Reviewer's report

Title: L-Carnitine-supplementation in advanced pancreatic cancer (CARPAN) - a randomized multicentre trial

Version: 1 Date: 2 May 2012

Reviewer: Michael VanSaun

Reviewer's report:

The manuscript 'L-Carnitine-supplementation in advanced pancreatic cancer (CARPAN) - a randomized multicentre trial' reports the outcome from a multi-centre, randomized study of L-carnitine treatment for cachexia improvement in pancreatic cancer patients. The major findings are that L-Carnitine supplementation in randomized groups shows significant improvements in BMI and BF after 12 weeks of compliance, even though survival was not significantly improved. The manuscript would be greatly improved through the following revisions:

Major Compulsory Revisions

The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.

1. Were only patients receiving chemotherapy selected through screening, if not was there a difference in the number of non-chemotherapy patients in either of the treatment arms?

2. The normal levels of L-carnitine in healthy patients is never discussed, therefore altered levels of L-carnitine in pancreatic cancer patients cannot be assessed (additionally with or without chemotherapy). Test or state known healthy serum levels for L-carnitine. Additionally, please provide a figure showing the levels of L-carnitine in both treatment groups over time. It was stated that serum L-carnitine was assessed for determination of compliance and that L-carnitine levels were 60% higher at 6 weeks, but no data are given for the 12 week timepoint. Essential to this paper is that supplementation actually increases the levels of L-carnitine over time in pancreatic cancer patients. Additionally, it is unknown whether the placebo might also have increase 60% even without supplementation.

3. Statistics are not provided for BCM at the 12 week timepoint, but are shown to be significant at the 6 week timepoint. Please address these results and if accurate provide a reason in the discussion for loss of significance at 12 weeks, especially since you stated that BIA was improved due to BCM and BF, yet these parameters individually were significant at different time periods.

4. Provide values for cognitive function, global health status, and gastrointestinal symptoms for respective groups since you have indicated that these are
significantly changed.

Minor Essential Revisions
1. Please define “Verum” as stated in Table 1 and Figure 2. No where in the manuscript is it stated what verum is.
2. Discrepancy between “methods” stating all patients received baseline chemotherapy and “Findings” that state 90% received chemotherapy.

Discretionary Revisions
1. Provide nutritional and laboratory values from Table 1 for 6 week and 12 week timepoints for both groups of patients.
2. Consistently use either L-carnitine or Verum
3. Spelling error “enroll” in conclusions.

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