Reviewer’s report

Title: Efficacy and safety of oral branched-chain amino acid supplementation in patients undergoing interventions for hepatocellular carcinoma: a meta-analysis

Version: 1 Date: 3 June 2015

Reviewer: Beng San Yeoh

Reviewer’s report:

In this manuscript, the authors present a meta-analysis on the efficacy of oral branched-chain amino acid supplementation in HCC patients based on published clinical trials. Although BCAA supplementation has been recommended for HCC patients, there is little evidence confirming the efficacy of such treatment. Hence, this study provides detailed analysis on the efficacy and safety which is not readily apparent in the current scientific literature.

Minor Essential Revision

1. Authors should discuss more on the rationale why BCAA given to HCC patients. What are the nutritional deficiencies that aggravate/worsen HCC? And how does BCAA supplementation overcome such problem? (In discussion, the authors mentioned 'malnutrition' as a risk factor during HCC therapy. More discussions are needed on why this is so).

2. It appears that BCAA treatment is given secondary to another anti-HCC treatment, possibly "surgery, RFA, HAIC or TACE". It is not clear whether these other anti-HCC treatment present a possible confounding variable.

3. BCAA metabolism is tightly associated with insulin resistance, obesity and other metabolic disorders (Lynch and Adams (2014), Nat Rev Endocrinol). Authors could discuss more on this matter and how metabolic abnormalities in HCC patients could potential influence efficacy of BCAA.

4. I suggest the authors to include an additional Table that summarizes the results in the articles reviewed (eg: study by et al, BCAA treatment reduce mortality and ___ but not ___; duration of study; side effects observed).

5. The discussion regarding BCAA effects on different class of Child-Pugh patients is very interesting. It would be more impactful if this Child-Pugh factor is included in the meta-analysis (in other words, should be included in the Result section).

Quality of written English: Needs some language corrections before being published

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.