

# EFFICACY OF NEOADJUVANT TREATMENT WITH IMMUNE CHECKPOINT INHIBITORS IN NON-SMALL CELL LUNG CANCER IN EARLY STAGES: A SYSTEMATIC REVIEW



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## BACKGROUND AND IMPORTANCE

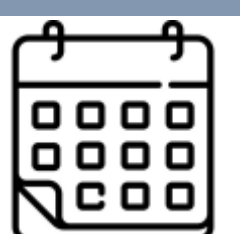
ICIs are standard in adjuvant therapy for NSCLC.  
NAT's use of ICIs is newer but promising.

## AIM AND OBJECTIVE

To evaluate the efficacy of ICIs-based NAT in the early stages of lung cancer.

## MATERIALS AND METHODS

A systematic review was carried out through Medline, for articles published until August 2023



➤ The methods were based on PRISMA guidelines.



➤ We searched for phase-2/3 RCTs that evaluated the efficacy of NAT with ICIs both in monotherapy and in combination with chemotherapy NSCLC in stages I-III.

➤ Two reviewers independently assessed the eligibility of each study.  
➤ To evaluate their quality, the **Grades scale** was used.

## RESULTS

10 studies met the inclusion criteria:



- 2 were phase 3,
- 6 used PD-1 inhibitors and
- 4 used PD-L1 inhibitors.

❖ 3 studies continued adjuvant treatment with ICIs

TRIAL	
<b>NADIM</b>	Studied nivolumab+chemotherapy before surgery, and obtained a PFS of 77.1% and a pCR rate of 63.4%
<b>NADIM II</b>	Patients were randomized to receive nivolumab+chemotherapy or chemotherapy alone, showing a better pCR rate (36.2% vs 6.8%) and better PFS with nivolumab
<b>CheckMate 816</b>	Nivolumab+chemotherapy resulted in a higher median EFS than chemotherapy alone (31.6 vs. 20.8 months) as well as a higher pCR rate.
<b>NEOSTAR</b>	Showed a higher pCR rate of the nivolumab+ipilimumab combination compared to nivolumab monotherapy.
<b>Shue et al. or LCMC3</b>	Atezolizumab+chemotherapy: supported the efficacy of neoadjuvant immunotherapy (NAIT), with improvements in response rates.
<b>KEYNOTE 671</b>	Evaluated pembrolizumab+chemotherapy showing better EFS and RCp in the pembrolizumab group compared to placebo use
<b>PRINCESS and IONESCO</b>	Studied the use of atezolizumab and durvalumab, respectively, and did not provide favorable results.

## CONCLUSION AND RELEVANCE

✓ These studies support the use of NAIT in patients with resectable NSCLC, with promising results in terms of survival and pCR. Currently, nivolumab is used in resectable lung cancer according to CheckMate 816.