mental cost of €496, resulting in an incremental cost-effectiveness ratio of €5470/LYG. LYG and incremental costs were respectively most sensitive to time-horizon and the effect of Hexvix on recurrence rate (€3,251/LYG to €25,549/LYG). **CONCLUSION:** Compared to standard white light cystoscopy alone, in this hypothetical model adding Hexvix to this procedure appears to be cost-effective in Belgium from the health care payer's perspective.

PCN22

COST-EFFECTIVENESS OF SUNITINIB AS SECOND LINE TREATMENT IN PATIENTS WITH METASTATIC RENAL CANCER IN BELGIUM

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OBJECTIVES: To determine the cost-effectiveness of sunitinib malate versus best supportive care (BSC) after failure of cytokine immunotherapy from the perspective of the Belgian public payers (INAMI/RIZIV). **METHODS:** A Markov model was constructed to simulate disease progression after failure on first-line cytokine therapy. Patients entered the model receiving sunitinib plus BSC or BSC alone. The model had 3 disease states (progression-free survival, tumor progression and move to BSC, and death) and used monthly cycles. Outcomes in the model were valued in terms of progression-free life years (PFLYs) and life years (LYs) gained. The cost-effectiveness measures were cost per PFLY and cost per LY saved. The effectiveness parameters for sunitinib were taken from a phase II clinical trial (RTKC-0511-014). To estimate survival for patients receiving palliative/supportive care, data from a SEER-Medicare analysis and a study of previously-treated patients with mRCC who were candidates for second-line therapy (Motzer et al., 2004) were combined. Medical costs in 2006 prices were considered from the perspective of the RIZIV/INAMI. Resource utilization was based on expert opinion from a modified Delphi panel consisting of seven Belgian physicians specialized in mRCC. Utilities were derived from published literature. The model incorporates the expensive cost of the terminal stage (last 4 weeks of life). Future costs were discounted at 3% and effects at 1.5% in line with the Belgian pharmacoeconomic guidelines. The time horizon was lifetime (10 years). **RESULTS:** Treatment with sunitinib was associated with an average gain of 5.13 PFLYs and 1.11 LYS per patient. The incremental cost-effectiveness ratio of sunitinib versus BSC was €7,665 per PFLY and €35,389 per LY gained. **CONCLUSION:** Given the assumptions and limitations of this model, if the value of a life year gained for cytokine-refractory mRCC patients is at least €35,389 sunitinib should be considered a cost-effective therapy.

PCN23

PRIMARY PROPHYLAXIS AGAINST FEBRILE NEUTROPENIA WITH PEGFILGRASTIM IS COST-EFFECTIVE COMPARED WITH FILGRASTIM IN NON-HODGKIN'S LYMPHOMA PATIENTS RECEIVING CHOP-21 IN ITALY

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OBJECTIVES: Primary prophylaxis with granulocyte-colony stimulating factors, used in the first and subsequent cycles of chemotherapy, is recommended by the 2006 ASCO and EORTC guidelines when the overall risk of febrile neutropenia (FN) is ≥20%. We evaluated the cost-effectiveness of pegfilgrastim versus filgrastim used for 11 days (as used in clinical trials) and 6 days (often used in clinical practice) in patients with aggressive non-Hodgkin's lymphoma (NHL) receiving CHOP-21 chemotherapy in Italy. **METHODS:** A decision-analytic model was constructed from a health care payer's perspective with a lifetime model horizon. Costs (2006 value) including drugs, drug administration, FN-related hospitalisations, and subsequent medical costs were acquired from official price lists or literature. FN risk, FN case-fatality, relative dose intensity (RDI), and impact of RDI on survival were based on data from a comprehensive literature review and expert panel validation. Using data from a meta-analysis and several observational studies, we estimated that the absolute risk of FN in patients receiving pegfilgrastim decreased from 19.6% to 13.1% (6.5 percentage points) versus 11-day filgrastim, and from 25.1% to 13.1% (12 percentage points) versus 6-day filgrastim. NHL mortality and all-cause mortality were from literature. Sensitivity analyses were performed on key parameters. **RESULTS:** Pegfilgrastim was cost saving compared with 11-day filgrastim (€5053 versus €7465). Compared with 6-day filgrastim, the incremental cost-effectiveness ratio (ICER) was €475 per FN event avoided or €5 per 1% decrease in absolute risk of FN. Pegfilgrastim achieved 0.112 more discounted life-years (LY) at a minimal cost increase of €57 (€5053 versus €4996) per person, yielding an ICER of €513/LY gained. Results were most sensitive to the relative risk of FN for filgrastim versus pegfilgrastim. **CONCLUSION:** In Italy, pegfilgrastim was cost saving compared with 11-day filgrastim and appeared to be cost-effective compared with filgrastim used for 6 days per cycle of CHOP-21.

PCN24

COST-EFFECTIVENESS ANALYSIS OF 5HT3 RECEPTOR ANTAGONISTS FOR PREVENTION OF CHEMOTHERAPY INDUCED NAUSEA AND VOMITING

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OBJECTIVES: To study the incremental cost-effectiveness of two 5HT3 receptor antagonists-granisetron (GR) against ondansetron (ON)- in prevention treatment of Chemotherapy induced nausea and vomiting (CINV). **METHODS:** Prospective, multi-center, observational study on 325 naïve patients recruited at 8 Spanish Oncology Services. Consecutive patients undergoing 1st cycle with moderate to highly emetogenic chemotherapy, and scheduled antiemetic treatment based on GR or ON were enrolled. After chemotherapy (day 0), daily maximum nausea intensity and number of vomiting episodes were self-recorded during 5 more days in a diary card. Acute CINV was defined as developed in day 0, and delayed CINV as developed or persisting in days 1–5. Antiemetic "full" response was defined as: no emesis and no/mild nausea. Differences between GR and ON in adverse event costs, emergency visits, or other concomitant treatments were negligible. Only antiemetic drug direct costs were considered. Incremental Cost-Effectiveness Ratio (ICER) was computed for 1,000 and 10,000 bootstrap samples. Mean ICER values, bootstrap percentiles and cost-effectiveness scatterplots were used for comparison. **RESULTS:** No differences were found in acute treatment effectiveness (GR = 78.7%, ON = 79%) making impossible to interpret ICER values. Direct mean cost was somewhat higher for GR = 36.9€ (SD = 35.3) than for ON = 34.1€ (SD = 34.2). Delayed effectiveness was higher in GR (51.8%) than in ON (42.7%) arm, with lower mean (90%IC) costs in GR = 19.54€ (16.57, 22.6) than in ON = 55.26€ (46.4, 64.2) group. Bootstrap ICER mean value was 353.1 (P10 = 1120.8, P90 = 85.7). Scatterplots in the cost-effectiveness space showed

clear segregation. Overall treatment results were similar to delayed treatment ones. **CONCLUSION:** No statistic differences were found between treatments in acute effectiveness, and hence cost minimization analysis was only considered. GR showed to be more cost-effective than ON in delayed and overall emesis treatment.

PCN25

PHARMACOECONOMIC EVALUATION OF CAPECITABINE (XELODA) FOR GASTRIC CANCER IN THE UNITED KINGDOM

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OBJECTIVES: The purpose of this study was to evaluate the cost-effectiveness of capecitabine (Xeloda®) for the treatment of advanced gastric cancer (aGC). This followed EMEA approval in March 2007 and was intended initially to inform an appraisal by the Scottish Medicines Consortium (SMC). **METHODS:** Based on clinical effectiveness evidence demonstrating that oral capecitabine is at least as good as IV 5-FU, a cost-minimisation analysis was performed. The replacement of continuous infusion IV 5-FU within a standard chemotherapy regimen including cisplatin and epirubicin (ECF) by oral capecitabine (ECX) was assessed. This analysis investigated the comparative drug acquisition costs of ECX versus ECF regimens, plus the incremental drug administration costs associated with providing continuous infusion IV 5-FU. The administration costs included hospital visits, transport, staff time and disposables. This health care resource utilisation (HCRU) was associated with insertion and management of central venous access lines, drug preparation, and use of infusional drug pumps. HCRU and unit costing evidence sources included clinical trials, published literature and an expert panel of specialists (oncology doctors, nurses and pharmacists) with experience of aGC management. Extensive sensitivity analysis assessed areas of potential uncertainty. The primary perspective was from the NHS, but a societal analysis was also undertaken. **RESULTS:** Additional drug acquisition costs of ≤634 per patient course for capecitabine are offset by drug administration savings of ≤1773. The net cost saving is ≤1139 per patient. Sensitivity analysis demonstrates that capecitabine remains cost saving across a range of uncertain parameters and under a number of realistic scenarios. Also, oral dosing confers significant benefits to patients in terms of personal time and cost savings. **CONCLUSION:** Capecitabine is cost saving in aGC and clearly offers good value-for-money for both the NHS and patients. Oral administration of chemotherapy in this therapy area may also help address capacity limitations within the cancer service.

PCN26

INNOVATION OVER THE PRODUCT LIFE CYCLE: ESTIMATING THE POTENTIAL ECONOMIC VALUE OF TRASTUZUMAB IN BREAST CANCER IN FIVE EUROPEAN COUNTRIES BETWEEN 2000 AND 2020

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OBJECTIVES: Trastuzumab (T) was recently approved to treat women with HER2+ early breast cancer (eBC) following earlier approval for metastatic breast cancer (mBC). The objective is to estimate the potential aggregate economic value and the incremental cost-utility ratio (ICUR) over T's life cycle in five major European countries from 2000 to 2020. **METHODS:** The projected life cycle ICUR was estimated by combining the ICURs of T in eBC and mBC in a dynamic life cycle (DLM) model. The model also projects the economic value to society, defined as monetized cumulative net quality-adjusted life years (QALYs) gained minus net life-cycle treatment costs. Using indication-specific ICURs (€43,000 per QALY in mBC and €15,000 per QALY in eBC) and epidemiological projections of disease incidence in Germany, France, UK, Italy, and Spain, the projected life cycle ICUR and cumulative economic value were estimated, discounting at 3.5%. **RESULTS:** We project a relative increase in the number of women with HER2+ eBC vs. HER2+ mBC—a ratio of 3.4 in 2020 up from 2.1 in 2000. Over this period, the projected overall mean ICUR was €18,000 per QALY with a total of 800,000 discounted QALYs gained. Scenario analysis was performed for alternative use rates and ICURs. When benchmarked against potentially acceptable values per QALY of €50,000 or €100,000, the total projected economic value of T treatment would range from €30 to €70 billion, respectively. **CONCLUSION:** Application of a DLM estimation approach to the case of trastuzumab demonstrates that: 1) the economic value of a product can change due to life-cycle innovation, and 2) typical static, indication-specific cost-effectiveness models do not account for the interdependence of drug development and adoption decisions over the life cycle. This raises important policy questions about the appropriate perspective—static vs. dynamic—and reimbursement for an innovative product whose economic value changes over time.

PCN27

COST-EFFECTIVENESS OF HUMAN INTERFERON-ALPHA AS ADJUVANT TREATMENT FOR PATIENTS WITH RESECTED CUTANEOUS MALIGNANT MELANOMA IN STAGE IIB & III

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OBJECTIVES: The objective of this economic evaluation was to estimate the cost-effectiveness of HuIFN-á as adjuvant treatment for patients with resected cutaneous malignant melanoma in stage IIb-III in a Swedish setting. **METHODS:** The economic evaluation is based on a prospective multicentre study, in which 252 patients with totally resected cutaneous melanoma in stage II-IV (whereof 158 high-risk patients with melanoma in stage IIb-III) were randomised to induction treatment with dacarbazine (DTIC) followed by six months adjuvant treatment with low-dose natural human interferon alpha (HuIFN-á) versus no adjuvant treatment. A Markov model was developed to assess the costs and clinical outcomes of DTIC/HuIFN-á compared with no adjuvant treatment. Time-to-progression and overall survival were based on data from the clinical study. The model compares two groups of patients, 54 years old at base-line, and adopts a life-long horizon. The primary clinical outcome measure is quality-adjusted life years (QALYs) gained. Direct medical costs were included in the analysis. An additional analysis was performed that included costs of added years of life for the Swedish population. Cost and outcome data were discounted with a 3% annual rate. Sensitivity analyses were performed to test the stability of the base case results. **RESULTS:** The economic analysis showed that adjuvant treatment with HuIFN-á for stage IIb-III melanoma patients resulted in €8200 higher costs and 2.5 additional QALYs, leading to an incremental cost per QALY gained of €3300 compared to no adjuvant treatment. Including costs of added years of life increased the cost per QALY gained to about €21,100. The results were stable in sensitivity analyses. **CONCLUSION:** The economic evaluation indicates that adjuvant treatment with HuIFN-á is cost-effective for patients with resected cutaneous malignant melanoma in stage IIb-III.