

SUPPLEMENTARY DATA

“Identifying heterogeneity of treatment effects from an intensive lifestyle weight loss intervention on cardiovascular events in overweight or obese patients with type 2 diabetes”

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Supplementary Table S1. Patient characteristics

	Look AHEAD participants (n = 4,901)
Demographics	
Age (years)	59 ± 7
Male sex	2030 (41%)
Current smoking	208 (4%)
Ethnicity	
White / Caucasian	3247 (66%)
Black / African-American	804 (16%)
Hispanic	676 (14%)
Other	174 (4%)
Medical history	
History of cardiovascular disease	690 (14%)
History of myocardial infarction	301 (6%)
History of stroke	119 (2%)
Use of insulin	832 (17%)
Duration of diabetes (years), median (IQR)	5 (2 - 10)
Physical examination	
Weight (kg)	101 ± 19
Body mass index (kg/m ²)	36 ± 6
Waist circumference (cm)	114 ± 14
Systolic blood pressure (mmHg)	129 ± 17
Laboratory tests	
Glycated hemoglobin (mmol/mol)	56 ± 13
Total cholesterol (mmol/L)	5.0 ± 1.0
High-density lipoprotein cholesterol (mmol/L)	1.1 ± 0.3
Low-density lipoprotein cholesterol (mmol/L)	2.9 ± 0.8
Triglycerides (mmol/L)	2.0 ± 1.3
Creatinine (μmol/L), median (IQR)	80 (71 - 97)
Presence of albuminuria	799 (17%)
Presence of micro-albuminuria	664 (14%)
Presence of macro-albuminuria	135 (3%)

All values are presented as either n (%) or mean ± SD unless noted otherwise

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Supplementary Table S2. Estimation of major cardiovascular events (myocardial infarction, stroke, hospitalization for angina, or cardiovascular mortality) for individual patients

	Risk of major cardiovascular events
Formula for risk estimation	$(1 - 0.845^{\exp(\mathbf{A} - 3.191)}) * 100\%$
Linear predictor	$\mathbf{A} = 0.038 * (\text{age}) - 0.005 * (\text{age if treated with intervention}) + 0.552 * (\text{if male}) - 0.017 * (\text{if male if treated with intervention}) + 0.165 * (\text{if current smoker}) + 0.124 * (\text{if current smoker if treated with intervention}) + 0.007 * (\text{SBP in mmHg}) - 0.005 * (\text{SBP in mmHg if treated with intervention}) - 0.246 * (\text{non-HDL in mmol/L}) + 0.015 * (\text{non-HDL in mmol/L if treated with intervention}) + 0.053 * (\text{non-HDL}^2 \text{ in mmol/L}) - 0.007 * (\text{non-HDL}^2 \text{ in mmol/L if treated with intervention}) + 0.003 * (\text{HbA1c in mmol/mol}) + 0.019 * (\text{HbA1c in mmol/mol if treated with intervention}) + 0.0005 * (\text{BMI in kg/m}^2) + 0.0007 * (\text{BMI in kg/m}^2 \text{ if treated with intervention}) - 0.006 * (\text{CKD-EPI in ml/min/1.73}) - 6.850E-5 * (\text{CKD-EPI in ml/min/1.73 if treated with intervention}) + 0.288 * (\text{if micro-albuminuria}) - 0.320 * (\text{if micro-albuminuria if treated with intervention}) + 0.136 * (\text{if macro-albuminuria}) + 0.258 * (\text{if macro-albuminuria if treated with intervention}) + 0.016 * (\text{duration of diabetes in years}) - 0.014 * (\text{duration of diabetes in years if treated with intervention}) + 1.041 * (\text{if history of CVD}) + 0.316 * (\text{if history of CVD if treated with intervention}) - 0.002 * (\text{if insulin user}) + 0.036 * (\text{if insulin user if treated with intervention}) + 0.016 * (\text{if treated with intervention})$

SBP = systolic blood pressure; non-HDL = non-high density lipoprotein cholesterol; HbA1c = glycated hemoglobin A1c; BMI = body mass index; CKD-EPI = glomerular filtration rate (estimated with the CKD-EPI formula); CVD = cardiovascular disease

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Supplementary Figure S1. Internal validation of the major cardiovascular events (MACE) risk model: Calibration plot of agreement between estimated and observed 10-year risk of MACE in the Look AHEAD study population, and associated C-statistic.

