OP3 COST-EFFECTIVENESS OF EPIDERMAL GROWTH-FACTOR RECEPTOR MUTATION TESTING AND FIRST-LINE TREATMENT WITH GEFITINIB FOR ADVANCED NON-SMALL-CELL LUNG CANCER

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Background: Epidermal growth-factor receptor (EGFR) testing and first-line therapy with gefitinib is becoming the standard treatment for advanced non-small-cell lung cancer (NSCLC). Yet, to date, no study has quantified the cost-effectiveness of this approach within an Asian population, where the prevalence of activating mutations is higher than among western populations.

Methods: A decision-analytic model was developed to determine the cost-effectiveness of EGFR testing and first-line treatment with gefitinib for patients with activating EGFR mutations, versus standard care, which includes first-line treatment with chemotherapy followed by gefitinib as second-line treatment. The model uses clinical and outcomes data from three randomised clinical trials, and societal (non-subsidised) costs from three cancer treatment centres in Singapore. Health effects were expressed as quality-adjusted life-years (QALY) gained. Costs include relevant costs for prescription medications, physician visits, laboratory tests, scans, hospitalisations, and treatment of adverse events. All costs and cost-effectiveness ratios were expressed in 2010 Singapore dollars. Sensitivity analyses were done to identify the extent to which results were robust to key model assumptions.

Findings: EGFR testing and first-line treatment with gefitinib was found to be a dominant strategy (lower costs and greater effectiveness) compared with standard care. Because the primary savings in the testing group did not result from not providing gefitinib to patients who do not benefit, this finding holds regardless of the percentage of patients who test positive for EGFR mutation. In a secondary analysis, first-line treatment with gefitinib was also dominant compared with first-line chemotherapy in patients with activating EGFR mutations.

Interpretation: Based on these data, EGFR testing and first-line treatment with gefitinib for patients with activating mutations should become a standard treatment in advanced NSLC.

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OP4 SALVAGE CHEMOTHERAPY IN PRIMARY RESISTANT OR RELAPSING STAGE III–IV NEUROBLASTOMA

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Background: Neuroblastoma is the most common extracranial tumour, accounting for 8–10% of childhood malignancies and 15% of deaths from cancer in the paediatric age group. Approximately half of newly diagnosed children are at high risk for treatment failure. The aim of this study was to evaluate the response rate of salvage chemotherapy with ifosfamide, carboplatin, and etoposide (ICE) when given to previously treated patients with primary refractory or progressive high-risk neuroblastoma.

Methods: Sixty-six patients from NCI and CCHE received salvage chemotherapy (ICE) for primary resistance ($n = 51$, 77.2%) or disease progression on primary chemotherapy ($n = 15$ 22.8%). Forty male patients (60.6%) and 26 females (39.4%), between 3 months and 12.5 years of age, were included.

Findings: The most common tumour site was suprarenal, followed by retroperitoneal mass. Two patients (3%) died from chemotherapy toxicity during ICE administration. Evaluation of tumour response in the remaining 64 patients showed the following: complete or partial response in 24 patients (36.5%), stable disease in 11 patients (16.6%), and progressive disease in 29 patients (43.9%). 14 patients (21.2%) were considered eligible for an autologous bone-marrow transplant, and 50 patients (78.8%) failed second-line (salvage) chemotherapy and had palliative lines of therapy. By the end of the study (May 2010), 47 of 66 (71.2%) of patients were still alive, and 19 of 66 (28.8%) were dead. Two of 14 patients (14.2%) who underwent haematopoietic stem-cell transplantation died from post-transplantation disease progression, and 12 of 14 (85.8%) were in complete cytogenic remission (CCR).

Interpretation: Chemotherapy with ICE for primary resistant or progressive stage III–IV neuroblastoma seems well tolerated. With a 36.6% response rate, 18% CCR, and 3.0% treatment mortality rate, it can be considered a good salvage therapy for patients in whom palliation is appropriate.

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OP5 DIFFERENCE IN HORMONE-RECEPTOR STATUS OF BREAST CANCERS IN VIETNAMESE AND SWEDISH WOMEN

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Background: The aim of this study was to compare oestrogen-receptor (ER) and progesterone-receptor (PgR) status of operable breast cancers in Vietnamese and Swedish patients.

Methods: Primary breast-cancer tissues were randomly selected from 249 Vietnamese patients treated in Hanoi, Vietnam, and 1257 Swedish patients treated in Stockholm, Sweden, between 2002 and 2003. Clinical information was available for