Reviewer’s report

Title: Comparative Effectiveness of Primary Tumor Resection in Patients with Stage III Pancreatic Adenocarcinoma

Version: 0 Date: 22 May 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable
OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Yes - current version is technically sound

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: This is a well conducted retrospective analysis utilizing the SEER database to determine the comparative survival between patients with Stage III pancreatic ductal adenocarcinoma who undergo surgical treatment versus non-surgical palliative treatment.

Despite some minor editorial (language/spelling) corrections that should be made, the paper is methodologically sound.

While some previous studies have demonstrated a survival advantage in those patients undergoing surgical treatment, others have not leading to the conclusion that bias may be inherent to these differing outcomes. To understand and clarify these differing the results, this study utilizes an instrumental variable analysis to attempt to "control for potential unmeasured confounding factors in decision making."

Interestingly, utilization of standard propensity score matching and Cox regression to analyze these cohorts demonstrates a survival advantage in those patients undergoing surgery for advanced pancreatic cancer. However, when utilizing the Instrumental variable analysis, the study did not demonstrate a survival benefit between surgical and non-surgical treatment.

Ultimately, this study is essentially demonstrating the utilization of a statistical method (Instrumental variable analysis) to reduce inherent bias that may not be realized in the data analysis. Through this statistical method, the authors suggest that there is no survival advantage to surgical treatment over non-surgical treatment in advanced pancreatic cancer.

ADDITIONAL REQUESTS/SUGGESTIONS:

Minor editorial (language/spelling) corrections.

Note: This reviewer report can be downloaded - see attached pdf file.

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

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

Yes

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

Yes

**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

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