Associations between Blood Pressure Indices and Brachial-ankle Pulse Wave Velocity in

Treated Hypertensive Adults: results from the China Stroke Primary Prevention Trial

(CSPPT)

Lihua Hu<sup>1</sup>, M.D., Yuanyuan Zhang<sup>2</sup>, M.D., Xiao Huang<sup>1</sup>, M.D., Ph.D., Yun Song<sup>2</sup>, M.D., Xianhui

Qin<sup>2,3</sup>, M.D., Binyan Wang<sup>2,3</sup>, M.D., Ph.D., Yan Zhang<sup>4</sup>, M.D., Genfu Tang<sup>5</sup>, M.D., Jianping Li<sup>4</sup>,

M.D., Ping Li<sup>1</sup>, M.D., Ph.D., Huihui Bao<sup>1\*</sup>, M.D., Ph.D., Yong Huo<sup>4</sup>, M.D., Xiaoshu Cheng<sup>1\*</sup>,

M.D., Ph.D.

<sup>1</sup>Department of Cardiovascular Medicine, the Second Affiliated Hospital of Nanchang University,

Nanchang of Jiangxi, China.

<sup>2</sup>National Clinical Research Study Center for Kidney Disease; State Key Laboratory for Organ

Failure Research; Renal Division, Nanfang Hospital, Southern Medical University, Guangzhou,

China.

<sup>3</sup>Institute of Biomedicine, Anhui Medical University, Hefei, China.

<sup>4</sup>Department of Cardiology and Heart Center, Peking University First Hospital, Beijing, China.

<sup>5</sup>School of Health Administration, Anhui University, Hefei, China.

\* Correspondence and reprint requests should be addressed to:

Huihui Bao, M.D., Ph.D.

Department of Cardiovascular Medicine, the Second Affiliated Hospital of Nanchang University,

Nanchang of Jiangxi, China.

Email: huihui bao77@126.com

Phone: +8613870092915

Fax: 0086-0791-86262262

Xiaoshu Cheng, M.D., Ph.D.

Department of Cardiovascular Medicine, the Second Affiliated Hospital of Nanchang University,

Nanchang of Jiangxi, China.

Email: xiaoshumenfan126@163.com

Phone: +8613607089128

Fax: 0086-0791-86262262

Supplementary figure 1. Subgroup analyses of the effect of PP on baPWV.

Subgroup	Total	Mean ±SD	Adjust	ted*β (95% CI) P fo	or interactio
Sex					0.096
male	5864	$17.2 \pm 3.3$	н-	0.085 (0.080, 0.091	.)
female	8734	$17.3\pm3.4$	<b>HE</b>	0.073 (0.069, 0.077	<b>'</b> )
Age, y					0.389
<60	4334	$15.6\pm2.6$	н	0.085 (0.080, 0.091	.)
≥60	10261	$18.0 \pm 3.5$		0.087 (0.083, 0.091	.)
BMI, kg/m^2					0.58
<24	6139	$17.6 \pm 3.5$	н	0.078 (0.073, 0.083	3)
≥24	8444	$17.0 \pm 3.3$	ни	0.077 (0.073, 0.081	.)
MTHFR C677T					0.086
CC	3963	$17.4 \pm 3.4$		0.084 (0.078, 0.091	.)
CT	7144	$17.2 \pm 3.4$	н	0.074 (0.070, 0.079	))
TT	3491	$17.2\pm3.5$	₩.	0.077 (0.070, 0.083	3)
FPG, mmol/L					0.047
<6.1	9432	$17.0 \pm 3.3$	н	0.075 (0.071, 0.079	))
≥6.1	4910	$17.7\pm3.5$	н-	0.082 (0.076, 0.088	3)
TC, mmol/L					0.118
<5.2	7176	$17.1\pm3.3$	на	0.080 (0.075, 0.084	1)
≥5.2	7165	$17.5\pm3.5$	юн	0.075 (0.071, 0.080	))
Hcy, μmol/L					0.576
<10	3254	$16.6 \pm 3.2$	н	0.074 (0.068, 0.081	.)
≥10	11183	$17.5 \pm 3.4$	нн	0.078 (0.074, 0.082	2)
RHR, beats/min					< 0.001
<80	8737	$16.7 \pm 3.1$	н	0.068 (0.064, 0.072	2)
≥80	5548	$18.1\pm3.7$		0.086 (0.080, 0.092	2)
Treatment group					0.016
Enalapril	7322	$17.3 \pm 3.4$		0.073 (0.068, 0.077	<b>'</b> )
Enalapril-folic acid	7276	$17.3 \pm 3.4$	н-	0.082 (0.078, 0.087	<b>'</b> )
			0 0.05 0.1	0.15	

Abbreviations: baPWV, brachial-ankle pulse wave velocity; PP, pulse pressure; BMI, body mass index; *MTHFR*, methylenetetrahydrofolate reductase; FPG, fasting plasma glucose; TC, total cholesterol; Hcy, homocysteine; RHR, resting heart rate.

\*adjusted for age, sex, center, MTHFR C677T polymorphisms, treatment group, antihypertensive treatment, BMI, smoking status, and alcohol consumption, RHR, TC, HDL-C, TG, FPG, creatinine, hcy, uric acid, if not be stratified.

Supplementary figure 2. Subgroup analyses of the effect of MAP on baPWV.

Subgroup	Total	Mean ±SD	Adjusted* $\beta$ (95% CI) $P$ fo	r interaction
Sex				0.001
male	5864	$17.2\pm3.3$	0.118 (0.111, 0.125)	
female	8734	$17.3\pm3.4$	0.111 (0.106, 0.117)	
Age, y				0.009
<60	4334	$15.6 \pm 2.6$	0.094 (0.088, 0.100)	
≥60	10261	$18.0\pm3.5$	0.107 (0.101, 0.113)	
BMI, kg/m^2				< 0.001
<24	6139	$17.6 \pm 3.5$	0.120 (0.113, 0.127)	
≥24	8444	$17.0 \pm 3.3$	0.107 (0.102, 0.113)	
MTHFR C677T				0.196
CC	3963	$17.4 \pm 3.4$	0.121 (0.112, 0.129)	
CT	7144	$17.2 \pm 3.4$	0.111 (0.104, 0.117)	
TT	3491	$17.2\pm3.5$	0.115 (0.107, 0.124)	
FPG, mmol/L				0.009
<6.1	9432	$17.0 \pm 3.3$	0.109 (0.103, 0.114)	
≥6.1	4910	$17.7\pm3.5$	0.123 (0.116, 0.131)	
TC, mmol/L				0.111
<5.2	7176	$17.1\pm3.3$	0.118 (0.111, 0.124)	
≥5.2	7165	$17.5\pm3.5$	0.112 (0.105, 0.118)	
Hcy, μmol/L				0.014
<10	3254	$16.6\pm3.2$	0.106 (0.098, 0.114)	
≥10	11183	$17.5 \pm 3.4$	0.117 (0.112, 0.122)	
RHR, beats/min				<0.001
<80	8737	$16.7\pm3.1$	0.102 (0.097, 0.108)	
≥80	5548	$18.1\pm3.7$	0.138 (0.131, 0.146)	
Treatment group				0.282
Enalapril	7322	$17.3 \pm 3.4$	0.113 (0.106, 0.119)	
Enalapril-folic acid	7276	$17.3 \pm 3.4$	0.117 (0.111, 0.123)	

Abbreviations: baPWV, brachial–ankle pulse wave velocity; MAP, mean arterial pressure; BMI, body mass index; *MTHFR*, methylenetetrahydrofolate reductase; FPG, fasting plasma glucose; TC, total cholesterol; Hcy, homocysteine; RHR, resting heart rate.

<sup>\*</sup>adjusted for age, sex, center, MTHFR C677T polymorphisms, treatment group, antihypertensive

treatment, BMI, smoking status, and alcohol consumption, RHR, TC, HDL-C, TG, FPG, creatinine, hcy, uric acid, if not be stratified.