SUPPLEMENTAL MATERIAL

Table S1. Amount of incident CAC (CAC_i) after 5 yrs, distributed in different CAC-categories depending on baseline amount of TAC in separate aortic segments.

Baseline $ATAC_{bl}$- / $DTAC_{bl}$-score (n=1185)	Amount of incident CAC_i after 5 yrs			
	CAC_i =0 (n=886, 75%)	CAC_i 1 to 99 (n=290, 24%)	CAC_i 100 to 399 (n=9, 1%)	p for trend
$ATAC_{bl}$ =0 (n=881, 74%)	683 (78%)	193 (21%)	5 (1%)	<0.0001
$ATAC_{bl}$ 1 to 99 (n=272, 23%)	188 (69%)	81 (30%)	3 (1%)	
$ATAC_{bl}$ 100 to 399 (n=26, 2%)	14 (54%)	11 (42%)	1 (4%)	
$ATAC_{bl}$ ≥400 (n=6, 1%)	1 (17%)	5 (83%)	0 (0%)	
$DTAC_{bl}$ =0 (n=635, 53%)	480 (76%)	151 (23%)	4 (1%)	0.008
$DTAC_{bl}$ 1 to 99 (n=469, 40%)	359 (76%)	106 (23%)	4 (1%)	
$DTAC_{bl}$ 100 to 399 (n=61, 5%)	40 (65%)	20 (33%)	1 (2%)	
$DTAC_{bl}$ ≥400 (n=20, 2%)	7 (35%)	13 (65%)	0 (0%)	

Abbreviations:
CAC_i = incidence of coronary artery calcification, in ascending aorta, $ATAC_{bl}$ = calcification at baseline in ascending aorta, $DTAC_{bl}$ = calcification at baseline in descending thoracic aorta.

Table S2. Amount of incident TAC (TAC_i) after 5 yrs distributed in different TAC_i-categories depending on baseline amount of CAC (CAC_{bl}).

Baseline CAC_{bl}-score (n=1243)	Amount of incident TAC_i after 5 yrs				
	TAC_i =0 (n=726, 58%)	TAC_i 1 to 99 (n=320, 26%)	TAC_i 100 to 399 (n=141, 11%)	TAC_i ≥400 (n=56, 5%)	p for trend
CAC_{bl} =0 (n=587, 47%)	401 (68%)	136 (23%)	39 (7%)	11 (2%)	<0.0001 $)
CAC_{bl} 1 to 99 (n=466, 37%)	257 (55%)	126 (27%)	66 (14%)	17 (4%)	
CAC_{bl} 100 to 399 (n=145, 12%)	61 (42%)	44 (30%)	24 (17%)	16 (11%)	
CAC_{bl} ≥400 (n=45, 4%)	7 (15%)	14 (31%)	12 (27%)	12 (27%)	

Abbreviations: CAC_{bl} = coronary artery calcification at baseline, TAC_i = amount of incident thoracic aortic calcification. $) = Mantel-Haenszel test

Table S3. Amount of incident calcification in separate aortic segments after 5 yrs distributed in different categories depending on baseline amount of CAC.

Amount of incident $ATAC_i$ / $DTAC_i$ after 5 yrs	Baseline CAC_{bl} score (n=1243)				
	CAC_{bl} =0 (n=587, 47%)	CAC_{bl} 1 to 99 (n=466, 37%)	CAC_{bl} 100 to 399 (n=145, 12%)	CAC_{bl} ≥400 (n=45, 4%)	p for trend
$ATAC_i$ =0 (n=959, 77%)	505 (86%)	345 (74%)	92 (63%)	17 (37%)	<0.0001
$ATAC_i$ 1 to 99 (n=238, 19%)	72 (12%)	106 (23%)	43 (30%)	17 (38%)	
$ATAC_i$ 100 to 399 (n=40, 3%)	10 (2%)	15 (3%)	7 (5%)	8 (18%)	
$ATAC_i$ ≥400 (n=6, 1%)	0 (0%)	0 (0%)	3 (2%)	3 (7%)	
$DTAC_i$=0 (n=845, 68%)	442 (75%)	315 (68%)	74 (51%)	14 (31%)	<0.0001
$DTAC_i$ 1 to 99 (n=243, 19%)	107 (19%)	86 (18%)	38 (26%)	12 (27%)	
$DTAC_i$ 100 to 399 (n=112, 9%)	30 (5%)	49 (11%)	22 (15%)	11 (24%)	
$DTAC_i$ ≥400 (n=43, 4%)	8 (1%)	16 (3%)	11 (8%)	8 (18%)	

Abbreviations:
$ATAC_i$ = incident calcification in ascending aorta, $DTAC_i$ = incident calcification in descending aorta, CAC_{bl} = coronary artery calcification at baseline.

Table S4. CAC-Progression in 5 yrs distributed in slow, expected and fast progression depending on baseline amount of TAC in in separate aortic segments.

Baseline $ATAC_{bl}$- / $DTAC_{bl}$-score (n=3270)	CAC-Progression in 5 yrs			p for trend
	Slow Progression (n=395, 12%)	Expected Progression (n=2238, 68%)	Fast Progression (n=637, 20%)	
$ATAC_{bl}$ =0 (n=1924, 59%)	261 (14%)	1298 (68%)	365 (18%)	0.0002
$ATAC_{bl}$ 1 to 99 (n=993, 30%)	111 (11%)	693 (70%)	189 (19%)	
$ATAC_{bl}$ 100 to 399 (n=257, 8%)	21 (8%)	180 (70%)	56 (22%)	
$ATAC_{bl}$ ≥400 (n=96, 3%)	2 (2%)	67 (70%)	27 (28%)	
$DTAC_{bl}$ =0 (n=1456, 44%)	209 (14%)	969 (67%)	278 (19%)	0.0009
$DTAC_{bl}$ 1 to 99 (n=1230, 38%)	136 (11%)	858 (70%)	236 (19%)	
$DTAC_{bl}$ 100 to 399 (n=362, 11%)	39 (11%)	253 (70%)	70 (11%)	
$DTAC_{bl}$ ≥400 (n=222, 7%)	11 (5%)	158 (71%)	53 (24%)	

Abbreviations:
$ATAC_{bl}$ = calcification at baseline in ascending aorta, $DTAC_{bl}$ = calcification at baseline in descending thoracic aorta CAC = coronary artery calcification.

Figure S1. Flow diagram of the original study participants and steps of exclusion, resulting in participants eligible for final analysis.