Comparative Costs of Gemcitabine/Cisplatin, Paclitaxel/Cisplatin and Vinorelbine/Cisplatin in the Treatment of Non-Small Cell Lung Cancer in Germany

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Objectives: Novel chemotherapy regimens are cost-effective relative to best supportive care in the treatment of patients with advanced non-small cell lung cancer (NSCLC). A recently published randomised controlled clinical trial demonstrated that gemcitabine/cisplatin (Gem/Cis), paclitaxel/carboplatin (Pac/Carbo) and vinorelbine/cisplatin (Vin/Cis) were equally effective with regards to overall survival and time to disease progression in Italian patients with advanced NSCLC. We performed a retrospective economic analysis to compare these three combination regimens from the perspective of the German health care system. Methods: Cost-minimisation and cost-effectiveness analyses were based on resource use and efficacy data from the clinical trial of Scagliotti et al. (2002). The following direct treatment-related costs were identified for each chemotherapy regimen: chemotherapy acquisition, drug administration, hospitalisations, and other medical resources. Unit costs of medical resources in Germany were derived from official published sources. Cost-effectiveness results were calculated by dividing the mean total treatment cost per patient by the mean number of extra life-months gained or by the mean number of months free of disease progression per patient treated. Results: The average total mean treatment costs per patient were 15,211€ for Pac/Carbo, 8738€ for Gem/Cis, and 9721€ for Vin/Cis. The incremental cost-effectiveness ratio for Pac/Carbo vs Gem/Cis was 65,000€ per additional life-month gained. Incremental analysis showed Gem/Cis to dominate Vin/Cis with additional survival achieved for less cost. Conclusions: Based on resource use and efficacy data from the same clinical trial, Gem/Cis is a cost-effective combination chemotherapy regimen for the treatment of advanced NSCLC in Germany.