



# Response letter for the editorial comments on the annual report of thoracic surgery service at Shanghai Chest Hospital in 2021

Yiyang Wang, Wentao Fang

Department of Thoracic Surgery, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China

Correspondence to: Wentao Fang, MD. Department of Thoracic Surgery, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, No. 241 Huaihai Road West, Shanghai 200030, China. Email: vwtfang@hotmail.com.

Received: 18 December 2023; Accepted: 16 January 2024; Published online: 22 January 2024.

doi: 10.21037/shc-23-46

View this article at: <https://dx.doi.org/10.21037/shc-23-46>

In the year of 2021, thoracic surgery service at the Shanghai Chest Hospital not only recovered from the impact of the coronavirus disease 2019 (COVID-19), but also achieved a historical height in surgical volume, with more than 20,000 patients received major thoracic procedures (1). There are two major reasons for this. One is the use of computed tomography (CT) screening for COVID-19 before hospitalization or invasive examinations, leading to increased detection of small pulmonary nodules especially ground-glass opacity (GGO). And although patients with severe or advanced diseases needing surgical treatment were not delayed during the COVID outbreak (2), a large amount of elective procedures were postponed. In addition to the quantity of the cases, the thoracic surgery team at the Shanghai Chest Hospital paid much attention to the quality of its service. In our previous study, we showed that the postoperative complication rate in each month of 2020 was lower compared with the corresponding month of 2019 (2). This continued in the year 2021, as Alcasid *et al.* noticed (3). The high quality of perioperative care at the Shanghai Chest Hospital was maintained despite of the increased case volume after the challenging circumstances of COVID-19 pandemic.

In the meantime, there was also a rapid increase in clinical trials performed by the thoracic surgery team at the Shanghai Chest Hospital in 2021. Just as both Verkoulen and Gaissert pointed out, such a large volume of surgical treatments could contribute to speed up the efficacy of clinical trials (4,5). In fact, the thoracic team of Shanghai Chest Hospital started several investigator-initiated trials (IIT) leading by the thoracic surgeons. In the year of 2021, we initiated a multi-institutional prospective open-label controlled randomized trial on the minimally invasive

segmentectomy versus lobectomy for GGO-containing early-stage invasive lung adenocarcinoma (GREAT) (6). GREAT trial was the third phase III clinical trial focusing on the comparison between segmentectomy and lobectomy among early-stage lung adenocarcinoma after the Cancer and Leukemia Group B (CALGB) 140503 trial and Japan Clinical Oncology Group (JCOG) 0802 trial in the world (7,8). We also started a prospective study for precise neoadjuvant therapy among patients with stage II–IIIB resectable non-small cell lung cancer (PURPOSE) (9). In fact, the PURPOSE study was so far the first umbrella-design trial concentrating on individualized induction treatments based on biomarkers in patients with resectable locally advanced diseases. Besides, the thoracic team also participated in several multicenter double-blinded randomized phase III trials such as the AEGEAN trial, the Neotorch trial, the NeoADAURA trial, etc. In esophageal and mediastinal division, our fellows also started several immunotherapy trials focusing on resectable or advanced esophageal cancer and mediastinal carcinomas (10).

Huge volume of surgical treatments also contributed to the study of rare diseases, which was noticed by Koen *et al.* (4). Thymoma was considered as a rare disease in the world. The Shanghai Chest Hospital has been receiving up to one thousand thymoma patients each year. The Mediastinal division of Thoracic surgery has been taking a leading role in the establishment of Chinese Alliance of Research for Thymomas (ChART) and later on, the Mediastinal Tumor Committee of the Chinese Anti-Cancer Association (CACA). By maintaining a prospective mediastinal tumor database at the Shanghai Chest Hospital and establishing nationwide multicenter retrospective and

prospective clinical databases, high-quality real-world studies on this rare disease have become possible. These included a series of retrospective studies using the ChART database, especially the ones on recurrence prediction model on thymic tumors (11), and the one on minimally invasive thymectomy for locally advanced thymic malignancies (12). In the year 2021, our fellows also established an expert consensus of the guidelines for thymomas.

These lead to the question whether it is the clinical practice that promoted the clinical studies, or it is the clinical trials that modeled the clinical practice (13). No doubt clinical practice has been the source of initiation and generation of a clinical trial. The benefit of minimally invasive thoracic surgery has long been witnessed before it was coronated by high-level evidences such as the results of better recovery after thoroscopic lobectomy compared with open lobectomy in the VIOLET study (14). That also explains for the high rates of minimally invasive procedures, including those pulmonary, mediastinal or esophageal diseases at the Department of Thoracic Surgery well before the appearance of the literatures (1,12,15). But this may not always be the case. More than ten years ago, our initial experience at the Shanghai Chest Hospital had indicated that minimally invasive segmentectomy was a safe procedure and might have comparable oncological outcomes similar to minimally invasive lobectomy for small-sized non-small cell lung cancers (16). But later on, we noticed that not all segmentectomies were function-saving, and thus presumably risk-reducing for patients (17,18). Although the results from the CALGB 140503 and the JCOG 0802 trials now provide high-level evidence on oncological non-inferiority of segmentectomy, neither of them was able to show any advantage in peri-operative recovery over lobectomy. And the presumed benefit of pulmonary function preservation with sublobar resections was at most minimum. Therefore, that was the very reason for the launch of the GREAT trial in 2021. We are trying to make a step forward to further explore the potential benefit of, and the exact population that may benefit from minimally invasive segmentectomy. Only after this randomized trial could minimally invasive segmentectomy be recommended as a better choice for patients with early-stage lung cancer.

As one of the super-high volume thoracic surgery services in China, the Shanghai Chest Hospital will continue to provide high quality medical care for our people with thoracic diseases. The Department of Thoracic Surgery will continue to focus on clinical studies and translational medicine, in hope of doing more benefit to our patients.

## Acknowledgments

*Funding:* None.

## Footnote

*Provenance and Peer Review:* This article was commissioned by the Editorial Office, *Shanghai Chest*. The article did not undergo external peer review.

*Conflicts of Interest:* Both authors have completed the ICMJE uniform disclosure form (available at <https://shc.amegroups.com/article/view/10.21037/shc-23-46/coif>). W.F. serves as the unpaid Executive Editor-in-Chief of *Shanghai Chest*. The other author has no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

*Open Access Statement:* This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

## References

1. Wang Y, Gu Z, Yao F, et al. Annual report of thoracic surgery service at Shanghai Chest Hospital in 2021. *Shanghai Chest* 2023;7:15.
2. Wang Y, Zhang Y, Bao F, et al. The Feasibility and Safety of Routine Thoracic Surgeries in the Low-Risk Areas During the Coronavirus Disease 2019 Pandemic. *JTO Clin Res Rep* 2021;2:100144.
3. Alcasid N, Banks KC, Velotta JB. Moving forward: overcoming adversity in thoracic surgery in the post COVID-19 pandemic era. *Shanghai Chest* 2023;7:27.
4. Verkoulen KCHA, Franssen AJPM, Daemen JHT, et al. Thoracic surgery in Shanghai—size does matter. *Shanghai Chest* 2023;7:22.
5. Gaissert HA. Shanghai Chest Hospital: the story yet to be told. *Shanghai Chest* 2023;7:21.

6. Li H, Wang Y, Chen Y, et al. Ground glass opacity resection extent assessment trial (GREAT): A study protocol of multi-institutional, prospective, open-label, randomized phase III trial of minimally invasive segmentectomy versus lobectomy for ground glass opacity (GGO)-containing early-stage invasive lung adenocarcinoma. *Front Oncol* 2023;13:1052796.
7. Altorki N, Wang X, Kozono D, et al. Lobar or Sublobar Resection for Peripheral Stage IA Non-Small-Cell Lung Cancer. *N Engl J Med* 2023;388:489-98.
8. Saji H, Okada M, Tsuboi M, et al. Segmentectomy versus lobectomy in small-sized peripheral non-small-cell lung cancer (JCOG0802/WJOG4607L): a multicentre, open-label, phase 3, randomised, controlled, non-inferiority trial. *Lancet* 2022;399:1607-17.
9. Wang Y, Zhai H, Wang J, et al. Study protocol of an open-label prospective phase II umbrella study of precise neoadjuvant therapy for patients with stage II-IIIb resectable non-small cell lung cancer (PURPOSE). *Front Oncol* 2022;12:1052774.
10. Liu Z, Zhang Y, Ma N, et al. Progenitor-like exhausted SPRY1(+)/CD8(+) T cells potentiate responsiveness to neoadjuvant PD-1 blockade in esophageal squamous cell carcinoma. *Cancer Cell* 2023;41:1852-1870.e9.
11. Liu H, Gu Z, Qiu B, et al. A Recurrence Predictive Model for Thymic Tumors and Its Implication for Postoperative Management: a Chinese Alliance for Research in Thymomas Database Study. *J Thorac Oncol* 2020;15:448-56.
12. Gu Z, Hao X, Liu Y, et al. Minimally Invasive Thymectomy Could Be Attempted for Locally Advanced Thymic Malignancies: A Real-World Study With Propensity Score-Matched Analysis. *J Thorac Oncol* 2023;18:640-9.
13. Rakovich G. Through the looking glass: a glance at lung cancer surgery at the Shanghai Chest Hospital in 2021. *Shanghai Chest* 2023;7:28.
14. Lim E, Batchelor TJP, Dunning J, et al. Video-assisted thoracoscopic or open lobectomy in early-stage lung cancer. *NEJM Evid* 2022. doi: 10.1056/evidoa2100016.
15. Yang Y, Li B, Yi J, et al. Robot-assisted Versus Conventional Minimally Invasive Esophagectomy for Resectable Esophageal Squamous Cell Carcinoma: Early Results of a Multicenter Randomized Controlled Trial: the RAMIE Trial. *Ann Surg* 2022;275:646-53.
16. Zhong C, Fang W, Mao T, et al. Comparison of thoracoscopic segmentectomy and thoracoscopic lobectomy for small-sized stage IA lung cancer. *Ann Thorac Surg* 2012;94:362-7.
17. Gu Z, Wang H, Mao T, et al. Pulmonary function changes after different extent of pulmonary resection under video-assisted thoracic surgery. *J Thorac Dis* 2018;10:2331-7.
18. Chen L, Gu Z, Lin B, et al. Pulmonary function changes after thoracoscopic lobectomy versus intentional thoracoscopic segmentectomy for early-stage non-small cell lung cancer. *Transl Lung Cancer Res* 2021;10:4141-51.

doi: 10.21037/shc-23-46

**Cite this article as:** Wang Y, Fang W. Response letter for the editorial comments on the annual report of thoracic surgery service at Shanghai Chest Hospital in 2021. *Shanghai Chest* 2024;8:6.