Reviewer’s report

Title: Goal-directed fluid therapy- A survey of anaesthetists in the UK, USA, Australia and New Zealand

Version: 2 Date: 18 October 2012

Reviewer: Christian von Heymann

Reviewer’s report:

Dear Authors,

thank you very much for this very interesting manuscript that addresses a highly important question!

Major compulsory revisions:

My major concerns with your work are two-fold:

1. This survey has only a very small number of respondents and is not representative for the anesthesiological community in UK or AUS/NZ and, therefore, does not allow to generalize the results.

2. The authors state the anesthesiologists were randomly chosen with the help of the national societies. But does the random selection secure a representative selection? Please comment on this.

Minor Essential Revisions

1. it is unclear why the use of pressors were analyzed. Does this really add to the purpose of this survey on goal directed fluid therapy to know which pressors are used in the UK oder NZ/AUS?

2. It might be interesting to analyze the choice of colloids used in different parts of the world, but is this relevant to the implementation of GDFT? Please comment on this.

3. Apart from the fluids used, this survey lacks one of the most important questions in the field of goal directed fluid therapy that is if a hemodynamic protocol is applied when using tools for hemodynamic monitoring. The early Connors study from 1997 has shown that the use of hemodynamic monitoring (PAC in this case) without a hemodynamic treatment protocol does not benefit the patients at all (this was in contrast to the even earlier work of William Shoemaker et al. 1988). Please comment on this.

4. Despite the small number of respondents from the US, these results are presented in the figures but not in the tables. Why is this? If you decide to not comment the US results due to 9% prespondent rate, than these results should be omitted completely.

5. Reference 20 should state that the revised GIFTASUP recommendation
from March 2011 are meant.

6. The discussion section mainly discusses the ODM and neglects the other hemodynamic monitoring tools as PPV, pulse contour analysis etc.

7. On page 10 is stated: „A proportion of people from all the regions surveyed remain sceptical regarding the proposed benefits of GDFT. To an extent, this is justified as important questions remain unanswered, such as efficacy in settings where fluid restriction has been shown to be beneficial.[21-23]“. This reviewer doubts that the terms „restrictive“ or „liberal“ reflect the essential issues of goal directed fluid therapy. Although it is important to avoid hypervolemia, goal directed fluid therapy aims at improving stroke volume, cardiac output, oxygen delivery or other physiological indices. Please comment on this.

**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:**

This reviewer declares that there is a potential conflict of interest as studies on hemodynamic optimisation with industrial support are conducted at the author’s institution. The reviewer doubts that the interpretation and review of this manuscript is influenced by this COI, but can not exclude this completely.

- Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this paper, either now or in the future? Reviewer: YES (funding from industry for lectures and prospective trial on hemodynamic optimisation)

- Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper, either now or in the future? Reviewer: NO

- Do you hold or are you currently applying for any patents relating to the content of the manuscript? Reviewer: NO

Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript? Reviewer: YES (see above)

- Do you have any other financial competing interests? Reviewer: NO

- Do you have any non-financial competing interests in relation to this paper? Reviewer: NO