Reviewer's report

Title: Healthcare Costs in Patients with Metastatic Lung Cancer Receiving Chemotherapy

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Reviewer: Janneke Grutters

Reviewer's report:

This is a well written, well executed and interesting study estimating lifetime healthcare resource utilization and costs and its components by setting and by type of service in patients with advanced lung cancer receiving chemotherapy. I have some comments that may help to further improve the paper.

Major compulsory revisions:

1) The selection of patients on page 3 is probably a bit technical for the readership of BMC Health Services Research. I would prefer more explanation, as this is very important in order to understand the validity of the study.

2) I am not sure whether it is a good idea to include patients who were still alive, and thus making costs, at the end of the study. I guess this should underestimate the total average healthcare costs. How many of these patients are included? Approximately 3300 (4068-776?)? What are the mean cumulative healthcare costs if they are excluded?

3) I am not from the US, and our standard costs differ from those in the US. For me, and in general to make the paper more interesting for readers outside the US, it would therefore be helpful to provide more information on resource use. For example, for Table II provide not only costs, but also the corresponding N. How many patients went to the hospital, how may had radiology diagnostic, etc?

4) The authors spend a page (7) on other studies, but do not compare their results with results from these studies. Although I understand the differences, I would think some comparison could be made for part of the results?

5) The limitations section could be better structured. Numbering the limitations (first, second,..) could for example help to read this section.

Discretionary revisions:

1) I would like to know whether the population (plan members) is generalisable to the general population. 10% are aged 65 or older: is this normal in the US? If not, how could this have impacted the results?

2) Lifetime healthcare resource utilization should also include diagnostics, and perhaps treatment before receiving chemotherapy. It was not completely clear to me whether these costs that occurred before chemotherapy were indeed included.

3) I very much like Figure 1. It is however a bit difficult to read the values from the
Figure. I would therefore be interested to see the actual values provided below Figure 1. It is then easier to see how much costs increase over the months.

4) The authors mention that they analyse characteristics of study subjects, but why were they not related to costs? As far as I am concerned it would be interesting to know how much age or presence of comorbidities impacts the total costs.

5) The authors mention that they did not adjust for inflation, I do not understand why they didn't?

**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.