



Moving forward: overcoming adversity in thoracic surgery in the post COVID-19 pandemic era

Nathan Alcasid^{1,2}, Kian C. Banks^{1,2}, Jeffrey B. Velotta¹

¹Department of Thoracic Surgery, Kaiser Permanente Northern California, Oakland, CA, USA; ²Department of Surgery, UCSF East Bay, Oakland, CA, USA
Correspondence to: Nathan Alcasid, MD. Department of Thoracic Surgery, Kaiser Permanente Northern California, 3600 Broadway, Oakland, CA 94611, USA; Department of Surgery, UCSF East Bay, 1411 E 31st St., Oakland, CA 94602, USA. Email: Nathan.alcasid@ucsf.edu.

Comment on: 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.

Keywords: Coronavirus disease 19 (COVID-19); lung cancer; annual reports

Received: 20 May 2023; Accepted: 14 August 2023; Published online: 01 September 2023.

doi: 10.21037/shc-23-20

View this article at: <https://dx.doi.org/10.21037/shc-23-20>

Lung cancer remains the leading cause of cancer-related mortality with an increasing incidence globally (1). There was an estimated >200,000 new cases of lung and bronchial cancer in the United States in 2022 alone (1). The advent of the coronavirus disease 2019 (COVID-19) brought about unprecedented changes to the medical community on a global scale (2). This has certainly been true in the field of thoracic surgery particularly during “peak” COVID-19 in 2020 where overall case volume decreased throughout the world (2,3). Though it has been less than 5 years since the start of the COVID-19 pandemic, the long-lasting clinical ramifications for patients and physicians remain largely unknown. Wang *et al.* have published their work, “*Annual report of thoracic surgery service at Shanghai Chest Hospital in 2021*”, demonstrating ongoing progress and resilience in the surgical treatment of lung cancer in the post-pandemic era by increasing surgical volume to decreasing average length of stay ultimately highlighting positive findings in a tertiary-referral medical center (3).

Despite the known geographic and demographic differences of tobacco use throughout the world, smoking remains the main risk factor for the development of lung cancer despite reaching its peak use in the later 20th century (1). Though the smoking rate has decreased from 52% to 16% in the United States over the past 40 years, there were an estimated 34 million United States’ adults who were still reported to be smoking in 2018 (4). Thus, the advent of the COVID-19 pandemic brought about clinical ramifications in the United States as the demand for lung cancer therapy was not waning any time soon.

According to Luc *et al.*, during the height of the COVID-19 pandemic in the United States in 2020, thoracic surgical operations were delayed or deferred for two major reasons: appropriately deemed allocation of resources and protection of healthcare workers (2). Many United States hospitals were put in the difficult position to appropriate and limit vital resources from ventilators and intensive care unit beds to limiting outpatient referrals (2). Additionally, it was not uncommon for cardiothoracic surgical teams to lose multiple personnel from either redeployment of healthcare workers to focus on COVID-19 patients as well as limiting in-hospital personnel to prevent transmission of potential nosocomial infections per the Society of Thoracic Surgeons COVID-19 Taskforce and the Workforce for Adult Cardiac and Vascular Surgery (2). Consequently, the impact of COVID-19 at its height certainly disrupted the normality of thoracic surgery in the United States with decreased surgical case volumes where there had been a previous rise according to The Society of Thoracic Surgeons General Thoracic Surgery Database in 2021 (5). Unfortunately to date, the current database has limited national data regarding the state of thoracic surgery in the United States post-pandemic. Thus, the research presented by Wang *et al.*, is a necessary inclusion of academic data that benefits thoracic surgery on a global scale with positive findings in the wake of a devastating pandemic. The reported overall caseload of 17,000 pulmonary cases in 2021 with which approximately 93% were performed minimally invasive is impressive considering the number of video-assisted thoracoscopic surgery lobectomies in 2019, considered pre-pandemic,

was approximately 13,000 in the United States (3,5). Additionally, the reported in-hospital mortality of 0.06% at Shanghai Chest Hospital is exceedingly much lower than the reported in-hospital mortality of lobectomies in the United States at 0.7% (3,5). Though this may be due to the more minimally invasive surgery performed at Shanghai Chest Hospital compared to the general United States thoracic surgery population, it is difficult to discern the in-hospital mortality as other confounders exist such as stage, body mass index, other comorbidities (3).

As the thoracic surgery case volume at Shanghai Chest Hospital continues to increase per year since the pandemic, it would be interesting in the future for the authors to note the impact on short and long term outcomes for those who had delayed care due to the back-log of cases (3). Additionally, as COVID infection may complicate the clinical picture of ground glass opacities, it would be of interest to see how future screening is undertaken in these patients where cancer is suspected (6). Another metric that would potentially enhance further reports would be to include 30 or 90-day mortality as well as emergency department revisits after being discharged from the hospital.

Though overall outcomes for lung cancer are continuing to improve through heightened primary prevention as well as improved medical and surgical therapy, the COVID-19 pandemic brought about specific challenges and adversity in providing optimal care. In the midst of an uncertain future, Shanghai Chest Hospital has provided a potential envisioned framework even in the most challenging circumstances by effectively managing high volume thoracic surgical patients while providing high quality care through an emphasis on minimally invasive techniques.

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was commissioned by the editorial office, *Shanghai Chest*. The article has undergone external peer review.

Peer Review File: Available at <https://shc.amegroups.com/article/view/10.21037/shc-23-20/prf>

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <https://shc.amegroups.com/article/view/10.21037/shc-23-20/coif>).

JBV serves as an editorial board member of *Shanghai Chest* from March 2022 to February 2024. The other authors have 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

- Williams BM, McAllister M, Erkmén C, et al. Disparities in thoracic surgical oncology. *J Surg Oncol* 2023;127:329-35.
- Luc JGY, Pizano A, Udawadia F, et al. Early effect of the COVID-19 pandemic on the North American cardiothoracic surgery job market. *J Thorac Dis* 2022;14:3304-13.
- 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.
- U.S. Department of Health and Human Services. Smoking Cessation: A Report of the Surgeon General. Available online: <https://www.hhs.gov/sites/default/files/2020-cessation-sgr-full-report.pdf>
- Servais EL, Towe CW, Farjah F, et al. The Society of Thoracic Surgeons General Thoracic Surgery Database: 2021 Update on Outcomes and Research. *Ann Thorac Surg* 2021;112:693-700.
- Migliore M. Ground glass opacities of the lung before, during and post COVID-19 pandemic. *Ann Transl Med* 2021;9:1042.

doi: 10.21037/shc-23-20

Cite this article as: 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.