Reviewer's report

Title: Inverse correlation between serum interleukin-6 and iron levels among Japanese adults

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Reviewer: Yoko Shibata

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Inverse correlation between serum interleukin-6 and iron levels among Japanese adults
Authors: Nakagawa et al

Comment 1: This manuscript demonstrated that inverse correlation between serum interleukin-6 and iron levels among 280 healthy Japanese subjects aged 20-78. However, the authors have not demonstrated blood hemoglobin levels that should be associated with the level of serum Fe. In addition, levels of other inflammatory mediators such as CRP have not been investigated. Therefore, the reviewer could not understand if IL-6 is the specific inflammatory molecule that is related to the level of sFe, or if IL-6 is one of the inflammatory molecules related to the level of sFe. If the latter is true, the low-grade systemic inflammation, not only IL-6, contributes to lowering the levels of sFe. Without the information on other inflammatory molecules, the reviewer could not assess if IL-6 is a major contributor for the sFe levels, or if IL-6 is merely a biomarker for sFe level.

Comment 2: Recently, Shibata and colleagues demonstrated the relationship between sFe levels and spirometric parameters, namely FEV1. Because FEV1 is largely affected by the behavior of cigarette smoking, the effects of cigarette smoking on the sFe levels may not be ignored. The reviewer thinks that it is better to include cigarette smoking behavior as a covariate in the multiple linear regression analysis.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.