

Publication

A cost-effectiveness analysis of consolidative local therapy in oligometastatic non-squamous non-small cell lung cancer (NSCLC)

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Novel systemic therapies have improved the prognosis of metastatic non-small cell lung cancer (NSCLC), but costs of some of these drugs are a matter of ongoing debate. More recently, local therapies (LT) such as radiotherapy and surgery have been suggested as additional treatment in oligometastatic NSCLC demonstrating an improved progression-free survival (PFS) in a phase II trial compared to maintenance chemotherapy (MC) alone. The aim of this analysis was to assess the cost-effectiveness of local therapies in oligometastatic NSCLC.; We constructed a Markov model comparing the cost-effectiveness of LT versus MC for oligometastatic NSCLC from the Swiss healthcare payer's perspective. Treatment specifications and PFS were based on the phase II trial (NCT01725165). Overall survival (OS) was inferred from a recent phase III trial. Utilities were taken from published data. Primary outcome was the incremental cost-effectiveness-ratio (ICER, costs in Swiss Francs (CHF) per quality-adjusted life-year (QALY) gained).; PFS in the model was 3.8/months for MC and 11.4/months for LT (compared to 3.9/months and 11.9/months in the trial). OS in the model was 15.5/months in both arms. LT was cost-effective with a gain of 0.24 QALYs at an additional cost of CHF 9641, resulting in an ICER of CHF 40,972/QALY gained. Probabilistic sensitivity analyses demonstrated that LT was dominant or cost-effective at a willingness-to-pay threshold of CHF 100,000 per QALY in 61.7% of the simulations.; LT may be cost-effective for selected patients with oligometastatic NSCLC responding to first-line systemic therapy.

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