Reviewer’s report

Title: A mathematical model that predicts the length from the left subclavian artery to celiac axis; towards accurate intra aortic balloon sizing.

Version: 1 Date: 22 May 2011

Reviewer: STAVROS SIMINELAKIS

Reviewer’s report:

Major Compulsory Revisions

The authors apply statistical techniques and linear regression to correlate the length from LSA to CA with the internal wire measurement, height, age and gender. The sample upon which they derive their results is of 40 people. Since, the only contribution of the paper is the equation for the length of the balloon and the empirical suggestions derived from it, I believe that more measurements are due in order to increase the accuracy and confidence in the predictive power of the equation. This wouldn't be a severe setback for the authors as all measurements are obtained from cadavers with no special medical history and therefore would be easy to obtain.

Minor Essential Revisions

The use of the term "mathematical model" is perplexing as it implies a model for the underlying physical process or structure that produces the phenomenon under study, whereas the authors use statistical methods. I recommend that the term "statistical model" be used instead.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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'