CHARACTERISTICS OF PERIOPERATIVE IMMUNOTHERAPY CLINICAL TRIALS IN NON-SMALL CELL LUNG CANCER: A SYSTEMATIC REVIEW

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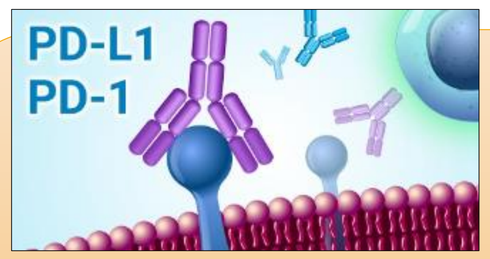
BACKGROUND

✓ Recently, several immunotherapy regimens were evaluated against chemotherapy (CT) as **perioperative treatment** for **resectable non-small-cell lung cancer** (rNSCLC). Analysing **randomised clinical trials** (RCTs) characteristics is essential for future reliable indirect comparisons between schemes.

AIM

To perform a **systematic search** and **evaluation** of **RCTs** characteristics about the use of **perioperative immunotherapies** for **rNSCLC**

MATERIAL AND METHODS



Sistematic search in Pubmed® (September 17, 2024)

- ✓ Search strategy with “Randomized Controlled Trial” filter: ***[Perioperative Resectable Non-Small-Cell Lung Cancer]***
- ✓ Selection: **Phase III RCTs** with **immunotherapies** as **perioperative treatment** of **rNSCLC** and event-free survival **(EFS)**
- ✓ The **rest** of studies were **excluded.**
- ✓ RCTs characteristics assessed: **populations** (baseline factors), **intervention arm** (exposure time and schemes used), **comparator arm** (differences in common drug regimen) and **other study design aspects.**

RESULTS

Results of bibliographic review:
55 results

51 results excluded

- ✓ 9 without design of RCTs
- ✓ 39 assessed different interventions
- ✓ 2 with different clinical context
- ✓ 1 evaluated different outcomes than EFS

4 RCTs included

Perioperative (P-) immunotherapies found

P-toripalimab
P-pembrolizumab
P-nivolumab
P-durvalumab

Intervention and comparator arm

- ➢ **P-toripalimab** presented an adjuvant CT cycle in arms (**3 neoadjuvant toripalimab+CT** cycles with **1 adjuvant toripalimab+CT** cycle followed by adjuvant toripalimab)
- ➢ The **remaining treatments** contained **4 neoadjuvant immunotherapeutic agent+CT** cycles with adjuvant immunotherapy.
- ➢ **All perioperative schemes** included **carboplatin- or cisplatin-based regimens** in CT, except **P-pembrolizumab** (**only cisplatin therapies**)

Differences in baseline factors

- ➢ **Patients with ≥65 years** (31.2% in P-toripalimab vs 45-56% in rest)
- ➢ **Squamous histology** (77.7% in P-toripalimab vs 43-51% in others)
- ➢ **Cancer stage IIIA-IIIB** (99.2% in P-toripalimab vs 64-70% in rest)
- ➢ **N2 stage** (70% in P-toripalimab vs 39%-45% in others)

Other study design aspects

- ➢ **Time of adjuvant exposure**: 365 days for P-nivolumab vs 273-336 for the rest
- ➢ **Patient follow-up**: 11.7 months for P-durvalumab vs 18-25 months for others

CONCLUSION

1. **RCT** of **P-toripalimab** presented **differences in populations**, **intervention** and **control arms** compared to the rest of immunotherapies.
2. **Only P-pembrolizumab** included exclusively **cisplatinum-based regimens**.
3. **P-nivolumab** required a **longer adjuvant exposure time**.
4. **P-durvalumab** developed the **lowest patient follow-up**.