

SUPPLEMENTARY DATA

Supplementary Table 1. Definition of diabetes mellitus by cohort

Cohort	Definition of Diabetes Mellitus
AIR	Self reported physician's diagnosis
ARIC	ADA definition (RPG or FPG or OGTT) or preexisting antidiabetic medication
BHS	FPG>126mg/dL or preexisting antidiabetic medication
Bruneck	Record-confirmed physician's diagnosis or HbA1c≥6.5%
CAPS	Self reported physician's diagnosis
CCCC	FPG>140mg/dL or preexisting antidiabetic medication
CHS	Self reported physician's diagnosis
CMCS	Self reported physician's diagnosis or preexisting antidiabetic medication
DIWA	Oral glucose tolerance test
EAS	Self reported physician's diagnosis or preexisting antidiabetic medication
EPICARDIAN	FPG≥126mg/dL or preexisting antidiabetic medication
EVA	Self reported physician's diagnosis or FPG≥7.8 mmol/L or preexisting antidiabetic medication
INVADE	Self reported physician's diagnosis or preexisting antidiabetic medication
KIHD	Self reported physician's diagnosis or preexisting antidiabetic medication
NOMAS/INVEST	Self reported physician's diagnosis or FPG>126mg/dl or preexisting antidiabetic medication
PIVUS	Self reported physician's diagnosis or FPG≥7.0 mmol/L
PLIC	Self reported physician's diagnosis or preexisting antidiabetic medication
Rotterdam	Self reported physician's diagnosis or preexisting antidiabetic medication
SAPHIR	Self reported physician's diagnosis or preexisting antidiabetic medication
SHIP	Self reported physician's diagnosis or HbA1c>6.5% or preexisting antidiabetic medication
Tromsø	Self reported physician's diagnosis or preexisting antidiabetic medication

ADA = American Diabetes Association

RPG = random plasma glucose

FPG = fasting plasma glucose

OGTT = oral glucose tolerance test

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Supplementary Table 2. Definition of the combined endpoint, and available adjustment variables by cohort

Study	definition of the combined endpoint	ethnicity	Socio-economic status	systolic blood pressure		body mass index		total cholesterol		HbA1c		fasting glucose		antihypertensive medication		Lipid lowering medication		smoking	
		BL	BL	BL	FU	BL	FU	BL	FU	BL	FU	BL	FU	BL	FU	BL	FU	BL	FU
AIR	MI or stroke or vascular death	yes	missing	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	yes	yes	yes	yes
ARIC	MI or stroke or death	yes	inc	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
BHS	n.a.	yes	edu	yes	yes	yes	yes	yes	yes	yes	missing	yes	yes	yes	yes	yes	yes	yes	yes
Bruneck	MI or stroke or vascular death	yes	ses	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	missing	missing	yes	yes
CAPS	MI or stroke or death	missing	edu	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
CCCC	MI or stroke or death	yes	ses	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	missing	missing	missing	yes	missing
CHS_1	MI or stroke or vascular death	yes	edu	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	yes	yes	yes	yes
CHS_2	MI or stroke or vascular death	yes	inc	yes	yes	yes	missing	yes	yes	missing	missing	yes	yes	yes	yes	yes	yes	yes	yes
CMCS	MI or stroke or vascular death	yes	edu	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	yes	yes	yes	yes
DIWA	MI or stroke or vascular death	yes	edu	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	missing	yes	missing	yes	missing
EAS	MI or stroke or vascular death	missing	ses	yes	yes	yes	yes	yes	missing	missing	missing	yes	yes	yes	missing	missing	missing	yes	yes
EPICARDIAN	MI or stroke or vascular death	missing	missing	yes	missing	yes	missing	yes	missing	missing	missing	yes	missing	missing	missing	yes	missing	yes	missing
EVA	n.a.	missing	missing	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	yes	yes	yes	yes
INVADE	MI or stroke or death	missing	edu	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
KIHD	MI or stroke or vascular death	yes	edu	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	yes	yes	yes	yes
NOMAS/INVEST	MI or stroke or vascular death	yes	edu	yes	missing	yes	missing	yes	yes	missing	missing	yes	yes	yes	missing	yes	missing	yes	missing
PIVUS	n.a.	missing	ses	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	yes	yes	yes	yes
PLIC	MI or stroke or vascular death	missing	missing	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	missing	missing	yes	yes
Rotterdam	MI or stroke or death	yes	edu	yes	yes	yes	yes	yes	yes	missing	missing	missing	yes	yes	yes	yes	yes	yes	yes
SAPHIR	MI or stroke or vascular death	missing	ses	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes	yes	yes	yes	yes	yes	yes
SHIP	MI or stroke or death	missing	edu	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	missing	missing	yes	yes
Tromso	MI or stroke or vascular death	yes	edu	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

BL = baseline visit
 FU = follow-up visit
 n.a. = not applicable (only total mortality available)
 inc = household income
 edu = education level
 ses = socioeconomic status

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Supplementary Table 3. Ultrasound protocols

Cohort	CCA landmark	CCA length	Avoid plaques	ECG gated	Angle control	Multiple scans	Central reading	Edge detection algorithm
AIR	Beginning of bulbar widening	1cm	No	Yes	No	No	Yes	Yes
ARIC	Beginning of bulbar widening	1cm	No	Yes	Yes	Yes	Yes	No
BHS	Beginning of bulbar widening	1cm	No	Yes	Yes	Yes	Yes	No
Bruneck	Beginning of bulbar widening	3cm	Yes	Yes	Yes	No	No	No
CAPS	2cm proximal to the tip of the flow divider	up to 4cm	Not specified	No	No	No	Yes	Yes
CCCC	1cm proximal to the tip of the flow divider	1cm	Yes	Yes	Yes	Yes	No	No
CHS	Beginning of bulbar widening or (if not determinable) 1cm proximal to the tip of the flow divider	1cm	No	No	No	No	Yes	No
CMCS	Beginning of bulbar widening	Three single measurements each in 3 segments of 1cm	Yes	No	No	No	Yes	No
DIWA	Beginning of bulbar widening	1cm	No ⁺	Yes	No	No	Yes	Yes
EAS	Beginning of bulbar widening	0,5cm	Yes	No	No	No	Yes	No
EPICARDIAN	Beginning of bulbar widening	1cm	Yes	No	Yes	Yes	No	No
EVA	2cm proximal to the tip of the flow divider	2cm	Yes	No	Yes	No	Yes	Yes
INVADE	1cm proximal to the tip of the flow divider	1cm	Yes	No	Yes	Yes	Yes	Yes
KIHD	Beginning of bulbar widening	1-5cm	No	No	No	No	Yes	Yes
NOMAS/INVEST	1cm proximal to the tip of the flow divider	1cm	Yes	No	Yes [#]	No	Yes	Yes
PIVUS	Beginning of bulbar widening	1cm	Not specified	Yes	No	No	Yes	Yes
PLIC	2cm proximal to the tip of the flow divider	2cm	Yes	Yes	No	No	Yes	Yes
Rotterdam	Beginning of bulbar widening	1cm	No	Yes	No	Yes	Yes	Yes
SAPHIR	8 mm proximal to the tip of the flow divider	8mm	Yes	No	Yes	Yes	No	No
SHIP	Beginning of bulbar widening	1cm	No	No	No	No	Yes	Yes
Tromsø	Beginning of bulbar widening	1cm	No ⁺	Yes	No	Yes	Yes	Yes

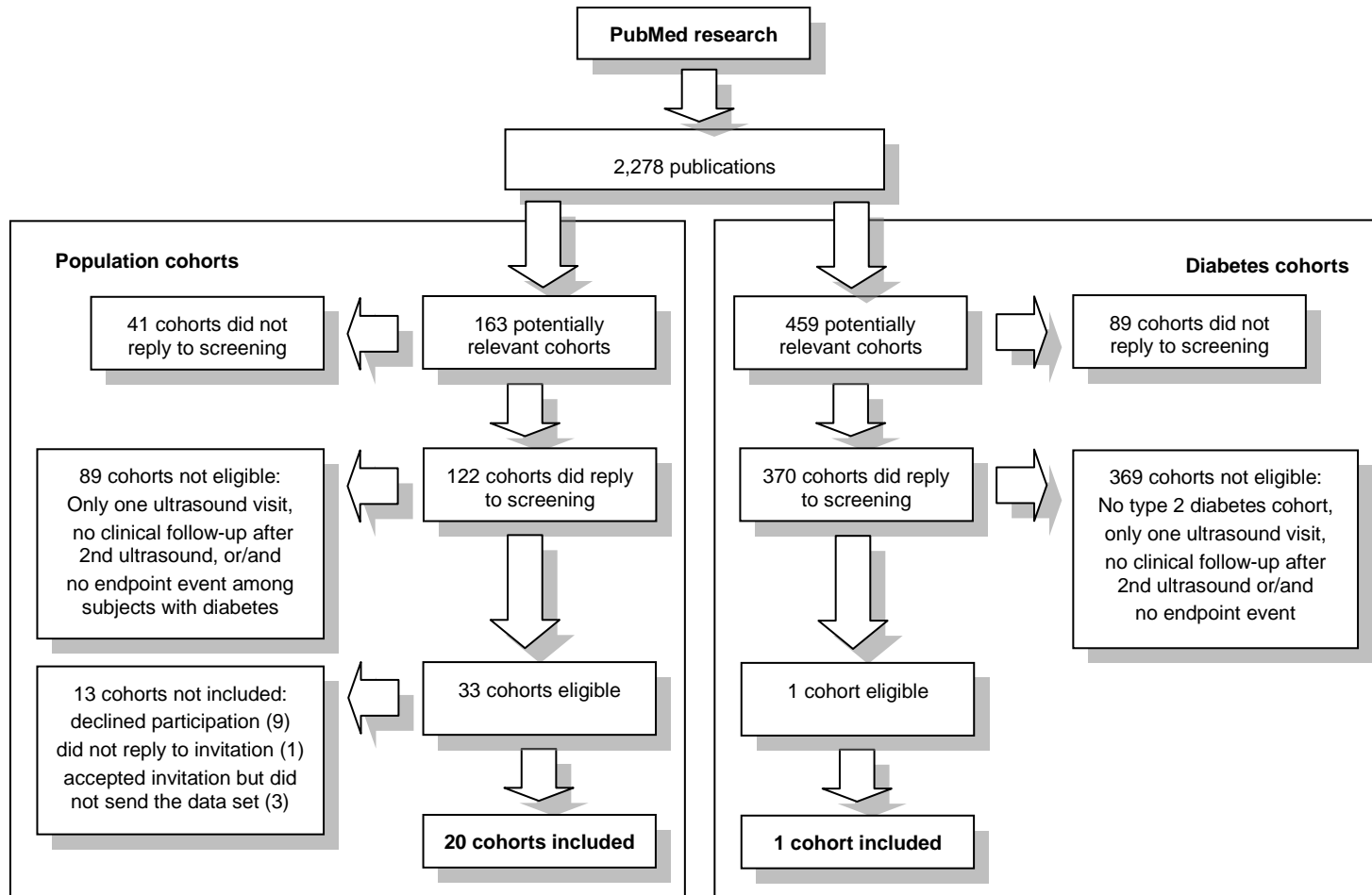
*vessel wall parallel to transducer interface

[#]internal landmarks in computer aided navigation

⁺plaques purposely included

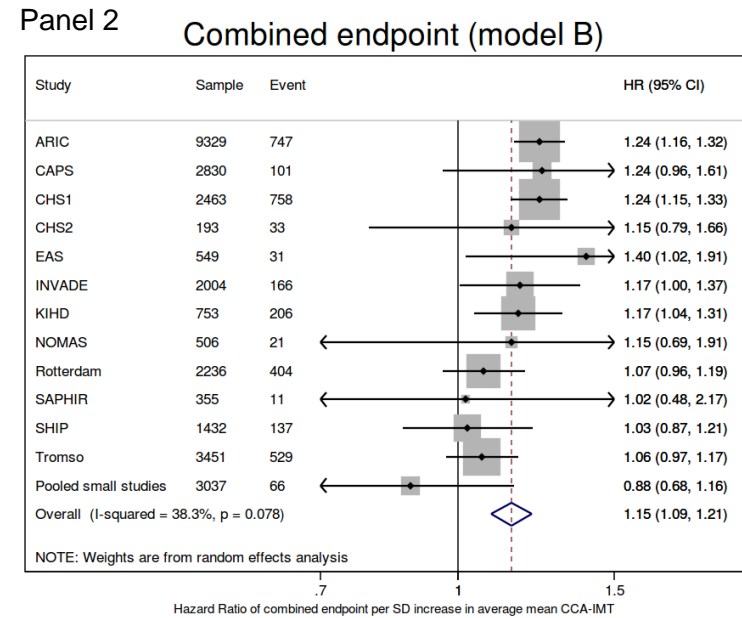
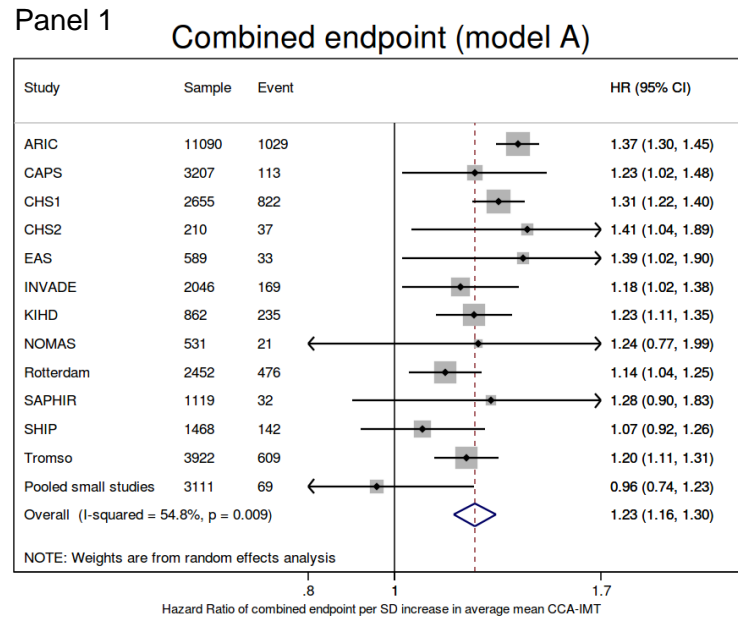
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Supplementary Figure 1. Flowchart showing numbers of screened and included publication and cohorts



SUPPLEMENTARY DATA

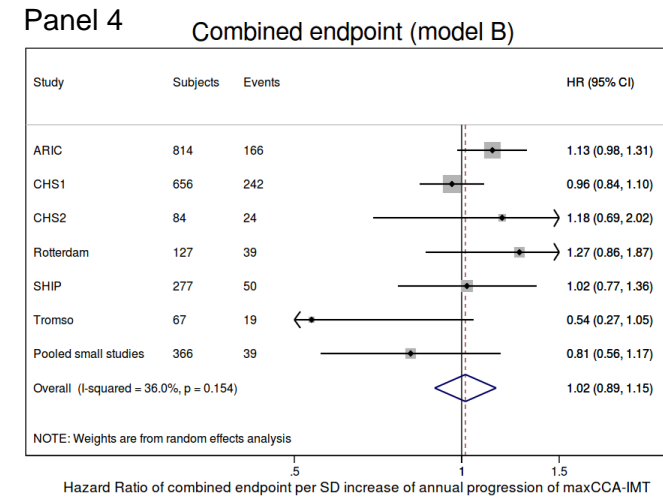
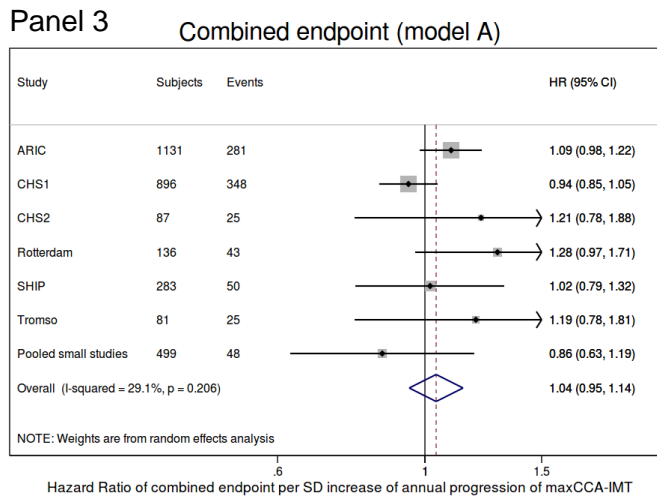
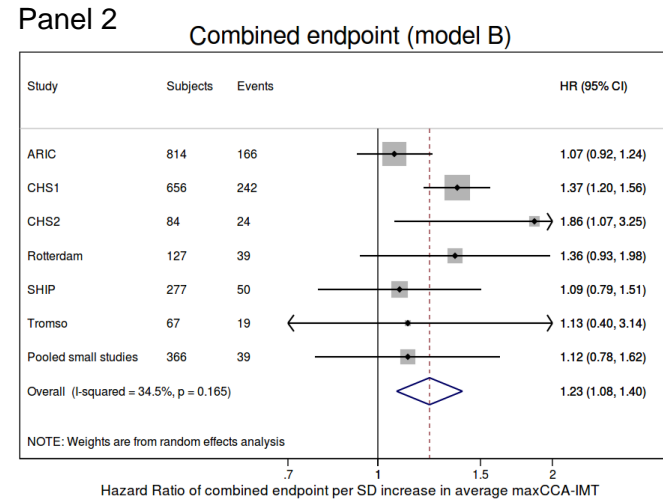
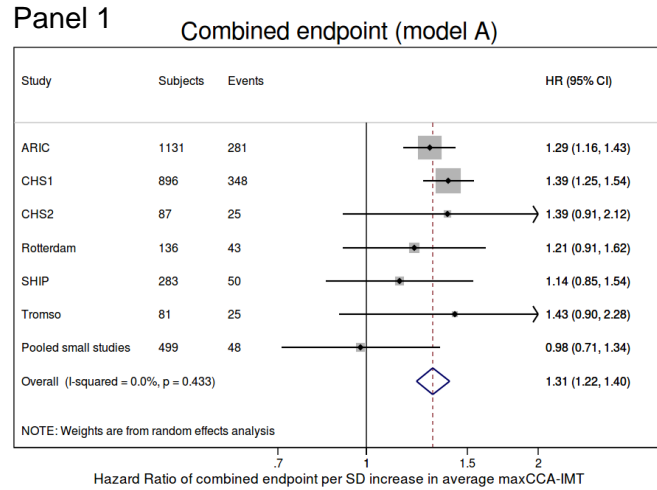
Supplementary Figure 2. Forest plot of HR of the combined endpoint (MI or stroke or vascular death) per SD of average mean CCA-IMT (panels 1 and 2) in subjects without diabetes



Note: pooled small studies included: AIR, CMCS, DIWA, EPICARDIAN and PLIC

SUPPLEMENTARY DATA

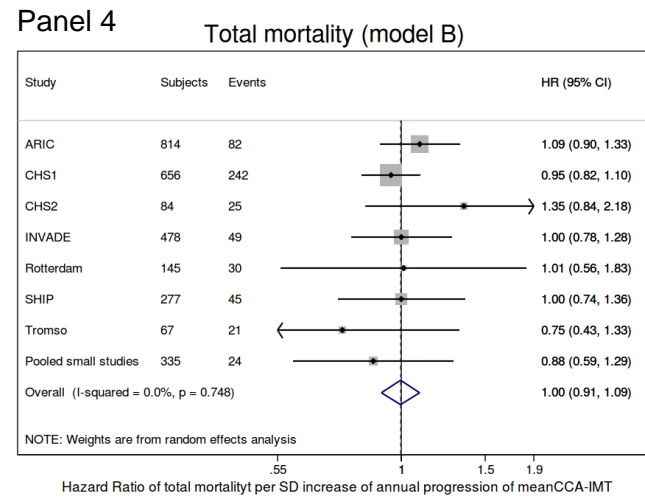
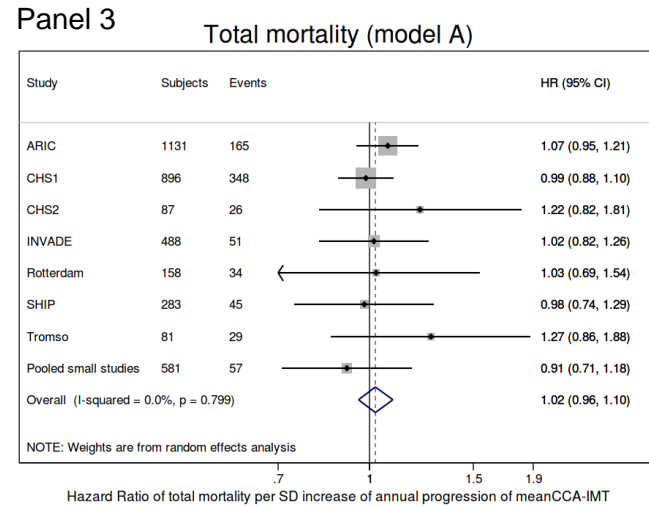
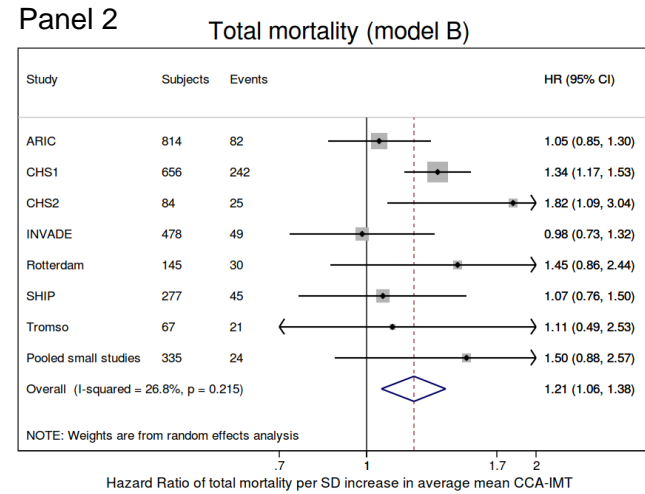
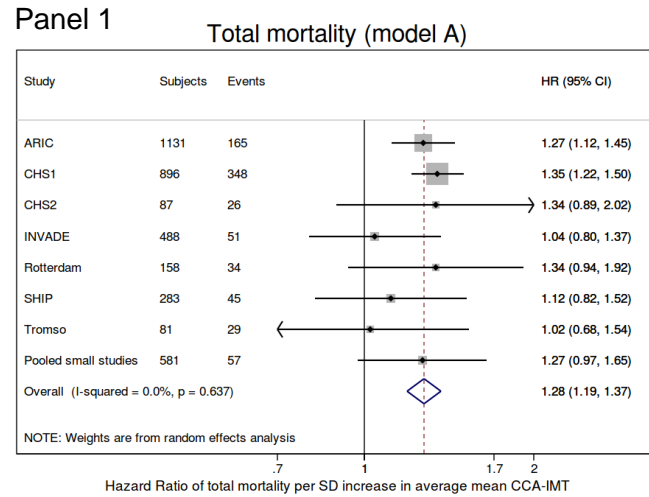
Supplementary Figure 3. Forest plot of HR of the combined endpoint (MI or stroke or vascular death) per SD of average maximal CCA-IMT (panels 1 and 2) and annual maximal CCA-IMT progression (panels 3 and 4)



Note: pooled small studies included: AIR, BRUNECK, CCCC, CMCS, DIWA, KIHD, NOMAS/INVEST and PLIC

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Supplementary Figure 4. Forest plot of HR of total mortality per SD of average mean CCA-IMT (panels 1 and 2) and annual mean CCA-IMT progression (panels 3 and 4)

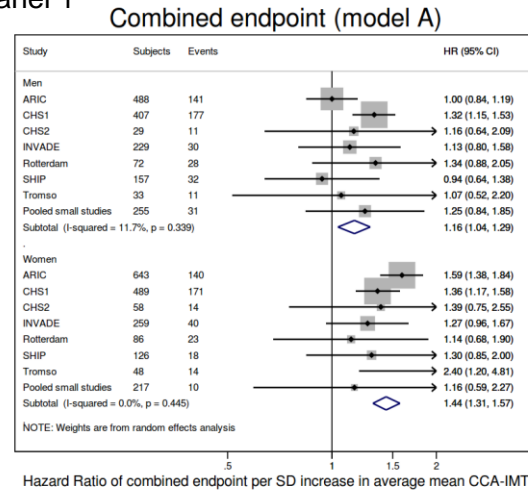


Note: pooled small studies included: AIR, CAPS, CMCS, DIWA, EAS, EPICARDIAN, EVA, KIH, NOMAS/INVEST, PIVUS and SAPHIR

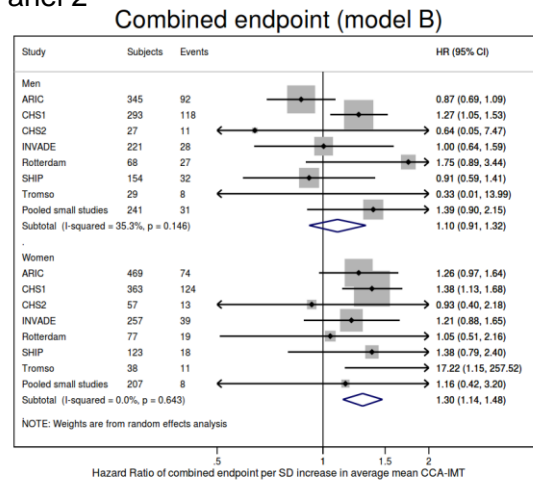
SUPPLEMENTARY DATA

Supplementary Figure 5. Forest plot of HR of the combined endpoint per SD of average mean CCA-IMT (panels 1 and 2) and annual mean CCA-IMT progression (panels 3 and 4), stratified by sex

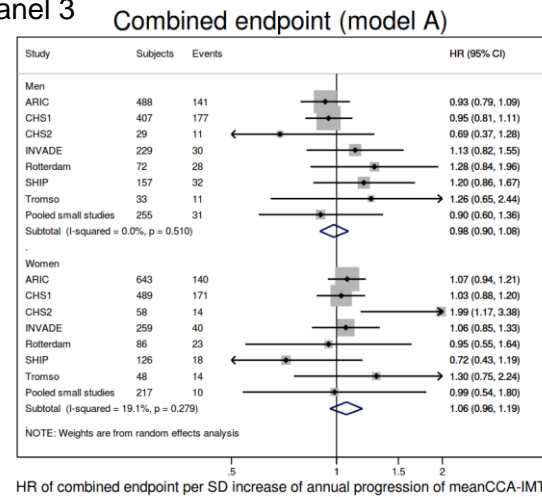
Panel 1



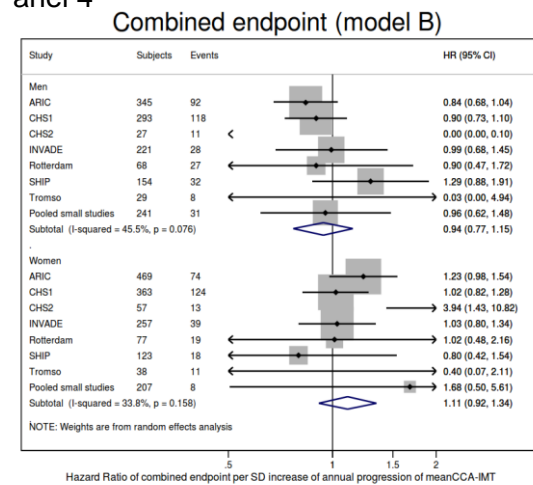
Panel 2



Panel 3



Panel 4

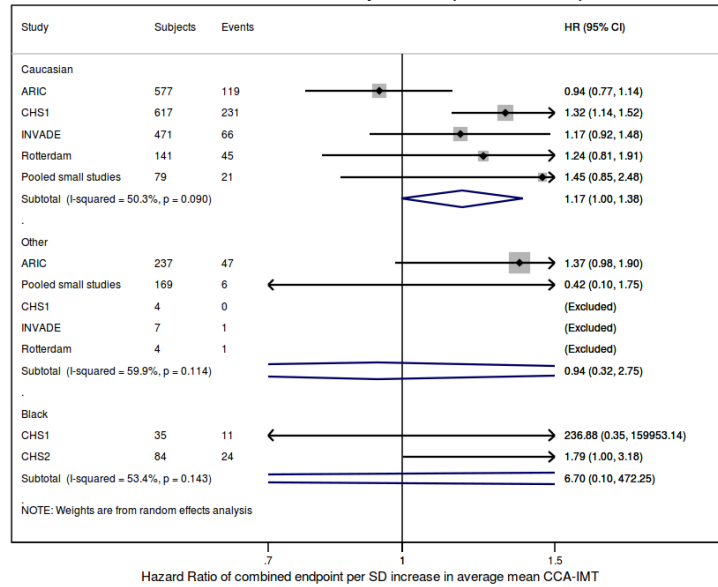


Note: pooled small studies included: AIR, CAPS, CMCS, DIWA, EAS, EPICARDIAN, KIH, NOMAS/INVEST, PLIC and SAPHIR

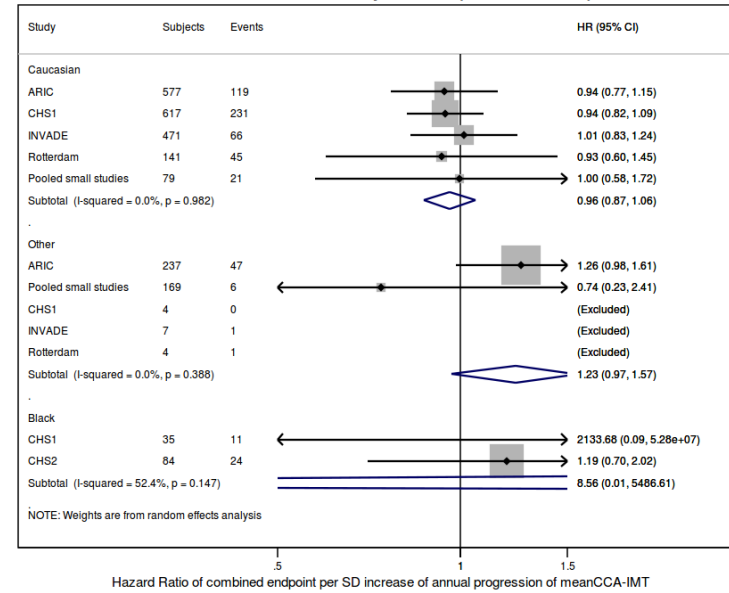
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Supplementary Figure 6. Forest plot of HR of the combined endpoint (model B) per SD of average mean CCA-IMT (panel 1) and annual mean CCA-IMT progression (panel 2), stratified by ethnicity

Panel 1 Combined endpoint (model B)



Panel 2 Combined endpoint (model B)



SUPPLEMENTARY DATA

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