Reviewer’s report

Title: Influence of muscle mass and bone mass on the mobility of the elderly: an observational study

Version: 2 Date: 26 May 2013

Reviewer: Kono Koichi

Reviewer’s report:

Comments of Referee:
The paper “Influence of muscle mass and bone mass on the mobility of the elderly: an observational study” by Gláucia R Falsarella et al. described the influence of sarcopenia and bone mineral density on the mobility in dwelling elderly in Campinas-SP, Brazil.

Although authors confirmed the correlation between sarcopenia and TUG (r=0.277, P=0.006), age and gait speed (P=0.034, OR=1.081), age and the TUG test (P=0.004, OR=1.111) and overweight and the TUG test (P=0.011, OR=7.83) and obese and the TUG test (P<0.001, OR=7.84), authors concluded that these findings indicate a lack of direct correlation among muscle and bone mass and mobility.

Authors suggested that unknown other factors that related to aging may contribute to a decline of physical function, however, I think this hypothesis is hyperspeculative because “other factors” are not identified and their existence is unclear in this study. Author should not discuss the indirect speculative manner but along with the purpose of the study described in the background and consider based on facts obtained results.

Although abstract background describes that the study was conducted on community dwelling elderly, however the subjects seems to be constructed of patients with >4 diseases. This study should be conducted on community dwelling healthy elderly.

As the present study was conducted on the female subjects only, manuscript title should include this limitation.

As the relationship between BMI vs muscle mass and BMI vs BMD is controversial, author should analyze these relationship and confirm them as independent variables.

Authors should present summary statistics of subjects in Table 1.

Authors categorized BMI by eutrophic, malnourished overweight and obese in Table 2, however, these categorizations were not defined in methods section.

P value should be listed in the most right line of the table.
Captions for Table 2 and 3 are unclear. What does n=73, n=25, n=24, n=23…. stand?

**Level of interest:** An article of limited interest

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

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'