Refining the Timing: Neoadjuvant vs. Perioperative CIO Therapy

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Educational background

2005-2008	Research Fellow, Translational Research Shien-lab., National Cancer Center Research Institute, Tokyo, Japan
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Professional experience

2025-Present	Director, Clinical Research and Trials Center Physician, Division of Thoracic Oncology, Tokyo Metropolitan Komagome Hospital, Tokyo, Japan
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The introduction of chemo-immunotherapy (CIO) has revolutionized the treatment landscape for resectable non-small cell lung cancer (NSCLC), establishing a new standard of care. Landmark trials such as KEYNOTE-671 and CheckMate 816 have demonstrated significant improvements in event-free survival (EFS) and pathologic complete response (pCR) with perioperative and neoadjuvant approaches, respectively.

This has shifted the clinical question from if CIO should be used to when and for how long. A critical debate is emerging regarding the optimal duration of immunotherapy: is a neoadjuvant-only approach sufficient, or does the addition of adjuvant immunotherapy in a full perioperative regimen confer a necessary, long-term benefit?

This presentation will critically evaluate the evidence supporting both strategies. We will compare the efficacy and safety profiles of neoadjuvant versus perioperative CIO, analyzing data from pivotal Phase 3 trials. Key discussion points will include the role of pCR as a surrogate endpoint, the clinical implications of ctDNA dynamics for predicting recurrence, and strategies for patient selection. Furthermore, we will explore the challenges of balancing the potential for enhanced disease control against the risks of increased toxicity and financial burden associated with extended adjuvant therapy. The goal of this talk is to provide a data-driven framework for clinicians to navigate the nuanced decision-making process between these two powerful therapeutic options, ultimately aiming to personalize treatment for patients with resectable NSCLC.