PCN81

THE COST-EFFECTIVENESS ANALYSIS OF SEMI-ANNUAL SCREENING FOR HEPATOCELLULAR CARCINOMA IN PATIENTS WITH CHORNIC HEPATITIS B

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OBJECTIVES: Hepatocellular carcinoma (HCC) is the fifth cause of dead from cancer worldwide. Hepatitis B virus infection is the important risk of HCC. Alpha fetoprotein (AFP) and liver ultrasound had been introduced as semi-annual screening test for HCC in human with hepatitis B surface antigen positive or patients with chronic hepatitis B. However, the cost-effectiveness of this screening is not well defined. Our objective was to explore the cost-effectiveness of semi-annual HCC screening using AFP and liver ultrasound from societal perspective compared with no screening. **METHODS:** With a Markov model, we simulated the four health states of natural history of HCC which were no HCC state, resectable HCC state, unresectable HCC state and death state with 6-month cycle lenght. The based case decision model was run for male patients with age of 51 that is mean age of screening group. Cost and outcomes were discounted at a 3% annual rate. Probabilistic sensitivity analysis was performed. **RESULTS:** For semi-annual HCC screening, the incremental cost effectiveness ratio (ICER) which compared with no screening was US$14,111 (95%CI US$13,650–US$14,573) per quality adjusted life year (QALY) for male chronic HBV patients. **CONCLUSIONS:** AFP with liver ultrasound is not cost effective for semi-annual screening HCC in patients with hepatitis B surface antigen positive or patients with chronic hepatitis B, according to the Thai threshold that ICER of cost-effective intervention should not be exceed US$ 9000 per QALY.

PCN82

COST COMPARISON OF BEVACIZUMAB PLUS CISPLATIN AND GEMCITABINE VERSUS PEMETREXED AND CISPLATIN THERAPY IN PATIENTS WITH ADVANCED OR RECURRENT NON-SQUAMOUS NON-SMALL CELL CANCER IN GERMANY – AN UPDATED ANALYSIS

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OBJECTIVES: New treatments for advanced NSCLC offer clinical benefits over standard chemotherapy, however it is important they demonstrate value for money. Bevacizumab with chemotherapy improves survival and time to progression in patients with advanced NSCLC compared to chemotherapy alone. Pemetrexed and cisplatin has shown survival improvements over gemcitabine plus cisplatin. In the light of gemcitabine generic pricing, the aim of this analysis was to provide an update on how the treatment costs of bevacizumab plus cisplatin and gemcitabine (BCG) compare with pemetrexed plus cisplatin (PC) therapy in Germany. **METHODS:** A 3-state Markov model was used to evaluate the costs of treating advanced or recurrent NSCLC with either BCG or PC induction therapy. The model assumes patients move between states according to transition probabilities derived from the efficacy data (progression-free survival) from the pivotal trials. Drug costs assume chemotherapy was given for up to 6 cycles, but that single agents pemetrexed and bevacizumab (7.5 mg/kg) were administered until progression. **RESULTS:** The monthly drug costs for BCG and PC therapy were €5764 and €6456, respectively; a saving of €692 per month with BCG. The mean monthly costs of administration were €205 for BCG and €153 for PC (a difference of €52). **CONCLUSIONS:** With the availability of generic gemcitabine during 2009, triplet therapy with bevacizumab has increased the potential monthly cost savings compared to doublet chemotherapy with pemetrexed. From a budget perspective bevacizumab should be considered as the targeted therapy of choice for patients with advanced NSCLC in Germany.

PCN83

COST-EFFECTIVENESS OF LENOGRASTYM ON NEUTROPENIA DURATION IN ADULTS RECEIVING CHEMOTHERAPY FOR SOLID TUMORS OR LYMPHOMAS

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OBJECTIVES: The aim of present analysis was to assess cost-effectiveness of lenograstim in comparison with other G-CSFs—filgrastim and pegfilgrastim in Polish settings (threshold is about 100,095 PLN). **METHODS:** Analysis covered time horizon of one chemotherapy cycle. A public payer perspective was adopted for cost analysis. The costs included were based on Polish NHF reference costs list. Data on time to ANC recovery, number of days with fever, length of hospital stay and antibiotics use were obtained from randomized controlled trials (RCTs) identified in the conducted systematic review. These included trials on prophylactic G-CSF use as well as trials in which only patients with neutropenia were included. Equations describing costs and QALY according to neutropenia and fever length, hospital stay and antibiotic use were established. **RESULTS:** Estimated QALY difference between lenograstim and filgrastim is 0.0035 ($CI_{95\%}$[0.0023; 0.0048]), compared to pegfilgrastim is 0.0039 ($CI_{95\%}$[0.0026; 0.0052]). Total costs difference between lenograstim and filgrastim is –2015 PLN ($CI_{95\%}$[–3004; –938]) and compared to pegfilgrastim is –3236 PLN ($CI_{95\%}$[–4125; –2259]). Probability of lenograstim being cost-effective over filgrastim is 99.98% and over pegfilgrastim is 100%. Taking into account only trials where G-CSFs were used in neutropenia prophylaxis estimated QALY difference between lenograstim and filgrastim is 0.0029 ($CI_{95\%}$[0.0015; 0.0044]), compared to pegfilgrastim is 0.0031 ($CI_{95\%}$[0.0017; 0.0047]). Total costs difference between lenograstim and filgrastim is –1720 PLN ($CI_{95\%}$[–2935; –487]) and compared to pegfilgrastim is –3097 PLN ($CI_{95\%}$[–4168; –1943]). Probability of lenograstim being cost-effective over filgrastim is 99.81% and over pegfilgrastim is 100%. **CONCLUSIONS:** Lenograstim is dominant over filgrastim and pegfilgrastim. Acknowledgements: This analysis was supported by Sanofi-Aventis.

PCN84

COST EFFECTIVENESS ANALYSIS OF ANTI-EPIDERMAL GROWTH FACTOR RECEPTOR AGENTS FOR TREATMENT REFRACTORY METASTATIC COLORECTAL CANCER

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OBJECTIVES: To conduct a cost effectiveness analysis of anti-EGFR treatment regimes for the treatment refractory mCRC. Clinical trial data was available and utilized to examine panitumumab monotherapy and to compare cetuximab monotherapy vs cetuximab + irinotecan therapy, while indirect clinical trial data compared cetuximab based therapies with panitumumab monotherapy. **METHODS:** A Markov model comprising of three health states (stable disease, progressive disease and death), was developed from an US societal perspective to estimate economic implications of weekly anti-EGFR treatments for 52 weeks for 1000 treatment refractory mCRC patients. Transition probabilities were estimated based on available clinical literature data for each treatment. Therapy cost, health utilities, direct and indirect costs were based on published literature and national health care databases. Cost parameters were reported based on 2009 US dollars with a 3% discount rate. **RESULTS:** The analyses yielded an ICER of $249,035/QALY for cetuximab monotherapy vs cetuximab + irinotecan, an ICER of $266,196/QALY for cetuximab monotherapy vs. panitumumab, an ICER of $250,992/QALY for cetuximab + panitumumab and an ICER of $773,978/QALY for panitumumab vs. best supportive care (placebo). Through strictly increasing rankings of the ICERs, we find best supportive care to be most cost effective therapy, followed by panitumumab monotherapy, cetuximab monotherapy and cetuximab + irinotecan therapy; however, changes in model parameters may influence the rankings of the treatment regimes. **CONCLUSIONS:** Based on the willingness to pay threshold of $150,000/QALY, treating treatment refractory mCRC patient with anti-EGFR agents is not cost effective. However, since the clinical literature lacks comprehensive head to head clinical trial amongst all anti-EGFR agents, further research is necessary.

PCN85

ECONOMIC MODELING FOR TREATMENT FAILURE PATIENTS USING MULTIPLE ROUNDS OF THERAPY AS COMPARATOR: CASE IN POINT LYMPHOMA DRUG CANDIDATE

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OBJECTIVES: Treatment failure patients in various disease areas are often treated by multiple rounds of therapy. However new treatment options are emerging that have potential to replace that treatment with single-agent or single round of combination treatment. It is challenging to demonstrate cost effectiveness of these new agents, especially when comparator is not one single regimen but sequential treatment. We present here our results from a study where we developed a model that can incorporate multiple rounds of treatment or relapses to estimate cost effectiveness of new emerging therapies. **METHODS:** Intervention was chosen as an emerging T-cell lymphoma drug candidate. Comparator was chosen as sequential treatment with 1–5 chemo regimens (called DHAP, ESHAP, ICE, HyperCVAD and EPOCH). All comparator chemo regimens are generics and their prices were obtained from Medispan's PriceRx. Intervention's price was assumed as median price of branded chemotherapy agents. Cost, efficacy, adverse events and utilities were sourced and estimated from published studies for T and B-cell lymphoma. Relapses and number of chemo regimens for comparators were varied from 1–5. Sensitivity analyses were performed for all base calculations. **RESULTS:** Model results show that a new agent that can replace multiple rounds of treatment is relatively more cost effective that another agent that replaces relatively fewer rounds of treatments. Our base case incremental cost effectiveness with one chemo regimen as comparator was $262,908. However if there are 2,3,4 or 5 sequential rounds, the ICER values change to $223,078, $183,249, $143,420, and $103,591, respectively. **CONCLUSIONS:** For newer agents that are indicated for treatment failure patients, the use of sequential treatments as comparator can significantly improve their cost effectiveness. The model approach described here can be used for Arthritis, Hepatitis C, and Diabetes and Oncology TF patients.