Reviewer's report

Title: The life expectancy of patients with metabolic syndrome after weight loss: study protocol for a randomized clinical trial” (LIFEXPE-RT)

Version: 1 Date: 03 Mar 2019

Reviewer: Qiuxia Cui

Reviewer's report:

Clinical Metabolism syndrome, which is considered as the result of obesity in this study, plays a leading role in reducing the life expectancy and increasing the mortality of Kazakhstan's population. In order to find out whether the loss weight treatments might affect the life expectancy of patients, the authors suggest an interesting three arm randomized study through comparing the changes in telomere lengths after surgery or non-surgery treatment.

I have several comments:

- since surgeons and physicians have found positive results treating patients with MetS via surgical and non-surgical weight loss therapies, what exact results are they, why this study not take just two aspects of them but conduct a three-arm trial;

- will there be any subgroups to minimize the influence of other factors, like ages, different comorbidities, lifestyle, etc;

- the sample size should be better described;

- the follow-up should be better described, and although I understand that it would be nearly impossible to do a long-term follow up, 6-12 months should at least be described as a limitation of the study

- as the author mentioned that these BMI of Asian patients should be reduced by 2.5 kg/m2, how it comes to set the inclusion criteria of BMI from 30 to 50 kg/m2, is it possible to describe a little bit more in detail;

- the unit of BMI should all be kg/m2

- what is T2D, could it be described when it occurs the first time in the manuscript
- "group" (methods/organization line 53) should be "groups"

- "we" (methods/study design, line 12) should be "will"

- the endpoints should be better described

**Level of interest**
Please indicate how interesting you found the manuscript:

An article of importance in its field

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

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**Statistical review**

Is it essential that this manuscript is seen by an expert statistician? If so, please give your reasons in your report.
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