Reviewer's report

Title: Admission of advanced lung cancer patients to intensive care unit: should we temper recent optimism? A retrospective study about 76 cases

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Reviewer: Jorge Salluh

Reviewer's report:

Claire et al performed a retrospective study on a most relevant issue. Despite the small sample size (a limitation similar to contemporaneous studies on the subject) the study provides interesting data and new insights adding to the current literature.

There are some limitations, however, and I will address them below.

I hope the following comments help the authors improve the current manuscript.

Main comments: - Major Compulsory Revisions

1-Please include in the abstract the duration of the inclusion period.

2-One important aspect is related to the long inclusion period. During this period, although it may be argued that the overall prognosis of lung cancer has not changed, several changes in the practice of critical care occurred and were translated into survival gains. Despite the analysis of the 2 periods, a comment from the authors is needed regarding the limitations for this comparison imposed by the small sample size.

This is clear for cancer patients requiring ICU and mechanical ventilation (Soares et al, Crit Care Clin, 2010; Azoulay et al Crit Care Med 2001).

Please comment and insert data on the limitations paragraph in the discussion

3-I think this category (i) is quite tricky. Please define more clearly as several "unrelated causes"maybe actually considered as related as sepsis, DVT/VTE, microangiopathic disorders...

4-Please provide the rate of EOL care measures in the ICU.

5-It is very interesting to observe the low rate of treatment.

Perhaps the authors should seek for data (if available) regarding the number of survivors were subsequent antineoplastic therapies would be applied and the actual number (n=4, right ?) that received cancer specific therapies.

6-What about Performance Status? Was it included as a predictor of outcome in the analysis?

It has been shown to be a very strong predictor in several recent studies of Critically ill cancer patients.
7-Should complication associated with cancer management (being a predictor of better outcomes) be considered a marker of patients with: Better PS, disease considered for potentially curable/controllable disease? Please comment.

8-There are some typos. please revise.

9-It is interesting to observe that the main predictive factors associated with outcomes are related to the acute illness (organ failures, MV, vasopressors). This may be related to patient selection: a) advanced only as opposed to all spectrum of cancer patients; b) better PS; c) selection of patients advanced but not EOLcare

This could explain why the main predictive factors are not related to the underlying disease. Please comment.

10-Regarding Thrombocytopenia the authors should better explore the explanation for this fact in their discussion:

a-As an organ failure it is included in the SOFA score
b-As a marker of outcome in general ICU (Moreau et al, Chest 2007)
c-As a marker of cancer related coagulation abnormalities (Salluh et al - Clinics 2008; De Meis et al-Cancer Invest. 2009 Dec;27(10):989-97)

**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