

DEFINITIVE CHEMORADIOOTHERAPY OF LOCALLY ADVANCED NSCLC

Jacek Jassem

Medical University of Gdańsk, Poland

For almost two decades, concurrent chemoradiotherapy (CHRT) has been considered the therapeutic standard for locally advanced inoperable non-small-cell lung cancer (NSCLC). Within this time, several diagnostics and radiotherapy improvements have been attempted to increase the outcomes. Dose escalation with prolonged overall treatment time did not increase survival, therefore 60 Gy in 2 Gy fractions or equivalent biological dose is still used in routine practice. Staging of NSCLC has been complemented by routine application of positron emission tomography/computed tomography, endobronchial ultrasonography and magnetic resonance imaging of the brain. Respiratory motion control and dose intensity modulation increased conformity of radiotherapy and reduced treatment-related toxicity. Implementation of these developments increased local and regional control up to 80% and 90%, respectively. However, 40-50% of patients managed with curative CHRT relapse at distant sites. In consequence the efficacy of this strategy has remained limited: the median overall survival has been in the range of 20–30 months, with five-year survival probability of 30%. Only recently, supplementing CHRT with maintenance durvalumab, a monoclonal anti-PD-L1 agent, has been found to significantly increase overall survival. This development set the new treatment standard in locally advanced NSCLC.