Reviewer's report

Title: The increase of vasomotor tone avoids the ability of the dynamic preload indicators to estimate fluid responsiveness.

Version: 1 Date: 22 August 2013

Reviewer: Koichi Suehiro

Reviewers report:

For the Authors:
General Comments:
The authors studied about the dynamic preload indicators in animal models, and concluded that all dynamic preload indicators (SVV, SPV, PPV and PPVapnea) were significantly reduced by phenylephrine administration during hemorrhage, masking the true fluid loss possibly by increasing the vasomotor tone. And they also indicated that arterial pressure surrogates are not interchangeable with SVV. This article is well written and it is easy to understand their results. However, the impact of the results seems to be few.

Suggestions for Revision:
1. Why did you choose SVV as a reference method in Bland-Altman analysis? In the present study, the bias in the Bland-Altman analysis was not acceptable. Many previous reports have shown the reliability of SVV, SPV, and SPV to predict fluid responsiveness in mechanically ventilated patients.
2. Please describe the reason why the bias in the Bland-Altman analysis became high (over 30%). You indicated that PPV, SPV and PPVapnea could not be interchangeable with SVV. However, all dynamic preload indicators (SVV, SPV, PPV and PPVapnea) have already been proved to be useful in many clinical settings. You think that these parameters except SVV should not be used as a predictor of fluid responsiveness?
3. You should use 4 quadrant plot and polar plot to assess the tracking ability of all dynamic preload indicators after phenylephrine administration and hemorrhage. Four quadrant plot [1], and polar plot analysis [2] give an assessment whether the changes of the new method is acceptable compared with the reference method.


4. As described in this paper, Cannesson, et al. has shown that the impact of phenylephrine administration on cardiac output is related to the position of the
heart of Flank-Starling relationship. Similarly, the impact of PHE boluses on the
dynamic preload indices is affected by systemic vascular resistance state?

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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.