Reviewer's report

**Title:** Value of segmental myocardial strain by 2-Dimensional Strain Echocardiography for assessment of scar area induced in a rat model of myocardial infarction

**Version:** 2  **Date:** 29 December 2011

**Reviewer:** Rosa Sicari

**Reviewer's report:**

In the present study, authors try to demonstrate the usefulness of 2D strain for the assessment of fibrosis in an experimental rat model of myocardial infarction. The study is interesting, however there are several issues that should be addressed:

1. In the abstract section, results should be reported in a more conventional way, giving numbers.
2. The ROC is probably not the best statistical tool to identify fibrosis. Since there is no control group and the detection of myocardial fibrosis is confirmed by histology a correlation analysis would be better suited to this aim.
3. In data analysis, one of the major problem for the application of 2D strain is that the longitudinal function is globally affected. This is a major limitation of such technologies when applied to humans.
4. These technologies are under scrutiny due to the lack of standardized method of measurements, different software by different vendors. Please address and cite the ASE/EAE joint document on myocardial mechanics.
5. The potential clinical implications of the present results should be discussed.
6. The figures should be redrawn and not presented as slides.

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

**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'