Clinical Trial Landscape of Antibody-Drug Conjugates in Lung Cancer: Treatment-Line Concentration and Perioperative Gaps

Man Sun[1], Dan Zang[1], Huan Zhou[1], Jun Chen[1]*
[1]Department of Oncology, The Second Hospital of Dalian Medical University, Dalian, Liaoning, China
Correspondence: chenjun_dmu@126.com

IASLC 2026 World Conference on Lung Cancer
SEPTEMBER 12 – 15, 2026
SEOUL, REPUBLIC OF KOREA

INTRODUCTION

Background

ADCs are rapidly reshaping lung cancer treatment, but their clinical development may remain concentrated in advanced-stage and later-line settings.

Objective

To map the global ADC trial landscape and identify gaps in earlier-stage and perioperative development.

METHODS

Data source

- Trialtrove registry
- Interventional lung cancer ADC trials through 2025

Eligibility

- Defined ADC target and verifiable ADC mechanism
- Incomplete or unverifiable records were excluded
- **508 eligible trials** were included

Variables extracted

- Registration year and geographic distribution
- Trial status, treatment line, and disease stage
- Target antigen, ADC generation, and payload class
- Treatment strategy and sponsor profile

Analysis

- Descriptive analysis of the global ADC trial landscape

DISCUSSION AND CONCLUSION

Key findings

- Lung cancer ADC development has expanded rapidly, with trial registrations peaking in 2024.
- Current trials remain strongly concentrated in **advanced-stage and later-line disease**.
- **HER2 and TROP2** are the dominant targets, although emerging antigens are broadening the development landscape.
- Earlier-stage and perioperative trials remain markedly underrepresented.

Interpretation

The current ADC pipeline is still largely positioned as a **salvage-treatment strategy** rather than a component of curative-intent therapy.

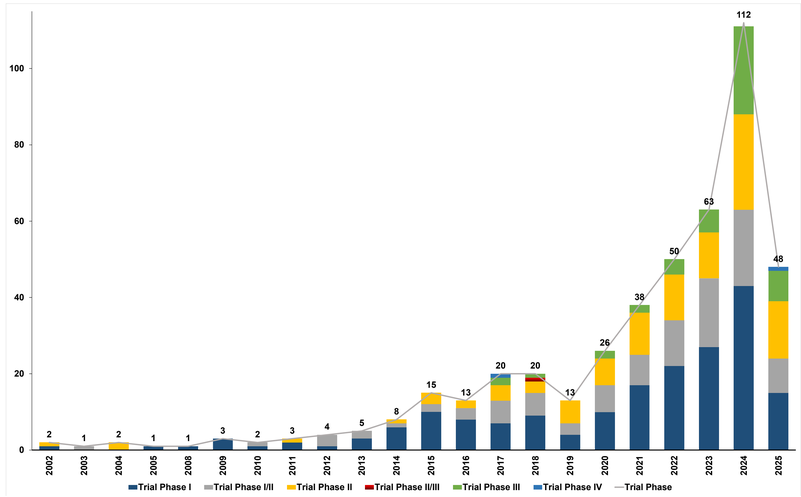
Conclusion

Future development should prioritize:

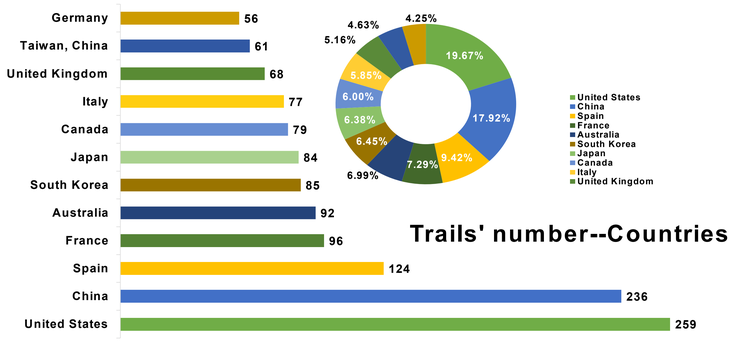
- **Earlier-stage and perioperative settings**
- **Biomarker-guided patient selection**
- **Toxicity-aware ADC design**
- **Rational combination and sequencing strategies**

The next major step for lung cancer ADCs is to move from later-line salvage therapy toward curative-intent integration.

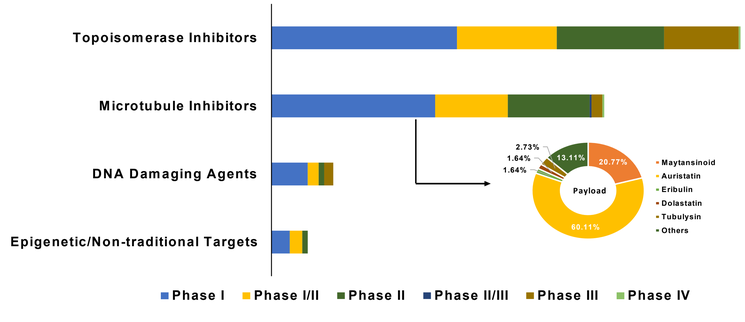
RESULTS



Lung cancer ADC trials increased markedly over time and peaked in 2024, reflecting rapid recent expansion of the field.



Trial activity was geographically concentrated, with the United States and China contributing the largest number of studies.



Payload development was dominated by microtubule inhibitors and topoisomerase inhibitors, highlighting their central role in current ADC design.