

Supplementary materials for:

**The association of apolipoproteins with later-life all-cause and cardiovascular mortality:
a population-based study stratified by age.**

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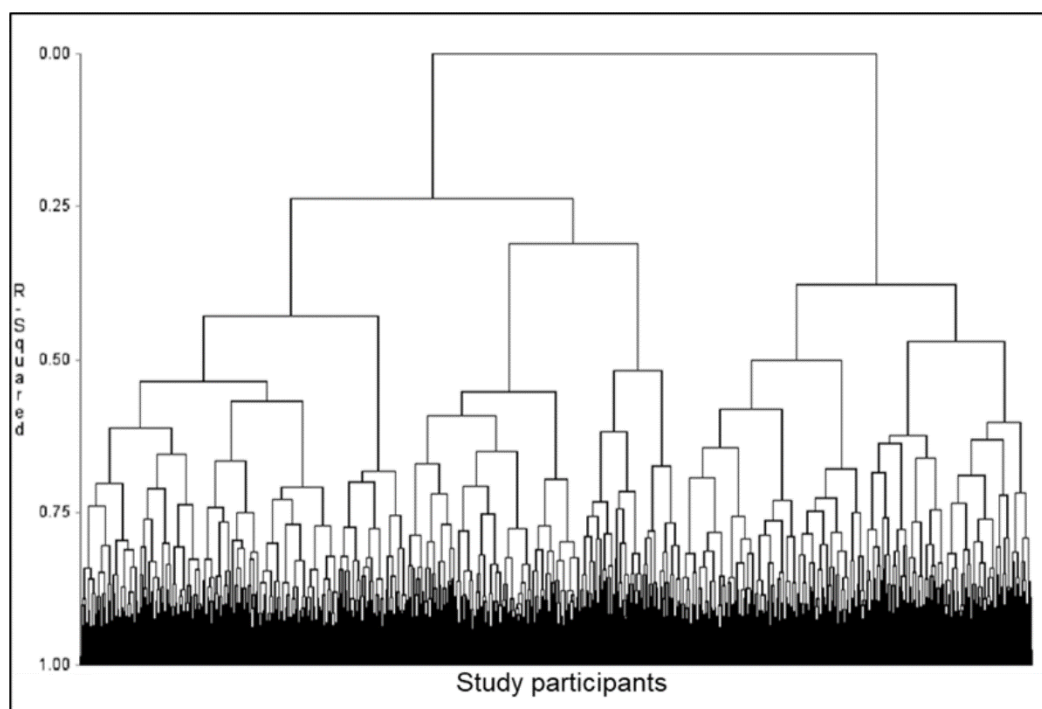


Fig. S1. The sequence of mergers in the dendrogram from hierarchical cluster analysis (using Ward's methods) performed on TC, triglycerides, ApoB, ApoA-I, and ApoB/ApoA-I ratio in z-scores.

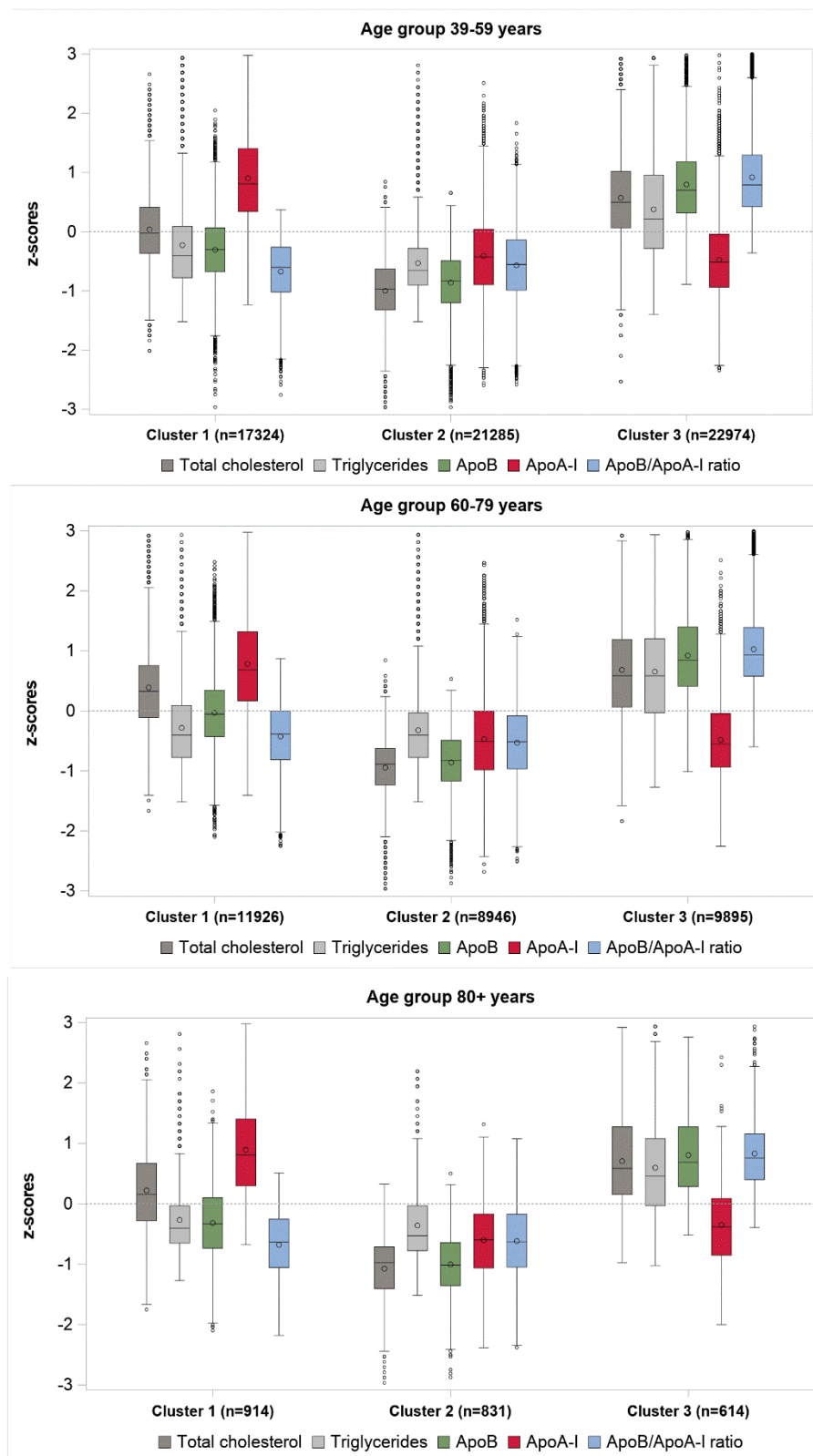


Fig. S2. Boxplots of total cholesterol, triglycerides, ApoB, ApoA-I, and ApoB/ApoA-I ratio in z-scores in the 3 clusters among people aged 39-59, 60-79, and ≥ 80 years, respectively. Cluster analyses were performed separately in the three age groups.

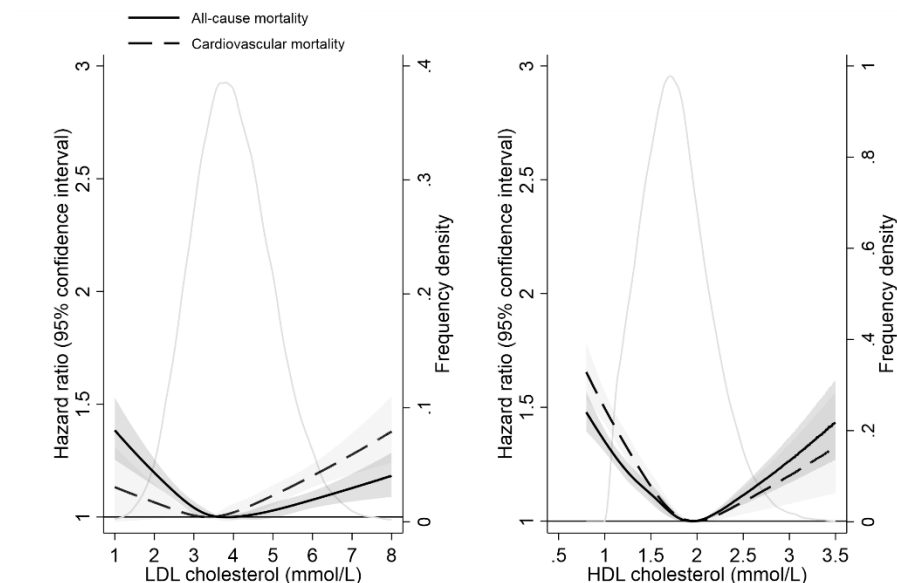


Fig. S3. Hazard ratios and 95% confidence interval for all-cause and cardiovascular mortality associated with concentrations of LDL and HDL cholesterol on a continuous scale over 25 years of follow-up. Hazard ratios (solid line for all-cause mortality and dash line for cardiovascular mortality) and 95% confidence intervals (gray area) are retrieved from Cox regression models with restricted cubic splines, adjusted for age, sex, and history of coronary heart disease, heart failure, atrial fibrillation, hypertension, diabetes, ischemic stroke, and transient ischemic attack. Solid gray line indicates the distribution of lipid biomarkers in the study population.

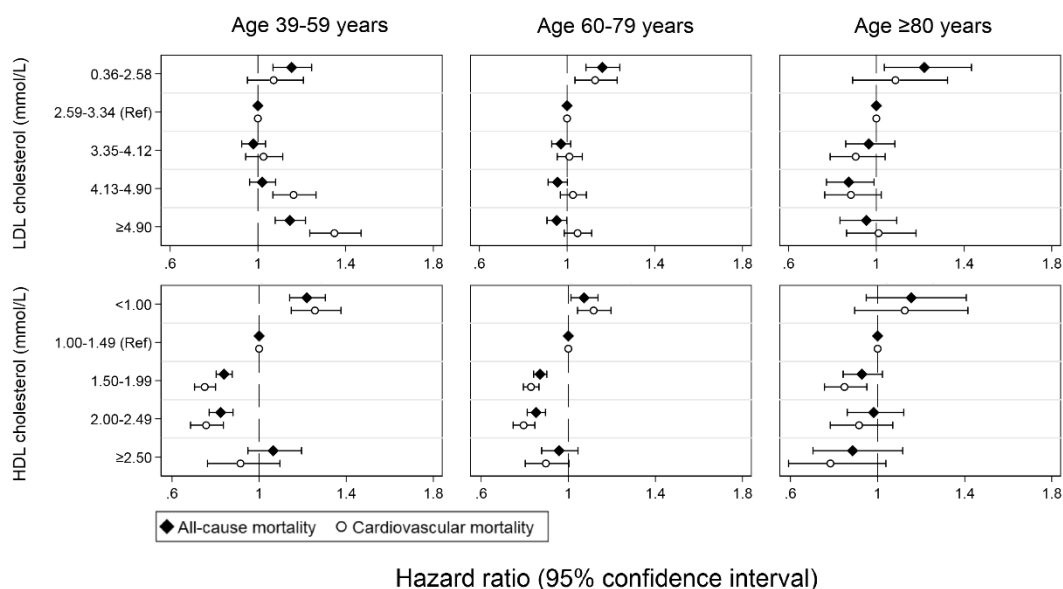


Fig. S4. Hazard ratios and 95% confidence interval for all-cause and cardiovascular mortality associated with LDL and HDL cholesterol in categories among people aged 39-59 years (left), 60-79 years (middle), and ≥ 80 years (right), respectively, adjusted for age, sex, and history of coronary heart disease, heart failure, atrial fibrillation, hypertension, diabetes, ischemic stroke, and transient ischemic attack.

Table S1. Biomarker concentration levels for the 3 lipid biomarker clusters.

	Cluster 1	Cluster 2	Cluster 3	Kruskal-Wallis test
Number of participants	35375	26124	33210	
Female sex, n (%)	20260 (57.3)	10901 (41.7)	13028 (39.2)	
Age at baseline, mean (SD)	58.4 (10.8)	58.4 (9.4)	57.7 (9.6)	p<0.001
Lipid biomarkers, mean (SD)				
Total cholesterol, mmol/L	6.19 (0.73)	5.03 (0.62) ^a	7.03 (0.84) ^{a,b}	p<0.001
Triglycerides, mmol/L	1.22 (0.60)	1.05 (0.47) ^a	1.79 (0.72) ^{a,b}	p<0.001
Apolipoprotein B, g/L	1.23 (0.19)	1.04 (0.17) ^a	1.65 (0.22) ^{a,b}	p<0.001
Apolipoprotein A-I, g/L	1.63 (0.19)	1.34 (0.16) ^a	1.37 (0.17) ^{a,b}	p<0.001
ApoB/ApoA-I ratio	0.77 (0.15)	0.79 (0.18) ^a	1.21 (0.18) ^{a,b}	p<0.001

^aStatistically different (p<0.001) from cluster 1 for all lipid biomarkers.

^bStatistically different (p<0.001) from cluster 2 for all lipid biomarkers.