Reviewer’s report

Title: Retained Organic Solutes, Patient Characteristics and All-Cause and Cardiovascular Mortality In Hemodialysis: Results from the Retained Organic Solutes and Clinical Outcomes (ROSCO) Investigators

Version: 1 Date: 17 January 2013

Reviewer: Guy Neild

Reviewer’s report:

This is an interesting study and another product of the widely reported CHOICE study.

The authors investigate the possible effect of 4 potential uremic toxins, which are all poorly cleared by conventional dialysis, on long-term clinical outcome. The most obvious feature of the report, is that the results are ‘negative’ but they are just as interesting for being negative since previous smaller studies have given positive results and reported relationships between high concentrations of specific toxins and poor outcome.

The paper is written by experts and is comprehensive and clear.

Major

1. My only comment is that the single samples that have been analyzed were obtained after 2-6 months of dialysis. I think this should be stated in the Abstract, but more importantly there should be a brief comment on this in the Discussion. Ideally, I assume, in a prospective study one would obtain a sample before dialysis is commenced and one after a several month period of dialysis. There must be some literature on the short term effect of dialysis on these 4 uraemic toxins. If sampling at 2-6 months after start of dialysis is just as valid as sampling before dialysis starts then please inform us.

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'