Peer Review File

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Response to Reviewer A

Comment 1. The authors state there is no benefit to adjuvant treatment in Stage I-II disease. Is it possible the authors are underpowered for this endpoint, specifically in Stage II disease?

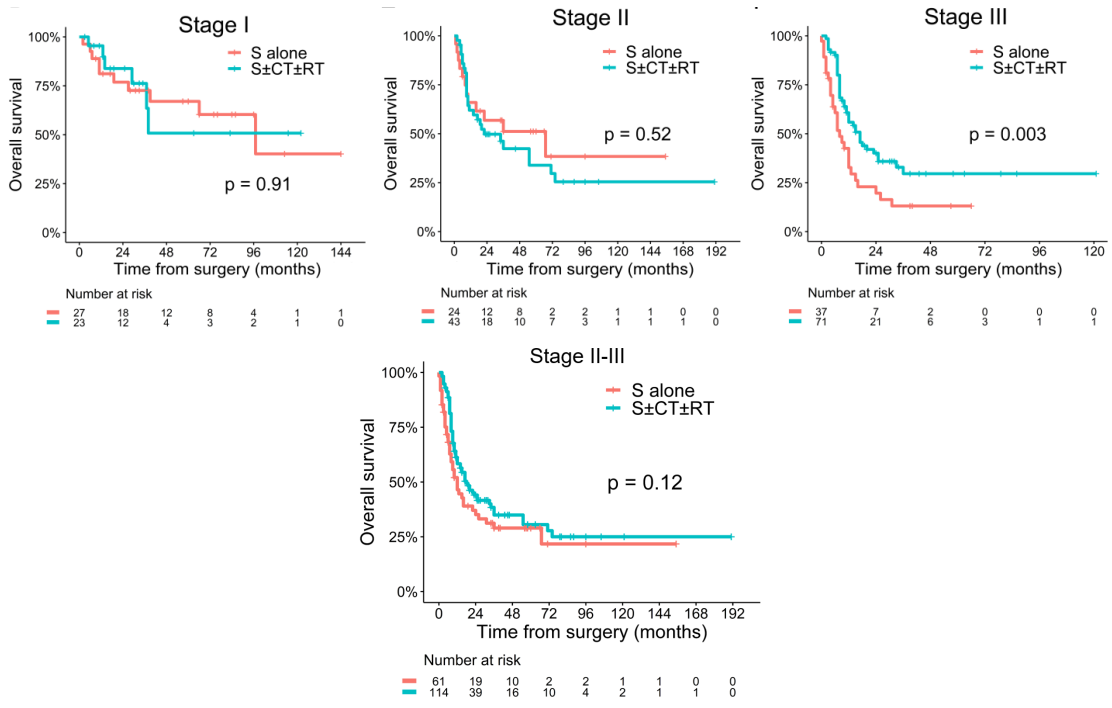
Reply: Thanks for your valuable comment.

As we noted in the original manuscript (Paragraph "Survival outcome and analysis", Section "Results"), in the subgroup analysis stratified by TNM stage, stage III patients who received surgery with adjuvant therapy had a significantly longer MST than those who underwent surgery alone (17.0 vs. 8.0 months, $p = 0.006$); however, the differences between two groups failed to reach significance in patients with stage I or stage II disease. This phenomenon was observed based on the plots of survival curves (Shown as below). By the way, in our original figures, we also plotted survival curves of the stage II-III disease (Shown as below), regretfully, no survival difference was observed between the two groups. Based on those findings, we reported in the abstract that the use of adjuvant therapy followed by surgery significantly prolonged survival in stage III patients but not in stage I and II patients. However, after reviewing the manuscript and your comment, we do realize that there was inadequate evidence to make such conclusion that adjuvant therapy brings no benefit for stage I and II disease. Firstly, the limited sample size restricted our statistical power of survival analysis. Secondly, there was evidence that showed adjuvant therapy may offer pronged survival in stage II and part of stage IB lung carcinoma, hence it is reasonable that adjuvant therapy may also benefit patients' survival for this more aggressive type of lung carcinoma. We can conclude that adjuvant therapy significantly prolonged patients' survival in stage III patients of PSC, however, the survival benefit of adjuvant therapy in stage I or stage II disease needs to be verified. Hence, according to your comment, we have made

revisions (See in the marked changes in the revised manuscript) in the correlating parts regarding the discussion of adjuvant therapy, especially in the section of “Abstract” (See Page 3, Line 10, Line 17) and “Discussion” (See Page 12, Line 9, Line 13-19).

By the way, we found there was misuse of grammar with the saying of “adjuvant therapy followed by surgery”. This may cause misunderstanding that adjuvant therapy was performed before surgery. Hence, we have corrected this wrongly used expression throughout the revised manuscript. We feel sorry for this mistake.

We wonder whether this revision meets your requirements and willing to make further modifications for your need.



Comment 2. Should SII be considered when deciding on adjuvant treatment in lower stage disease? Possibly this granularity is not available, but would be of interest for treatment decisions.

Reply: We sincerely appreciate your critical comment.

We have to say the original purpose of this study was mainly focused on the treatment patterns and survival for PSC. During the data processing, we also found that SII was a strong independent prognostic predictor. The statistical power of SII was solid and universal whether for OS, DFS or recurrence risk. Higher preoperative SII indicates inferior survival and higher risk of postoperative recurrence. This undoubtedly may help clinicians seeking to apply individualized treatment modalities and intensive follow-up strategies. Regretfully, we failed to take further discussion. The decision on adjuvant treatment relies on patient's stage, pathological risk factors, as well as physical condition. As a robust prognostic predictor, the SII should also be considered for the decision of adjuvant therapy, and this is more meaningful for the lower stage disease. The overall prognosis of PSC is inferior to other types of lung carcinoma, even in early disease. Any prognostic marker which could differentiate patients' survival would benefit the treatment selection. As you stated, evidence was lacking and it seems premature to make such conclusion, however, we are confident to include an assumption. Hence, we made essential revisions in this part (See Page 16, Line 3-8) of "Discussion" section. We hope the revised version will improve and perfect our manuscript.

Comment 3 (Minor comments on wording).

Page 4, Line 18: In the method section, please clarify the pretreatment evaluation, was this all extracted from the database? The wording makes it sound as if this pretreatment evaluation was done prospectively.

Page 8, Line 6: This section refers to methodology and should be placed in the methodology section.

Page 10, Line 11: Reword to read "hence were not referred to our hospital".

Reply: Thanks for your careful check.

Sorry for the misleading of pretreatment evaluation description. These detailed examinations were pretreatment routine regime for PSC patients, not an extraction from the database, let alone the prospective design. The purpose of the inclusion of this part was to illustrate that all patients received comprehensive pre-treatment assessment. We have already made modifications in this part to avoid any misleading (See Page 6, Line 7-11).

For Page 8, Line 6, this section was meant to illustrate the cut-off values were determined using OS as the primary outcome, however, it seems redundant and this has been already shown in the "Statistical analysis" section. Hence, we made an essential reduction in this part (See Page 9, Line 19-20).

At last, thanks for the phrase replacement for Page 10, Line 11, we have made changes as you required (See Page 12, Line 2).

We hope that this revised version of manuscript will meet your requirements.

Response to Reviewer B

Overall comment.

Thank you for the opportunity to review the manuscript titled " Preoperative Systemic Immune-inflammation Index Predicts Survival and Recurrence in Patients with Resected Primary Pulmonary Sarcomatoid Carcinoma" written by Qingpeng Zeng and colleagues.

In my opinion, this original article is well written and well structured, there are no further concerns.

Reply: Thanks for your positive comment and we are grateful that our manuscript meets your standards for publication. However, limits exist and we have made essential revisions as the other reviewers suggested. We hope the revised version will improve and perfect our manuscript.