

COHORT STUDY EXAMINING THE ASSOCIATION OF ABDOMINAL AORTIC SIZE WITH MAJOR ADVERSE CARDIOVASCULAR EVENTS IN PATIENTS WITH AORTIC AND PERIPHERAL OCCLUSIVE AND ANEURYSMAL DISEASE SUPPLEMENT

Supplementary table 1: Association of aortic size measurement with major adverse events in participants with stable artery disease.

Supplementary table 2: Discrimination and reclassification using aortic diameter, aortic size index, and aortic height index for different major adverse outcomes among participants with stable artery disease.

Supplementary table 3: Association of aortic size measurement with major adverse events in male participants.

Supplementary table 4: Association of aortic size measurement with major adverse events in female participants.

Supplementary table 5: Discrimination and reclassification using aortic diameter, aortic size index, and aortic height index for different major adverse outcomes among male and female participants.

Supplementary table 1: Association of aortic size measurement with major adverse events in participants with stable artery disease.

Event	Aortic size measure					
	Aortic diameter		Aortic size index		Aortic height index	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Major adverse cardiovascular events	1.19 (1.04, 1.36) p=0.013	1.24 (0.97, 1.58) p=0.080	1.29 (1.13, 1.47) p<0.001	1.43 (1.16, 1.77) p=0.001	1.22 (1.06, 1.40) p=0.004	1.29 (1.02, 1.64) p=0.031
Any peripheral artery surgical procedure	1.93 (1.70, 2.19) p<0.001	2.98 (2.45, 3.61) p<0.001	1.83 (1.63, 2.05) p<0.001	2.64 (2.22, 3.14) p<0.001	1.89 (1.67, 2.14) p<0.001	2.86 (2.36, 3.46) p<0.001
AAA event	23.51 (17.37, 31.82) p<0.001	20.02 (14.45, 27.74) p<0.001	6.50 (5.55, 7.63) p<0.001	6.87 (5.54, 8.53) p<0.001	15.74 (12.21, 20.29) p<0.001	13.67 (10.31, 18.13) p<0.001
All-cause mortality	1.40 (1.22, 1.60) p<0.001	1.51 (1.20, 1.89) p<0.001	1.56 (1.37, 1.78) p<0.001	1.68 (1.38, 2.05) p<0.001	1.43 (1.25, 1.63) p<0.001	1.49 (1.19, 1.86) p<0.001

Shown are hazard ratio and 95% confidence intervals. Analyses adjusted for age, sex, presentation, diabetes, hypertension, coronary heart disease, previous stroke, current smoking, statin and anti-thrombotic prescriptions. AAA= abdominal aortic aneurysm. The aortic size measures were reported relative to an increase of approximately one standard deviation (aortic diameter 15.8 mm; aortic size index 0.833 cm/m²; aortic height index 0.917 cm/m)

Supplementary table 2: Discrimination and reclassification using aortic diameter, aortic size index, and aortic height index for different major adverse outcomes among participants with stable artery disease.

Models	NRI (95% CIs)	P-value
Major adverse cardiovascular events		
Clinical risk factors only	-	
Clinical risk factors + aortic diameter	0.13 (0.01, 0.25)	0.036
Clinical risk factors + aortic size index	0.06 (-0.06, 0.19)	0.320
Clinical risk factors + aortic height index	0.13 (0.00, 0.25)	0.046
Requirement for peripheral artery surgery		
Clinical risk factors only	-	
Clinical risk factors + aortic diameter	0.41 (0.30, 0.52)	< 0.001
Clinical risk factors + aortic size index	0.43 (0.32, 0.54)	< 0.001
Clinical risk factors + aortic height index	0.42 (0.31, 0.53)	< 0.001
Abdominal aortic aneurysm events		
Clinical risk factors only	-	

Clinical risk factors + aortic diameter	1.38 (1.25, 1.50)	< 0.001
Clinical risk factors + aortic size index	1.21 (1.09, 1.34)	< 0.001
Clinical risk factors + aortic height index	1.34 (1.21, 1.46)	< 0.001
All-cause mortality		
Clinical risk factors only	-	
Clinical risk factors + aortic diameter	-0.04 (-0.16, 0.07)	0.772
Clinical risk factors + aortic size index	0.07 (-0.05, 0.18)	0.263
Clinical risk factors + aortic height index	-0.04 (-0.16, 0.07)	0.763

Clinical risk factors includes age, sex, presentation, diabetes, hypertension, coronary heart disease, previous stroke, current smoking, statin and anti-thrombotic prescriptions. NRI, net reclassification index; CI, confidence intervals.

Supplementary table 3: Association of aortic size measurement with major adverse events in male participants.

Event	Aortic size measure					
	Aortic diameter		Aortic size index		Aortic height index	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Major adverse cardiovascular events	1.07 (0.98, 1.18) p=0.129	1.12 (0.98, 1.27) p=0.093	1.13 (1.02, 1.24) p=0.014	1.19 (1.04, 1.35) p=0.011	1.09 (0.99, 1.19) p=0.079	1.13 (0.99, 1.29) p=0.062
Any peripheral artery surgical procedure	1.74 (1.62, 1.88) p<0.001	2.03 (1.86, 2.20) p<0.001	1.76 (1.63, 1.90) p<0.001	2.12 (1.93, 2.32) p<0.001	1.74 (1.62, 1.88) p<0.001	2.05 (1.88, 2.23) p<0.001
AAA event	3.17 (2.95, 3.42) p<0.001	2.88 (2.64, 3.14) p<0.001	3.46 (3.18, 3.77) p<0.001	3.04 (2.76, 3.35) p<0.001	3.26 (3.02, 3.52) p<0.001	2.90 (2.65, 3.17) p <0.001
All-cause mortality	1.14 (1.06, 1.24) p=0.001	1.16 (1.04, 1.29) p=0.009	1.22 (1.12, 1.34) p<0.001	1.22 (1.09, 1.37) p<0.001	1.15 (1.06, 1.25) p=0.001	1.16 (1.04, 1.30) p=0.010

Shown are hazard ratio and 95% confidence intervals. Analyses adjusted for age, sex, presentation, diabetes, hypertension, coronary heart disease, previous stroke, current smoking, statin and anti-thrombotic prescriptions. AAA= abdominal aortic aneurysm. The aortic size measures were reported relative to an increase of approximately one standard deviation (aortic diameter 15.8 mm; aortic size index 0.833 cm/m²; aortic height index 0.917 cm/m)

Supplementary table 4: Association of aortic size measurement with major adverse events in female participants.

Event	Aortic size measure					
	Aortic diameter		Aortic size index		Aortic height index	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Major adverse cardiovascular events	1.36 (1.15, 1.61) p<0.001	1.57 (1.20, 2.05) p=0.001	1.38 (1.20, 1.59) p<0.001	1.65 (1.32, 2.07) p<0.001	1.34 (1.15, 1.56) p<0.001	1.51 (1.19, 1.92) p=0.001
Any peripheral artery surgical procedure	1.76 (1.49, 2.07) p<0.001	2.33 (1.82, 2.97) p<0.001	1.57 (1.38, 1.80) p<0.001	1.94 (1.59, 2.36) p<0.001	1.66 (1.43, 1.92) p<0.001	2.08 (1.67, 2.58) p<0.001
AAA event	5.73 (4.56, 7.20) p<0.001	5.03 (3.73, 6.78) p<0.001	3.54 (3.00, 4.19) p<0.001	3.33 (2.63, 4.22) p<0.001	4.54 (3.72, 5.55) p<0.001	3.94 (3.03, 5.12) p<0.001
All-cause mortality	1.44 (1.23, 1.67) p<0.001	1.50 (1.19, 1.89) p=0.001	1.42 (1.25, 1.61) p<0.001	1.50 (1.24, 1.82) p<0.001	1.40 (1.22, 1.61) p<0.001	1.43 (1.16, 1.76) p=0.001

Shown are hazard ratio and 95% confidence intervals. Analyses adjusted for age, sex, presentation, diabetes, hypertension, coronary heart disease, previous stroke, current smoking, statin and anti-thrombotic prescriptions. AAA= abdominal aortic aneurysm. The aortic size measures were reported relative to an increase of approximately one standard deviation (aortic diameter 15.8 mm; aortic size index 0.833 cm/m²; aortic height index 0.917 cm/m)

Supplementary table 5: Discrimination and reclassification using aortic diameter, aortic size index, and aortic height index for different major adverse outcomes among male and female participants.

	Male		Female	
Models	NRI (95% CIs)	P-value	NRI (95% CIs)	P-value
Major adverse cardiovascular events				
Clinical risk factors only	-		-	
Clinical risk factors + aortic diameter	0.03 (-0.09, 0.15)	0.609	-0.01 (-0.22, 0.21)	0.531
Clinical risk factors + aortic size index	0.02 (-0.10, 0.14)	0.766	0.06 (-0.16, 0.27)	0.592
Clinical risk factors + aortic height index	-0.06 (-0.17, 0.06)	0.830	0.06 (-0.16, 0.27)	0.611
Requirement for peripheral artery surgery				
Clinical risk factors only	-		-	
Clinical risk factors + aortic diameter	0.55 (0.45, 0.66)	< 0.001	0.50 (0.30, 0.70)	<0.001
Clinical risk factors + aortic size index	0.55 (0.44, 0.65)	<0.001	0.47 (0.27, 0.67)	<0.001

Clinical risk factors + aortic height index	0.53 (0.43, 0.64)	<0.001	0.48 (0.28, 0.68)	<0.001
Abdominal aortic aneurysm events				
Clinical risk factors only	-		-	
Clinical risk factors + aortic diameter	1.45 (1.33, 1.57)	<0.001	1.41 (1.67, 1.64)	<0.001
Clinical risk factors + aortic size index	1.37 (1.26, 1.49)	<0.001	1.34 (1.10, 1.57)	<0.001
Clinical risk factors + aortic height index	1.48 (1.36, 1.59)	<0.001	1.42 (1.18, 1.66)	<0.001
All-cause mortality				
Clinical risk factors only	-		-	
Clinical risk factors + aortic diameter	-0.01 (-0.12, 0.10)	0.579	0.14 (-0.07, 0.34)	0.182
Clinical risk factors + aortic size index	0.08 (-0.03, 0.19)	0.176	0.22 (0.02, 0.43)	0.032
Clinical risk factors + aortic height index	0.00 (-0.11, 0.11)	0.973	0.21 (0.00, 0.41)	0.047

Clinical risk factors includes age, sex, presentation, diabetes, hypertension, coronary heart disease, previous stroke, current smoking, statin and anti-thrombotic prescriptions. NRI, net reclassification index; CI, confidence intervals.