

Peer Review File

Article Information: <https://dx.doi.org/10.21037/jtd-24-1061>

Reviewer A

Thank you for asking me to review the manuscript entitled “Postoperative radiotherapy after extirpative surgery may not improve survival in patients with Masaoka-Koga stage IIB thymoma: A propensity-matched study based on the SEER database”. The authors performed an analysis on the SEER database to evaluate the role of PORT in stage IIB thymomas.

The topic is interesting and the use of propensity matching allows to reduce some kind of bias, however there are some major issues, mainly because of the use of the SEER database.

First of all, as specified by the authors, we don't really know if there has been a microscopic radicality (R0) or instead patients had a R1 resection and that was the reason for PORT.

This could also explain the need for postoperative chemo, which is particularly strange for this kind of stage. Do the authors have some more details for these patients?

Reply: Thank you very much for the valuable comment. We agree with the reviewer's suggestion. However, there is no more detailed information on the patient's disease and treatment in the SEER database. Although we specifically limited the surgical extent to total resection or radical surgery, the lack of information on pathological resection margins means that it is possible that some patients may have had an R1 resection. Interestingly, patients with incomplete resections may have benefited more from the addition of PORT, but even in this setting, the addition of PORT still failed to significantly improve the prognosis of patients with stage IIB thymoma who received extirpative surgery, suggesting that the addition of PORT may not benefit this group of patients. We have modified the “Discussion” section (see Page 10 line 219-225) and thank you again for the valuable advice!

Changes in the text: We have modified the “Discussion” section (see Page 10 line 219-225).

Another important point could be whether the patients had a complete thymectomy or, instead, only a thymomectomy.

Reply: We appreciate the reviewer's insightful suggestion and agree that it would be more meaningful to further differentiate whether the patient had a complete thymectomy or only a thymomectomy. However, the SEER database does not have a specific description of this aspect and only defines radical surgery as partial or total removal of the primary site with an en bloc resection (partial or total removal) of other organs.

Changes in the text: We have modified the Limitations section of our manuscript, highlighting the lack of detailed surgical information as a limitation of our study. (see Page 11, line 240-243).

I don't agree on the endpoints used by the authors. I suggest adding also the disease-free survival as an outcome. In thymomas it is definitively a more reliable outcome than OS or CSS, as recurrence treatment is widely performed and impacts on survival. Instead, as the main goal of PORT is to reduce local recurrence. DFS seems a more informative outcome.

Reply: We appreciate the reviewer's insightful suggestion and agree that DFS is a more reliable outcome than OS and CSS. However, the SEER database does not record whether patients have recurrence or metastasis, only their survival status and cause of death, so it is difficult to assess the effect of PORT on DFS. Although OS and CSS appear to be less valuable than DFS in thymoma, they still seem to reflect to some extent the value of PORT as the current gold standard for assessing clinical benefit in tumors. However, as the reviewers point out, DFS is a more informative outcome and future prospective clinical trials are warranted to investigate the value of PORT on DFS in patients with stage IIB thymoma who received extirpative surgery. We have modified the "Discussion" section as advised (see Page 12, line 245-248) and thank you again for the valuable advice!

Changes in the text: We have modified the "Discussion" section (see Page 12, line 245-248).

Again, the information of the site of recurrence would be extremely precious as it would allow to understand if there is an effective reduction in the rate of local recurrence.

Reply: Thank you very much for pointing this out. We agree that analyzing the site of recurrence would be extremely precious. However, as we mentioned in the manuscript, the lack of information on recurrence or metastasis in the SEER database prevented us from further exploring the value of PORT. Future prospective clinical trials are needed to explore whether the addition of PORT could reduce the rate of local recurrence. We have modified the "Discussion" section (see Page 12, line 244) and thanks again for the valuable comment!

Changes in the text: We have modified the "Discussion" section (see Page 12, line 244).

Reviewer B

Please indicate the full name of NCDB in the main text.

Reply: Thank you very much for pointing this out. The full name of NCDB is added. **National Cancer Database (NCDB)**

All abbreviations in figures/tables and legends should be explained. **OS, CSS, PORT, and PSM** in **Figure 1** for example.

Reply: Thank you very much for pointing this out. All abbreviations were added.

Please consider adding a unit for "Age" in Figure 2. Please also check through the tables for the unit issue.

Reply: Thank you very much for pointing this out. We have added a unit for “Age” in Figure 2.