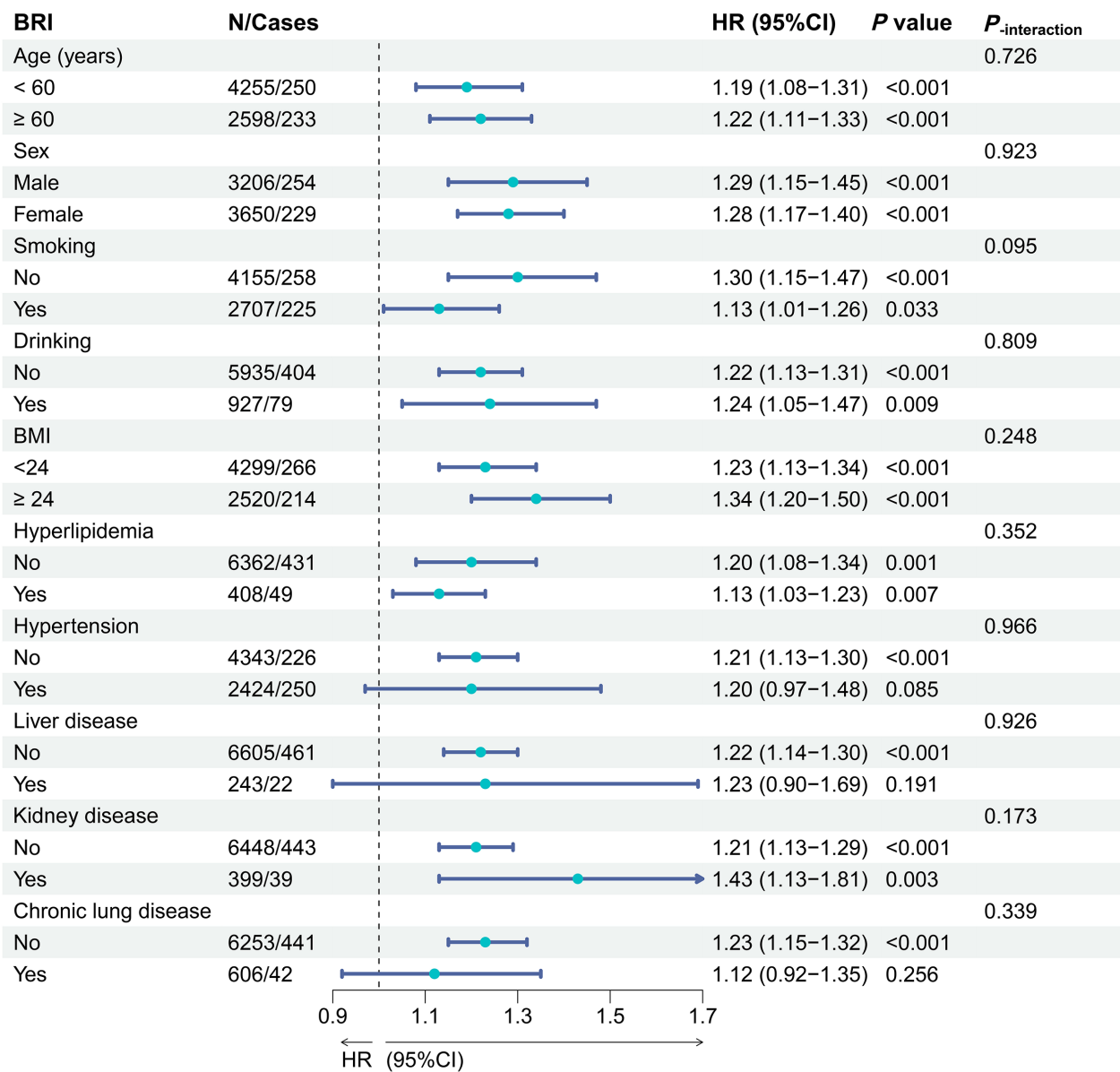
**Table S5** Sensitivity analysis for the association between BRI and stroke incidence, stratified by TyG levels among all participants (including those with and without diabetes)

	N/Cases	Crude		Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Model 3 <sup>c</sup>	
		HR (95%CI)	P value	HR (95%CI)	P value	HR (95%CI)	P value	HR (95%CI)	P value
TyG <8.37									
BRI <3.89	1716/182	1 (reference)		1 (reference)		1 (reference)		1 (reference)	
BRI ≥3.89	1012/177	1.78 (1.45–2.18)	<0.001	1.73 (1.40–2.15)	<0.001	1.76 (1.42–2.19)	<0.001	1.86 (1.23–2.81)	0.003
Quartiles									
Q1	998/101	1 (reference)		1 (reference)		1 (reference)		1 (reference)	
Q2	820/94	1.25 (0.95–1.62)	0.106	1.23 (0.94–1.61)	0.132	1.26 (0.96–1.65)	0.096	1.10 (0.66–1.83)	0.709
Q3	553/93	1.86 (1.41–2.45)	<0.001	1.85 (1.40–2.46)	<0.001	1.95 (1.46–2.60)	<0.001	1.72 (1.00–2.94)	0.048
Q4	357/71	2.14 (1.58–2.91)	<0.001	2.06 (1.49–2.86)	<0.001	2.07 (1.49–2.90)	<0.001	2.08 (1.11–3.91)	0.023
P trend			<0.001		<0.001		<0.001		0.010
TyG ≥ 8.37									
BRI <3.89	1544/224	1 (reference)		1 (reference)		1 (reference)		1 (reference)	
BRI ≥3.89	2043/365	1.37 (1.16–1.61)	<0.001	1.30 (1.10–1.54)	0.002	1.29 (1.09–1.54)	0.003	1.37 (0.97–1.91)	0.070
Quartiles									
Q1	785/114	1 (reference)		1 (reference)		1 (reference)		1 (reference)	
Q2	894/125	1.05 (0.82–1.34)	0.711	1.06 (0.83–1.36)	0.643	1.10 (0.85–1.42)	0.461	1.32 (0.79–2.19)	0.287
Q3	962/163	1.34 (1.06–1.70)	0.014	1.33 (1.04–1.69)	0.021	1.36 (1.06–1.73)	0.014	1.63 (0.99–2.67)	0.055
Q4	946/187	1.61 (1.28–2.03)	<0.001	1.52 (1.19–1.94)	0.001	1.53 (1.20–1.97)	0.001	1.94 (1.16–3.24)	0.012
P trend			<0.001		<0.001		<0.001		0.008

Model 1 was adjusted for sex and age; model 2 was adjusted for model 1 plus BMI, education, marital status, residence, living standard, smoking status, drinking status, uric acid, serum creatinine, CRP, FBG, SBP, DBP; model 3 was adjusted as model 2 plus history of hypertension, dyslipidemia, liver disease, kidney disease, chronic lung diseases. TyG, triglyceride glucose index; BRI, body roundness index; HR, hazard ratio; CI, confidence interval.



**Figure S1** Subgroup and interaction analyses among the quartiles of TyG-BRI and stroke incidence across various subgroups.



**Figure S2** Subgroup and interaction analyses among the BRI and stroke incidence across various subgroups.

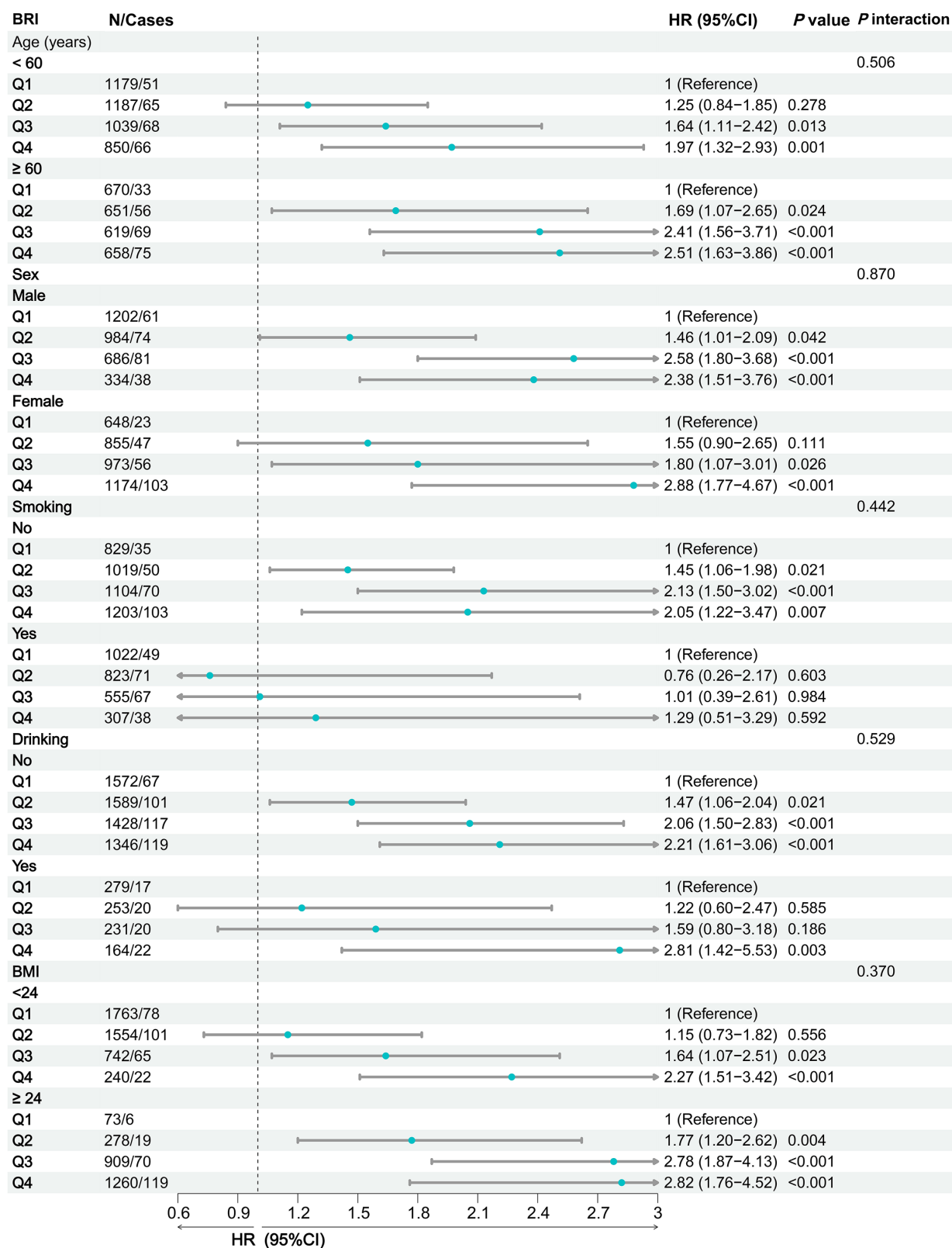
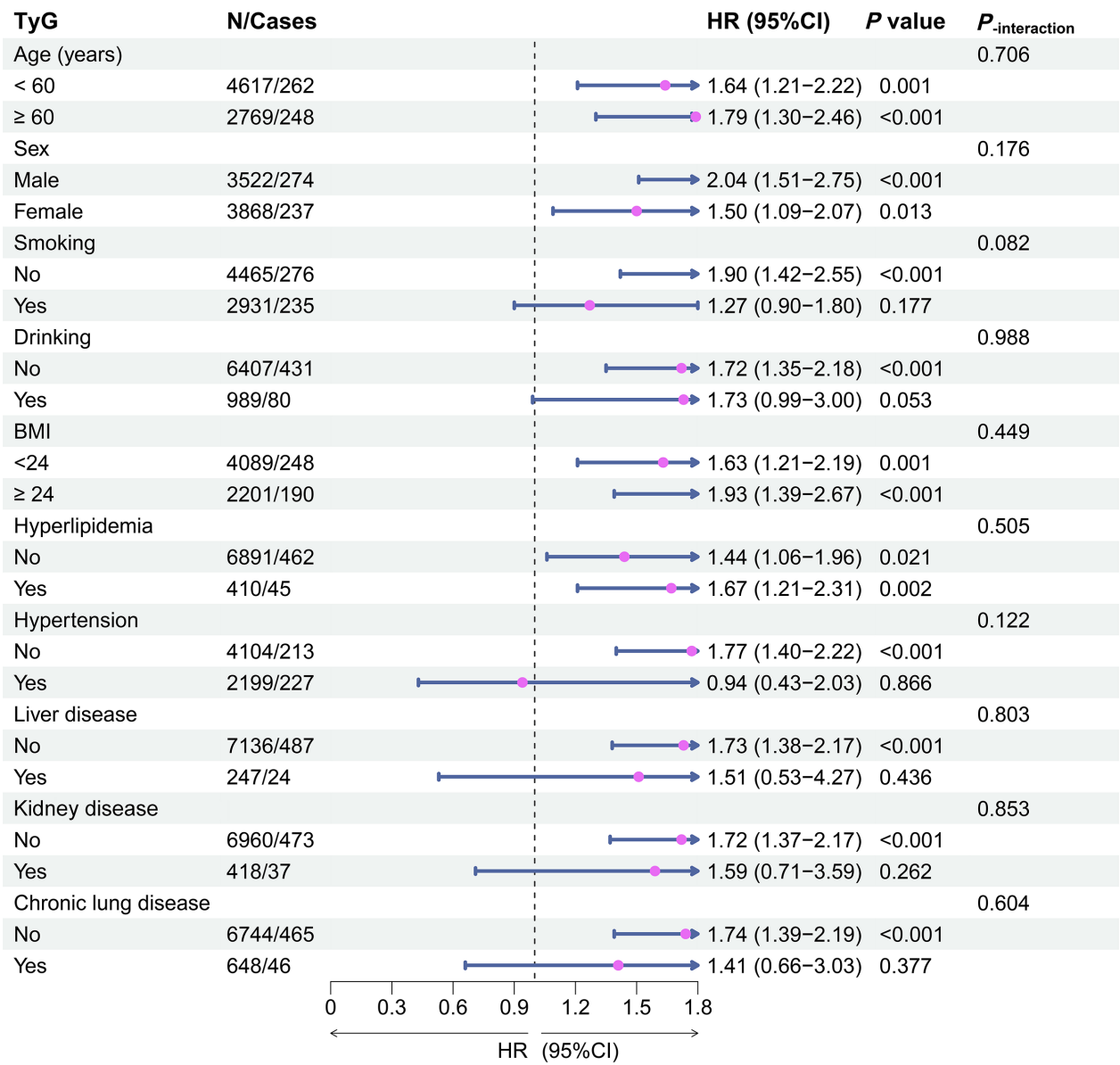
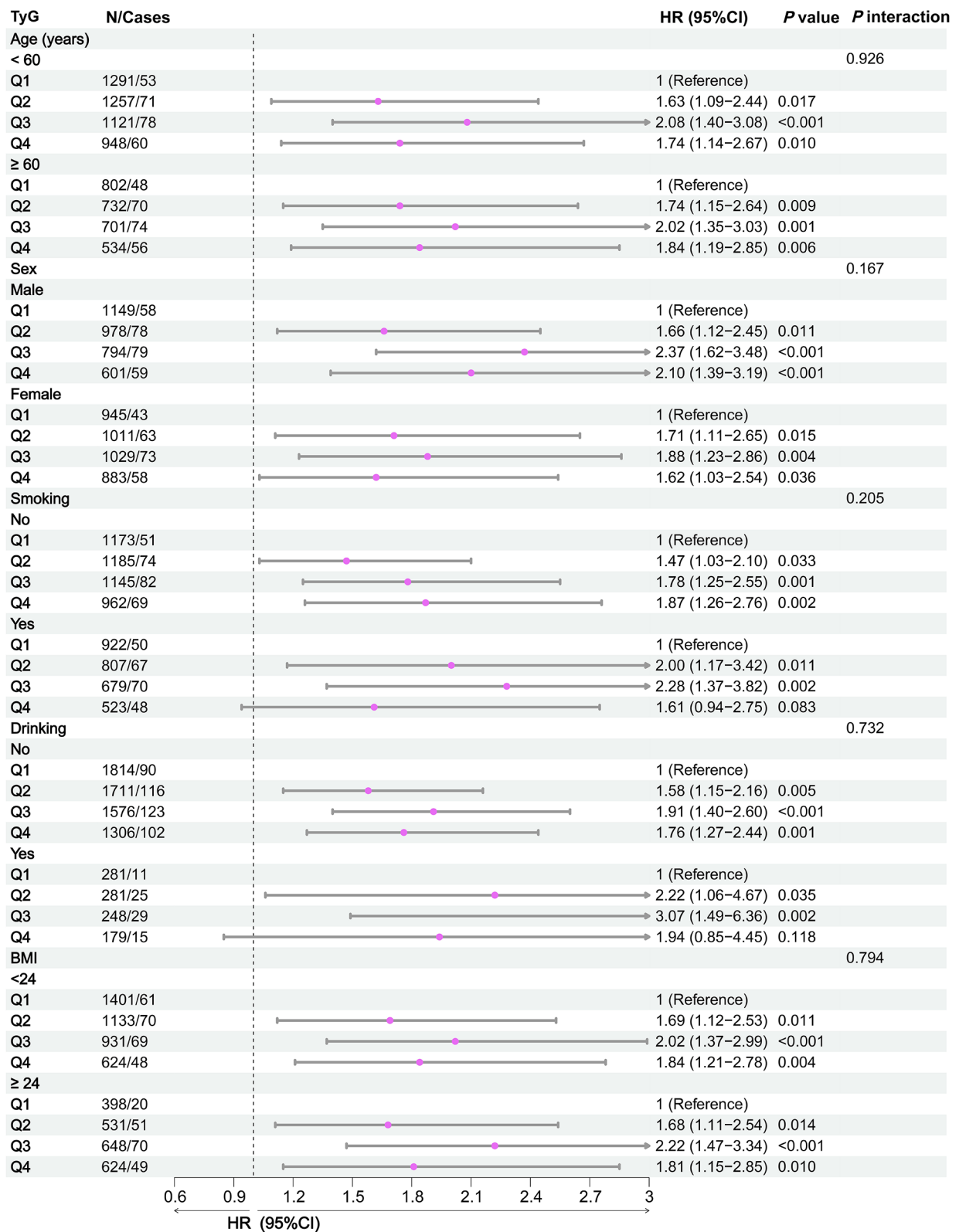


Figure S3 Subgroup and interaction analyses among the quartiles of BRI and stroke incidence across various subgroups.



**Figure S4** Subgroup and interaction analyses among the TyG and stroke incidence across various subgroups.



**Figure S5** Subgroup and interaction analyses among the quartiles of TyG and stroke incidence across various subgroups.