Title: Prevalence of Metabolic Syndrome (MetS) in Chinese subjects gradually increased with impaired glucose homeostasis: A multicenter, clinical based, cross-sectional study

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Reviewer: Paola Forti

Reviewer's report:

Major Compulsory Revisions

The study aims (which include an investigation of how MetS prevalence by glucose homeostasis vary across different age groups) should be better defined.

It would also be interesting compare results for prevalence of MetS by NCEP-ATPIII criteria with other internationally accepted definitions (e.g. IDF)

The inclusion and exclusion criteria of the two cohorts included in the study should be better defined. It should be clarified whether anthropometric measurements where actually performed or data for weight, height, etc are from self-report.

The results section is mostly a mere and raw duplicate of the data in the tables. It would be easier for the reader if the authors attempted to summarize trends and differences.

As this is a cross-sectional study, it is unclear what the authors mean with the term "hazard ratio" in the tables. If they also estimated Odds Ratios, this should be clearly stated in the statistical section and p-values for ORs and trends across categories should be provided.

95% confidence limits for prevalences should be provided.

The test used for pairwise comparisons should be mentioned.

It would be interesting to know whether presence of glucose abnormalities is associated with the number of positive MetS criteria.

Discussion - second paragraph: the authors should mention current debates (and doubts) about the predictive ability of MetS for adverse cardio and cerebro vascular events. The reader should also be cautioned that the authors are extrapolating from cross-sectional data.

The meaning of the association of glucose abnormalities with single MetS criteria should be discussed.

Minor essential revisions
Throughout the manuscript NECP-ATPIII should be changed to NCEP-ATPIII

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests