Reviewer’s report

Title: Renal Resistive Index as an Indicator of the Presence and Severity of Anemia and its Future Development in Patients with Hypertension

Version: 1 Date: 22 February 2015

Reviewer: Toshihiro Sugiura

Reviewer’s report:

Tanimura et al. reported the relationship between renal RI and anemia. They have revised the manuscript according to the three reviewers’ questions and suggestions. As the authors mentioned in the discussion section, there are many limitations, especially in the study design, making it hard to lead their conclusions.

Major compulsory revisions

1. While the correlation between RI and anemia is a new interesting finding, the hemoglobin levels are much higher than those expected from GFR (Fig.2). There are many patients whose hemoglobin levels are above normal range despite CKD. This makes it difficult to apply the results to the general CKD population.

2. Concerning the above described issue, the end point accepted in this study, a decrease in hemoglobin > 1g/dL, can be clinically insignificant. For example, change in hemoglobin from 15 to 14 g/dL will have no clinical impact.

3. It is hard to believe that RI can predict a development of anemia. The hazard ratios of RI are 1.05 (univariate) and 1.03 (multivariate) (Table 3). These values are not clinically and practically significant. In addition, the multivariate analysis showed 95% RI of 1.00-1.06 and P-value of 0.05, which is not statistically significant.

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

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests.