

Supplementary material, Table 1. Population percentile-equivalent concentrations of LDLC and apoB in the NHANES database (16,17), used in the concordance/discordance analysis of treatment group classification according to EAS/ESC risk categories (1)

Treatment group	Very high risk	High risk	Moderate risk	Low risk
LDLC (mmol/L)	1.4	1.8	2.6	3.0
LDLC (mg/dL)	55	70	100	115
apoB (g/L)	0.50	0.60	0.80	0.90
Percentile	3rd	7th	33rd	52nd

NHANES – National Health and Nutrition Examination Survey. EAS/ESC – European Society of Cardiology and European Atherosclerosis Society. LDLC – low-density lipoprotein cholesterol. ApoB – apolipoprotein B.

Supplementary material, Table 2. Concordance-analyses based on the ESC/EAS treatment thresholds of apoB and LDLC calculated with the Friedewald equation (A), the Sampson equation (B) and the Martin-Hopkins equation (C)

A.		apoB (g/L)				
		< 0.65	0.65 to < 0.80	0.80 to < 1.00	1.00 to < 1.20	≥ 1.20
LDL-F	< 1.4	34	7	1	0	0
(mmol/L)	1.4 to < 1.8	47	19	7	0	0
	1.8 to < 2.6	39	117	73	10	1
	2.6 to < 3.0	3	42	102	34	1
	≥ 3.0	2	16	200	254	170

B.		apoB (g/L)				
		< 0.65	0.65 to < 0.80	0.80 to < 1.00	1.00 to < 1.20	≥ 1.20
LDL-S	< 1.4	35	5	0	0	0
(mmol/L)	1.4 to < 1.8	47	17	2	0	0
	1.8 to < 2.6	37	120	62	4	1
	2.6 to < 3.0	4	43	100	28	0
	≥ 3.0	2	16	219	266	171

C.		apoB (g/L)				
		< 0.65	0.65 to < 0.80	0.80 to < 1.00	1.00 to < 1.20	≥ 1.20
LDL-MH	< 1.4	35	3	0	0	0
(mmol/L)	1.4 to < 1.8	52	18	1	0	0
	1.8 to < 2.6	34	134	66	2	0
	2.6 to < 3.0	2	35	115	20	1
	≥ 3.0	2	11	201	276	171

Concordant results are visualised in green, discordant result in yellow, major discordant results in light orange and divergent results in orange. Discordant means that LDLC classifies the results 1 category too high or too low, and major discordant means that LDLC classifies the results more than 1 category too high or too low, compared to apoB. Divergent values are misclassified more than 2 categories.

ApoB – apolipoprotein B. LDL – low-density lipoprotein cholesterol. LDL-MH – LDL calculated using Martin-Hopkins formula. LDL-S – LDL calculated using Sampson formula. LDL-F – LDL calculated using the Friedewald formula.

Supplementary material, Table 3. Chi-squared tests assessing statistical difference in the number of concordant results between two equations for the calculation of LDL-C

A) **ESC/EAS treatment thresholds**

	LDL-F	LDL-MH
Concordant	330	310
Discordant	849	869
P-value	0.354	

	LDL-F	LDL-S
Concordant	330	313
Discordant	849	866
P-value	0.560	

	LDL-S	LDL-MH
Concordant	313	310
Discordant	866	869
P-value	0.731	

B) **Population percentile equivalent treatment thresholds**

	LDL-F	LDL-MH
Concordant	769	829
Discordant	410	350
P-value	0.008	

	LDL-F	LDL-S
Concordant	769	801
Discordant	410	378
P-value	0.163	

	LDL-S	LDL-MH
Concordant	801	829
Discordant	378	350
P-value	0.212	

Supplementary material, Table 3. Continued.

c) Population percentile equivalent treatment thresholds (subgroup TG > 2.0 mmol/L)

	LDL-F	LDL-MH
Concordant	144	180
Discordant	94	58
P-value	< 0.001	

	LDL-F	LDL-S
Concordant	144	167
Discordant	94	71
P-value	0.027	

	LDL-S	LDL-MH
Concordant	167	144
Discordant	71	94
P-value	0.181	

Section A uses data from the concordance analysis based on the ESC/EAS-recommended apoB thresholds (entire dataset). Section B uses data from the concordance analysis based on population percentile equivalent apoB thresholds (entire dataset). Section C uses data from the concordance-analysis based on population percentile equivalent apoB thresholds in the hypertriglyceridemia subgroup (TG 2.0–4.5 mmol/L).

EAS/ESC – European Society of Cardiology and European Atherosclerosis Society. LDL – low-density lipoprotein cholesterol. LDL-MH – LDL calculated using Martin-Hopkins formula. LDL-S – LDL calculated using Sampson formula. LDL-F – LDL calculated using the Friedewald formula. TG – triglycerides.

Supplementary material, Table 4. Concordance-analyses based on the population percentile equivalent thresholds of apoB and LDLC calculated with the Friedewald equation (A), the Sampson equation (B) and the Martin-Hopkins equation (C)

A.		apoB (g/L)				
		< 0.50	0.50 to < 0.60	0.60 to < 0.80	0.80 to < 0.90	≥ 0.90
LDL-F	< 1.4	20	12	9	1	0
(mmol/L)	1.4 to < 1.8	8	30	29	5	0
	1.8 to < 2.6	3	23	146	42	26
	2.6 to < 3.0	0	3	54	64	61
	≥ 3.0	0	1	27	105	509

B.		apoB (g/L)				
		< 0.50	0.50 to < 0.60	0.60 to < 0.80	0.80 to < 0.90	≥ 0.90
LDL-S	< 1.4	21	12	7	0	0
(mmol/L)	1.4 to < 1.8	7	31	27	1	0
	1.8 to < 2.6	3	21	148	36	16
	2.6 to < 3.0	0	4	53	69	49
	≥ 3.0	0	1	30	111	532

C.		apoB (g/L)				
		< 0.50	0.50 to < 0.60	0.60 to < 0.80	0.80 to < 0.90	≥ 0.90
LDL-MH	< 1.4	21	12	5	0	0
(mmol/L)	1.4 to < 1.8	7	35	29	0	0
	1.8 to < 2.6	3	19	161	42	11
	2.6 to < 3.0	0	2	51	73	47
	≥ 3.0	0	1	19	102	539

Concordant results are visualised in green, discordant result in yellow, major discordant results in light orange and divergent results in orange. Discordant means that LDLC classifies the results 1 category too high or too low, and major discordant means that LDLC classifies the results more than 1 category too high or too low, compared to apoB. Divergent values are misclassified more than 2 categories.

ApoB – apolipoprotein B. LDL – low-density lipoprotein cholesterol. LDL-MH – LDL calculated using Martin-Hopkins formula. LDL-S – LDL calculated using Sampson formula. LDL-F – LDL calculated using the Friedewald formula.

Supplementary material, Table 5. Concordance-analyses for hypertriglyceridemic samples (TG > 2.0 mmol/L), based on the population percentile equivalent thresholds of apoB and LDLC calculated with the Friedewald equation (A), the Sampson equation (B) and the Martin-Hopkins equation (C)

A.		apoB (g/L)				
		< 0.50	0.50 to < 0.60	0.60 to < 0.80	0.80 to < 0.90	≥ 0.90
LDL-F	< 1.4	3	2	4	1	0
(mmol/L)	1.4 to < 1.8	1	0	4	5	1
	1.8 to < 2.6	0	0	9	17	17
	2.6 to < 3.0	0	0	1	8	36
	≥ 3.0	0	0	1	4	124

B.		apoB (g/L)				
		< 0.50	0.50 to < 0.60	0.60 to < 0.80	0.80 to < 0.90	≥ 0.90
LDL-S	< 1.4	3	1	2	0	0
(mmol/L)	1.4 to < 1.8	1	1	6	1	0
	1.8 to < 2.6	0	0	9	16	9
	2.6 to < 3.0	0	0	0	14	29
	≥ 3.0	0	0	2	4	140

C.		apoB (g/L)				
		< 0.50	0.50 to < 0.60	0.60 to < 0.80	0.80 to < 0.90	≥ 0.90
LDL-MH	< 1.4	2	1	0	0	0
(mmol/L)	1.4 to < 1.8	2	1	5	0	0
	1.8 to < 2.6	0	0	11	15	3
	2.6 to < 3.0	0	0	1	13	22
	≥ 3.0	0	0	2	7	153

Concordant results are visualised in green, discordant result in yellow, major discordant results in light orange and divergent results in orange. Discordant means that LDLC classifies the results 1 category too high or too low, and major discordant means that LDLC classifies the results more than 1 category too high or too low, compared to apoB. Divergent values are misclassified more than 2 categories.

ApoB – apolipoprotein B. LDL – low-density lipoprotein cholesterol. LDL-MH – LDL calculated using Martin-Hopkins formula. LDL-S – LDL calculated using Sampson formula. LDL-F – LDL calculated using the Friedewald formula.