Reviewer’s report

Title: Whole-heart four-dimensional flow can be acquired with preserved quality without respiratory gating, facilitating clinical use: a head-to-head comparison

Version: 2 Date: 26 February 2015

Reviewer: Sarah Nordmeyer

Reviewer’s report:

Dear Authors,

The findings presented in this manuscript are interesting and important to help implanting 4D flow in clinical practice. I have some minor essential revisions.

1) Please add more Details concerning the Population of healthy volunteers (weight, height, heart rate) and especially patients with heart failure (Age, weight, height, heart rate, underlying disease, LVEF %)

2) Please explain within the manuscript why you chose a Venc of 100cm/s for 4D flow and 200 cm/s in 2d Flow, why did you not choose 200 cm/s for both measurements? Did you have aortic Stenosis in your heart failure patients?

3) Please add visualizations (figures) for particle traces and vortex to demonstrate the lack of differences between resp_ and resp+.

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