

## Supplemental Tables

**Supplement Table 1. Comparison of model type for relationship of CPP (per SD) and eGFR**

Model	$\beta$ (SE)	p-value
Linear	-1.73 (0.52)	0.001
Spline:CPP <sup>a</sup>	3.66 (2.81)	0.193
Spline:CPP <sup>2</sup>	-0.75 (0.38)	0.051
Piecewise: CPP $\leq$ 4 SD <sup>b</sup>	-0.26 (0.81)	0.748
Piecewise: CPP>4 SD	-4.54 (1.92)	0.018

<sup>a</sup>ANOVA and likelihood ratio tests for linear vs. spline models yielded p-value of 0.05.

<sup>b</sup>ANOVA and likelihood ratio tests for linear vs. piecewise models yielded a p-value of 0.02.

Abbreviations: CPP, carotid pulse pressure; eGFR, estimated glomerular filtration rate.

**Supplement Table 2. Correlation matrix of measures of aortic stiffness and measures of peripheral blood pressure**

	<b>CPP</b>	<b>CFPWV</b>	<b>SBP</b>	<b>DBP</b>	<b>MAP</b>	<b>PPP</b>
	<b>(mm Hg)</b>	<b>(m/s)</b>	<b>(mm Hg)</b>	<b>(mm Hg)</b>	<b>(mm Hg)</b>	<b>(mm Hg)</b>
<b>CPP (mm Hg)</b>	1.00	0.29	0.83	-0.07	0.53	0.93
<b>CFPWV (m/s)</b>		1.00	0.40	0.21	0.36	0.32
<b>SBP (mm Hg)</b>			1.00	0.39	0.84	0.87
<b>DBP (mm Hg)</b>				1.00	0.79	-0.12
<b>MAP (mm Hg)</b>					1.00	0.48
<b>PPP (mm Hg)</b>						1.00

Abbreviations: CPP, carotid pulse pressure; CFPWV, carotid femoral pulse wave velocity; SBP, systolic blood pressure; DBP, diastolic blood pressure; MAP, mean arterial pressure; PPP, peripheral pulse pressure.

**Supplement Table 3. Multivariable models of aortic stiffness and different GFR estimating equations**

	CPP ≤ 85 mm Hg		CPP > 85 mm Hg		CFPWV <sup>a</sup>	
	N=743		N=197			
	Δ in eGFR per SD of CPP	95% CI	Δ in eGFR per SD of CPP	95% CI	Δ in eGFR per SD of CFPWV	95% CI
<b>eGFRcr-cys</b>						
Unadjusted	-0.26	-1.85, 1.33	-4.54	-8.30, -0.78	-1.87	-2.89, -0.85
Fully adjusted <sup>b</sup>	-0.03	-1.77, 1.72	-2.72	-6.23, 0.79	-0.29	-1.46, 0.87
<b>eGFRcr</b>						
Unadjusted	0.24	-1.30, 1.79	-5.14	-8.80, -1.47	-1.72	-2.72, -0.73
Fully adjusted <sup>b</sup>	0.55	-1.22, 2.31	-3.82	-7.37, -0.27	-0.50	-1.68, 0.68
<b>eGFRcys</b>						
Unadjusted	-0.65	-2.36, 1.06	-3.87	-7.91, 0.18	-2.04	-3.14, -0.94
Fully adjusted <sup>b</sup>	-0.53	-2.37, 1.30	-1.63	-5.31, 2.06	-0.09	-1.31, 1.14

<sup>a</sup>CFPWV modeled as the negative inverse

<sup>b</sup>Multivariable models adjusted for sex, heart rate, height, age, MAP, HDL cholesterol, HbA1c, CRP, ACR.

Abbreviations: eGFR, estimated glomerular filtration rate; CPP, carotid pulse pressure; CFPWV, carotid femoral pulse wave velocity; DM, diabetes mellitus; LDL, low density lipoprotein cholesterol; HDL, high density lipoprotein cholesterol; MAP, mean arterial pressure; HbA1c, hemoglobin A1c; CRP, c-reactive protein; ACR, natural logarithm of albumin-creatinine ratio.

**Supplement Table 4. Sensitivity analyses for multivariable models of aortic stiffness and eGFR (ml/min/1.73 m<sup>2</sup>)**

	CPP ≤ 85 mm Hg N=743		CPP > 85 mm Hg N=197		CFPWV <sup>a</sup>	
	Δ in eGFR per SD of CPP	95% CI	Δ in eGFR per SD of CPP	95% CI	Δ in eGFR per SD of CFPWV	95% CI
Original model <sup>b</sup>	-0.03	-1.77, 1.72	-2.72	-6.23, 0.79	-0.29	-1.46, 0.87
+Smoking status	-0.09	-1.84, 1.65	-2.66	-6.16, 0.85	-0.27	-1.44, 0.89
+DM status	-0.10	-1.84, 1.64	-2.47	-5.98, 1.03	-0.28	-1.44, 0.88
+Statin use	-0.25	-2.11, 1.62	-2.54	-6.22, 1.14	-0.32	-1.57, 0.93
+On treatment for hypertension	0.35	-1.36, 2.06	-2.86	-6.29, 0.58	-0.05	-1.19, 1.09
LDL instead of HDL	0.44	-1.33, 2.21	-3.55	-7.11, 0.02	-0.67	-1.85, 0.51
Cholesterol instead of HDL	0.45	-1.33, 2.20	-3.48	-7.05, 0.09	-0.66	-1.84, 0.52

<sup>a</sup>CFPWV modeled as the negative inverse

<sup>b</sup>Original multivariable model includes sex, heart rate, height, age, MAP, HDL cholesterol, HbA1c, CRP, ACR.

Abbreviations: eGFR, estimated glomerular filtration rate; CPP, carotid pulse pressure; CFPWV, carotid femoral pulse wave velocity; DM, diabetes mellitus; LDL, low density lipoprotein cholesterol; HDL, high density lipoprotein cholesterol; MAP, mean arterial pressure; HbA1c, hemoglobin A1c; CRP, c-reactive protein; ACR, natural logarithm of albumin-creatinine ratio.

**Supplement Table 5. Sensitivity analyses for multivariable models of aortic stiffness and ACR<sup>a</sup> (mg/g)**

	CPP		CFPWV <sup>a</sup>	
	$\Delta$ in ACR per SD of CPP	95% CI	$\Delta$ in ACR per SD of CFPWV	95% CI
Original model <sup>b</sup>	0.14	0.03, 0.24	0.01	-0.09, 0.11
+Smoking status	0.14	0.02, 0.25	0.002	-0.11, 0.11
+DM status	0.14	0.03, 0.26	-0.001	-0.11, 0.11
+Statin use <sup>c</sup>	0.11	-0.01, 0.24	-0.01	-0.13, 0.10
+On treatment for hypertension	0.14	0.03, 0.26	-0.0004	-0.11, 0.11
LDL instead of HDL	0.13	0.02, 0.25	-0.01	-0.12, 0.10
Cholesterol instead of HDL	0.14	0.02, 0.26	-0.01	-0.12, 0.10

<sup>a</sup>ACR modeled as natural logarithm, CFPWV modeled as the negative inverse.

<sup>b</sup>Original multivariable model includes sex, heart rate, height, age, MAP, HDL, HbA1c, CRP, eGFR.

<sup>c</sup>R<sup>2</sup> for model including statin use was less than original model (0.107 vs. 0.112, respectively).

Abbreviations: ACR, natural logarithm of albumin-creatinine ratio. CPP, carotid pulse pressure; CFPWV, carotid femoral pulse wave velocity; DM, diabetes mellitus; LDL, low density lipoprotein cholesterol; HDL, high density lipoprotein cholesterol; MAP, mean arterial pressure; HbA1c, hemoglobin A1c; CRP, c-reactive protein; eGFR, estimated glomerular filtration rate.

**Supplement Table 6. Multivariable linear regression of peripheral pulse pressure and measures of kidney disease**

	PPP		
	$\Delta$ per SD of PPP	95% CI	R <sup>2</sup>
<b>eGFR</b>			
Unadjusted	-1.50	-2.52, -0.48	0.009
Fully adjusted <sup>a</sup>	-0.46	-1.65, 0.73	0.174
<b>ACR</b>			
Unadjusted	0.18	0.25, 0.94	0.020
Fully adjusted <sup>a</sup>	0.15	0.04, 0.25	0.121

<sup>a</sup>Multivariable models adjusted for sex, heart rate, height, age, MAP, HDL cholesterol, HbA1c, CRP, ACR/eGFR.

Abbreviations: PPP, peripheral pulse pressure; eGFR, estimated glomerular filtration rate; ACR, natural logarithm of albumin-creatinine ratio; MAP, mean arterial pressure; HDL, high density lipoprotein cholesterol; HbA1c, hemoglobin A1c; CRP, c-reactive protein.