

Peer Review File

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Reviewer #1

Comment 1: There should be language in the discussion/conclusions section that, to my knowledge, there has not been head to head comparison of preoperative fiducial or T bar placement by CT guidance followed by surgical resection at a later time with intraoperative x-ray confirmation of target resection (sequential) vs. a hybrid operating room and iVATS approach (simultaneous) where the localization and resection is performed in the same sitting.

Reply 1: Excellent point. There was a prospective study, Chao et. al, published in 2018 that directly compared patients with small pulmonary nodules to traditional 2 step localization versus iVATS. This was mentioned in the manuscript, but the language has been changed now to make this point more obvious. The main conclusions of the study were that there was significantly decreased time between marker placement and operative procedure in the iVATS patients, thus diminishing patient time at risk for complications. Success of targeting was similar between the two groups.

Here is the reference for the article: Chao YK, Pan KT, Wen CT, et al. A comparison of efficacy and safety of preoperative versus intraoperative computed tomography-guided thoracoscopic lung resection. *J Thorac Cardiovasc Surg.* 2018;156:1974-83

Comment 2: There should be some references that describe a sequential approach such as Rodrigues et al. *Radiology* 2019; 291:214–222. It would be interesting to look at migration, complication, and efficacy of localization along with cost differences and scheduling/delays for surgeon and radiologist availability in a sequential vs. simultaneous approach to demonstrate a true superiority to the iVATS approach.

Reply 2: The traditional localization approach has been described in more detail, the migration rate and overall success rates have been added to the manuscript as suggested. The associated complications with 2 step approach is reported in the iVATS complication section to facilitate direct comparison of these rates. It is difficult to comment or report the scheduling/delays due to availability of the surgeon or radiologist because this is not generally discussed in the manuscripts we reviewed. Additionally, each institution has a different work flow and therefore

no standard to report. For example, one institution routinely places the hook wires the day before surgery while another has radiology place the wire in the morning and surgery is immediately after wire placement. Cost is another important aspect of evaluating these techniques but this is also poorly reported in the literature. We do mention the need for a hybrid OR to perform the iVATS technique, which does have associated upfront costs and maintenance. A direct comparison of cost between the techniques, however, is not feasible with the current literature published.

Reviewer #2

Comment 1: The abstract feels disjointed and would benefit from transitions between the final three paragraphs.

Reply 1: Transitions were added to the abstract as suggested.

Comment 2: Finally, there was some redundancy in the text – for example, discussing procedure time was found in “advantages over other techniques”, “limitations of technique” and “learning curve” sections. I would recommend minor editing for brevity, only to increase the readability of the chapter

Reply 2: We revised the iVATS section to eliminate these areas of redundancy.