A cost-effectiveness analysis of consolidation immunotherapy with durvalumab in stage III NSCLC responding to definitive radiochemotherapy in Switzerland

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Consolidation immunotherapy with the programmed death ligand 1 (PD-L1) inhibitor durvalumab improves survival in patients with stage III non-small-cell lung cancer responding to radiochemotherapy. The aim of this study was to assess the cost-effectiveness of durvalumab in Switzerland based on the most recent PACIFIC survival follow-up.; We constructed a Markov model based on the 3-year follow-up data of the PACIFIC trial and compared consolidation durvalumab with observation. We used published utility values and assessed costs for treatment strategies from the perspective of the Swiss health care payers. Cost-effectiveness was tested both in the intention-to-treat population of the PACIFIC trial unselected for PD-L1 tumor expression and in patients with PD-L1-expressing tumors ($\geq$1%).; In the unselected/PD-L1-positive patients, durvalumab showed an incremental effectiveness of 0.76/1.18 quality-adjusted life year (QALY) and incremental costs of Swiss Francs (CHF) 67 239/78 177, resulting in incremental cost-effectiveness ratios of CHF 88 703/66 131 per QALY gained, respectively. The most influential factors for the incremental cost-effectiveness ratio were the utility before first progression, costs for durvalumab, and the hazard ratio for overall survival under durvalumab versus observation. The cost-effectiveness of durvalumab was better than CHF 100 000 per QALY gained in 75% of the simulations in probabilistic sensitivity analysis.; Assuming a willingness-to-pay threshold of CHF 100 000 per QALY gained, consolidation durvalumab is likely to be cost-effective both in patients with inoperable stage III non-small-cell lung cancer (NSCLC) unselected for PD-L1 status and in patients with PD-L1-expressing tumors in Switzerland.

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