

Supplementary Tables

Supplementary Table 1: Demography, medication and measurements according to HOMA-IR tertiles for 450 participants.

	Lower HOMA-IR tertile (n = 150)	Middle HOMA-IR tertile (n = 150)	Higher HOMA-IR tertile (n = 148)	p – value ***
Age, years	70 ± 3	70 ± 3	70 ± 3	0.62
Hypertension, n (%)	43 (29)	54 (36)	65 (44) *	0.024
Hypercholesterolemia, n (%)	58 (39)	55 (37)	72 (49)	0.08
Smoking, n (%)				
Active	2 (1)	14 (9)	11 (7)	0.10
Previous	71 (47)	82 (55)	81 (54)	0.32
Never	57 (38)	53 (35)	54 (36)	0.94
Pack-years	14.7 ± 18.4	16.3 ± 18.0	18.8 ± 21.2	0.35
Familiar disposition, n (%)	15 (1)	11 (7)	14 (9)	0.73
Aspirin, n (%)	49 (33)	46 (31)	58 (39)	0.20
ACEIs/ARBs, n (%)	34 (23)	41 (27)	52 (35)	0.057
Beta-blocker, n (%)	7 (5)	9 (6)	14 (9)	0.25
Statins, n (%)	57 (38)	54 (36)	72 (49)	0.058
Duration statin treatment, months, median [IQR]	5 [2; 49]	5 [2; 54]	27 [3; 48]	0.14
Systolic blood pressure, mmHg	136 ± 18	138 ± 16	142 ± 17 *	0.003
Diastolic blood pressure, mmHg	78 ± 11	80 ± 10.0	83 ± 10.0 *	< 0.001
BMI, kg/m ²	25 ± 3	27 ± 3	30 ± 4 *	< 0.001
Waist circumference, cm	93 ± 9	99 ± 9	106 ± 10.0 *	< 0.001
Hip, cm	101 ± 6	103 ± 6	107 ± 7 *	< 0.001
HbA1c, mmol/mol	35.9 ± 2.9	36.7 ± 3.4	38.0 ± 3.7 *	< 0.001
HDL, mmol/L	1.8 ± 0.4	1.5 ± 0.3	1.4 ± 0.4 *	< 0.001
LDL, mmol/L	2.6 ± 1.0	2.7 ± 1.0	2.6 ± 1.0	0.47
Total cholesterols, mmol/L	4.8 ± 1.1	4.7 ± 1.1	4.6 ± 1.1	0.44
Triglycerides, mmol/L	0.8 ± 0.3	1.1 ± 0.5	1.3 ± 0.6 *	< 0.001
Prediabetes, n (%)	33 (22)	70 (47)	106 (72) *	< 0.001
HOMA-IR, ** median [IQR]	1.4 [1.1; 1.7]	2.4 [2.2; 2.7]	4.6 [3.7;5.7] *	< 0.001
FPG, mmol/L	5.6 ± 0.4	5.9 ± 0.5	6.3 ± 0.7 *	< 0.001
2HPG, mmol/L	6.3 ± 1.6	6.8 ± 1.9	8.2 ± 2.4 *	< 0.001

hs-CRP, mg/L	1.8 ± 2.9	2.3 ± 3.0	2.6 ± 2.8 *	< 0.001
Segment length (mm)	263.1 ± 56.0	272.3 ± 57.1	252.7 ± 52.1 *	0.005

Continuous values are presented as mean ± standard deviation (SD) or median and [inter quartile range], and categorical data as prevalence and percentage (%). BMI = body mass index, ACEI = Angiotensin-converting enzyme inhibitors; ARB = Angiotensin receptor blockers; HbA1c = hemoglobin A 1c; HDL = high-density lipoprotein; LDL = low-density lipoprotein; HOMA-IR = homeostatic model assessment for IR; FPG = fasting plasma glucose; 2HPG = 2-h post-load plasma glucose; hs-CRP = high-sensitivity C-reactive protein.

*Higher vs. Lower HOMA-IR tertile, $p < 0.05$.

** HOMA-IR available for 448 participants'

*** Overall p-value across the HOMA-IR tertiles

Supplementary Table 2: Demography, medication and measurements according to glycemic groups for 450 participants.

	Normal glucose tolerance (n = 239)	Pre-diabetes (n = 211)	p – value **
Age, years	70 ± 3	70 ± 3	0.16
Hypertension, n (%)	71 (30)	92 (44)	0.002
Hypercholesterolemia, n (%)	87 (36)	99 (47)	0.02
Smoking, n (%)			
Active	26 (11)	20 (10)	0.64
Previous	118 (49)	117 (55)	0.18
Never	94 (39)	71 (34)	0.23
Pack-years	14.1 ± 17.7	19.4 ± 20.5	0.01
Familiar disposition, n (%)	24 (10)	16 (8)	0.36
Aspirin, n (%)	75 (31)	79 (37)	0.18
ACEIs/ARBs, n (%)	54 (23)	74 (35)	0.003
Beta-blocker, n (%)	11 (5)	19 (9)	0.06
Statins, n (%)	87 (36)	97 (46)	0.04
Duration statin treatment, months, median [IQR]	6 [2; 54]	12 [3; 46]	0.14
Systolic blood pressure, mmHg	135 ± 17	142 ± 17	< 0.001

Diastolic blood pressure, mmHg	79 ± 10	82 ± 10	0.01
BMI, kg/m ²	26 ± 3	28 ± 4	< 0.001
Waist circumference, cm	96 ± 10	103 ± 10	< 0.001
Hip, cm	102 ± 6	105 ± 7	< 0.001
HbA1c, mmol/mol	35.8 ± 3.1	38.0 ± 3.6	< 0.001
HDL, mmol/L	1.6 ± 0.4	1.5 ± 0.4	0.03
LDL, mmol/L	2.7 ± 1.0	2.6 ± 1.1	0.69
Total cholesterol, mmol/L	4.7 ± 1.0	4.7 ± 1.1	0.68
Triglycerides, mmol/L	1.0 ± 0.4	1.2 ± 0.6	< 0.001
HOMA 1,* median [IQR]	1.9 [1.4; 2.7]	3.2 [2.2; 5.1]	< 0.001
FPG, mmol/L	5.6 ± 0.3	6.3 ± 0.6	< 0.001
2HPG, mmol/L	5.9 ± 1.0	8.5 ± 2.4	< 0.001
hs-CRP, mg/L	2.0 ± 3.0	2.5 ± 2.9	0.002
Segment length, mm	260.7 ± 56.4	265.4 ± 54.5	0.35

Continuous values are presented as mean ± standard deviation (SD) or median and [inter quartile range], and categorical data as prevalence and percentage (%). BMI = body mass index; ACEI = Angiotensin-converting enzyme inhibitors; ARB = Angiotensin receptor blockers; BP = blood pressure; HbA1c = hemoglobin A 1c; HDL = high-density lipoprotein; LDL = low-density lipoprotein; HOMA-IR = homeostatic model assessment for IR; FPG = fasting plasma glucose; 2HPG = 2-h post-load plasma glucose; hs-CRP = high-sensitivity C-reactive protein.

* HOMA-IR available for 448 participants

** Pre-diabetes vs. normal glucose tolerance

Supplementary Table 3: Demography, medication and measurements according to HOMA-IR tertiles for the 373 participants with plaque.

	Lower HOMA-IR tertile (n = 125)	Middle HOMA-IR tertile (n = 124)	Higher HOMA-IR tertile (n = 122)	p – value ***
Age, years	70 ± 3	70 ± 3	70. ± 3	0.41
Hypertension, n (%)	41 (33)	49 (40)	58 (48)	0.06
Hypercholesterolemia, n (%)	55 (44)	54 (44)	67 (55)	0.13
Smoking, n (%)				>0.05
Active	17 (14)	13 (14)	9 (7)	
Previous	60 (48)	65 (52)	66 (54)	
Never	47 (38)	45 (36)	45 (37)	
Pack-years	15.3 ± 19.1	17.0 ± 18.8	19.5 ± 22.0	0.45
Familiar disposition, n (%)	14 (11)	9 (7)	13 (11)	0.58
Aspirin, n (%)	47 (38)	45 (36)	53 (43)	0.48
ACEIs/ARBs, n (%)	32 (26)	37 (30)	47 (39)	0.08
Beta-blocker, n (%)	7 (6)	7 (6)	12 (10)	0.36
Statins, n (%)	54 (43)	53 (43)	67 (55)	0.10
Duration statin treatment, months, median[IQR]	5 [2; 48]	5 [2; 52]	27 [3; 48]	0.10
Systolic blood pressure, mmHg	137 ± 18	138 ± 16	142 ± 18 *	0.02
Diastolic blood pressure, mmHg	79 ± 11	81 ± 10	83 ± 10 *	0.005
BMI, kg/m ²	25 ± 3	27 ± 3	30 ± 3 *	< 0.001
Waist circumference, cm	93 ± 9	100 ± 9	106 ± 10 *	< 0.001
Hip, cm	101 ± 5	103 ± 6	106 ± 7 *	< 0.001
HbA1c, mmol/mol	35.8 ± 3.0	37.0 ± 3.4	38.2 ± 3.6 *	< 0.001
HDL, mmol/L	1.8 ± 0.4	1.5 ± 0.4	1.4 ± 0.4 *	< 0.001
LDL, mmol/L	2.5 ± 1.0	2.7 ± 1.0	2.5 ± 1.0	0.58
Total cholesterols, mmol/L	4.7 ± 1.1	4.7 ± 1.1	4.6 ± 1.1	0.75
Triglycerides, mmol/L	0.8 ± 0.3	1.1 ± 0.5	1.4 ± 0.7 *	< 0.001
Prediabetes, n (%)	29 (23)	55 (44)	88 (72)	< 0.001
HOMA 1 **, median[IQR]	1.4 [1.1; 1.7]	2.5 [2.2; 2.7]	4.6 [3.7; 57] *	< 0.001
FPG, mmol/L	5.6 ± 0.4	5.9 ± 0.4	6.3 ± 0.7 *	< 0.001
2HPG, mmol/L	6.4 ± 1.6	6.7 ± 1.9	8.2 ± 2.5 *	< 0.001

hs-CRP, mg/L	1.9 ± 3.1	2.3 ± 3.1	2.6 ± 2.9 *	< 0.001
Segment length (mm)	263.1 ± 55.7	269.8 ± 56.4	249.7 ± 51.8 *	0.006

Continuous values are presented as mean ± standard deviation (SD) or median and [inter quartile range], and categorical data as prevalence and percentage (%). BMI = body mass index; ACEI = Angiotensin-converting enzyme inhibitors; ARB = Angiotensin receptor blockers; BP = blood pressure; HbA1c = hemoglobin A 1c; HDL = high-density lipoprotein; LDL = low-density lipoprotein; HOMA-IR = homeostatic model assessment for IR; FPG = fasting plasma glucose; 2HPG = 2-h post-load plasma glucose; hs-CRP = high-sensitivity C-reactive protein.

*Higher vs. Lower HOMA-IR tertile, $p < 0.05$.

** HOMA-IR available for 371 participants

*** Overall p-value across the HOMA-IR tertiles

Supplementary Table 4: Demography, medication and measurements according to glycemic groups for the 373 participants with plaque.

	Normal glucose tolerance (n = 197)	Pre-diabetes (n = 176)	p – value **
Age, years	70 ± 3	70 ± 3	0.13
Hypertension, n (%)	64 (32)	85 (48)	0.002
Hypercholesterolemia, n (%)	81 (41)	96 (55)	0.01
Smoking, n (%)			
Active	22 (11)	17 (10)	> 0.05
Previous	96 (49)	96 (55)	
Never	78 (40)	60 (34)	
Pack-years	14.8 ± 18.5	19.9 ± 21.2	0.04
Familiar disposition, n (%)	21 (11)	15 (9)	
Aspirin, n (%)	70 (36)	76 (43)	0.13
ACEIs/ARBs, n (%)	48 (24)	69 (39)	0.002
Beta-blocker, n (%)	10 (5)	16 (9)	0.13
Statins, n (%)	81 (41)	94 (53)	0.02
Duration statin treatment, months, median[IQR]	6 [2; 52]	14.5 [3; 47]	0.59
Systolic blood pressure, mmHg	135 ± 17	143 ± 17	< 0.001
Diastolic blood pressure, mmHg	79 ± 10	82 ± 10	0.004
BMI, kg/m ²	26 ± 3	28 ± 4	< 0.001
Waist circumference, cm	97 ± 9	103 ± 11	< 0.001
Hip, cm	102 ± 6	105 ± 7	< 0.001
HbA1c, mmol/mol	36.1 ± 3.1	38.2 ± 3.6	< 0.001
HDL, mmol/L	1.6 ± 0.4	1.5 ± 0.44	0.05
LDL, mmol/L	2.6 ± 1.0	2.5 ± 1.1	0.38
Total cholesterol, mmol/L	4.7 ± 1.0	4.6 ± 1.1	0.42
Triglycerides, mmol/L	0.98 ± 0.43	1.2 ± 0.65	0.003
HOMA 1 *, median[IQR]	2.0 [1.4; 2.7]	3.2 [2.2; 5.0]	< 0.001
FPG, mmol/L	5.6 ± 0.31	6.3 ± 0.64	< 0.001
2HPG, mmol/L	5.9 ± 0.96	8.4 ± 2.5	< 0.001
hs-CRP, mg/L	2.1 ± 3.1	2.5 ± 3.0	0.01
Segment length (mm)	258.7 ± 56.3	263.7 ± 53.7	0.34

Continuous values are presented as mean \pm standard deviation (SD) or median and [inter quartile range], and categorical data as prevalence and percentage (%). BMI = body mass index; ACEI = Angiotensin-converting enzyme inhibitors; ARB = Angiotensin receptor blockers; BP = blood pressure; HbA1c = hemoglobin A 1c; HDL = high-density lipoprotein; LDL = low-density lipoprotein; HOMA-IR = homeostatic model assessment for IR; FPG = fasting plasma glucose; 2HPG = 2-h post-load plasma glucose; hs-CRP = high-sensitivity C-reactive protein.

* HOMA-IR available for 371 participants

** Pre-diabetes vs. normal glucose tolerance

Supplementary Table 5: Uni- and multivariable logistic regression models for 450 participants

SC (n = 450)	Univariable			Multivariable (n = 372)		
	OR	95% CI	p	OR	95% CI	p
Pre-diabetes	1.6	1.07-2.26	0.02	1.37	0.83-2.25	0.22
HOMA-IR tertiles *						
Lower	ref.					
Middle	1.62	1.03-2.56	0.04	1.50	0.85-2.62	0.16
Higher	1.58	1.00-2.50	0.049	1.26	0.65-2.46	0.50
Duration of statin treatment	1.01	1.00-1.01	0.10			
Hypertension	1.83	1.24-2.71	0.02	1.08	0.67-1.77	0.74
Pack-year	1.00	0.99-1.01	0.84			
BMI	1.06	1.00-1.12	0.04	1.04	0.96-1.12	0.30
Age	1.12	1.05-1.21	0.001	1.10	1.01-1.19	0.03
NPV*	1.02	1.01-1.03	0.001	1.01	1.00-1.02	0.04
TAV	1.00	1.00-1.00	< 0.001	1.00	1.00-1.00	0.05
HbA1c	1.03	0.98-1.09	0.21			

OR = odds ratio; 95% CI = 95% confidence interval; SC = spotty calcification; HOMA-IR = homeostatic model assessment for IR; BMI = body mass index; HbA1c = hemoglobin A 1c; BMI = body mass index; TAV = total atheroma volume; NPV = necrotic plaque volume..

* HOMA-IR available for 371 participants

**NPV available for the 373 participants.