Reviewer's report

Title: Serum C-reactive protein and thioredoxin levels in subjects with mildly reduced glomerular filtration rate

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Reviewer: Giovanni Tripepi

Reviewer's report:

In this paper, Tsuchikura and co-workers investigated the relationship between biomarkers of inflammation/oxidative stress and renal function in 182 individuals included in a health check-up program. The study results are interesting but there are some problems to be clarified.

- This study tests a precise etiological hypothesis: are CRP and TRX involved in the pathogenesis of mildly reduced GFR? This type of hypothesis should be investigated by an appropriate multiple regression analysis including, in the same model, all potential confounders [that is, all variables related to both exposure (CRP or TRX) and outcome (GFR), that are not an effect of exposure and that are not in the same causal pathway between exposure and outcome]. For this reason either the CRP-GFR link or TRX-GFR link should be re-tested in models simultaneously including all potential confounders (the large sample size allows it). Apparently the authors only performed bivariate analysis. As a consequence, the discussion should be re-calibrated according to the results of this analysis.

- The paper needs an accurate revision by a mother tongue English speaker. In particular, the authors should avoid the use of the word "changes" (see abstract, 2nd statement; discussion, 1st statement, etc) because this type of wording would be appropriate in studies investigating real changes in inflammatory or oxidative stress biomarkers (for example before/after a given intervention/condition).

Otherwise, the present paper is a cross-sectional analysis.

- Fig.1 and Fig.2: please provide the regression lines.

Level of interest: An article of importance in its field

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'