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Title: Non-fasting remnant cholesterol and CVD risk prediction in Canadians: a prospective cohort study
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Reviewer 1: Dr. Yuanchao Feng
Institution: University of Calgary Cumming School of Medicine, Calgary, Alta.
General comments (author response in bold)

The authors have conducted a large prospective study to measure and generate non-fasting RC and other lipid risk indices from the ATP cohort and to compare the levels of RC and LDL-C in those with and without CVD incidence.
The manuscript is interesting but needs minor modifications:

1. Author should carefully check the abbreviation/acronym in the full article. The abbreviation/acronym with full name should appear the first time they are in the article, then will always abbreviation/acronym. For example, Alberta's Tomorrow Project (ATP) (line 92 and line 103) and Canadian Partnership for Tomorrow Project (CPTP) (line 94 and line 104) appear twice. TG (line 85) and AHA (line 79) do not have full name explanation. It is best to avoid using abbreviations and acronyms in the abstract unless the abbreviation/acronym is commonly understood and/or is used multiple times in the abstract.
We have made sure that abbreviations are defined only once, at the first use. Acronyms in the abstract were limited to RC, LDL-C and CVD which are used multiple times.

2. The author needs to provide the accurately definition of composite CVD or provide more reference articles for this part to support the use of composite CVD.
See response to editorial comment (Methods, 4b)

3. Need to provide more information about ATP/CPTP. How the data was coded and the validation of the data. As I know that ATP only cover patients with the ages of 35 and 69. Chosen the patients at this age range may cause selection bias. Author should discuss this at the limitation part.
A note about coding of the data was added to the 'Data Sources' section (p 6). The 'Limitations' section now includes a comment about how the data compares to the general population and the generalizability of the data based on the older, female cohort (p 16). More information on ATP has been added throughout Methods (p4-7).

4. Methods described in not enough detail. What kinds of the healthcare data were linked to ATP? Any ICD code, procedure CCI code and ATC medication code was used for variable selection?
More detail on types of linked healthcare data and codes used were added to 'Data Sources' and 'Variables and Outcomes' section (p6-7).

5. Author should check confounding and collinearity before conducting the multivariate logistic regression.
We used a purposeful model building approach whereby clinically important covariates were included in the models regardless of whether or not they were

statistically found to be confounders. There was no collinearity between any of the explanatory variables.

6. Some of the outcome variables are also included in the Elixhauser Comorbidities. For example, myocardial infarction (MI), how did the author handle with this situation?
The Elixhauser comorbidity index does not include any of the outcome variables used in this analysis. Please refer to the following for the full list of comorbidities included in the index: Elixhauser A, Steiner C, Harris DR, Coffey RM. Comorbidity measures for use with administrative data. Med Care. 1998 Jan;36(1):8-27. doi: 10.1097/00005650-199801000-00004. PMID: 9431328.

7. Figures and tables (including acronyms) need a better description.
More detailed footnotes (some detail moved from title) were added to tables and figures, including acronym definitions.

8. Need to check the distribution of continuous variables at first and then decide to use mean/SD or median/IQR. The mean and standard deviation is normally only appropriate when the continuous data is not significantly skewed or has outliers.
Regarding the mean/median, both RC and LDL are very normally distributed and as a result the means and medians are nearly identical.

	Mean	SD	Median	IQR
LDL-C	2.86	0.85	2.82	1.12
RC	0.78	0.38	0.70	0.51

9. Author should rework the results parts. The results section simply and objectively reports what you found; some parts of results could move to interpretation part. [Editor's note: the Results section tends at times to editorialization. Please review carefully.]
The results section has been edited to reflect an objective and more succinct presentation of the results (p9-13).

10. The interpretation is too light: it should address potential biases due to patient selection or the fact that most study populations are of old age. The generalizability of this study should be discussed. [Editor's note: please include in the Limitations subsection of the Interpretation.]
More detail has been added to the limitations section, including a lack of generalizability due to the sample being predominantly older age females (p 16).

Reviewer 2: Dr. Vivek Pillai
Institution: K S Hegde Medical Academy, Mangaluru, India
General comments (author response in bold)

The finding of high CVD incidence in the lowest quartile LDL population was an eye opener, as well as the conclusion that this could be a novel risk factor in an undertreated and underrepresented group- females.
We thank Dr. Pillai their time and consideration of this manuscript.

Reviewer 3: Dr. Karim Hnid
Institution: Mitochondrial Interest Group
General comments (author response in bold)

Very interesting publication. Well done.
We thank Dr. Hnid for their time and consideration of this manuscript.