Atezolizumab Improved Overall Survival Across Subgroups With NSCLC

News | December 07, 2016 | Lung Cancer
By Leah Lawrence

The programmed death ligand 1 (PD-L1) inhibitor atezolizumab significantly improved overall survival compared with docetaxel in patients with non–small-cell lung cancer (NSCLC) regardless of histology and in subgroups including patients who were never-smokers and those with baseline brain metastases, according to the results of the subgroup analysis of the OAK study (abstract PR04.02) presented at the International Association for the Study of Lung Cancer (IASLC) 17th World Conference on Lung Cancer, held December 4–7 in Vienna.
In the phase III OAK study, patients who failed prior platinum-based chemotherapy were randomly assigned to atezolizumab or docetaxel. Previously presented results showed that atezolizumab significantly improved overall survival compared with docetaxel in the intent-to-treat population of patients with previously treated NSCLC that expressed 1% or greater PD-L1 on tumor cells.

“The subgroup analysis demonstrates that atezolizumab does have broad activity in several subgroups, particularly across several levels of PD-L1 expression including that assessed by immunohistochemistry and gene expression, as well as in never-smokers,” said Shirish Gadgeel, MD, of the Karmanos Cancer Institute at Wayne State University in Detroit, during a press conference.

Previous data from PD-1 inhibitor studies has suggested that there are certain subgroups of patients with NSCLC that may not derive a survival advantage with anti–PD-1 drugs compared with docetaxel. Therefore, Gadgeel and colleagues conducted a subgroup analysis of the OAK study to identify any possible differences in survival outcomes between patients treated with atezolizumab vs docetaxel.

For the first 850 of 1,225 patients in the study, overall survival was significantly improved with atezolizumab compared with docetaxel regardless of tumor histology and regardless of PD-L1 status as measured by immunohistochemistry or gene expression. Survival was improved in patients with high PD-L1 expression as well as low expression, according to Gadgeel.

The researchers also conducted a subgroup analysis of 85 patients with central nervous system (CNS) metastases and found a survival benefit of atezolizumab compared with docetaxel for patients with baseline brain metastases (median overall survival, 20.1 vs 11.9 months). No additional neurologic toxicities were seen with atezolizumab in patients with CNS metastases.

There have also been data to suggest that anti–PD-L1 drugs may not provide a survival advantage compared with docetaxel in patients who are never-smokers. The researchers looked at 156 patients who were never-smokers and found that atezolizumab did provide a survival advantage compared with docetaxel.

“Finally, there is concern that in elderly patients the immune system may not be as active and, therefore, there was an interest in looking at whether the efficacy was similar across age groups,” explained Gadgeel.

The subgroup analysis showed at least a trend toward improved survival across all age groups including very elderly patients aged older than 75 years.

The US Food and Drug Administration approved atezolizumab in October for the treatment of patients with NSCLC whose disease progressed during or after chemotherapy.