Supplemental material

		CACS = 0	CACS 1-100	CACS 101-400	CACS >400
Women	**n**	1387	899	340	167
	Age in years (mean (SD))	56 (7)	62 (8)	64 (8)	67 (8)
	Body mass index (mean (SD))	26 (5)	27 (5)	27 (5)	27 (5)
	Smoking status, n (%)				
	Current	441 (34)	270 (32)	99 (32)	49 (31)
	Former	383 (30)	301 (36)	129 (42)	62 (40)
	Never	465 (36)	262 (32)	82 (27)	45 (29)
	Diabetes Mellitus, n (%)	78 (6)	75 (8)	30 (9)	30 (18)
	Hypertension, n (%)	349 (25)	352 (39)	164 (48)	89 (53)
	Dyslipidemia, n (%)	167 (12)	179 (20)	82 (24)	49 (29)
	Degree of stenosis, n (%)				
	0 %	432 (92)	82 (14)	11 (4)	<10
	1%-49%	34 (7)	399 (68)	110 (44)	15-20
	50%-70%	<10	65 (11)	74 (30)	23 (30)
	>70%	<10	39 (7)	56 (22)	32 (42)
	Examinations during follow-up, n (%)				
	At least one CAG	10-15	90 (10)	114 (34)	90 (54)
	At least one PCI or CABG	<10	24 (3)	23 (7)	41 (25)
	All-cause mortality	14 (1)	18 (2)	12 (4)	<10
	Years of follow up (median [IQR])	4.6 [3.2, 6.5]	4.4 [3.1, 6.3]	4.3 [3.0, 6.0]	4.3 [3.1, 5.9]
Men	**n**	569	774	436	413
	Age in years (mean (SD))	54 (7)	58 (8)	61 (8)	64 (7)
	Body mass index (mean (SD))	27 (4)	27 (4)	27 (4)	27 (4)
	Smoking status, n (%)				
	Current	165 (32)	217 (30)	113 (28)	122 (32)
	Former	168 (32)	259 (36)	174 (42)	174 (45)
	Never	191 (37)	245 (34)	123 (30)	91 (24)
	Diabetes Mellitus, n (%)	23 (4)	64 (8)	35 (8)	61 (15)
	Hypertension, n (%)	113 (20)	197 (26)	153 (35)	164 (40)
	Dyslipidemia, n (%)	57 (10)	129 (17)	85 (20)	102 (25)
	Degree of stenosis, n (%)				
	0 %	181 (86.2)	68 (12)	14 (4)	<10
	1%-49%	25 (12)	355 (63)	128 (37)	40-45
	50%-70%	<10	94 (17)	109 (31)	57 (27)
	>70%	<10	48 (9)	96 (28)	106 (51)
	Examinations during follow-up, n (%)				
	At least one CAG	<10	109 (14)	147 (34)	239 (58)
	At least one PCI or CABG	<10	38 (5)	67 (15)	111 (27)
	All-cause mortality	<10	23 (3)	14 (3)	20 (5)
	Years of follow up (median [IQR])	4.7 [3.3, 6.4]	4.4 [3.0, 6.2]	4 [3, 6]	4 [3, 6]

Supplementary Table 1. Baseline characteristics of study population per sex stratified per CACS category. Abbreviations: CACS, coronary artery calcium score; CAC, coronary artery calcium; CAG, coronary angiography; PCI, percutaneous coronary intervention; CABG, coronary artery bypass graft.

	Model	*n*	*Events*	*HR (95%CI)*	*C-statistic (95%CI)*
European women	**Absolute CACS**				
	Continuous	2411	47	1.0 (1.0-1.0)	0.67 (0.59-0.76)
	Categorized				0.67 (0.59-0.75)
	CACS 0	1185	11	reference	
	CACS 1-100	773	16	2.9 (1.1-5.2)	
	CACS 101-400	304	12	5.0 (2.2-11.3)	
	CACS > 400	149	<10	6.3 (2.5-15.7)	
	MESA percentiles				
	Continuous, adjusted for any calcification	2411	47		0.61 (0.58-0.75)
	MESA percentile			0.4 (0.1-1.7)	
	Any calcification			6.9 (2.0-23.7)	
	Categorized				0.66 (0.58-0.74)
	No calcification	1185	11	reference	
	<75th percentile	466	16	3.8 (1.8-8.3)	
	75th-90th percentile	386	11	3.4 (1.5-8.0)	
	>90th percentile	374	<10	3.0 (1.2-7.1)	
European men	**Absolute CACS**				
	Continuous	1898	57	1.0 (1.0-1.0)	0.64 (0.56-0.72)
	Categorized				0.62 (0.55-0.70)
	CACS 0	480	<10	reference	
	CACS 1-100	665	20	3.9 (1.3-11.3)	
	CACS 101-400	380	13	4.4 (1.4-13.6)	
	CACS > 400	373	20	7.1 (2.4-20.7)	
	MESA percentiles				
	Continuous, adjusted for any calcification	1898	57		0.59 (0.51-0.67)
	MESA percentile			0.5 (0.2-1.7)	
	Any calcification			7.3 (2.1-25.6)	
	Categorized				0.62 (0.55-0.69)
	No calcification	480	<10	reference	
	<75th percentile	763	30	5.1 (1.8-14.5)	
	75th-90th percentile	360	<10	3.3 (1.0-10.6)	
	>90th percentile	295	14	6.1 (2.0-18.6)	

Supplementary Table 2. Mortality prediction as a function of absolute and age-, sex- and ethnicity specific percentiles of CACS in women (above) and men (below), only performed in European women and men.

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Open Heart

	CT population	*Subgroup with CTA*
n	4985	2715
Female sex, n (%)	2793 (56)	1385 (51)
Age in years (mean (SD))	59 (8)	59.66 (8)
Body mass index (mean (SD))	27 (4)	26.68 (4)
Complaints, n (%)	2683 (54)	1499 (55)
Chest pain or discomfort	538 (11)	295 (11)
Dyspnoea	172 (4)	93 (3)
Fatigue	463 (9)	272 (10)
Palpitations	27 (0.5)	18 (0.7)
Collapse		
Smoking status, n (%)	1476 (32)	809 (32)
Current	1650 (36)	936 (37)
Former	1504 (33)	765 (31)
Never		
Diabetes Mellitus, n (%)	396 (8)	211 (8)
Hypertension, n (%)	1581 (32)	885 (33)
Dyslipidemia, n (%)	850 (17)	497 (18)
CACS score (median [IQR])	7.60 [0, 121]	34.00 [0, 162]
CACS category, n (%)	1956 (39)	682 (25)
0	1673 (34)	1150 (42)
1-100	776 (16)	598 (22)
101-400	580 (12)	285 (11)
>400		
All-cause mortality, n (%)	116 (2)	68 (3)
Cardiovascular mortality, n (%)	22 (0.4)	10 (0.4)

Supplementary Table 3. Direct comparison of CT and CTA population. Abbreviations: CT, computed

tomography; CTA, computed tomographic angiography; CACS, coronary artery calcium score.

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Open Heart

		CACS = 0	CACS 1-100	CACS 101-400	CACS >400
Women	n	472	585	251	77
	Age in years (mean (SD))	55.90 (6.98)	61.32 (7.68)	64.49 (7.70)	66.45 (7.99)
	Body mass index (mean (SD))	26.22 (4.82)	26.71 (4.90)	27.19 (5.24)	26.90 (4.31)
	Smoking status, n (%)	168 (39)	173 (32)	68 (29)	19 (27)
	Current	136 (32)	200 (37)	99 (43)	26 (37)
	Former	123 (29)	166 (31)	66 (28)	25 (36)
	Never				
	Diabetes Mellitus, n (%)	22 (5)	43 (7)	21 (8)	10-15 (13-19)
	Hypertension, n (%)	135 (29)	221 (38)	122 (49)	40 (52)
	Dyslipidemia, n (%)	64 (14)	110 (19)	66 (26)	23 (30)
	Degree of stenosis, n (%)	432 (92)	82 (14)	11 (4)	<10 (<13)
	0 %	34 (7)	399 (68)	110 (44)	20-25 (25-32)
	1%-49%	<10 (<2)	65 (11)	74 (30)	23 (30)
	50%-70%	<10 (<2)	39 (7)	56 (22)	32 (42)
	>70%				
	Examinations during follow-up, n (%)	<10 (<2)	72 (12)	96 (38)	32 (42)
	At least one CAG	<10 (<2)	23 (4)	22 (9)	20 (26)
	At least one PCI or CABG				
	All-cause mortality	<10 (<2)	<10 (<2)	<10 (<4)	<10 (<13)
	Years of follow up (median [IQR])	5 [3, 7]	4 [3, 6]	4 [3, 6]	4 [3, 5]
Men	n	210	565	347	208
	Age in years (mean (SD))	53.71 (6.40)	58.13 (7.69)	60.98 (8.05)	63.19 (7.55)
	Body mass index (mean (SD))	26.49 (4.03)	26.83 (3.67)	26.79 (3.79)	26.51 (3.42)
	Smoking status, n (%)	75 (40)	160 (30)	85 (26)	61 (32)
	Current	55 (29)	193 (36)	146 (45)	81 (42)
	Former	57 (31)	181 (34)	96 (29)	51 (26)
	Never				
	Diabetes Mellitus, n (%)	<10	48 (9)	28 (8)	29 (14)
	Hypertension, n (%)	34 (16)	143 (25)	118 (34)	72 (35)
	Dyslipidemia, n (%)	23 (11)	94 (17)	65 (19)	52 (25)
	Degree of stenosis, n (%)	181 (86)	68 (12)	14 (4)	<10 (<4)
	0 %	25 (12)	355 (63)	128 (37)	40-45 (19-22)
	1%-49%	<10 (<4)	94 (17)	109 (31)	57 (27)
	50%-70%	<10 (<4)	48 (9)	96 (28)	106 (51)
	>70%				
	Examinations during follow-up, n (%)	<10 (<4)	92 (16)	127 (37)	123 (59)
	At least one CAG	<10 (<4)	33 (6)	61 (18)	73 (35)
	At least one PCI or CABG				
	All-cause mortality	<10 (<4)	21 (4)	12 (4)	12 (6)
	Years of follow up (median [IQR])	5 [4, 7]	4 [3, 6]	5 [3, 6]	4 [3, 6]

Supplementary Table 4. Baseline characteristics of CTA study population per sex stratified per CACS category. Abbreviations: CACS, coronary artery calcium score; CAC, coronary artery calcium; CAG, coronary angiography; PCI, percutaneous coronary intervention; CABG, coronary artery bypass graft.