

**Supplemental Data Table 1.** Linear correlation analysis, by sex, between biological variables and total GGT activity.

<b>Variables</b>	<b>Men</b>	<b>Women</b>
<b>Age</b>	-0.05	0.09 <sup>†</sup>
<b>BMI</b>	0.13 <sup>‡</sup>	0.21 <sup>‡</sup>
<b>Waist circumference</b>	0.15 <sup>‡</sup>	0.25 <sup>‡</sup>
<b>Alcohol</b>	0.26 <sup>‡</sup>	0.09 <sup>†</sup>
<b>Coffee</b>	-0.04	-0.03
<b>Physical activity</b>	-0.06	-0.04
<b>Heart rate</b>	0.18 <sup>‡</sup>	0.19 <sup>‡</sup>
<b>SBP</b>	0.09 <sup>†</sup>	0.16 <sup>‡</sup>
<b>DBP</b>	0.14 <sup>‡</sup>	0.11 <sup>‡</sup>
<b>Creatinine<sup>#</sup></b>	-0.09 <sup>†</sup>	-0.06 <sup>§</sup>
<b>Blood glucose</b>	0.12 <sup>‡</sup>	0.24 <sup>‡</sup>
<b>Total cholesterol</b>	0.23 <sup>‡</sup>	0.21 <sup>‡</sup>
<b>HDL Cholesterol</b>	0.03	-0.13 <sup>‡</sup>
<b>LDL cholesterol</b>	0.02	0.16 <sup>‡</sup>
<b>Triglycerides<sup>#</sup></b>	0.28 <sup>‡</sup>	0.30 <sup>‡</sup>
<b>CRP<sup>#</sup></b>	0.16 <sup>‡</sup>	0.24 <sup>‡</sup>
<b>Fibrinogen<sup>#</sup></b>	-0.02	0.08 <sup>§</sup>
<b>PAI-1<sup>#</sup></b>	0.34 <sup>‡</sup>	0.41 <sup>‡</sup>
<b>HCys<sup>#</sup></b>	0.02	0.10 <sup>‡</sup>
<b>UACR,<sup>#</sup></b>	0.04	0.05
<b>BNP<sup>#</sup></b>	-0.06	-0.06
<b>Aldosterone<sup>#</sup></b>	0.08 <sup>§</sup>	0.10 <sup>‡</sup>
<b>Renin<sup>#</sup></b>	0.05	0.11 <sup>‡</sup>
<b>Aldosterone/Renin<sup>#</sup></b>	-0.01	-0.05
<b>D-dimer<sup>#</sup></b>	-0.05	0.08 <sup>§</sup>

Data are reported as Pearson correlation coefficients. BMI: body mass index; BNP: brain natriuretic peptide; CRP: C-reactive protein; DBP: diastolic blood pressure; HCys: homocysteine; PAI-1: plasminogen activator inhibitor 1; Q: quartile; SBP: systolic blood pressure; UACR: urine-albumin to creatinine ratio. #Linear correlation analysis have been performed on ln-transformed data, also fractional GGT data were ln-transformed. Statistical significance level: §P < 0.01; †P < 0.001; ‡P < 0.0001; otherwise P ≥ 0.01.

**Supplemental Data Table 2.** Clinical correlates of total GGT, by sex, as determined by multivariable linear regression analysis.

Variable	Total GGT		
	Regression coefficient	95% CI	
<b>MEN (n=1422)</b>			
Age	-0.05	-0.10	-0.01
Waist Circumference			
Alcohol	0.16 <sup>‡</sup>	0.11	0.21
Heart rate	0.08 <sup>†</sup>	0.04	0.13
SBP			
Blood glucose	0.03	-0.01	0.08
HDL Cholesterol	0.17 <sup>‡</sup>	0.12	0.23
LDL cholesterol	0.00	-0.05	0.05
Triglycerides <sup>#</sup>	0.25 <sup>‡</sup>	0.19	0.31
CRP <sup>#</sup>	0.16 <sup>‡</sup>	0.10	0.22
Fibrinogen, <sup>#</sup>	-0.11 <sup>†</sup>	-0.17	-0.06
PAI-1 <sup>#</sup>	0.21 <sup>‡</sup>	0.15	0.26
HCys <sup>#</sup>	0.01	-0.04	0.06
<b>WOMEN (n=1616)</b>			
Age	-0.02	-0.07	0.03
Waist circumference			
Alcohol	0.08 <sup>§</sup>	0.03	0.12
Heart rate	0.04	-0.01	0.09
SBP			
Blood glucose	0.07 <sup>§</sup>	0.02	0.12
HDL Cholesterol	0.05	-0.01	0.10
LDL cholesterol	0.08 <sup>†</sup>	0.04	0.13
Triglycerides <sup>#</sup>	0.15 <sup>‡</sup>	0.09	0.20
CRP <sup>#</sup>	0.10 <sup>†</sup>	0.05	0.16
Fibrinogen, <sup>#</sup>	-0.08 <sup>§</sup>	-0.14	-0.03
PAI-1 <sup>#</sup>	0.29 <sup>‡</sup>	0.24	0.35
HCys <sup>#</sup>	0.06	0.01	0.10

Standardized regression coefficients (95% CI) for significant correlations are shown. CRP: C-reactive protein; DBP: diastolic blood pressure; PAI-1: plasminogen activator inhibitor 1. #Linear correlation analysis have been performed on ln-transformed data, also fractional GGT data were ln-transformed. Statistical significance level: §P < 0.01; †P < 0.001; ‡P < 0.0001; otherwise P ≥ 0.01.

**Supplemental Data Table 3.** Clinical baseline characteristics of the Reference Group (n =432).

	<b>Men</b>	<b>Women</b>
<b>n (%)</b>	194 (45)	238 (55)
<b>Age, years</b>	56 (10)	58 (10)
<b>BMI, Kg/m<sup>2</sup></b>	26.2 (2.3)	24.8 (2.7)
<b>Waist circumference, cm</b>	96 (7)	89 (10)
<b>Alcohol, drink/week</b>	4.5 (4.7)	1.7 (2.2)
<b>Coffee consumption, cups/day</b>	2.0 (2.2)	1.5 (1.6)
<b>Physical activity index, times/week</b>	3.1 (2.2)	2.2 (2.3)
<b>Heart rate, bpm</b>	61 (10)	65 (8)
<b>SBP, mmHg</b>	121 (10)	120 (13)
<b>DPB, mmHg</b>	75 (7)	72 (8)
<b>Pre-diabetes, n (%)</b>	85 (44)	51 (21)
<b>Blood glucose, mg/dL</b>	98 (91 – 104)	92 (87 – 99)
<b>Creatinine, mg/dL</b>	1.2 (1.2 – 1.3)	1.0 (1.0 – 1.2)
<b>UACR, mg/g</b>	3.8 (1.7 – 6.6)	8.2 (3.7 – 15.3)
<b>Total cholesterol, mg/dL</b>	196 (172 – 221)	210 (184 – 241)
<b>HDL Cholesterol, mg/dL</b>	41 (35 – 51)	54 (47 – 65)
<b>LDL Cholesterol, mg/dL</b>	128 (105 – 151)	130 (109 – 151)
<b>Triglycerides, mg/dL</b>	112 (77 – 149)	110 (77 – 164)
<b>CRP, mg/dL</b>	1.2 (0.6 – 2.6)	1.5 (0.7 – 3.4)
<b>Fibrinogen, mg/dL</b>	303 (272 – 351)	316 (288 – 358)
<b>PAI-1, ng/ml</b>	20.9 (14.0 – 28.0)	17.6 (9.9 – 25.6)
<b>HCys, μmol/L</b>	9.6 (8.3 – 11.2)	7.6 (6.2 – 9.2)
<b>BNP, ng/L</b>	4.2 (4.0 – 10.5)	9.2 (4.0 – 17.7)
<b>Aldosterone, ng/dL</b>	9.0 (7.0 – 13)	10.0 (7.0 – 14.0)
<b>Renin, mUI/L</b>	14.0 (10.0 – 21.5)	9.0 (6.0 – 15.0)
<b>Aldosterone/Renin</b>	0.6 (0.4 – 0.9)	1.0 (0.6 – 1.7)
<b>D-dimer μg/mL</b>	235 (132 – 362)	299 (191 – 418)
<b>Total GGT, U/L</b>	23.1 (16.7 – 35.2)	16.8 (13.0 – 23.8) <sup>‡</sup>
<b>b-GGT, U/L</b>	3.1 (2.1 – 6.1)	2.5 (1.7 – 4.3) <sup>§</sup>
<b>m-GGT, U/L</b>	0.5 (0.3 – 0.9)	0.3 (0.2 – 0.6) <sup>†</sup>
<b>s-GGT, U/L</b>	6.3 (4.0 – 12.7)	4.1 (2.7 – 7.8) <sup>‡</sup>
<b>f-GGT, U/L</b>	11.7 (9.8 – 14.9)	9.4 (7.7 – 11.3) <sup>‡</sup>
<b>b-GGT/s-GGT</b>	0.46 (0.33 – 0.68)	0.59 (0.38 – 0.85) <sup>†</sup>

Data are presented as mean (SD) or median (Q1-Q3), unless otherwise indicated. BMI: body mass index; BNP: brain natriuretic peptide; CRP: C-reactive protein; DBP: diastolic blood pressure; HCys: homocysteine; PAI-1: plasminogen activator inhibitor 1; Q: quartile; SBP: systolic blood pressure; UACR: urine-albumin to creatinine ratio. Wilcoxon-Mann-Whitney test, statistical significance level: <sup>§</sup>P < 0.01; <sup>†</sup>P < 0.001; <sup>‡</sup>P < 0.0001.