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Pathological response is an independent factor of overall survival and disease-free survival after neoadjuvant durvalumab in resectable non-small cell lung cancer (NSCLC) in the IFCT-1601 IONESCO phase II trial

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Background

Major pathological response after neoadjuvant cisplatin-based chemotherapy for early-stage NSCLC has been shown to predict survival. This has not been demonstrated for neoadjuvant immune checkpoint inhibitors. In IONESCO multicenter phase II trial, 3 cycles of durvalumab were administered in stage IB>4cm–IIIA, non N2 resectable NSCLC (TNM 8th edition) before surgery. We report here the updated analysis on disease-free survival (DFS) and overall survival (OS) and their association with residual viable tumor cells (RVT).

Methods

Tissue specimens from patients who underwent neoadjuvant durvalumab and complete surgical resection were retrospectively evaluated by two pathologists blinded to patient outcomes. Specimens were reviewed for the degree of pathologic response i.e. % of RVT in the primary tumor and in any involved lymph nodes. The relationship between % of RVT as a continuous variable and outcomes (OS and DFS) was analyzed using a Cox regression model including patient characteristics (age, gender, PS, smoking status), histology, PD-L1 tumor proportion score (TPS), stage and surgical procedure.

Results

50 pts were included. 46 were eligible and received durvalumab, 43 operated, 67.4% males, median age, 61 yr; all ECOG PS 0-1; 98% (ex-)smokers; 23 adenocarcinoma, 19 squamous; clinical stages IB/IIA/IIB/IIIA = 5/13/27/1; 15 TPS ≥1%. Median % of RVT was 36.11. Median OS and DFS were not reached; 18-m OS: 89.1% [95% CI: 75.8-95.3] 18-m DFS: 73.7% [95% CI: 58.4-84.1]. In the multivariate prognostic analysis, for increasing value of % of RVT, OS and DFS were poorer (HR [95%CI]: 1.05 [1.00-1.10] p=0.04 and 1.06 [1.01-1.11] p=0.02, respectively).

Conclusions

The IFCT-1601 IONESCO trial showed for the first time that the extent of pathological response to a neoadjuvant immune checkpoint inhibitor is an independent prognostic factor of OS and DFS in NSCLC.

Clinical trial identification

NCT03030131.

Legal entity responsible for the study

French Cooperative Thoracic Intergroup (IFCT).

Funding

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Disclosure

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