WCLC 2018: IMpower132: Atezolizumab Plus Carboplatin and Pemetrexed in Stage IV Nonsquamous NSCLC

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Key Points

- Atezolizumab plus pemetrexed-based chemotherapy resulted in improvement in progression-free survival (median 7.6 months vs 5.2 months for the control group) associated with a 40% reduction in the risk for disease progression in all patients and across key clinical subgroups.
- Atezolizumab plus pemetrexed-based chemotherapy demonstrated a numerical improvement in overall survival of 4.5 months over pemetrexed-based chemotherapy alone.

Findings from the IMpower132 trial demonstrate that the use of the programmed cell death ligand 1 (PD-L1) inhibitor atezolizumab in combination with carboplatin plus pemetrexed as first-line therapy and pemetrexed as maintenance therapy improved progression-free survival in patients with stage IV nonsquamous non–small cell lung cancer (NSCLC). **Vassiliki A. Papadimitrakopoulou, MD**, Chief of the Section of Thoracic Medical Oncology at The University of Texas MD Anderson Cancer Center, presented these findings at the International Association for the Study of Lung Cancer 19th World Conference on Lung Cancer (Abstract OA05.07).

IMpower132

IMpower132 is a global, randomized, open-label, phase III study of 578 chemotherapy-naive patients with stage IV nonsquamous NSCLC. Eligibility criteria included measurable disease by Response Evaluation Criteria in Solid Tumors (RECIST) guidelines v1.1 and Eastern Cooperative Oncology Group Performance Status (ECOG PS) 0 to 1. Exclusion criteria included tumors known to harbor epidermal growth factor receptor (*EGFR*) or anaplastic lymphoma kinase (*ALK*) driver mutations, untreated central nervous system (CNS) metastases, autoimmune disease, and prior exposure to immunotherapy.

Patients were randomized 1:1 to receive 4 or 6 cycles of carboplatin AUC 6 mg/mL/min or cisplatin at 75 mg/m^2 plus pemetrexed at 500 mg/m^2 every 3 weeks, followed by pemetrexed as maintenance therapy (arm B), or carboplatin/pemetrexed or cisplatin/pemetrexed plus atezolizumab at 1,200 mg, followed by pemetrexed plus atezolizumab as maintenance therapy (arm A).

Results

Results of the study showed that the atezolizumab plus pemetrexed-based chemotherapy resulted in improvement in progression-free survival (median 7.6 months vs 5.2 months for the control group) associated with a 40% reduction in the risk for disease progression (HR = 0.60; 95% CI = 0.49–0.72) in all patients and across key clinical subgroups, including Asian patients (HR = 0.42; 95% CI = 0.28–0.63), never-smokers (HR = 0.49; 95% CI = 0.28–0.87), current and former smokers (HR = 0.61; 95% CI = 0.50–0.74). Also, at this interim overall survival analysis, the atezolizumab plus pemetrexed-based chemotherapy demonstrated a numerical improvement in overall survival of 4.5 months over pemetrexed-based chemotherapy alone (HR = 0.46; 95% CI = 0.22–0.96).

“The findings from IMpower132 indicate that the addition of atezolizumab to a backbone of carboplatin and pemetrexed chemotherapy provides better clinical efficacy than carboplatin and pemetrexed alone,” said Dr. Papadimitrakopoulou. “By inhibiting the interaction of PD-L1 with its receptors PD-1 and B7-1, atezolizumab restores tumor-specific T-cell immunity, offering a valuable treatment option that prolongs survival for patients with stage IV nonsquamous NSCLC.”