Neoadjuvant durvalumab plus chemotherapy in stage III non-small cell lung cancer: A phase II single-arm study

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BACKGROUND
Stage III non-small cell lung cancer (NSCLC) is highly heterogeneous with great variations in clinical practice. Though neoadjuvant immunotherapy plus chemotherapy significantly improved pCR and EFS in resectable NSCLC patients compared with chemotherapy alone in previous study. However, there are few studies focusing on stage III population, in both clinical practice, such patients have a strong willingness to surgery. This is the first study to evaluate durvalumab neoadjuvant and adjuvant treatment in stage III NSCLC patients.

METHODS

- Patients were eligible (according to the multidisciplinary team) with histologically confirmed stage IIIa-IIIC NSCLC without known EGFR/ALK mutations;
- Patients received neoadjuvant durvalumab (1500mg) plus platinum-based chemotherapy q3w for 2-4 cycles followed by surgery, then adjuvant durvalumab mono q4w for 12 cycles (Figure 1);
- The primary endpoint was MPR, Secondary endpoints included pCR, ORR, DFS, OS, and safety. Predictive biomarkers was exploratory endpoint.

RESULTS

From February 7, 2021 to May 30, 2022, a total of 14 patients were enrolled in the study. The median age was 64.5 (rang: 53-71) with 13 (92.9%) males, and 71.4% were squamous carcinoma histology. The number of patients with stage IIIA, IIIB, IIIC were 2 (14.3%), 10 (71.4%) and 2 (14.3%), respectively (Table 1).

All patients completed neoadjuvant therapy, 6 patients received 3 cycles and 8 patients received 4 cycles. 10 patients underwent surgery, 4 patients were ineligible for surgery due to 2 with unresectable stage IIIC disease, 1 with tumor wrapping around the right bronchus and 1 with poor lung function

Efficacy
- Among 14 patients, 9 patients had partial response, the ORR was 64.3% (9/14). DCR was 92.9% (13/14) (Figure 2).
- Among the 10 resected patients, 50.0% (5/10) achieved MPR, and 20.0% (2/10) patients achieved pCR (Figure 3)
- The number of T-cell clones after 1 cycle neoadjuvant therapy was positively correlated with imaging regressions (p=0.044) (Figure 4)

CONCLUSION

- The results suggest that stage IIIA-IIIB NSCLC has a benefit trend from neoadjuvant Durvalumab plus chemotherapy. Two stage IIIC patients failed to convert from neoadjuvant therapy.
- TCR diversity is positively correlated with imaging regression, analysis of its correlation with survival outcomes is ongoing.

REFERENCE