

## Cost-Effectiveness of Web-Based Patient-Reported Outcome Surveillance in Patients With Lung Cancer

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**INTRODUCTION:** A multicenter randomized clinical trial in France found an overall survival benefit of web-based patient-reported outcome (PRO)-based surveillance after initial treatment for lung cancer compared with conventional surveillance. The aim of this study was to assess the cost-effectiveness of this PRO-based surveillance in lung cancer patients.

**METHODS:** This medico-economic analysis used data from the clinical trial, augmented by abstracted chart data and costs of consultations, imaging, transportations, information technology, and treatments. Costs were calculated based on actual reimbursement rates in France, and health utilities were estimated based on scientific literature review. Willingness-to-pay thresholds of €30,000 per quality-adjusted life year (QALY) and €90,000 per QALY were used to define a very cost-effective and cost-effective strategy, respectively. Average annual costs of experimental and control surveillance approaches were calculated. The incremental cost-effectiveness ratio was expressed as cost per life-year gained and QALY gained, from the health insurance payer perspective. One-way and multivariate probabilistic sensitivity analyses were performed.

**RESULTS:** Average annual cost of surveillance follow-up was €362 lower per patient in the PRO arm (€941/year/patient) compared to control (€1,304/year/patient). The PRO approach presented an incremental cost-effectiveness ratio of €12,127 per life-year gained and €20,912 per QALY gained. The probabilities that the experimental strategy is very cost-effective and cost-effective were 97% and 100%, respectively.

**CONCLUSIONS:** Surveillance of lung cancer patients using web-based PRO reduced the follow-up costs. Compared to conventional monitoring, this surveillance modality represents a cost-effective strategy and should be considered in cancer care delivery.

Résumé en anglais

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