

Peer Review File

Article information: <https://dx.doi.org/10.21037/jtd-22-599>

First Round Peer Review

Reviewer A

Thank you for this enlightening review of newer techniques of regional pain block methods in CT surgery. I have some comments/questions.

Comment 1. Typo in this, erase one sentence, "Intercostal nerves are ventral continuations of spinal nerves T1-L 128 11 Intercostal nerves are 129 ventral continuations of spinal nerves T1-11

Response: The manuscript has been changed accordingly.

Comment 2. Did the authors look into more specific studies of type of analgesic used, like exparel?

Response: No, different analgesics was outside of the scope of this narrative review and we therefore did not specifically look into that.

Comment 3. what about ONQ pumps and the literature?

Response: ONQ pumps are outside of the scope of this narrative review on indications and clinical considerations of regional anesthesia for patients having thoracic surgery. We therefore did not include anything related to this topic.

Comment 4. Can the authors be more specific on the infusions used and how long lasting some of these are?

Response: Additional information on this subject is mentioned under the heading "Ultrasound-guided interfascial plane blocks".

Reviewer B

This manuscript reviewed regional anesthesia for patients undergoing thoracic surgery. This manuscript summarized the indications and clinical considerations of established regional anesthesia interventions in thoracic surgery, alongside newer block techniques.

Major comments

Overall

Comments 1. The author well described anatomy and techniques in each fascial plane blocks. However, the manuscript suffers from numerous flaws, making it very difficult to read and evaluate.

Response: The entire manuscript was carefully revised.

Comments 2. The purpose of this review is to summarize current evidence of regional anesthesia. However, literature search was insufficient for reviewing the evidence of regional anesthesia. For example, page14 line283-284: In addition, some studies have reported that hemodynamics remain more stable compared to paravertebral and thoracic epidural blocks (42, 48) (Table 2).

Reference (42) compared standard postoperative pain control with intravenous opioids, NSAIDs and acetaminophen with serratus anterior plane block for post-thoracic surgery. Reference (48) compared serratus plane block (SPB) with ropivacaine to SPB with normal saline for video-assisted thoracic surgery. There were no comparison between SPB and paravertebral or thoracic epidural blocks.

The author should describe current evidence of regional anesthesia accurately.

Response: The aim of this narrative review was to summarize current indications and clinical considerations for regional techniques used for patients having thoracic surgery. We are well aware, that this current manuscript does not entirely summarize all available literature. A formal systematic review or even meta-analysis would be needed to accurately summarize current evidence. However, we carefully reviewed the manuscript and updated/added several references.

Minor comments

Comments 1. Page 4 Line 70: syntax error, anesthesia were limited

Response: The manuscript has been changed accordingly.

Comments 2. Page 5 Line 98: Typo? Check the innervation of the thorax.

Response: The manuscript has been changed accordingly.

Comments 3. Page 7 Line 128-129: There is same sentence. One sentence should be deleted.

Response: The manuscript has been changed accordingly.

Comments 4. Page 8 Line 163-165: Recently a systematic review and meta-analysis was performed between intercostal nerve block and other block including thoracic epidural analgesia. The author should read this paper.

Assessment of Intercostal Nerve Block Analgesia for Thoracic Surgery: A Systematic Review and Meta-analysis. JAMA Netw Open. 2021 Nov 1;4(11):e2133394. doi: 10.1001/jamanetworkopen.2021.33394.

Response: Thank you for sharing this important reference. We carefully revised the manuscript.

Comments 5. Page 11 Line 224: Typo? Transversus thoracic muscle block

Response: The manuscript has been changed accordingly.

Comments 6. Page 11 Line 228: Typo? Figure 2

Response: The manuscript has been changed accordingly.

Comments 7. Page 12 Line 246-247: Reference (41) showed that PECS could not reduce post-operative morphine consumption compared to thoracic paravertebral block.

Response: In this specific study, the authors reported that PECS block had similar analgesic effects and morphine consumption to paravertebral block. This seems to be an advantage for this superficial block.

Comments 8. Table 1

Surgical indication is ambiguous. Thoracic surgery includes any type of surgeries in the chest. Are there any differences between video assisted thoracic surgery and thoracoscopic surgeries.

The author should make the table in an easy-to-understand manner.

Local anesthetic toxicity seems potential complications for all fascial plane blocks.

Response: Table 1 has been changed accordingly.

Comments 9. Table 3

It needs scientific references to explain intervals.

Response: After careful considerations and based on the comments by another reviewer, we decided to delete this sub-topic from the manuscript.

Reviewer C

Thank you for submitting your article entitled “Regional anesthesia for patients undergoing thoracic surgery.” It is a useful review about ultrasound-guided interfascial blocks for the chest wall analgesia, I commented as below.

MAJOR COMMENTS

Comments 1. Cardiac surgery and breast surgery are not included in thoracic surgery. The reader should expect regional anesthesia for the patients undergoing thoracic surgery, which includes intrathoracic noncardiac surgeries eg. mediastinal tumor, esophageal surgery, and lung surgery, from your title.

If the title remains as it is, the descriptions of cardiac surgery and breast surgery should be removed.

Response: Agreed, and we therefore deleted all sections related to cardiac and breast surgery.

Comments 2. For the same reason as #1, the Parasternal block section and Transversus thoracic muscle block section should be removed.

Response: Upon your suggestion, the parasternal block section and the transversus thoracic muscle block section were removed from the article.

Comments 3. The scope of the description is broad and vague. It should be better to focus on “RA for thoracic surgery”, “RA for cardiothoracic surgery” or “Interfacial block of chest wall”.

Response: The scope of the article is regional analgesia techniques used in thoracic surgery. The title of the article has been revised in line with your suggestion.

Comments 4. The anticoagulation regimen settings (including table3) are not the main focus of this article, they can be omitted, or referred to slightly.

Response: Agreed, the section on anticoagulation regimen has been removed.

MINOR COMMENTS

Comments 1. Chest wall anatomy and innervation section would be better to be along with figures or illustrations to be clear.

Response: Since we would like to highlight clinical applications in general, we preferred to use figures for daily anesthesia practice.

Comments 2. The difference in RA indications between thoracic procedures eg. VATS vs thoracotomy should be added. ESRA prospect is recommended to refer.

Response: A paragraph that explained the difference in RA indications between thoracic procedures has been added to the article under the guidance of the ESRA prospect.

Reviewer D

I would like to thank the authors for submitting a very well-written review manuscript titled "Regional anesthesia for patients undergoing thoracic surgery." This review discusses indications and clinical considerations of established regional anesthesia techniques (epidural, paravertebral blocks) and newer chest wall blocks such as the serratus anterior block or the erector spinae block. Examples of ultrasound probe placement and ultrasound anatomy are given.

I would offer the following, questions, and/or suggestions.

Comments 1. Chest tubes in thoracic or cardiac surgery are frequent causes of pain that are difficult to address. Thoracostomy tube pain potentially can emanate from a variety

of sources: long thoracic nerve, phrenic nerve, thoracodorsal nerve, vagus nerve, and incompletely blocked intercostal nerves. Please add a section in the chest wall anatomy and innervation to include the innervation of the pleural space. This innervation pattern is likely why chest wall blocks that potentially penetrate the paravertebral space seem to be more efficient in thoracic surgery (with thoracostomy tubes) than others.

Response: In line with your valuable suggestions, paragraphs about chest tube pain and pleural space innervation have been added to the article.

Reviewer E

This manuscript is a narrative review of regional anesthesia for thoracic surgery, with a focus on newer thoracic fascial plane blocks. Overall, this review is comprehensive, is well-organized, and includes helpful figures. I thank the authors for their submission. I do have several comments/questions which are listed below:

General comments:

Comments 1. All figures: The figures are helpful to demonstrate where to place the probe and the highlighted sonographic image is helpful to understand the anatomy. What would also be helpful is a sonographic image that is not highlighted/labeled, so the readers can see exactly what the anatomy looks like unaltered

Response: Not highlighted/ labeled sonographic images have been added.

Specific comments:

Comments 1. P5 L84: Please list some of the undesirable side effects of opioids, as you did in the abstract

Response: The manuscript has been changed accordingly.

Comments 2. P8 L151: Please provide examples of the “adverse events”

Response: The manuscript has been changed accordingly.

Comments 3. P11 L228: The authors reference Figure 1, but did they mean to reference figure 2?

Response: The manuscript has been changed accordingly.

Comments 4. P12 L242: Please provide more details on this statement. For example, the reference examined specifically looked at breast cancer surgery. Please provide more details on how the authors determined the “same analgesic effect” (pain scores, postoperative morphine consumption).

Response: The manuscript has been changed accordingly.

Comments 5. P12 L242-243: Reference 40 is an RCT comparing PECS II to placebo – how was this information regarding hemodynamic instability with PECS II vs paravertebral and epidural obtained?

Response: The manuscript has been changed accordingly.

Comments 6. P12 L248: Please provide more information on this study. For example, more patients in the PECS II group required rescue analgesia

Response: The manuscript has been changed accordingly.

Comments 7. P12 L251: It seems there is a word missing between “plane” and “to the serratus”

Response: The manuscript has been changed accordingly.

Comments 8. P14 L280: Is there concern for LAST with topping this block off with PECS and intercostal blocks?

Response: Although there should be a concern in general, we think that there is no need for such a concern as long as the maximum daily dose of local anesthetic is not exceeded.

Comments 9. P14 L282-283: Please provide more details on these studies – for example, what types of surgeries were studied?

Response: The manuscript has been changed accordingly.

Comments 10. P14 L290: Please amend title to include the full name parasternal intercostal nerve block since the authors later state that TTMP was formerly called parasternal plane block and this may be confusing

Response: Based on the suggestions by other reviewers, this paragraph was deleted from this manuscript. Your comments is therefore not eligible any more.

Comments 11. P14 L291: How is the parasternal intercostal block different than the pecto-intercostal fascial plane block?

Response: Parasternal plane block, newly named transversus thoracic plane block (TTPB), is a regional technique that provides analgesia to the medial anterior chest wall. Nerves are located between the inner intercostal muscle in the TTP and the TTM. TTPB numbs the nerves by injection of a local anesthetic between two muscles.

A potentially safer alternative method is the pecto-intercostal fascial block (PIFB), in which a local anesthetic is injected into the fascial plane between the pectoralis major and intercostal muscles. It is a more superficial nerve block. PIFB also anesthetizes the anterior branches of the intercostal nerves that pass through the intercostal muscles, but it is a new block that requires additional research.

Comments 12. P14 L292: I realize that parasternal blocks often discuss injecting local between the pec major and external intercostals, but should it be internal intercostals?

The external intercostal muscles don't start until you get a little more lateral from the sternum

Response: Based on the suggestions by other reviewers, this paragraph was deleted from this manuscript. Your comments is therefore not eligible any more.

Comments 13. P15 L315-316: this sentence doesn't make sense to me – could the authors please rephrase?

Response: The sentence has been rephrase.

Comments 14. P17 L337: Please incorporate this reference:
10.1053/j.jvca.2021.03.009

Response: The manuscript has been changed accordingly.

Comments 15. P17 L355: Similar to my question above, should “external” be “internal”?

Response: The misspelling has been corrected.

Comments 16. P18 L371: Please incorporate these references:
10.1053/j.jvca.2020.07.058, 10.1053/j.jvca.2020.07.074,

Response: The manuscript has been changed accordingly.

Comments 17. P18 L366: Please incorporate this reference:
10.1053/j.jvca.2021.09.041

Response: The manuscript has been changed accordingly.

Comments 18. P22 L448: Please discuss limitations of this study (reference 80). For example, this included different types of surgeries, ranging from wedge resection (typically not as painful) to pectus repair (very painful).

Response: The manuscript has been changed accordingly.

Comments 19. P23 L484: Please clarify this sentence. I don't quite understand it.
P23 L488: Please explain why COPD is a relative contraindication

Response: Based on the suggestions by other reviewers, the entire section on anticoagulation has been removed from the manuscript.

Comments 20. P24 L511-514: Please check this information. Per the ASRA guideline from 2018, warfarin should be discontinued at least 5 days prior to neuraxial procedures, and the INR should be normalized

Response: Thank you for your valuable input. Based on the suggestions by other reviewers, the entire section on anticoagulation has been removed from the manuscript.

Comments 21. P24 L511: Why should LMWH be administered for all patients? I do not think all patients require bridging

Response: The section on anticoagulation has been removed.

Comments 22. P24 L512: What is TDP?

Response: The section on anticoagulation has been removed.

Comments 23. P24 L515: Is it 6 hours or 4-6 hours? Does "standard" mean subcutaneous?

Response: The section on anticoagulation has been removed.

Comments 24. P25 L519: Please double check whether heparin can be restarted immediately after catheter withdrawal

Response: The section on anticoagulation has been removed.

Comments 25. P25 L520: What if therapeutic LMWH is being used, shouldn't it be 24 hours? This entire anticoagulation section for epidurals should be verified. Please make sure you are consulting the latest version of the ASRA guidelines (4th edition, Reg Anesth Pain Med 2018;43: 263–309)

Response: The section on anticoagulation has been removed.

Comments 26. Table 3: Please check the latest ASRA guidelines as I suggested for the text and update this accordingly. Please clarify what is meant by "standard heparin." Please include direct oral anticoagulants in this list.

Response: The section on anticoagulation has been removed.

Reviewer F

Comments to the authors:

Comments 1. Some comments are not supported by the reference.

Response: The manuscript has been carefully revised and critical references have been added.

Comments 2. English language still needs a bit of editing and refinement.

Response: The manuscript has been carefully revised.

Comments 3. Along with the benefits of regional anesthesia in multimodal regimen, its downsides of it also should be mentioned.

Response: Disadvantages of regional anesthesia haven been added to the abstract.

Comments 4. While the anterior thoracic wall is mainly innervated by T1-T6 spinal nerves, but the innervation of the lateral as well as posterior thoracic cage and wall is complex and more extensive.

Response: The manuscript has been changed accordingly.

Comments 5. Even branches from superficial cervical plexus have some cutaneous contribution to the epical portion of the thoracic cage. The anatomical discussion needs to be updated and modified.

Response: The manuscript has been changed accordingly.

Comments 6. Along with somatic nerve supply, authors need to discuss a bit about sympathetic supply which also has a contribution to pain. More so, both dermatome, myotome, and osteotome components should be discussed. Also, this discussion should be accompanied by both typical and atypical intercostal nerves.

Response: The manuscript has been changed accordingly.

Comments 7. T12 though not a classical intercostal nerve, as T7-T11 are also not, but it does have a thoracic dermatomal contribution.

Response: The manuscript has been changed accordingly.

Comments 8. T1 does not have any cutaneous contribution, and neither is an ideal intercostal nerve.

Response: The manuscript has been changed accordingly.

Comments 9. In ICNB, rather than proximal dorsal term should be used.

Response: The manuscript has been changed accordingly.

Comments 10. As anatomy is variable, how can you decide about the landmark to perform ICNB to prevent sparing of lateral cutaneous nerve?

Response: The ICN can be blocked anywhere proximal to the midaxillary line, where the lateral cutaneous branch takes off. In children, the block is commonly carried out at the posterior axillary line or, alternatively, just lateral to the paraspinal muscles, at the angle of the rib. In adults, the most common site for ICNB is at the angle of the rib (6–8 cm from the spinous processes). At the angle of the rib, the rib is relatively superficial and easy to palpate, and the subcostal groove is the widest.

Comments 11. In Figure 1, along with coloring the intercostal muscles, a simple ultrasound image should also be provided.

Response: The manuscript has been changed accordingly.

Comments 12. Discussion on TEA of TPVB should be done separately than in the ICNB area.

Response: In line with your suggestion, discussion on TEA of TPVB and ICNB has been separated.

Comments 13. Complications of ICNB are missing.

Response: The manuscript has been changed accordingly.

Comments 14. Regarding the new nomenclature of the fascial plane block, the review published in RAPM should be considered here. The nomenclature mentioned here is possibly no more valid now.

Response: According to the consensus reached on the name change for PECS I and II blocks, the PECS I and PECS II block expressions in the article have been changed to "interpectoral" and "combination of interpectoral and pectoserratus plane blocks".

Comments 15. Controversy related to PECS I block needs to be mentioned as pectoral nerves are not necessarily a sensory nerve, but rather carry proprioception.

Response: The manuscript has been changed accordingly.

Comments 16. Same goes for long thoracic and thoracodorsal nerves in the PECS II block.

Response: The manuscript has been changed accordingly.

Comments 17. Even PECS II block has an indication in chest wall trauma, this needs mentioning.

Response: The manuscript has been changed accordingly.

Comments 18. Controversy related to PECS II block and SAP blocks needs further discussion. Current evidence has raised doubt on the efficacy and claims made on SAPB. Meta-analysis has proved that it does not have much advantage over the PECS II block. At least cadaver and dye studies have not confirmed the superiority.

Response: The manuscript has been changed accordingly.

Comments 19. I agree that the PECS II block can be possibly performed in the supine position, but the classic SAP block needs a bit of lateral position.

Response: Patient positions are shared in the photographs of the blocks. During the SAP block application, the patient is in the lateral decubitus position.

Comments 20: Dorsal component of thoracic spinal nerves has hardly any contribution to the thoracic cavity, but more for the paraspinal muscles and spine.

Response: The manuscript has been changed accordingly.

Comments 21. I think the figure for TTMP block PSI block should also be provided.

Response: Based on the the comments by other reviewers, this paragraphs has been removed from this submission.

Comments 22. General discussion of absolute and relative contraindication of RA is immaterial here as it is well known. If you feel it needs mentioning, just mention it in short.

Response: Based on the the comments by other reviewers, this paragraph including the figure has been removed from this submission.

Comments 23. This review is not about RA and anticoagulation. Thus, a detailed discussion on this issue is immaterial here.

Response: Based on the the comments by other reviewers, this paragraph has been removed from this submission.

Strengths:

- Good initiative to amalgamate the available RA techniques for thoracic surgery.
- Detailed analysis of old gold-standard and new emerging techniques.

Weakness:

- The review is written like a story-telling pattern, not like a scientific evidence-based review.
- For each RA modality, initially the indication, details of the technique, landmark guided procedure, and then US-guided procedure should be discussed. Then the pros and cons of the technique, as well as the literature review should be discussed.

Response: The purpose of this narrative review is to provide an up-to-date overview of the blocks applied for analgesia in thoracic surgery and to contribute to daily anesthesia practice in the accompanied by current literature. For this reason, we did not mention the technical details, landmark and ultrasound-guided procedures that we think readers can easily reach from any source.

- Finally at the end of all techniques, literature on comparative evaluation and superiority should be discussed.

Response: The literature on comparative evaluation and superiority has been summarized in Table 1.

- Literature on the utility of these techniques is discussed mainly for the adult population. But some mention should be done on the pediatric and obstetric populations as well as in obese patients.

Response: Regional analgesia techniques used in thoracic surgery in adult patients are the main focus of our article. In order to stay focused, different age, BMI and other special patient groups are not included in the content of our article. We hope that you will understand our decision in this regard.

- Some modalities are missed here like wound infiltration, wound catheter technique, and segmental thoracic spinal anesthesia.
- For all technique feasibility, pros and cons of single shot and catheter techniques should be discussed.
- Nothing is mentioned about the use of adjuvants and the benefits of that.
- No mention of benefits of these regional techniques on patient satisfaction, hospital patient flow, cost reduction, outcome benefits, morbidity and mortality benefits, and chronic post-surgical pain. These need mentioning along with a literature review.

- Furthermore, a comparative literature review with general anesthesia and or standard opioid analgesia should be done for each technique.

Response: In this narrative review, we wanted to outline the regional analgesia techniques used in thoracic surgery in adult patients. As in a book, it is almost impossible for a review to collect everything on the subject. Therefore, we have provided an up-to-date review that will keep readers interested in this topic. We hope you will accept this thought with understanding.

- No mention of why this review should be published and what is the uniqueness of this one as there are many such existing reviews on this topic.

Response: An explanation of why this review should be published and what is the uniqueness of this one has been added to the abstract section.

- No mention of any limitation of this review.

Response: The limitations of this review are mentioned in line with your recommendation.

- No mention of which methodology, the process of literature search, and analysis for writing this review.

Response: We changed the title of this submission and now indicate, that this manuscript is a narrative review of indications and clinical considerations. A formal data search methodology is therefore not warranted.

Verdict: Good initiative to make a concise review on currently used RA techniques for thoracic wall surgeries. But this review has many gaps and limitations to accept for publication. However, considering the noble intent, I shall like to give the authors a chance to improve the quality. If they come up with suitable answers to my questions and modify the manuscript accordingly, I can give it another look.

Second Round Peer Review

Reviewer A

Can the authors in the reply to a response actually state what they changed on the revisions page? So we know what was actually changed on the comments section.

Response: We did respond point by point and all changes in the manuscript are highlighted in RED colour. We apologize for any inconvenience.

Comment 1. Typo in this, erase one sentence, "Intercostal nerves are ventral continuations of spinal nerves T1-L 128 11 Intercostal nerves are 129 ventral continuations of spinal nerves T1-11

Response: The duplicate was erased from the manuscript.

Comment 2. Did the authors look into more specific studies of type of analgesic used, like exparel?

Response: No, different local agents and analgesics were outside of the scope of this narrative review and we therefore did not specifically look into that.

Comment 3. What about ONQ pumps and the literature?

Response: ONQ pumps are outside of the scope of this narrative review on indications and clinical considerations of regional anesthesia for patients having thoracic surgery. We therefore did not include anything related to this topic.

Comment 4. Can the authors be more specific on the infusions used and how long lasting some of these are?

Response: Additional information on this subject is mentioned under the heading "Ultrasound-guided interfascial plane blocks". Page 13.

Reviewer E

This is a revised version of a narrative review describing regional anesthesia for thoracic surgery. I thank the authors for their revision and hard work. I appreciate the authors' attention to my prior comments, but there remain a number of issues to be addressed to help the authors reach the full potential of this article.

General Comments:

1) While the manuscript is well-organized in terms of major sections, the content of each section is variable in the order of topics. For example, it would help if the authors followed a consistent pattern for each block (for example, block name, background on when/how discovered, block technique, block indications, block risks) followed by a discussion on literature. This added organization would help the reader follow along better.

2) Please use consistent abbreviations and please check for spelling/grammar errors.

Response: We carefully revised the manuscript and made all changes as needed.

Specific comments:

P2 L38: Please change "facial" to "fascial"

Response: Done

P3 L71: Please change "interfacial" to "interfascial"

Response: Done

P3 L55: The abstract is over a page and I think this is too long; please make this more concise; In particular, the section on opioid side effects should be condensed.

Response: The abstract was revised and significantly shortened.

P3 L72: Please add “Potential” prior to “advantages”

Response: Done

P3 L74: Please change “sufficient” to “improved”

Response: Done

P3 L77: Please list LAST as a separate entity, and not under “allergic reaction,” as these are two different issues.

Response: Done

P5 L85-86: Please provide a reference for this statement that intravenous opioids alone are insufficient. This sentence also may not be completely necessary given the sentence that immediately follows.

Response: Agreed, deleted.

P5 L99-104: These sentences seem out of place – why are the authors mentioning subplueral catheter and epidural here?

Response: Agreed, deleted.

P6 L106: It seems unusual to have this methods section for a narrative review. If the authors wish to keep it, the authors should describe what MeSH search terms they used. Unless there was a specific reason, I would suggest removing this section. I don't think it would be required for a narrative review.

Response: In line with your suggestion, the methods section has been removed from the narrative review.

P6 L115: is “spinal” supposed to be “intercostal”

Response: Corrected.

P8 L168: It seems like TEA and PVB should be discussed around here rather than towards the end of the article since they are more established techniques. Currently, it seems like they are under the fascial plane blocks section. Also, please use consistent nomenclature (PVB or TPVB)

Response: In line with your suggestion, TEA and TPVB were mentioned before the fascial plan blocks section.

Thoracic paravertebral plane block (TPVB) terminology was used throughout the review.

P11 L232: Please correct spelling of “pesto”

Response: Corrected.

P11 L244: There is inconsistent nomenclature regarding PEC (listed as PECS on line 244) as well as pectoral nerve block on line 244 and 229 versus “interpectoral block” on L242. Please make sure consistent verbiage is used throughout the manuscript. The same applies for PECS II

Response: The nomenclature as PECS block is used throughout the article. Confusing terms have been removed from the article.

P12 L257: Please correct “pectorals nerves”

Response: Corrected.

P13 L289: Between the serratus anterior muscles? Do the authors mean above or below the serratus anterior?

Response: Spelling error corrected. The authors noted that it is above the serratus anterior. Detailed explanation has been given in the relevant section.

P15 L331: The authors previously mentioned that the ERAS and ESTS recommended PVB or ICNB for thoracic surgery on P9 L175-177, which seem to conflict with the ESRA recommendation somewhat. Please reconcile or clarify that these recommendations conflict.

Response: ERAS, ESTS and ESRA jointly recommend primarily epidural analgesia and TPVB for thoracic surgery. However, ERAS and ESTS recommend epidural analgesia, PVB or ICNB regardless of surgical method. ESRA, on the other hand, recommends TPVB and ESP in VATS, TEA and TPVB in thoracotomy, and ICNB if these methods are contraindicated or not feasible.

P18 L371: The authors removed the TTPM section, so I’m not sure it makes sense to compare PIF to TTPM or list it on P11 L231.

Response: The reference to TTPM was deleted.

P19 L391: the section on intrapleural block states that it provides “high-quality analgesia for thoracotomy” – does this mean it is an acceptable substitute for TEA? How does intrapleural block compare to other techniques?

Response: There is no study in the literature comparing intrapleural block with TEA in thoracic surgery. Therefore, we cannot say that it is a substitute for TEA. Thank you for your valuable warning. Necessary corrections have been made in the section on intrapleural block.

P19 L405: Why is PVB described here in the fascial plane blocks section? I think it would make more sense to discuss it near the intercostal nerve section since these are more traditional thoracic surgery blocks

Response: In line with your suggestion, TEA and TPVB were mentioned before the fascial plan blocks section.

P22 L471-473: Please check this statement regarding intrathecal opioid – is this an ESRA recommendation? The authors make it sound like they are recommending intrathecal and intravenous opioid, but I don't see where reference 89 states this. Reference 89 also does not seem to be an ESRA guideline.

Response: The incorrect statement regarding intrathecal opioid has been removed from the text. The sentence has been edited in accordance with the ESRA guidelines. Replaced with incorrect reference line.

Table 1: The authors seemed to indicate that “parasternal block” and TTMPB were the same, yet they have two different categories. Also, it seems this was removed from the text, so do the authors want to remove it from Table 1 as well?

Response: TTMPB has been excluded from Table 1.