Abstracts

PCN30

COST-EFFECTIVENESS OF APREPITANT IN PATIENTS RECEIVING ANTIEMETIC PROPHYLAXIS FOR HIGHLY EMETOGENIC CHEMOTHERAPY IN HUNGARY

Nagy L1, Erdezsi D1, Lovas K1, Wisniewski T1
1Merck, Sharp & Dohme, Budapest, Hungary; 2LKH RO, Budapest, Hungary; 3Merck& Co, Inc, Whitehouse Station, NY, USA

OBJECTIVES: Chemotherapy-induced nausea and vomiting (CINV) remains a major adverse effect of cancer therapy. We aimed to determine outcomes and cost-effectiveness associated with the use of aprepitant in patients undergoing cisplatin-based chemotherapy in Hungary from a patient’s and payer’s perspective.

METHODS: A global decision-analytic model was adapted in Hungary which compared an aprepitant regimen (aprepitant/ondansetron/dexamethasone) to a control regimen (ondansetron/dexamethasone) over a five days period. Clinical results observed in aprepitant phase III clinical trials, and utility data came from published literature were assigned Hungarian resource utilisation and unit cost data. RESULTS: Complete responders over one chemotherapy cycle was observed in 71.9% of patients in the aprepitant group compared to 59.9% of patients in the control group. Total cost per patient in aprepitant and control group was €259 and €254 respectively. As the result of cost-effectiveness analyses was practically cost neutral; the incremental cost per additional responder was irrelevant (£5). Patients were estimated to have gained an equivalent of 8.25 additional hour of perfect health per three cycle (0.34 quality-adjusted life days) with aprepitant-based regimen compared to control regimen. Cost per quality-adjusted life year gained with aprepitant was estimated at £5363. CONCLUSIONS: Aprepitant-based strategy is more effective in CINV-related health outcomes in patients undergoing highly emetogenic chemotherapy. Incremental benefits materialised in a cost-effective fashion.

PCN31

ECONOMIC EVALUATION OF CLODRONATE AND ZOLENDRONATE IN PATIENTS DIAGNOSED WITH METASTATIC BONE DISEASE FROM THE PERSPECTIVE OF THIRD PARTY PAYORS IN BRAZIL

Machado M1, Araujo G2, Cruz LS1, Fonseca M1
1University of Toronto, Toronto, ON, Canada; 2Axis.Bio Consulting, São Paulo, Brazil; 3Pacific Gateway International College, Toronto, ON, Canada

OBJECTIVES: Bisphosphonates have been shown to be effective in reducing the incidence of skeletal-related events (SREs) in patients with metastatic bone disease (MBD) originated from any type of malignancy. The purpose of this study was to evaluate the cost-effectiveness of clodronate and zoledronate in the prevention of SREs in patients with MBD. METHODS: A Markov model was developed to represent a cohort of patients diagnosed with MBD. The model had four primary health states: “without SRE”, “with SRE (i.e., pathologic fracture, radiotherapy or surgery, and hypercalcemia)”, “osteonecrosis” and “death”.

Patients evaluated were those diagnosed with MBD, presenting any SRE and treated with clodronate or zoledronate. Transition probabilities originated from a meta-analysis previously published by our group. Time-horizon used was five years. Cost data were obtained from national privately-administered databases. Outcomes evaluated were costs, quality-adjusted life years (QALYs), and SRE-free years. Univariate and multivariate sensitivity analyses were used to determine model robustness. Costs were reported in 2007 Brazilian Reais (1R$ = 1.60US$).

RESULTS: MBD treatment total cost in Brazil (on average, per patient) in five years (base-case) was R$45,904 with clodronate and R$53,076 with zoledronate. For both drugs, drug cost drove the overall cost of MBD management (>90%). Clodronate and zoledronate generated (on average, per-patient) 2.00 and 1.90 QALYs (5-year time-horizon), respectively. Within the same time-horizon, clodronate and zoledronate also generated (on average, per-patient) 1.81 and 1.76 SRE free-years, respectively.

When clodronate and zoledronate were contrasted for cost-effectiveness, clodronate was considered dominant. Multivariate sensitivity analysis did not show changes in original results. CONCLUSIONS: Clodronate was dominant (i.e., produced higher effectiveness and lower costs) in comparison to zoledronate for preventing SREs in patients diagnosed with MBD in Brazil from the private sector perspective.

PCN32

ECONOMIC ANALYSIS OF CHEMO RADIOTHERAPY IN HEAD AND NECK CANCER

Brentani A1, Federico M2
1Faculdade de Medicina da universidade de Sao Paulo, Sao Paulo, Brazil; 2Faculdade de Medicina da universidade de Sao Paulo, Sao Paulo, Sao Paulo, Brazil

OBJECTIVES: to conduct a cost-effectiveness analysis comparing chemoradiotherapy with cisplatin and radiotherapy alone, to treat inoperable advanced head and neck cancer. METHODS: we collected data from 29 patients in a prospective study on chemoradiotherapy with cisplatin, conducted at Hospital das Clinicas—HC-FMUSP (strategy 2). For strategy 1, we collected retrospective data of 33 patients treated with radiotherapy at HC-FMUSP and Hospital A.C. Camargo. We considered only direct costs (personnel, drugs, material and equipment depreciation). We considered, the National Health Service(SUS) reimbursement parameters as the payer’s, and HC-FMUSP costs as the institutional perspectives. The time horizon was 13 months. We measured effectiveness as years of disease-free life gained. We collected costs and effectiveness data and calculated the cost-effectiveness incremental ratio—RICE, which expresses additional costs per life year gained, in strategy 2, compared to strategy 1, the standard treatment. RESULTS: A total of 24.13% of the patients treated in strategy 1 lived more than 12 months, without disease progression, compared to 48.48% of the patients in strategy 2. According to the payer’s perspective, the total cost per patient in strategy one is US$1,742.01 (1 US dollar equals 1.60 Reais) and US$ 3090.00 in strategy 2. Considering the institutional perspective, total costs are US$1,762.59, and US$3,661.50 respectively. In the payer’s perspective, the cost-effectiveness incremental ratio of strategy 2 compared to 1 is US$5.40 dollars per life year gained. In the institutional perspective, RICE is US$77.98. We conducted a one-way sensitivity analysis to verify our calculations. CONCLUSIONS: Chemoradiotherapy with cisplatin proved more cost-effective than radiotherapy. There are no Brazilian guidelines about payment for additional life years. The World Bank guidelines considers the countries’ GDP per capita an acceptable cost per additional year of life. Given Brazil’s GDP per capita (US$6080.51 in 2004), the incremental cost of both is acceptable.

PCN33

ECONOMIC EVALUATION OF FIRST-LINE TREATMENT FOR METASTATIC COLORECTAL CANCER (MCRC) BASED ON IRINOTECAN (FOLFIRI) + BEVACIZUMAB OR CETUXIMAB, ADJUSTED BY KRAS GENE (WILD-TYPE (WT) OR MUTANT (MT))

Torrecillas L1, Vargas J2
1Medical Center “20 de Noviembre”; ISSSTE, México, DF, Mexico; 2Econopharma Consulting SA de CV, Mexico, DF, Mexico

OBJECTIVES: To perform an economic evaluation of First-line mCRC treatment with irinotecan based schemes, FOLFIRI + BEVACIZUMAB or CETUXIMAB, adjusted by KRAS gene (WT or MT)