

# Preface on neoadjuvant treatment in lung cancer—some facts on the outcomes

Modest advances were achieved in the treatment approach to early-stage resectable non-small cell lung cancer (NSCLC), in both, neoadjuvant and adjuvant settings, for almost two decades. The outcomes for completely resected early-stage NSCLC have not been satisfying (1,2). The high incidence of relapse with distant metastases has implied that systemic treatment is critical to increase cure rates.

Neoadjuvant therapy has the ability to reduce tumor burden and to destroy subclinical (micro) metastases, at the same time providing important information about prognosis, tumor response and downstaging. Added value and significant advantage is a comprehensive molecular profiling and assessment of the different biological characteristics of the tumor at resection. Novel systemic therapy agents, targeted and immune check point inhibitors, incorporated in multimodality approach are being investigated in the neoadjuvant and adjuvant settings to decrease the risk of systemic relapses and to achieve better outcomes in early-stage NSCLC (3-9).

In the current series, we highlight recent advancements in the most recent years that have pushed the boundaries of knowledge how to improve the outcomes of early stage resectable NSCLC. Different aspects and various challenges of neoadjuvant systemic therapy in early-stage NSCLC are presented in this series. Several significant topics include treatment efficacy, biomarkers under investigation, imaging procedures in assessment of the response to neoadjuvant treatment and the role of endosonography in preoperative restaging, response evaluation on resection tumor samples after neoadjuvant therapy, the necessity for comprehensive molecular analysis, the impact of neoadjuvant immunotherapy on surgery as a special challenge for thoracic surgeon because of the technical feasibility of lung resection, especially with a minimally invasive approach.

## **Acknowledgments**

Funding: None.

#### Footnote

Provenance and Peer Review: This article was commissioned by the editorial office, AME Surgical Journal for the series "Impact of Novel Neoadjuvant Treatment on Surgery Outcomes in Lung Cancer". The article did not undergo external peer review.

Conflicts of Interest: Both authors have completed the ICMJE uniform disclosure form (available at https://asj.amegroups.com/article/view/10.21037/asj-23-35/coif). The series "Impact of Novel Neoadjuvant Treatment on Surgery Outcomes in Lung Cancer" was commissioned by the editorial office without any funding or sponsorship. DJ served as the unpaid Guest Editor of the series and serves as an unpaid editorial board member of AME Surgical Journal from January 2021 to December 2024. SB served as the unpaid Guest Editor of the series. The authors have no other 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. Goldstraw P, Chansky K, Crowley J, et al. The IASLC Lung Cancer Staging Project: Proposals for Revision of the TNM Stage Groupings in the Forthcoming (Eighth) Edition of the TNM Classification for Lung Cancer. J Thorac Oncol 2016;11:39-51.
- 2. Chansky K, Detterbeck FC, Nicholson AG, et al. The IASLC Lung Cancer Staging Project: External Validation of the

Page 2 of 2 AME Surgical Journal, 2023

Revision of the TNM Stage Groupings in the Eighth Edition of the TNM Classification of Lung Cancer. J Thorac Oncol 2017;12:1109-21.

- 3. Provencio M, Calvo V, Romero A, et al. Treatment Sequencing in Resectable Lung Cancer: The Good and the Bad of Adjuvant Versus Neoadjuvant Therapy. Am Soc Clin Oncol Educ Book 2022;42:1-18.
- 4. Hellmann MD, Chaft JE, William WN, et al. Pathological response after neoadjuvant chemotherapy in resectable NSCLCs: proposal for the use of major pathological response as a surrogate endpoint. Lancet Oncol 2014;15:e42-e50.
- 5. Weissferdt A, Pataer A, Vaporciyan AA, et al. Agreement on Major Pathological Response in NSCLC Patients Receiving Neoadjuvant Chemotherapy. Clin Lung Cancer 2020;21:341-8.
- Travis WD, Dacic S, Wistuba I, et al. IASLC Multidisciplinary Recommendations for Pathologic Assessment of Lung Cancer Resection Specimens After Neoadjuvant Therapy. J Thorac Oncol 2020;15:709-40.
- 7. Saqi A, Leslie KO, Moreira AL, et al. Assessing Pathologic Response in Resected Lung Cancers: Current Standards, Proposal for a Novel Pathologic Response Calculator Tool, and Challenges in Practice. JTO Clin Res Rep 2022;3:100310.
- 8. Forde PM, Chaft JE, Smith KN, et al. Neoadjuvant PD-1 Blockade in Resectable Lung Cancer. N Engl J Med 2018;378:1976-86.
- 9. Chaft JE, Rimner A, Weder W, et al. Evolution of systemic therapy for stages I-III non-metastatic non-small-cell lung cancer. Nat Rev Clin Oncol 2021;18:547-57.



Dragana Jovanovic



Semra Bilaceroglu

### Dragana Jovanovic, MD, PhD

Thoracic Oncology and Palliative Medicine, Internal Medicine Clinic "Akta Medica", Belgrade, Serbia. (Email: draganajv@yahoo.com)

## Semra Bilaceroglu, MD, FCCP

University of Health Sciences, Izmir Faculty of Medicine, Izmir Dr. Suat Seren Training and Research Hospital for
Thoracic Medicine and Surgery, Izmir, Turkey.

(Email: s.bilaceroglu@gmail.com)

**Keywords:** Neoadjuvant therapy; non-small cell lung cancer (NSCLC); outcome

Received: 24 September 2023; Accepted: 07 October 2023; Published online: 23 October 2023. doi: 10.21037/asj-23-35

View this article at: https://dx.doi.org/10.21037/asj-23-35

doi: 10.21037/asj-23-35

Cite this article as: Jovanovic D, Bilaceroglu S. Preface on neoadjuvant treatment in lung cancer—some facts on the outcomes. AME Surg J 2023;3:42.