Reviewer’s report

Title: Treatment Selection of Early Stage Non-Small Cell Lung Cancer: The Role of the Patient in Clinical Decision Making

Version: 0 Date: 20 Feb 2017

Reviewer: Jamie Studts

Reviewer’s report:

This manuscript describes a prospective cohort study examining decision making and outcomes among individuals diagnosed with early stage non-small cell lung cancer. Participants completed surveys prior to undergoing surgery or stereotactic radiation treatment. Results were interpreted to suggest a high degree of decisional conflict and dissatisfaction with knowledge but a strong desire for shared decision making among study participants.

This study addressed some interesting and important questions regarding treatment decision making following an early stage lung cancer diagnosis. Several validated instruments were used to measure decision-relevant and outcome variables. However, it appeared that several ad hoc items were also included, and the psychometric foundation of these decision items was not provided. Solid imputation strategies were employed to deal with the challenge of a modest amount of missing data at baseline. While the study achieved a reasonable response rate for work conducted in this population, longitudinal analyses of the outcome data was hampered by non-response due to an aggressive disease with generally poor outcomes. The study concluded that additional work is needed to facilitate integration of shared decision making into thoracic oncology settings in order to achieve greater patient-centered care in this setting.

In addition to the strengths of the study, several questions and limitations reduced enthusiasm for this report despite the importance of addressing treatment decision making in the context of lung cancer care.

The background information provided does not integrate previous decision making research in oncology and does not include previous literature exploring individuals diagnosed with lung cancer.

The manuscript provides substantial details on commonly used measures (e.g., decisional conflict scale, SF-36), but might benefit from additional details or examples of some of the ad hoc and less commonly used items pertaining to patient perspectives on the lung cancer treatment decision making process. In particular, it was not clear how analyses of the perceived lack of knowledge items were conducted or how the data was categorized.

In terms of study design, it may have been interesting for the study to explore decisional conflict or decision regret over time in addition to the SF-36 data. However, this is a minor point given the noted difficulty of obtaining surveys at 6 and 12 months from this population.
Although a minor point, the SF-36 might be best considered a measure of health status rather than quality of life. Other measures would provide better assessment of the quality of life construct in oncology.

In the results section, it was not always clear what analyses were conducted or how data was categorized based on a lack of statistical information provided in the text. While a general description of proposed analyses was provided in the methods section, this was not sufficient to allow replication of the analyses.

To support the argument that decision conflict scores were clinically elevated, it would be helpful to provide comparison data from other samples. In the discussion section, the manuscript could address whether decisional conflict was higher in this sample lung cancer than other malignancies, and could this be a function of factors other than the actual decision making and patient-provider communication process? Might self-blame and stigma play a role in creating uncertainty about the treatment?

One comment in the discussion section noted that this population of patients suffers from emotional instability and is overloaded with disease information, but this is not supported with study data or referenced with data from other studies. There is data suggesting that individuals with lung cancer do commonly experience substantial distress, but it is not clear if individuals diagnosed with early stage disease commonly experience these similar levels of distress. Most data have over-sampled from individuals with later stage disease based on the fact that most patients present with later stage lung cancer.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics
Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal