Reviewer's report

Title: Magnesium supplementation and high volume hydration reduce the renal toxicity caused by cisplatin-based chemotherapy in lung cancer patients; a toxicity study.

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Reviewer: Christine N Metz

Reviewer's report:

1. Is the question posed by the authors well defined?

Yes

2. Are the methods appropriate and well described?

The authors state that the subjects agreed to the cisplatin therapy – did they agree to the various magnesium/hydration protocols? Can the authors confirm that the subjects consented to be treated with the magnesium/hydration protocols? Were these Mg/hydration regimens approved by the IRB?

3. Are the data sound?

The data presented are sound but very limited by assessing only after the first round of cisplatin chemotherapy. The major problem with cisplatin is that the damage is cumulative with every cycle and few patients would ever only receive a single treatment. This is a major limitation of the study. Because this data should be available in the subjects’ charts – it does not seem reasonable to include it. The authors state that ‘our results predict the change of sCr and CrCl in the following cycles – why not be sure of this instead of guessing?’

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

Yes.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

See number 3. Also, with respect to assessing Mg status – the authors indicate that they did not include the subjects’ serum status because serum Mg is only 1% of the body’s total Mg – however, this is used clinically to determine which patients should receive Mg supplementation during cisplatin treatment. Despite its poor correlation, serum Mg reflects Mg status due to acute changes and is clinically relevant. Therefore, this information should be included in the manuscript because it should be revealed whether serum Mg levels could be used as a guide for providing Mg treatments.
6. Are limitations of the work clearly stated?
Mostly.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes.

8. Do the title and abstract accurately convey what has been found?
The abstract and methods section should remove the term: ‘chest tumors’ and used the term lung cancer (to be consistent with the title, background, discussion and patient population.

9. Is the writing acceptable?
No, the manuscript requires significant re-writing (mostly grammar/sentence structure) to improve readability. For example: “Wilcox et al revealed THAT 16mEq magnesium (Mg) supplementation WAS beneficial.” “It is concerned that low Mg inhibit tumor cell proliferation and neoangiogenesis. Therefore, Mg supplementation for protecting nephrotoxicity has possibility to promote tumor cell proliferation.” – these are just a couple of examples where grammar and sentence structure hinder readability of the manuscript.