Review of: "Why Non-HDL Cholesterol is Preferred over Apolipoprotein B-100 (Apo B)"

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Potential competing interests: No potential competing interests to declare.

The question what lipid and/or lipoproteins might be the optimal discriminators of cardiovascular diseases including MI, stroke and other heart problem have been debated in the past in numerous original publications and specific reviews.

I am afraid to say that the present work does not really solve the open problems that still exists. My judgement is based on the following points:

1.Not only that the number of patients and controls is rather low, the authors mention in the § “Subjects, Blood Sample Collection, and Angiography” that 140 “Normals” served as control collective. What are normal individuals?? One would have to match carefully for age, gender, coexisting diseases and other factors.

2. Noting is said on the possible drug treatment of individuals that certainly has an enormous impact on the outcome of the study.

3. Another point to consider is the methodology: The commercial assays from different companies are mostly not harmonized and considering the heterogeneity of the non-HDL cholesterol fractions in plasma they all are measuring different things.

4.Last but not least among the non-HDL cholesterol fraction there is one of the most atherogenic lipoprotein, Lp(a) (A,B) that needs special consideration.

Taking together, matters are much more complicated and in the era of personalized medicine measurement of total apoB, HDL, LDL-C or non-HDL-C can be only a rough filter to pinpoint those individuals that need further laboratory examinations.

A) Kostner, K. M., and G. M. Kostner. Lipoprotein (a): a historical appraisal.*J. Lipid Res.* 2017. 58:1–14.

B) Tycho R. Tromp, Shirin Ibrahim, Nick S. Nurmohamed , Jorge Peter , Linda Zuurbier , Joep C. Defesche , Laurens F. Reeskamp , G. Kees Hovingh, Erik S.G. Stroes. Use of Lipoprotein(a) to improve diagnosis and management in clinical familial hypercholesterolemia. *Atherosclerosis 365 (2023) 27–33.*