

## ASCO 2025 / Lung Cancer: Preoperative Immunotherapy Improves Patient Survival

The combination of immunotherapy and chemotherapy is now the standard neoadjuvant treatment (before surgery) for non-small cell lung cancer (NSCLC). The adoption of this approach in clinical practice follows initial results from the international Phase 3 CheckMate-816 study, coordinated by Prof. Nicolas Girard, pulmonologist and head of the medical oncology department at Institut Curie. Today, this therapeutic strategy is further validated by the final 5-year overall survival results from the study, presented on June 2, 2025, at the ASCO conference and published simultaneously in the *New England Journal of Medicine*.

Lung cancer is the leading cause of cancer death throughout the world, with around 1.8 million deaths in 2020. **With 52,777 new cases in 2023, lung cancer is the third most common cancer in France, and its incidence is rapidly increasing among women.** Many patients with non-small cell lung cancer (NSCLC)—the most prevalent form—can be cured by surgery if diagnosed before metastasis. However, **these cancers are highly aggressive, and the risk of recurrence remains very high** (30% to 55% of patients who undergo surgery experience a relapse). Historically, oncologists prescribed chemotherapy before or after surgery. In recent years, however, immunotherapy has emerged as a promising approach that trains the patient's immune system to recognize and attack cancer cells.

Coordinated by teams at Institut Curie, **the international Phase 3 CheckMate-816 study involving 358 patients with non-metastatic lung cancer showed in 2022 that combining immunotherapy (nivolumab) with chemotherapy before surgery significantly reduced the risk of recurrence by nearly 40%**<sup>1</sup>. This treatment is now the standard in France, although until now, formal evidence linking this reduction in recurrence to an increase in cure rates had been lacking.

### Fewer Recurrences, More Cures

**At the 2025 ASCO meeting, the final 5-year overall survival data from the CheckMate-816 clinical trial were presented: more patients are now cured, and fewer die from the disease.** In the long term, the combination of immunotherapy and chemotherapy demonstrated a statistically and clinically significant improvement in overall survival compared to chemotherapy alone. At five years, 65% of patients treated with a combination of immunotherapy and chemotherapy before surgery were still alive, compared to 55% for chemotherapy alone.

The 5-year data also show a significant **improvement in event-free survival and the complete pathological response (CR) rate**. In 25% of cases, cancer cells were eliminated by the immunotherapy-chemotherapy combination before surgery, and these patients were cured without relapse. Those who achieved a CR experienced an approximately 90% reduction in the risk of death at five years, compared to those who did not.

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<sup>1</sup> Read the press release from April 11, 2022: Lung cancer: a new treatment combining immunotherapies and chemotherapy reduces risk of recurrence and death by almost 40%: <https://presse.curie.fr/cancer-du-poumon-un-nouveau-traitement-associant-immunotherapies-et-chimiotherapie-reduit-de-pres-de-40-le-risque-de-recidive-et-de-deces/?lang=fr>



*“CheckMate 816 represents a major advance in the treatment of operable lung cancer: it is the first Phase 3 trial to definitively demonstrate that neoadjuvant chemoimmunotherapy significantly improves overall survival,”* said **Prof. Nicolas Girard**, pulmonologist, head of the medical oncology department at Institut Curie and coordinator of the CheckMate-816 study.

*“This long-lasting, durable benefit confirms the clinical value of this therapeutic strategy and offers hope to many patients. These important advances also remind us that the earlier cancer is detected, the more effective the treatment options and the higher the chances of recovery. That's why early detection of lung cancer is critical—as is the implementation of organized screening initiatives, such as our Opti-Depist-Mut<sup>✳</sup> study at Institut Curie.”*

[Overall survival with neoadjuvant nivolumab \(NIVO\) + chemotherapy \(chemo\) in patients with resectable NSCLC in CheckMate 816.](#) Oral abstract session, June 2, 2025. **Prof. Nicolas Girard, last author**

**+ Reference NEJM / DOI?**



#### ✳ **OPTI-DEPIST-MUT: A Unique Pilot Study in the Paris Region for Organized Lung Cancer Screening**

Institut Curie, in partnership with Institut Mutualiste Montsouris and the Centre de Santé du Square de la Mutualité, is conducting the OPTI-DEPIST-MUT pilot study: **Optimization of the Implementation of Lung Cancer Screening in the Île-de-France Region.** Launched in early 2025, the trial aims to assess the feasibility of early lung cancer detection in a large at-risk population. Supported by the Fédération Nationale de la Mutualité Française (FNMF), this is one of the few studies of its kind currently underway in France, and it plays a central role in the national ten-year cancer control strategy.

**Learn more:** [curie.fr/opti-depist-mut](https://curie.fr/opti-depist-mut)

Press Release - March 18, 2025: **OPTI-DEPIST-MUT: A Unique Pilot Study in the Paris Region for Organized Lung Cancer Screening:** <https://presse.curie.fr/opti-depist-mut-une-etude-pilote-unique-en-ile-de-france-vers-un-depistage-organise-du-cancer-du-poumon-33627/?lang=fr>

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#### **About Institut Curie**

Institut Curie, France's leading cancer center, combines an internationally-renowned research center with a cutting-edge Hospital Group, treating all types of cancer, including the rarest. Founded in 1909 by Marie Curie, Institut Curie employs 3,800 researchers, physicians, and health professionals across three sites (Paris, Saint-Cloud, and Orsay), all of whom contribute to its three missions of treatment, teaching, and research. A foundation with public utility status, Institut Curie is authorized to accept donations and bequests, and thanks to the support of its donors, is able to accelerate discoveries and improve patient treatment and quality of life.

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