

# ONLINE SUPPLEMENT

Supplementary Table I. Baseline characteristics and dementia status by quartiles of cfPWV (3.7- 24.8 m/sec)\*

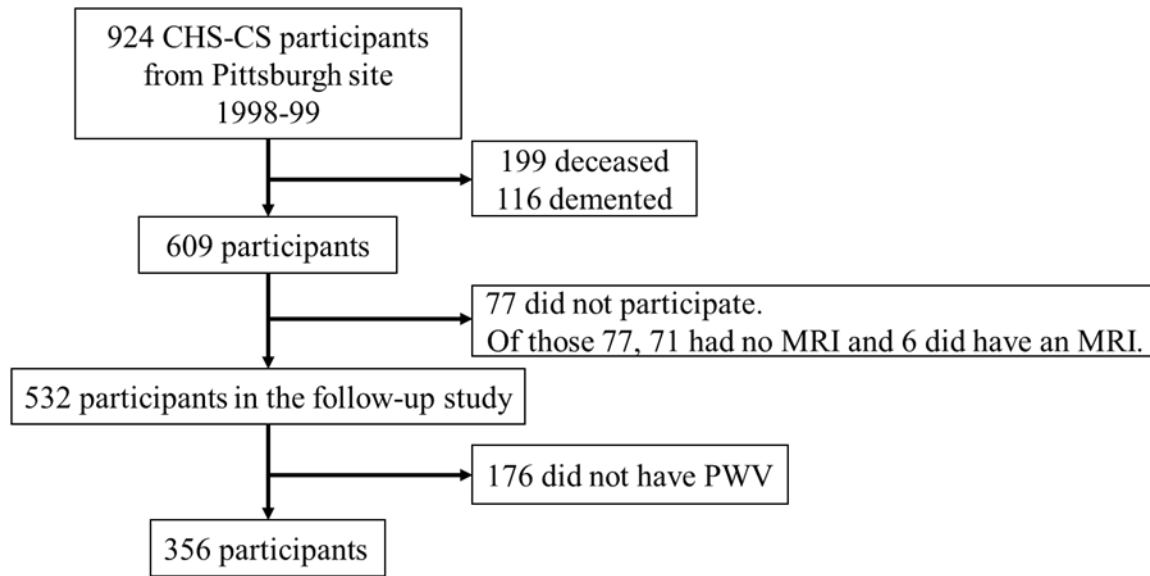
	CfPWV Quartiles				<i>p-trend</i> †
	Q1 (n=89)	Q2 (n=89)	Q3 (n=89)	Q4 (n=89)	
cfPWV, m/sec median (IQR)	5.8 (5.3, 6.2)	7.4 (7.1, 7.9)	9.0 (8.5, 9.5)	11.4 (10.8, 13.0)	-
Age, years	77.3±3.5	77.3±3.8	77.7±3.5	78.7±4.1	0.02
Men (n, %)	38 (42.7)	28 (31.5)	38 (42.7)	42 (47.2)	0.29
Black (n, %)	18 (20.2)	23 (25.8)	21 (23.9)	16 (18.0)	0.66
Education, years median (IQR)	20.0 (12.0, 21.0)	18.0 (12.0, 20.0)	12.0 (12.0, 20.0)	14.0 (12.0, 20.0)	<0.01
Hypertension (n, %)	52 (59.1)	54 (62.1)	61 (68.5)	66 (75.9)	0.01
Anti-hypertensive medication (n, %)	45 (50.6)	44 (49.4)	54 (60.7)	52 (58.4)	0.14
SBP, mmHg	123.6±18.7	129.2±20.7	130.5±16.7	135.6±20.3	<0.01
DBP, mmHg	63.9±12.0	67.7±9.0	67.9±11.9	66.6±11.1	0.09
Pulse pressure, mmHg	58.6±17.1	61.5±17.6	61.7±16.3	69.0±16.5	<0.01
Mean arterial pressure, mmHg	84.2±10.7	88.2±11.3	89.3±9.7	89.6±12.6	<0.01
Diabetes mellitus (n, %)	7 (8.0)	10 (11.5)	10 (11.4)	13 (15.3)	0.15
BMI, kg/m <sup>2</sup>	26.4±4.0	26.8±4.4	27.2±4.3	27.5±4.6	0.08
<i>APOE4</i> carriers (n, %)	26 (31.3)	19 (22.4)	18 (22.0)	16 (19.8)	0.10
3MSE median (IQR)	98.0 (95.0, 100.0)	97.0 (93.0, 96.0)	97.0 (92.0, 99.0)	96.0 (93.0, 98.0)	<0.01
MCI at baseline (n, %)	15 (16.9)	15 (16.9)	11 (12.4)	24 (27.0)	0.16
>1 infarct (n, %)	15 (18.5)	21 (25.6)	16 (20.3)	26 (33.3)	0.07
Ventricular grade $\geq$ 5 (n, %)	15 (18.5)	15 (18.3)	17 (21.8)	10 (12.8)	0.48
White matter grade $\geq$ 3 (n, %)	22 (27.2)	30 (36.6)	28 (35.9)	28 (35.9)	0.28

Abbreviations: 3MSE, Modified Mini-Mental State Examination; BMI, body mass index; CAC, coronary artery calcium; cfPWV, carotid-femoral pulse wave velocity; CHS-CS, Cardiovascular Health Study Cognition Study; DBP, diastolic blood pressure; HDLc, high density lipoprotein cholesterol; IQR, interquartile range; LDLc, low density lipoprotein cholesterol; MCI, mild cognitive impairment; SBP, systolic BP. \* Results are mean±SD unless otherwise indicated. † Continuous variables: Spearman rank-order correlation; Categorical variables: Cochran-Armitage trend test.

Supplementary Table II. Dementia risk (HR and 95% CI) for blood pressure measures (quartiles and continuous)

Predictor	Model	BP Quartiles				<i>p-trend</i>	per 10-unit higher BP
		Q1	Q2	Q3	Q4		
SBP	Range, mmHg	83.0-115.0	116.0-127.0	128.0-141.0	142.0-203.0		
	N dementia/total	51/85	46/87	53/90	57/86	-	
	Minimal*	1.00	0.89 (0.60, 1.33)	0.95 (0.65, 1.40)	1.14 (0.78, 1.66)	0.48	1.06 (0.98, 1.13)
	Base†	1.00	0.91 (0.60, 1.41)	1.04 (0.69, 1.57)	1.12 (0.75, 1.67)	0.48	1.07 (0.99, 1.15)
	Full ‡	1.00	0.92 (0.60, 1.42)	1.05 (0.69, 1.58)	1.13 (0.75, 1.69)	0.46	1.07 (0.99, 1.15)
DBP	Range, mmHg	31.0-59.0	60.0-67.0	68.0-73.0	74.0-94.0		
	N dementia/total	51/81	56/94	47/82	53/89	-	
	Minimal	1.00	0.99 (0.68, 1.45)	0.92 (0.62, 1.37)	1.06 (0.72, 1.56)	0.87	1.04 (0.91, 1.20)
	Base	1.00	1.05 (0.69, 1.58)	0.95 (0.62, 1.45)	1.19 (0.78, 1.83)	0.54	1.09 (0.94, 1.27)
	Full	1.00	1.04 (0.69, 1.58)	0.95 (0.62, 1.45)	1.19 (0.77, 1.82)	0.56	1.09 (0.94, 1.27)
MAP	Range, mmHg	50.7-79.7	80.0-87.7	87.7-94.7	95.0-121.0		
	N dementia/total	52/86	47/87	50/86	58/87	-	
	Minimal	1.00	0.89 (0.60, 1.32)	0.90 (0.61, 1.34)	1.26 (0.86, 1.83)	0.25	1.08 (0.96, 1.22)
	Base	1.00	0.90 (0.59, 1.38)	0.92 (0.61, 1.40)	1.36 (0.90, 2.05)	0.16	1.12 (0.98, 1.28)
	Full	1.00	0.91 (0.59, 1.40)	0.93 (0.61, 1.41)	1.37 (0.91, 2.06)	0.15	1.12 (0.98, 1.28)
PP	Range, mmHg	18.0-50.0	51.0-60.0	61.0-72.0	73.0-128.0		
	N dementia/total	48/86	45/86	55/87	59/87	-	
	Minimal	1.00	0.99 (0.66, 1.50)	1.17 (0.79, 1.72)	1.28 (0.87, 1.89)	0.13	1.07 (0.98, 1.16)
	Base	1.00	1.09 (0.70, 1.69)	1.26 (0.82, 1.93)	1.28 (0.84, 1.96)	0.20	1.06 (0.98, 1.16)
	Full	1.00	1.10 (0.71, 1.71)	1.28 (0.84, 1.97)	1.30 (0.85, 1.98)	0.16	1.06 (0.98, 1.16)

Abbreviations: CI, confidence interval; DBP, diastolic blood pressure; HR, hazards ratio; MAP, mean arterial pressure; PP, pulse pressure; SBP, systolic blood pressure. \* Minimal model: age (yr) + sex (male vs. female). † Base model: minimal model + education ( $\geq 12$  yrs vs.  $< 12$  yrs) + race (black vs. white) + *APOE4* (carrier vs. noncarrier) + diabetes (yes vs. no) + BMI ( $\text{kg}/\text{m}^2$ ) (not MAP) ‡ Full model: base model + anti-hypertensive medication (yes vs. no)



Supplementary Figure I. Participants in the current analysis