

Supplementary Tables

Supplementary Table S1: Population characteristics of dropped outs at each follow-up time.

Characteristic	Drop out at 1st follow-up	Drop out at 2nd follow-up	Drop out at 3rd follow-up
N, total	1627	1859	1865
Socio-demography			
Age (years), mean (SD)	45.36 (19.56)	46.9 17.8	49.7 (16.9)
Sex (females), n (%)	921 (56.6)	1036 (57.0)	1062 (57.0)
Ever smoking (yes)	629 (38.7)	771 (42.4)	772 (41.4)
Ever drinking alcohol (yes)	805 (49.5)	1040 (57.2)	1060 (56.8)
Anthropometry			
Body mass index (kg/m ²), mean (SD)	25.6 (5.0)	25.7 (4.7)	25.8 (4.5)
Blood pressure			
Systolic blood pressure (mm Hg), median (IQR)	127.0 (19.7)	124.6 (17.2)	124.0 (18.2)
Diastolic blood pressure (mm Hg), median (IQR)	77.2 (11.1)	77.9 (11.5)	76.0 (10.1)
Hypertension, n (%)	458 (28.1)	440 (24.8)	398 (22.5)
PWV (m/s), median (IQR)	6.5 (5.3 8.29)	6.6 (5.5 8.3)	6.6 (5.6 8.1)

Supplementary Table S2: Impact of genetic variants, lipid levels, inflammation, and the interplay between genetic variants with lipids and inflammation markers on arterial stiffness (represented by PWV).

	Variables	Lipids								
		CHO			LDL			TG		
		Estimate	95% CI	p	Estimate	95% CI	p	Estimate	95% CI	p
SNPs										
rs3742207	GG	Reference			Reference			Reference		
	GT	1.013	1.005 – 1.021	1.38E-03	1.013	1.005 – 1.021	1.53E-03	1.013	1.005 – 1.021	1.45E-03
	TT	1.026	1.016 – 1.037	1.04E-06	1.026	1.016 – 1.037	9.10E-07	1.026	1.016 – 1.037	7.85E-07
	biomarker	1.006	1.00 – 1.012	5.96E-02	1.003	0.997 – 1.009	2.95E-01	1.007	1.001 – 1.012	2.19E-02
	biomarker*GT	1.006	0.999 – 1.014	9.19E-02	1.004	0.997 – 1.011	2.83E-01	1.004	0.997 – 1.012	2.26E-01
	biomarker*TT	1.0	0.990 – 1.009	9.31E-01	0.998	0.989 – 1.008	7.49E-01	1.005	0.995 – 1.014	3.30E-01
rs1495448	TT	Reference			Reference			Reference		
	TG	1.004	0.996 – 1.012	3.62E-01	1.004	0.996 – 1.012	3.71E-01	1.004	0.996 – 1.012	3.41E-01
	GG	1.013	1.003 – 1.024	1.25E-02	1.012	1.002 – 1.022	2.18E-02	1.013	1.003 – 1.023	1.38E-02
	biomarker	1.008	1.002 – 1.014	1.15E-02	1.006	1.000 – 1.012	4.02E-02	1.005	0.999 – 1.011	1.10E-01
	biomarker*TG	1.001	0.993 – 1.008	8.40E-01	0.999	0.992 – 1.006	7.94E-01	1.004	0.996 – 1.011	3.57E-01
	biomarker*GG	1.00	0.999 – 1.009	9.23E-01	0.997	0.987 – 1.006	4.66E-01	1.014	1.004 – 1.023	6.52E-03
rs7152623	GG	Reference			Reference			Reference		
	GA	1.008	0.999 – 1.017	7.67E-02	1.008	0.999 – 1.017	7.96E-02	1.008	1.00 – 1.017	6.24E-02
	AA	1.017	1.007 – 1.027	8.01E-04	1.017	1.007 – 1.027	8.28E-04	1.018	1.008 – 1.028	5.21E-04
	biomarker	1.009	1.003 – 1.016	5.57E-03	1.007	1.001 – 1.014	3.17E-02	1.006	1.00 – 1.013	5.23E-02
	biomarker*GA	1.00	0.992 – 1.008	9.20E-01	0.998	0.990 – 1.006	6.42E-01	1.004	0.996 – 1.012	2.99E-01
	biomarker*AA	0.998	0.989 – 1.007	5.91E-01	0.995	0.989 – 1.004	3.22E-01	1.005	0.996 – 1.014	3.09E-01
Inflammation markers										
SNPs		TWBC			ESR			FGN		
rs3742207	GG	Reference			Reference			Reference		
	GT	1.012	1.004 – 1.020	3.02E-03	1.012	1.004 – 1.020	2.80E-03	1.012	1.004 – 1.020	3.46E-03
	TT	1.025	1.014 – 1.035	3.74E-06	1.026	1.015 – 1.036	1.74E-06	1.026	1.015 – 1.036	1.54E-06
	biomarker	1.006	1.001 – 1.012	2.10E-02	1.007	1.000 – 1.013	3.82E-02	1.01	1.004 – 1.016	7.41E-04
	biomarker*GT	1.004	0.997 – 1.011	2.48E-01	0.997	0.989 – 1.005	4.75E-01	0.996	0.989 – 1.004	3.11E-01
	biomarker*TT	1.007	0.997 – 1.016	1.68E-01	0.996	0.986 – 1.006	4.75E-01	1.003	0.994 – 1.013	4.83E-01

rs1495448	TT	Reference			Reference			Reference		
	TG	1.003	0.995– 1.012	4.03E-01	1.004	0.995– 1.012	3.86E-01	1.004	0.996 – 1.012	3.65E-01
	GG	1.013	1.002 – 1.023	1.63E-02	1.012	1.002 – 1.023	1.75E-02	1.013	1.002 – 1.023	1.56E-02
	biomarker	1.005	0.999 – 1.010	9.32E-02	1.009	1.003 – 1.015	4.35E-03	1.011	1.005 – 1.017	1.79E-04
	biomarker*TG	1.009	1.001 – 1.016	1.88E-02	0.995	0.988 – 1.003	2.20E-01	0.998	0.990 – 1.005	5.06E-01
	biomarker*GG	1.006	0.997 – 1.015	2.08E-01	0.990	0.981– 0.999	4.38E-02	0.996	0.986– 1.005	3.36E-01
rs7152623	GG	Reference			Reference			Reference		
	GA	1.008	1.00 – 1.017	6.28E-02	1.008	0.999 – 1.017	6.53E-02	1.008	1.000 – 1.017	6.22E-02
	AA	1.017	1.007 – 1.027	6.20E-04	1.017	1.007 – 1.027	6.40E-04	1.018	1.008 – 1.028	3.67E-04
	biomarker	1.007	1.001 – 1.014	4.71E-02	1.009	1.002 – 1.016	8.29E-03	1.01	1.004 – 1.017	2.14E-03
	biomarker*GA	1.004	0.996 – 1.012	3.26E-01	0.997	0.989– 1.005	4.14E-01	0.997	0.989 – 1.005	4.88E-01
	biomarker*AA	1.002	0.993– 1.012	6.66E-01	0.989	0.980 – 0.999	2.34E-02	1.00	0.992 – 1.009	9.29E-01

Linear mixed effects model adjusted for age, sex, body mass index, diastolic blood pressure, ant-hypertension medication, plasma glucose, ever smoking, and ever drinking was used. Each SNP-biomarker pair was modeled separately. SNP: Single nucleotide polymorphism; PWV: Pulse wave velocity; TC: Total cholesterol; LDL: Low-density lipoprotein; TG: Triglyceride; TWBC: Total white blood cells; ESR: Erythrocyte sedimentation rate; FGN: Fibrinogen.

Supplementary Table S3: Effects of lipids, inflammatory biomarkers and genetic variants on arterial stiffness (represented by PWV) over time, stratified by gender.

	Males		Females		Males vs. Females
Variables	Estimate (95% CI)	<i>p</i>	Estimate (95% CI)	<i>p</i>	P ^b
Lipids					
CHO	1.01 (0.96-1.06)	7.80E-01	1.04 (1-1.07)	6.23E-02	0.358
LDL	0.96 (0.92-1.01)	1.26E-01	1.01 (0.98-1.05)	4.47E-01	0.121
TG	1.05 (1.0-1.1)	5.49E-02	1.1 (1.06-1.14)	7.22E-08	0.005
Inflammation biomarkers					
TWBC	1.1 (1.05-1.15)	1.07E-04	1.08 (1.05-1.12)	6.07E-06	0.338
ESR	1.09 (1.04-1.14)	2.93E-04	1.05 (1.02-1.09)	5.16E-03	0.004
FNG	1.07 (1.02-1.12)	2.65E-03	1.07 (1.04-1.11)	3.85E-05	0.613
SNPs					
rs3742207					
TT	Reference				
GT	1.17 (1.04-1.29)	8.09E-03	1.04 (0.95-1.13)	4.07-01	0.084
GG	1.29 (1.13-1.45)	3.8E-04	1.21 (1.08-1.33)	9.44E-04	0.348
rs1495448					
TT	Reference				
GT	1.09 (0.97-1.21)	1.38E-01	1.03 (0.93-1.12)	6.10E-01	0.265
GG	1.3 (1.13-1.44)	2.66E-04	1.05 (0.93-1.17)	4.17E-01	0.005
rs7152623					
GG	Reference				
GA	1.15 (1.01-1.28)	3.08E-02	0.99 (0.89-1.09)	8.21E-01	0.092
AA	1.23 (1.08-1.34)	2.87E-03	1.07 (0.95-1.19)	2.55E-01	0.13

^bSignificance level from interaction analyses between gender and the corresponding biomarkers and genetic variants. Abbreviations: PWV: Pulse wave velocity; TC: Total cholesterol; LDL: Low-density lipoprotein; TG: Triglyceride; TWBC: Total white blood cells; ESR: Erythrocyte sedimentation rate; FGN: Fibrinogen; SNP: Single nucleotide polymorphism