

Review

# Multimodality Treatment including Surgery Related to the Type of N2 Involvement in Locally Advanced Non-Small Cell Lung Cancer

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**Simple Summary:** Multimodality therapy for locally advanced non-small cell lung cancer (NSCLC) is a complex and controversial issue, especially regarding optimal treatment regimens for patients with ipsilateral positive mediastinal nodes (N2 disease). Is the landscape in this hotly debated stage changing the role for surgery as immunotherapy and targeted therapies are being investigated and implemented? A review on multimodality therapeutic options for stage IIIA-N2 NSCLC is presented.

**Abstract:** For patients with locally advanced non-small cell lung cancer (NSCLC) or positive N1 nodes, multimodality treatment is indicated. However, the optimal management of patients presenting with ipsilateral positive mediastinal nodes (N2 disease) has not been determined yet. Different treatment regimens consisting of chemotherapy, radiation therapy, and surgery have been proposed and implemented previously. In more recent years, immunotherapy and targeted therapies have been added as therapeutic options. The role of surgery is currently redefined. Recent studies have shown that surgical resection after induction immunotherapy or targeted therapy is feasible and yields good short-term results. In this review, we summarize the latest data on multimodality treatment options for stage IIIA-N2 locally advanced NSCLC, depending on the extent of nodal involvement.

**Keywords:** non-small cell lung cancer; chemotherapy; radiotherapy; chemoradiotherapy; concomitant; locally advanced; NSCLC; multimodality; immunotherapy; targeted therapy; surgery



Citation: Allaeyts, T.; Berzenji, L.; Lauwers, P.; Yogeswaran, S.K.; Hendriks, J.M.H.; Billiet, C.; De Bondt, C.; Van Schil, P.E. Multimodality Treatment including Surgery Related to the Type of N2 Involvement in Locally Advanced Non-Small Cell Lung Cancer. *Cancers* **2022**, *14*, 1656. <https://doi.org/10.3390/cancers14071656>

Academic Editor: Akshaya Goto

Received: 22 February 2022

Accepted: 21 March 2022

Published: 25 March 2022

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## 1. Introduction

With 1.8 million deaths in 2020 globally, lung cancer still remains the leading cause of cancer-related death [1]. Non-small cell lung cancer (NSCLC) accounts for the majority of lung cancer cases, up to 85%. At the time of diagnosis, most patients already present in an advanced stage [2]. In the locally advanced disease group, heterogeneity exists resulting in different prognostic subgroups for which different treatment strategies are proposed. An effort to solve this problem was provided by Goldstraw et al. in the latest, 8th edition of the Tumour, Node, and Metastasis (TNM) staging system of the American Joint Committee on Cancer (AJCC) where locally advanced stage III disease was further subdivided into stages IIIA, IIIB, and IIIC [3]. Loccoco et al. proposed to further divide this stage into resectable and unresectable disease [4]. The second ESMO

# Multimodality Treatment Of Lung Cancer

**Xiaolong Qi**



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