

**SUPPLEMENTAL MATERIAL**

**Table I: Univariate Associations between Study Covariates and Carotid Measures**

Study Variable	Mean cIMT, um		Presence of cPlaque	
	$\beta$ (SE)	P value	OR (95%CI)	P value
Age, Year	8.83(0.42)	<.0001	1.077 (1.065, 1.090)	<.0001
Race / Ethnicity		<.0001		0.01
White	-----		-----	
Chinese American	19.34(15.24)	0.20	0.604(0.432, 0.845)	0.006
African American	65.65(12.48)	<.0001	1.011 (0.773, 1.321)	0.05
Hispanic	19.54(13.28)	0.14	0.821 (0.617, 1.092)	0.81
Age at menopause	1.54(0.91)	0.09	1.005 (0.986, 1.025)	0.57
Time since menopause	6.40(0.51)	<.0001	1.049 (1.036, 1.062)	<.0001
Menopausal Status		<.0001		<.0001
Surgical menopause	0.51(11.97)	0.95	0.899 (0.688, 1.174)	<.0001
Natural menopause	-----		-----	
perimenopause	-145.13(12.80)	<.0001	0.210 (0.149, 0.296)	<.0001
BMI, Kg/m <sup>2</sup>	1.98(0.81)	0.01	0.998 (0.982, 1.027)	0.85
SBP, mmHg	3.31(0.20)	<.0001	1.022 (1.017, 1.027)	<.0001
Smoking status		0.026		0.005
Never	-----		-----	
Former	18.84(11.28)	0.10	1.389 (1.092, 1.767)	0.008
Current	-28.03(16.33)	0.09	1.542 (1.085, 2.192)	0.02
Intentional physical activity, metabolic equivalent task (MET) minutes/week*	-1.27(1.62)	0.43	0.989 (0.955, 1.023)	0.51
Hypertension	109.00(9.49)	<.0001	2.451 (1.974, 3.044)	<.0001
Diabetes	81.68(16.00)	<.0001	2.022 (1.421, 2.878)	<.0001
Antihypertensive medications	81.45(10.06)	<.0001	2.127 (1.702, 2.659)	<.0001
Lipid lowering medications	44.37(13.54)	0.001	2.694 (1.983, 3.660)	<.0001
Ever use hormone replacement therapy	-17.14(10.41)	0.10	1.078 (0.864, 1.346)	0.51
CRP, mg/L*	20.00(4.21)	<.0001	1.098 (1.003,1.202)	0.043
IL-6, pg/mL*	45.27(7.31)	<.0001	1.412 (1.202, 1.660)	<.0001
Lipids, mg/dL				
HDL-C	-0.84(0.32)	0.009	1.006 (0.999, 1.013)	0.09

LDL-C	0.42(0.16)	0.007	1.004 (1.001, 1.008)	0.01
Total cholesterol	0.38(0.14)	0.007	1.006 (1.003, 1.009)	0.0004
Triglycerides *	37.01(9.76)	0.0002	1.236 (1.002, 1.525)	0.048
Ion mobility particle concentrations, umol/L				
Total HDL-P	-0.91(0.90)	0.31	1.015 (0.999, 1.035)	0.14
Large HDL-P	-2.25(2.63)	0.39	1.056 (0.998, 1.118)	0.06
Small HDL-P	-1.19(1.23)	0.33	1.015 (0.989, 1.042)	0.26
Total LDL-P	38.17(13.96)	0.006	1.262 (0.937, 1.701)	0.13

\* Log transformed

BMI: body mass index; cIMT: carotid intima-media thickness; cPlaque: carotid plaque; CRP: C-reactive protein, HDL-C: high-density lipoprotein cholesterol; HDL-P: high-density lipoprotein particles; IL-6: interleukin-6; LDL-C: low-density lipoprotein cholesterol; LDL-P: low-density lipoprotein particles; SBP: systolic blood pressure.

**Table II: Adjusted estimated difference in cIMT (um) per 1SD greater HDL measures**

	<b>HDL-C (SD 15.34 mg/dL)</b>		<b>Total HDL-P (SD 5.48 umol/L)</b>		<b>Large HDL-P (SD 1.88 umol/L)</b>		<b>Small HDL-P (SD 4.04 umol/L)</b>	
	<b>β(SE)</b>	<b>P value</b>	<b>β(SE)</b>	<b>P value</b>	<b>β(SE)</b>	<b>P value</b>	<b>β(SE)</b>	<b>P value</b>
Model 1	-19.16(4.40)	<.0001	-10.92(4.26)	0.01	-14.11(4.28)	0.001	-8.33(4.27)	0.05
Model 2	-17.87(4.90)	0.0003	-13.54(4.47)	0.003	-14.87(4.48)	0.001	-11.57(4.49)	0.01
Model 3	-5.42(5.74)	0.34	-19.75(5.60)	0.0004	-17.49(6.85)	0.01	-18.69(5.25)	0.0004
Model 4*	-----		-----		-1.78(9.31)	0.85	-17.77(7.15)	0.01
Model 5	-6.79(6.29)	0.28	-19.69(6.01)	0.001	-2.05(9.53)	0.83	-17.41(7.22)	0.02

\*Only for large and small HDL-P

Model 1: Adjusted for age, race, study site, and menopausal status

Model 2: Model 1+ BMI, SBP, smoking, physical activity, antihypertensive, lipid lowering medications, ever use hormone replacement therapy, IL-6 and CRP

Model 3: For HDL-C: Model2+ total HDL-P and LDL-P; for total HDL-P, large HDL-P and small HDL-P: Model2+ HDL-C and LDL-P

Model 4: For large HDL-P: Model3+ small HDL-P; for small HDL-P: Model3+ large HDL-P

Model 5: For HDL-C and HDL-P: Model3+ triglycerides and LDL-C; for large and small HDL-P: Model4+ triglycerides and LDL-C

BMI: body mass index; cIMT: carotid intima-media thickness; CRP: C-reactive protein; HDL-C: high-density lipoprotein cholesterol; HDL-P: high-density lipoprotein particles; IL-6: interleukin-6; LDL-C: low-density lipoprotein cholesterol; LDL-P: low-density lipoprotein particles; SBP: systolic blood pressure.

**Table III: Adjusted odds ratio (95% CI) of cPlaque presence per 1SD greater HDL measures**

	HDL-C (SD 15.34 mg/dL)		Total HDL-P (SD 5.48 umol/L)		Large HDL-P (SD 1.88 umol/L)		Small HDL-P (SD 4.04 umol/L)	
	OR(95%CI)	P value	OR(95%CI)	P value	OR(95%CI)	P value	OR(95%CI)	P value
Model 1	1.014(0.900, 1.142)	0.82	1.027(0.916, 1.151)	0.65	1.020(0.909, 1.144)	0.74	1.027(0.920, 1.152)	0.65
Model 2	1.143(0.996, 1.311)	0.06	1.047(0.924, 1.187)	0.47	1.079(0.952, 1.223)	0.23	1.027(0.906, 1.165)	0.67
Model 3	1.249(1.061, 1.471)	0.008	0.894(0.761, 1.049)	0.17	0.878(0.723, 1.065)	0.19	0.907(0.781, 1.054)	0.20
Model 4*	-----		-----		0.920(0.709, 1.194)	0.53	0.947(0.774, 1.158)	0.60
Model 5	1.201(1.004, 1.437)	0.04	0.974(0.820, 1.156)	0.76	0.993(0.760, 1.298)	0.96	0.979(0.798, 1.202)	0.84

\* Only for large and small HDL-P

Model 1: Adjusted for age, race, study site, and menopausal status

Model 2: Model 1+ BMI, SBP, smoking, physical activity, antihypertensive, lipid lowering medications, ever use hormone replacement therapy, interleukin-6 and C-reactive protein

Model 3: For HDL-C: Model2+ total HDL-P and LDL-P; for total HDL-P, large HDL-P and small HDL-P: Model2+ HDL-C and LDL-P

Model 4: For large HDL-P: Model3+ small HDL-P; for small HDL-P: Model3+ large HDL-P

Model 5: For HDL-C and HDL-P: Model3+ triglycerides and LDL-C; for large and small HDL-P: Model4+ triglycerides and LDL-C

BMI: body mass index; cIMT: carotid intima-media thickness; CRP: C-reactive protein; cPlaque: carotid plaque; HDL-C: high-density lipoprotein cholesterol; HDL-P: high-density lipoprotein particles; IL-6: interleukin-6; LDL-C: low-density lipoprotein cholesterol; LDL-P: low-density lipoprotein particles; SBP: systolic blood pressure.