COST MINIMIZATION ANALYSIS OF CAPECITABINE+CISPLATIN IV VS 5-FLUOROURACIL IV+CISPLATIN IV AS FIRST LINE THERAPY FOR ADVANCED GASTRIC CANCER FROM THE BRASILIAN SOCIETAL PERSPECTIVE

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OBJECTIVES: The purpose of this study was to compare the cost of the oral therapy with capecitabine + IV cisplatin (XP) against standard IV therapy with 5-fluorouracil + cisplatin (FP) as first-line treatment for patients with advanced gastric cancer (AGC).

METHODS: A cost minimization analysis was conducted based on clinical data from the phase III trial of Kang et al. 2006. In this trial patients were treated until disease progression, which corresponded to 5.22 cycles of chemotherapy for XP and 4.56 cycles for FP (Kang et al. 2006). Progression free-survival and overall survival with XP was non-inferior to FP. Therefore, we assumed that both treatments compared in this study had the same effectiveness. We considered direct costs (drugs, administration of drug, physician fees), non-medical direct costs per patient (transportation to hospital) and indirect costs (hours of absence from work). A Delphi panel was conducted to identify local practices and resources use in Brazil. Costs such as medical payment, pre and post medication and administration were also included. One-way and multi-way sensitivity analyses were performed for testing robustness of results.

RESULTS: Total cost per patient in the XP group (R$14,247) was significantly lower than the total cost per patient in the FP group (R$15,649). As a result of the additional visits for infusion of 5-FU, FP patients incurred greater indirect costs in terms of lost time. The sensitivity analysis confirmed the robustness of the results. Capecitabine benefits AGC patients by reducing the number of infusion visits and time spent receiving IV administration, and would produce significant direct medical cost savings.

CONCLUSION: Findings of this cost-minimization analysis suggest XP as a cost-saving alternative from the Brazilian societal perspective.

COST-MINIMIZATION ANALYSIS OF ERLOTINIB VERSUS DOCETAXEL OR PEMETREXED AS SECOND-LINE THERAPY FOR NON-SMALL-CELL LUNG CANCER (NSCLC) FROM THE PERSPECTIVE OF A PRIVATE PAYER IN BRAZIL

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OBJECTIVES: To perform a cost-minimisation and budget impact analysis of erlotinib versus docetaxel or pemetrexed for the treatment of patients with advanced NSCLC who have failed previous chemotherapy. METHODS: In the absence of head-to-head clinical trial data for erlotinib versus docetaxel or pemetrexed, equivalent efficacy was assumed for the three interventions; indirect comparisons of phase III trial results suggest that this was a conservative assumption. We developed a cost-minimisation and budget impact model for cost comparison of these three treatments based on the results of the BR.21 study of erlotinib, and pivotal trials for docetaxel and pemetrexed, adopting a Brazilian private payer perspective. A 126-day timeframe was used for the comparison, based on the progression-free survival observed in the BR.21 study. A Delphi panel was conducted to identify local practices and their associated costs in Brazil. Other costs such as medical payment, pre- and post-medication, and administration were also included. One-way and multi-way sensitivity analyses were performed to assess the robustness of the outcomes. Discounting was not included due to the short-term perspective of the analysis. RESULTS: Total costs were R$26,825 for erlotinib, R$42,284 for docetaxel and R$79,841 for pemetrexed. The cost-savings observed for erlotinib were due to lower acquisition costs (R$26,795 versus R$40,217 for docetaxel and R$78,911 for pemetrexed) and its more favourable tolerability profile. Sensitivity analyses confirmed the robustness of the results obtained. The budget impact analysis showed savings in the first year after incorporation of erlotinib starting from R$3,576,931 in a conservative scenario, and reaching R$32,192,379 at the upper limit. CONCLUSION: The findings of this cost-minimisation analysis suggest that erlotinib is a cost-saving alternative under the private health care system perspective in Brazil.

COST-MINIMIZATION ANALYSIS OF ONCE-PER-CYCLE FIXED-DOSE ADMINISTRATION OF PEGFILGRASTIM VERSUS DAILY FILGRASTIM FOR THE PROPHYLAXIS OF CHEMOTHERAPY-INDUCED FEBRILE NEUTROPENIA IN BRAZIL

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OBJECTIVES: A cost-minimization analysis compared costs and medical resources of the treatment of pegfilgrastim (PF) versus filgrastim (F), for the prophylaxis of chemotherapy (CT)-induced febrile neutropenia (FN) in high-risk stage II-IV breast cancer patients.

METHODS: Two important clinical trials compared the efficacy of pegfilgrastim versus filgrastim: Holmes et al. 2002 and Green et al. 2003. Those studies have shown that a single dose of pegfilgrastim corresponds, in terms of severe neutropenia time reduction, to approximately 11 doses of filgrastim. Data of FN incidence was provided by a retrospective study based on a phase III trial (Green et al. 2002). According to that study, pegfilgrastim arm was more effective to decrease the FN incidence, consequently, hospitalization (PF 18% vs. F 31%), blood transfusion (PF 4% vs. F 25%) and IV antibiotics (PF 17% vs. F 21%). For the base case a patient with 72.8 Kg was considered. A panel with Brazilian experts was conducted to determine local practice for prophylaxis of FN and in the treatment of patients who develop FN. Only direct costs were considered: drugs administration, hemograms, daily hospital costs, transfusion and antibiotics costs. As per clinical trials the time horizon considered was 4 months therefore discounting was not applied. This assessment was undertaken from the Brazilian payer perspective.

RESULTS: Acquisition drug costs for pegfilgrastim were higher than filgrastim (R$ 5010 vs. R$ 447). However, pegfilgrastim treatment was cost-saving (R$ 4631) due to the reduction in the number of administrations per CT cycle (1 vs. 11). One-way sensitivity analysis was conducted and results were robust. CONCLUSION: Findings suggest pegfilgrastim as a cost-saving therapy for the prophylaxis of CT-induced FN under the payer perspective in Brazil.

COST MINIMIZATION ANALYSIS OF INTRA-VENOUS BIPHOSPHONATES THERAPIES AVAILABLE IN BRAZIL FOR THE PROPHYLAXIS OF SKELETAL EVENTS (SE) IN BREAST CANCER PATIENTS WITH BONE METASTASIS

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OBJECTIVES: A cost minimization analysis was developed to compare the costs of intra-venous biphosphonates therapies...
ECONOMIC EVALUATION OF ERLOTINIB, DOCETAXEL AND PEMETREXED AS SECOND LINE TREATMENT IN PATIENTS WITH ADVANCED NON–SMALL-CELL LUNG CANCER (NSCLC). A COST-MINIMIZATION IN ITALIAN HOSPITALS

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OBJECTIVES: The purpose of this study was to compare the costs of the drug, drug administration and managing of adverse events (AEs) using erlotinib, docetaxel and pemetrexed as second line therapy in non-small cell lung cancer (NSCLC), in the Italian hospital setting. METHODS: Since a clinical study comparing the three therapies is not available, the major clinical findings from randomized trials of each drug were used showing that all three chemotherapies have comparable efficacy results. Therefore a cost-minimization analysis was performed. Costs from the hospital perspective were calculated according to Italian clinical practice. Consumption of each chemotherapy was based on respective clinical trial, while to estimate the resources used in the AEs and for the drug administration a Delphi panel of experts was structured. In order to allow a comparison between an oral daily therapy (erlotinib) and infusion therapies administered every 21 days (docetaxel and pemetrexed), costs were computed on a monthly basis. RESULTS: The total per-patient cost for erlotinib was €1669, €2569 for docetaxel and €3324 for pemetrexed for one month therapy from the hospital perspective. The cost of AEs represents the 8%, 18%, and 3% of the total cost for erlotinib, docetaxel and pemetrexed. Sensitivity analysis showed that no reasonable changes in the quantity and cost of services reduced the savings associated with erlotinib by more than 33%. CONCLUSION: A cost-minimization analysis was performed to assess the cost of three second line chemotherapies in non-small cell lung cancer. The less costly alternative was erlotinib which could produce savings between 40% and 50% of total hospital costs in Italy.

PCN36

RESOURCE USE AND TIME SAVINGS IN SPAIN LINKED WITH NEW CHEMOTHERAPY PRESENTATIONS: THE CASE OF OXLAPLATIN

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OBJECTIVES: To value the use of resources and costs linked with different presentations of oxaliplatin: lyophilised powder and concentrated solution. METHODS: A cost-minimization analysis was conducted with the Spanish hospital’s perspective. Time consumption and use of resources linked with the preparation of the products were obtained from a study conducted in a cancer center in France. The preparation was performed according to standard clinical practice and several measures were taken to avoid any bias in the process. Spanish unitary costs were applied to all resource measures: technician’s time, consumables (needles, syringes, water, tampon gauze and air intake), using cost data from a Spanish oncology centre. RESULTS: The new concentration solution of oxaliplatin achieves a 36% reduction in preparation time, saving 139 seconds compared with the lyophilised powder (p < 0.001) and also is linked to less use of consumables. Monetary savings linked to preparation time and

PCN37

ASSESSING THE IMPACT ON STAFF RESOURCES AND PATIENT WAITING TIME OF A SWITCH FROM IV TO ORAL CHEMOTHERAPY WITH VINORELBINE

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OBJECTIVES: Navelbine® (Vinorelbine) Oral is an orally administered formulation of chemotherapy (CT) recently introduced in Italy in the treatment of NSCLC (Non Small Cell Lung Cancer) and Metastatic Breast Cancer. The purpose of this study is to evaluate the economic consequences of the impact on pharmacy, nursing time and patient waiting time of a switch from IV to oral CT in the treatment of NSCLC. METHODS: Cost-minimisation analysis was developed in order to evaluate the times required to deliver IV vinorelbine and oral vinorelbine. The comparison was made in two settings with different patient pathways, in the Cancer Center Unit of Istituto Nazionale dei Tumori, Milan and Azienda Ospedaliera di Busto Arsizio, Varese. A stop-watch was used to time elements of essential processes (pharmacy preparation and chemotherapy administration) and patient waiting time for the delivery of a single dose of chemotherapy, in order to build an hypothetic diagnostic and therapeutic pathway and to describe different phases, times and costs for each formulation. RESULTS: Administration of Vinorelbine Oral was less time consuming in both Cancer Centres. In the base case scenario, total costs were €171.75 for oral vinorelbine (80 mg/m²) versus €232.82 respectively. Productivity loss and patient waiting time were key drivers to our cost-minimisation analysis. Results were submitted to a Sensitivity Analysis. CONCLUSION: Delivery of oral CT is less resource intensive and time consuming than IV CT and reduces overall patient waiting in hospital. A switch from Vinorelbine IV to Oral formulation with home administration could increase the capacity of the Day-Hospital Unit, the number of prescriptions prepared by pharmacy and thereafter a reduction of the patient waiting list which is associated with a global cost reduction.

PCN35

AVAILABLE IN BRAZIL FOR PREVENTING SKELETAL EVENTS (SE) IN BREAST CANCER PATIENTS WITH BONE METASTASIS. METHODS: Indirect comparison of different clinical trials published do not allow us to consider that exist an efficacy difference among ibandronate acid, zoledronic acid and pamidronic acid (e.g.: Body et al. 2004; Rosen et al. 2003; Theriault et al. 1999). In our analysis only direct costs were considered. The indirect costs of treating SE were not estimated. For direct costs calculations we assumed the reduction in analgesics usage reported by De Cock et a. 2005 (Ibandronic acid: 7% reduction vs. Comparators: 3% reduction). The time horizon of the analysis was 14 months which represents the average overall survival of patients (Hotton J et al. 2004). Therefore discounting was not applied. The payer perspective was adopted within the Brazilian setting. A one-way sensitivity analysis was conducted. RESULTS: Results show that ibandronate acid offers the lowest treatment cost, followed by pamidronic acid and zoledronic acid (R$ 10,301, R$ 10,906 and R$ 12,829). Results were sensitive to drug prices. CONCLUSION: Results suggest ibandronate acid as a cost-saving alternative with better safety profile when compared to zoledronic acid and pamidronic acid under the Private Healthcare System perspective in Brazil.