ADJUVANT THERAPY OF RESECTED NSCLC

Robert Pirker

Medical University of Vienna, Vienna, Austria

Adjuvant chemotherapy has been standard for patients with completely resected non-small cell lung cancer (NSCLC) for about 15 years. Adjuvant chemotherapy increased the 5-year survival rates by 4% to 15% within randomized trials (for review see Pirker R & Filipits M. Clin Lung Cancer 2019, 20, 1) and by about 10% based on a meta-analysis of trials with cisplatin plus vinorelbine (Douillard JY et al. JTO 2010, 5, 220). Several strategies have been studied in order to improve outcome of adjuvant therapy. The first strategy has focused on predictive biomarkers but remains experimental (Seymour L et al. Clin Lung Cancer 2019, 20, 66). The second strategy has assessed the integration of targeted therapies. The addition of bevacizumab to adjuvant chemotherapy failed to increase survival (Wakelee H et al. Lancet Oncol 2017, 18, 1610). EGFR directed tyrosine kinase inhibitors also failed to improve outcome in patients unselected for EGFR mutations. Among patients with EGFR mutation-positive NSCLC, however, gefitinib and osimertinib improved disease-free survival (Zhong W-Z et al. Lancet Oncol 2018, 19, 139; Wu Y-L et al. NEJM 2020, 383, 1711). The third strategy has evaluated immunotherapy. Adjuvant vaccination with the MAGE-A3 tumor vaccine failed to improve outcome in MAGE-A3-positive patients with completely resected stage IB-IIIA NSCLC (Vansteenkiste J et al. Lancet Oncology 2016, 17, 822). Immune checkpoint inhibitors hold great promise and several of them are currently evaluated within phase 3 trials. Challenges of adjuvant trials are large study populations, selection of the clinically most relevant endpoint, long durations and high costs. Identification of reliable predictive biomarkers for patient selection and novel clinical trial designs might overcome some of these challenges.