Reviewer’s report

Title: Thyroid function and metabolic syndrome. Results from the population-based LifeLines Cohort Study.

Version: 0 Date: 06 Aug 2017

Reviewer: Rohana Ghani

Reviewer's report:

The manuscript was well-written.

Introduction was adequate.

The authors have concluded that "..both fT4 and fT3 are associated with several components of the MetS."

The authors have elaborated on the plausible explanations with comparisons to previous studies. Perhaps it would be useful that the authors attempt to explain which of the factors (fT4, fT3 or fT3/fT4 ratio) are more 'useful' for further confirmatory studies. Based on the argument that men have blood pressure and women have waist circumference as the more predominant criteria in the diagnosis of MetS, respectively, would the authors be able to conclude that fT3/fT4 ratio is a more useful factor, or each gender would require different factors.

Table 6- Summary of previous studies.

Column 6- Major findings- Authors to summarise findings with acceptable abbreviations- eg

"fT4 negative association with TC, LDL-C, TG, WC; positive association with HDL-C.

fT3 neg association with TC, LDL-C, TG"

Overall, the study mainly supports previous data, with a notable sample size.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I am able to assess the statistics

Quality of written English
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Acceptable

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