Reviewer's report

Title: Quality of Life Assessment: An Independent Predictor of Survival in Lung Cancer

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Reviewer: Richard Fielding

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Abstract:

1. Re-write Results section to emphasize adjusted findings rather than the unadjusted bi-variate results as is currently the case.
2. Include findings of differences in QoL of on vs. off treatment patients.
3. The content of the Conclusions should be in the Results, and a new Conclusion focussing on the very limited predictive effect of physical status and importance of QoL for patients (see below).

Background:

4. Paragraph 3: whereas several studies have shown a number of studies that link QoL to cancer survival, such studies are not without problems, mainly that of reverse causality: patients with more aggressive disease or who are less responsive to treatment feel worse, and hence report poorer QoL. Moreover, some of the more rigorously controlled studies in this area have failed to demonstrate that QoL is an independent risk factor once reverse causality is taken into account. Some mention of this lack of unanimity in the literature is needed in the present paper. Otherwise, if it is a given that QoL predicts outcomes, then where is the value of another “me too” paper describing the same phenomenon?

5. Moreover, there are other issues related to choice of instrument that could be mentioned concisely in the Background (see Montazeri et al, H&QoLO., 2009). These include generic vs. symptom specific instruments’ relative sensitivity and other methodological concerns that litter this field. Montazari’s paper could also be referenced, providing as it does a review of the issue.

Methods:

6. Other issues that have been identified as potentially important in such QoL-survival studies are the inclusion of socioeconomic data in multivariate models. In the USA this should include information on health insurance coverage (access to treatment), and possibly employment and education status. If these data are not available to adjust the multivariate models a note should be included in the limitations section of the paper to this effect and indicating these possible problems. (I note in the Limitations SES is mentioned but no discussion of
insurance cover/access is raised).

Discussion:

7. The authors make a good point in emphasizing the value of QoL to patients being as great as that of survival. Good quality life is a major treatment challenge in optimal cancer care and with targeted therapies, prolonged disease is shifting the equation more in this direction. However, lung cancer remains a serious challenge to survival-extending therapies, making QoL issues even more pertinent.

8. Page 14: This section needs substantially more work. Instead of simply saying study A found X, study B found Y, and so on, some effort should be made to make sense of these findings and account for the highly variable quality of the evidence they present. Many studies of QoL outcomes have failed to provide adequate controls for confounding, and in particular reverse causality; some (as the authors indicate in the subsequent paragraph, are only case series. In most of these studies, it is not that QoL independently predicts survival, but that QoL reflects progress of the underlying disease. The present study strongly suggests this also, with only physical QoL and symptoms predicting survival after adjustment for disease factors.

9. The authors seem to emphasize throughout that their study shows that QoL independently predicts survival, but this interpretation is not justified, given that only physical status predicts outcome. The Physical subscale of the EORTC is in effect reflecting the physical status of the patient, which in turn is a reflection of the disease progress. In this regard the authors have produced identical findings to another large longitudinal study that we published in 2007 (Fielding & Wong, EJC, 2007). Yet there is no mentioned of these or other findings that reach similar conclusions. Some effort should be made to represent or account for dismissing alternate findings.

10. The authors’ conclusions are therefore contentious. Claiming that it is vital to measure QoL to determine when interventions should be undertaken to improve QoL is fair enough and not disputed. Making the patient as comfortable and able as possible is probably the most important issue in advanced lung cancer. However, other disease indicators (weight loss, appetite, other physical symptoms) provide probably the same information on likely survival that the physical scales of QoL instruments do.

11. A strength of the study is the sample size.

12. References 26 and 38 are duplicates. Ref 43 includes an typo (%).

Major compulsory revisions.
Points 1, 3, 4, 8, 9, 10

Minor compulsory revisions.
Points 5, 6, 11, 12

Optional revisions.
Points 2, 7,
Level of interest: An article of limited interest

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.