Reviewer's report

**Title:** Influence of Oral Glutamine Supplementation on Survival Outcomes in Locally Advanced Non-Small Cell Lung Cancer Patients Treated with Concurrent Chemoradiotherapy

**Version:** 1 **Date:** 25 April 2012

**Reviewer:** nada rotovnik kozjek

**Reviewer's report:**

The manuscript covers interesting topic on the possible influence of oral glutamine supplementation on the cancer treatment outcome. Glutamine effect was evaluated on the basis of retrospective analysis of data from hospital documentation.

My comments to manuscript are graded regarding the BMC Cancer criteria:

**Mayor compulsory revisisons**

1. **Abstract**
   
   Background section in the abstract is not defined very well, it sound mora like the Aim section and need more clear explanation of background.

   Conclusion section in abstract: Regarding metodology of the study current results can not suggest, mybe better words: show association.

2. **Background**
   
   a) The following sentence should be rewritten more clearly:

   "Although improvements in target definition tools and advent of sophisticated RT techniques, and elimination of elective irradiation of lymph node regions reduced the volume of normal tissue exposed to high dose radiation to a significant degree, because of the need for irradiation of subclinical tumor extension, it appears that normal tissue toxicity and its consequences will remain as a treatment challenge for RT clinics that is not anticipated to be solved in near future."

   b) Add reference after...marked GLT depletion develops over time which cannot be compensated by increased synthesis

   c) Add reference(s) ... concerns have been raised whether administration of GLT might stimulate tumor growth (TG), and therefore, negatively alter tumor control and survival outcomes following anticancer treatment.

   The hypothesis to the study quesition is not clearly stated (the proposed effect of oral glutamine on survival)! And why they oral dosage of 3x10g/day per day?

3. **Methods**
The methodology of the study is very weak. There is no explanation how they control the ingestion of glutamine in the treatment group. Maybe they have just better food intake if the control group was not able to afford glutamine use because of socioeconomic reasons.

Side effects of treatment should be listed and explained in the Methods section! Stages of ARIE should be explained.

4. Results
   a) "The unique acute toxicity that may be attributed to GLT prophylaxis"....What is that, needs explanation.
   b) Did patients in the control group have no nausea?
   c) "Weight change (WC), which is the absolute difference between pre- and posttreatment weight measures, is a parameter that is independent of pre-treatment weight with the potential to underestimate the value of pre-treatment body mass." ...this goes in Methods and needs reference

4. Discussion
   a) See the comment 1, the use of words "suggest no tumor protection.." can not be justified according to weak methodology
   b) Limitations of the study must be exposed! It seems that not just glutamine but also factors as better socioeconomic status and just better doesn't change the treatment outcome.

Hope that my comments will be helpful.

Best regards!

**Level of interest:** An article of importance in its field

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

**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