PCN113

COST-UTILITY ANALYSIS OF COMBINATION THERAPY OF PEGYLATED LIPOSOMAL DOXORUBICIN(PLD) AND CARBOPLATIN FOR KOREAN WOMEN WITH PLATINUM-SENSITIVE OVARIAN CANCER

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OBJECTIVES: Our objective was to perform the cost-utility analysis of comparing the combination therapy of Pegylated Liposomal Doxorubicin(PLD)/ Carboplatin with that of Paclitaxel/Carboplatin as a second-line treatment for women with Platinum-sensitive ovarian cancer among the Koreans. **METHODS:** Model : Markov model was constructed with 10-year time horizon. Treatment sequence was consisted of 1st ~ 6th line chemotherapy and best supportive care before death. Cycle length, time interval for efficacy evaluation of chemotherapy, was 9 weeks. Structure: The model consists of four health states: Responsive, Progressive, Clinical Remission and Death. At any given time, a patient may either remain at the current therapy line or make a transition to the next therapy or death. Effectiveness data: Median time to progression and survival were obtained through a systematic literature review and were pooled using meta-analytical approach. In case the required data was not available, it was elicited from opinions of expert panel. These outcomes were then converted into transition probabilities using formula. Costs and utilities: Direct cost included drug acquisition costs, costs for test, monitoring, BSC, and out-of-pocket cost. Indirect costs included transportation-related expenses. Utilities were obtained from existing literature. **RESULTS:** PLD/Carboplatin combination as the 2nd line therapy in the sequence of treatment turned out to be more effective but with higher costs, showing ICER of Korean Won(KRW) 19,712,349 (equivalent to US$ 18,093). This result was robust in all the deterministic sensitivity analyses, only except when the median TTPs were varied. The probability of cost-effectiveness for PLD/Carboplatin combination therapy was 50.6% at the willingness to pay of KRW 22,000,000 (about US$20,202), which is 2010 Korean GDP per capita. **CONCLUSIONS:** It could be safe to assert that the PLD/Carboplatin combination therapy is an economically valuable option as the 2nd-line chemotherapy for the treatment of Platinum-sensitive ovarian cancer within the Korean context.

PCN114

COST EFFECTIVENESS OF ADJUVANT CYCLOPHOSPHAMIDE IN THE TREATMENT OF BREAST CANCER IN SPAIN

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OBJECTIVES: The combination of doxorubicin and Cyclophosphamide (AC) has been a standard adjuvant breast-cancer regimen. The purpose of this analysis was to estimate the cost-effectiveness of AC compared with AT (Doxorubicin and Docetaxel), CMF (Cyclophosphamide, Methotrexate and 5-Fluoruracil) and FEC (5-Fluoruracil, Epirubicin and Cyclophosphamide) administered as adjuvant therapy to women with node-positive early breast-cancer in Spain. **METHODS:** We developed a multi-country Cost-Utility-Model to simulate the long-term consequences from initiation of adjuvant-chemotherpy over 10-years. Markov-modelling technique were used to estimate incidence of complications during chemotherapy (febril-neutropenia, chemotherapy-induced nausea and vomiting, dose-reduction, dose-delay, other grade 3 or 4 adverse-events) and long-term consequences like local or distant-relapse, acute-myelogenous-leukemia, chronic-heart-failure and death. Monte-Carlo-simulation accounted for uncertainty. The model includes twelve health-states. Probabilities were derived from clinical and epidemiological studies; direct costs (2010 Euro) from published sources from the payer's perspective. QALYs, life-years and costs were discounted at 5% p.a. **RESULTS:** Over a 10-year timeframe, costs associated with AC amounts to 13,265.88€ and 5.85 QALYs (6.49 LYs). Costs associated with AT are 15,361.89€. The cost-saving potential associated to AC amounts to 2,096.01€ per patient with comparable outcomes to AT. Costs associated with CMF are 14,144.63€ and QALYs and LYs do not differ from AC. AC dominates both AT and CMF. FEC associated total-costs are 15,138.23€ and 6.02 QALYs (6.81 LYs). Incremental costs vs. AC amounts to 1,872.35€ favorable for AC, the QALY gains are 0.17 QALYs (0.32 LYs). The incremental cost-effectiveness-ratio amounts 46,208.13€. Probabilistic sensitivity-analysis demonstrated the robustness of the model regarding input-data and assumptions. From a cost-minimization viewpoint AC remains the dominant strategy up to a price of 0.13€/mg (current price 0.01€/mg). **CONCLUSIONS:** AC chemotherapy is a cost-effective alternative to AT, CMF and FEC. AC is characterized by a clear cost advantage and comparable quality-of-life and life-years.

PCN115

COST OF SKELETAL-RELATED EVENTS (SRES) IN PATIENTS WITH BONE METASTASES TO SOLID TUMOURS BASED ON THE HEALTH RESOURCE UTILISATION (HRU) COLLECTED IN A PROSPECTIVE EUROPEAN MULTINATIONAL OBSERVATIONAL STUDY

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OBJECTIVES: Estimate the cost of SREs in patients with bone metastases secondary to solid tumours (i.e. breast, lung and prostate). **METHODS:** This study assessed county-specific HRU (in Germany, Italy, Spain and the UK [EU4]) as attributed by study investigators to SREs (defined as pathologic fracture [non-vertebral fracture, NVF; vertebral fracture, VF], radiation to bone [RB], spinal cord compression [SCC] and surgery to bone [SB]). Cost-conversion was based on country-specific HRU data (inpatient stays, outpatient visits, emergency room visits, nursing home/long-term care facility stays, home health visits and outpatient procedures) collected retrospectively for 90 days prior to enrolment and prospectively for up to 18-21 months. Unit costs were collected from 2010 national sources. GBP were converted into Euros (£1=1.12867 Euro). **RESULTS:** A total of 478 eligible patients contributed 893 SREs (109 NVF, 48 VF, 585 RB, 61 SCC and 90 SB) during the study period which, were used for cost conversions. Mean cost per NVF across the EU4 ranged from 1720€ (Germany) to 3209€ (Spain). Mean cost per VF was lowest in the UK (1015€), was more than twice as costly in Germany and Italy (2100€) and highest in Spain (6968€). In the UK, mean cost per RB was about 3 times lower and cost per SCC was approximately twice as costly relative to the other European countries. Mean SB cost was 3348€ in Italy and 4263€ in Spain and was twice as costly in Germany and the UK. Cost variation was linked to the type of HRU and differences in local unit costs. **CONCLUSIONS:** All SREs are associated with substantial costs and cost per SRE type varied depending on the type of HRU and local unit costs. Preventing SREs in patients with bone metastases may help to reduce the financial burden to the European healthcare systems.

PCN116

COST-EFFECTIVENESS OF DENOSUMAB VERSUS ZOLEDRONIC ACID (ZA) FOR THE PREVENTION OF SKELETAL-RELATED EVENTS (SRE) IN PATIENTS WITH BONE METASTASES FROM SOLID TUMORS IN THE NETHERLANDS

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OBJECTIVES: The objective of this study was to perform a model-based economic evaluation of denosumab vs. ZA in the prevention of SREs in patients with bone metastases from advanced solid tumors based on data from head to head phase III clinical trials in breast cancer (BrCa), prostate cancer (PrCa) and other solid tumors (OST), excluding multiple myeloma. **METHODS:** Three separate three-state Markov models (On Treatment, Off Treatment, and Dead) were developed for each cancer type. Constant SRE incidence rates estimated from the clinical trials were used for denosumab and ZA within each study. Overall survival was not significantly different between treatments, and was estimated using parametric distributions for extrapolation beyond the trial duration. Analyses were based on a lifetime model horizon and trial-based discontinuation. SRE-related utility decrements were derived from trial-based EQ-5D data. SRE-related costs and administration cost were based on local data. Costs were discounted 4% and QALY outcomes at 1.5% according to local guidelines. The models predictions were validated by comparing the SRE predictions against those observed in the clinical trials. **RESULTS:** Denosumab resulted in fewer SREs, higher QALYs, lower SRE-related costs, lower administration cost and higher medication and total cost. The predicted incremental cost-effectiveness ratio (ICER) per SRE avoided was €1,644, €3,475, and €690 and the ICER per QALY gained was €26,524, €44,622, and €11,660 for BrCa, PrCa and OST, respectively. One-way sensitivity analyses were performed including administration cost, SRE and adverse event cost and SRE QALY decrements. Administration costs were important drivers of results. **CONCLUSIONS:** Denosumab provides superior effectiveness vs. ZA with fewer SREs predicted over patients lifetime. The estimated incremental cost/QALY indicates that denosumab is cost-effective vsersus ZA in The Netherlands and represents good value for money in prevention of SREs in patients with bone metastases from all advanced solid tumors based on commonly accepted thresholds.

PCN117

HEALTH RESOURCE UTILISATION (HRU) ASSOCIATED WITH SKELETAL-RELATED EVENTS (SRES) IN PATIENTS WITH BONE METASTASES (BMS): RESULTS FROM A RETROSPECTIVE, MULTINATIONAL EUROPEAN STUDY

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OBJECTIVES: Patients with BMs from advanced cancer experience SREs (radiation/surgery to bone, pathologic fracture or spinal cord compression). Limited data exist on the financial burden of SREs. HRU data will support healthcare resource planning and the assessment of new products that prevent/delay these events. **METHODS:** Eligible patients with BMs from breast/lung/prostate cancer or multiple myeloma were enrolled in centres in Austria, Czech Republic, Finland, Greece, Poland, Portugal, Sweden and Switzerland. HRU extracted from patient charts included inpatient stays, outpatient visits, day care visits, emergency room visits, procedures, etc. We present HRU data for Austria, Czech Republic, Poland, Sweden and Switzerland (collected retrospectively from both 3.5 months prior to the SRE and 3 months after the SRE). **RESULTS:** A total of 658 eligible patients with at least one SRE were enrolled across five countries (36%, 13%, 27% and 25% had breast, lung and prostate cancer and multiple myeloma, respectively). Across all tumour and SRE types, mean increase from baseline in number of inpatient stays per SRE for Austria, Czech Republic, Poland, Sweden and Switzerland, respectively, were 1.0(95%CI:0.7-1.3), 0.8(95%CI:0.6-1.0), 0.9(95%CI:0.7-1.1), 0.8(95%CI:0.6-0.9) and