vival (PFS) and progressive disease, using a parametric extrapolation of the NO16966 phase III trial survival data. The predicted time spent in each health state was weighted using published CRC utility scores to account for patient quality of life and to estimate the Quality Adjusted Life Years (QALYs) for both bevacizumab + XELOX and FOLFOX. One-way sensitivity analysis was performed in order to evaluate the uncertainty around the base case estimate of the incremental cost-effectiveness ratio (ICER) for bevacizumab + XELOX compared with FOLFOX. Uncertainty surrounding the parameters of the model was evaluated by modifying the costs and parametric survival assumptions. RESULTS: The base case cost per QALY was estimated to be £25,806. The highest ICER was observed when only a 2-year time horizon was taken (£35,241); this, however, does not capture all the costs and benefits of the interventions. The ICER for the scenario in which 100% of FOLFOX patients did not require an inpatient stay was £31,669 and decreased to £14,431 when full sensitivity analysis of the administration costs was performed. CONCLUSIONS: This sensitivity analysis illustrated that the combination of bevacizumab and XELOX demonstrated a stable ICER. Substantial cost savings and health benefits gain through the use of bevacizumab and oxaliplatin in combination with bevacizumab showed to be a cost-effective treatment strategy.

1Maastro Clinic, Maastricht, The Netherlands; 2University Hospital Maastricht, Maastricht, The Netherlands; 3Turner & Townsend, Munich, Germany
OBJECTIVES: Radiotherapy (RT) with charged particles, protons and carbon ions (c-ions) offers clinical advantages in cancer treatment compared to conventional RT with photons, including better tumor control and/or less side-effects. The costs of particle therapy (PT) are however, much higher then of the photon therapy. Therefore, the cost-effectiveness of PT as opposed to the best current photon therapy was examined.

METHODS: In a cost-effectiveness Markov model the prostate cancer treatments with (A) c-ions and (B) photons were evaluated. The outcomes were survival, quality adjusted survival and costs. The therapy effects and quality of life estimates were derived from the literature. Toxicity of treatment was taken into account. Direct medical costs were assigned. The RT costs were based on an extensive cost analysis. The time horizon of the model was 10 years. The analyses were run for a cohort of 70 year old. The study was performed from the health care perspective.

RESULTS: The expected total health care costs per patient over 10 years were: A) £62,880, and B) £13,550. The expected life years were 8.78 and 8.68, respectively. The difference in the clinical effects became larger, when quality of life was accounted for. The quality of life adjusted life years (QALY’s) were: A) 7.82 and B) 7.59. Extra costs per QALY gained were €40,170 (up to €65,000 in a sensitivity analysis).

CONCLUSIONS: The preliminary results indicate that with a threshold of €80,000 per QALY, treatment with c-ions is cost-effective (for age 70). The model will be further adapted. Firstly, treatment with protons will be included. Secondly, analyses will be performed for different age and risk categories. Thirdly, the probability that the different treatment modalities are cost-effective, given the existing uncertainty, will be assessed. Finally, an expected value of perfect information (EVPI) analysis will be conducted.

COST MINIMIZATION ANALYSIS OF ADVANCED GASTRIC CANCER TREATMENT WITH CAPECITABINE/CISPLATIN (XP) VS. 5-FU/CISPLATIN (FP) REGIMENS IN POLISH SETTING Kawalec P, Szwadowski A, Federowicz P, Szklutecka-Debek M, Russel-Szymczyk M
1Centrum HTA, Krakow, Poland; 2M. Sklodowska-Curie Memorial Cancer Center and Institute of Oncology, Warsaw, Poland; 3Roche Polska, Warsaw, Poland
OBJECTIVES: Evaluation of costs of oral capecitabine and cisplatin (XP) treatment vs. intravenous 5FU and cisplatin (FP) infusion from public payer’s perspective in Poland. METHODS: Based on systematic review of medical databases similar clinical efficacy for compared treatment options was proved. Therefore a cost minimization analysis was performed to identify costs and estimate potential benefits of 5FU/cisplatin replacement with capecitabine/cisplatin scheme, from public payer perspective. Efficacy and safety data were derived from clinical trial published by Y.Kang et al. (JCO, 2006 ASCO Annual Proceedings). A pharmacoeconomic model was used to compare costs of these two therapies. Costs of alternative therapies were estimated based on clinical results on actual dose and number of administrations. Clinical experts panel estimated typical treatment patterns and costs of treating major AEs in Poland. RESULTS: Mean duration of hospitalization in XP arm was 5.11 days and in FP arm was 22.15 days. The substitution of 5-FU infusion by oral capecitabine reduced the number of hospitalization days per cycle. Drug administration costs were significantly higher on FP scheme (8800PLN) in comparison to XP (1515PLN). Total drug cost per patient on XP scheme was 6384. 41PLN (1 PLN = 0.4 EUR) and 708.20PLN on FP scheme. AE profiles were similar. Total costs (drug, administration and AE) was lower for XP scheme, generating 1614.12PLN savings per patient/year. Sensitivity analysis was conducted for number of patients treated with 5FU/cisplatin requiring intravenous access and for the drug reimbursement level. Reimbursement level doesn’t influence conclusions drawn from the basic analysis. Change in percentage of patients requiring intravenous access influence the conclusions (breaking point 43%). CONCLUSIONS: Replacing 5FU/cisplatin scheme with capecitabine/cisplatin in treatment of advanced gastric cancer patients from public payer in Poland is cost saving.

ECONOMIC ANALYSIS OF THE CLINICAL OUTCOMES OF SURGICAL THERAPY (COST) TRIAL COMPARING LAPAROSCOPICALLY-ASSISTED COLECTOMY (LAC) WITH OPEN COLECTOMY (OC) FOR COLON CANCER Weeks JC, Nelson H, Romanus D, Long KH, Sargent D
1Dana-Farber Cancer Institute, Boston, MA, USA; 2Mayo Clinic, Rochester, MN, USA
OBJECTIVES: The randomized COST trial revealed no significant differences in clinical or quality-of-life endpoints between LAC and OC for stage I-III colon cancer. We conducted a cost-minimization analysis from a third-party payer perspective to test for differences in costs between procedures from surgery through 2 months of follow-up. METHODS: Resource use was collected on all patients, including: inpatient and ICU days, reoperations, surgery and anaesthesia times, use of laparotomy and laparoscopic instruments, cartridges, reusable and disposable trocars, and outpatient visits for surgery-related complications. Professional services were valued based on Medicare reimbursement rates; all other unit costs were derived from charges adjusted by ratios-of-costs-to-charges for patients treated at two centers, one academic (A) and one community (C). 21% of patients assigned
to the LAC arm who were converted to open colectomy were included in the LAC group in the analysis. RESULTS: Among 855 patients, length of stay (mean: 5.5 vs. 6.7 days) was significantly shorter, while operating time was significantly longer (mean: 166 vs. 109 minutes) in the LAC arm. More costly OR supplies were used in the LAC arm. Resource use was otherwise similar between arms. The incremental costs were either modestly higher in the LAC arm, $2,454 (95% CI $1,421–$3,485, 2007 US $) (C), or not statistically different, $–62 (95% CI $–1,759–$1,608) (A) depending on the source of unit costs. CONCLUSIONS: Economically, the choice between LAC and OC consists of a tradeoff between higher operative costs and shorter length of stay. The direction and magnitude of the net effect depends on the cost inputs from a given institution, with LAC relatively less expensive in institutions with higher “hotel” costs and less costly operative supplies. Future research should focus on structured peri- and post-operative care to further optimize the care and costs associated with LAC.

PCN46

COST-MINIMIZATION ANALYSIS OF CAPECITABINE VERSUS UFT/LEUCOVORIN FOR THE TREATMENT OF METASTATIC COLORECTAL CANCER (MCRC) IN BRAZIL

Saggia MG1, Nasciben VD1, Santos EA2, Stefani S2
1Roche Brazil, Sao Paulo, SP, Brazil, 2UNIMED and Instituto do Câncer Mãe de Deus, Porto Alegre, RS, Brazil

OBJECTIVES: Capecitabine (Xeloda) is an effective alternative to treat metastatic colorectal cancer (mCRC) patients. This study compares the costs of capecitabine and UFT/Leucovorin (UFT/LV) in first line therapy for patients with mCRC in Brazil. METHODS: An analytic-decision model for projecting costs of treating mCRC in Brazil was developed considering local guidelines, to compare costs of capecitabine ($2,500 mg/m²/day, d1-d14; 21 days-cycle) and UFT/LV ($300 mg/m²/day of UFT, d1-d28; 35 days-cycle; 70 mg of LV per day), under the payer perspective. The time horizon of this analysis was 3.5-months, based on the progression free survival (PFS) of UFT/LV showed in Douillard, et al 2002 trial. In the absence of head-to-head trials, the same efficacy, in terms of PFS, was assumed for capecitabine and UFT/LV. The safety profiles were obtained from Twelves, et al 2001 and Douillard, et al 2002. A panel of Brazilian specialists was conducted to identify the local practices for treating adverse events (AE). Costing was conducted based on public lists. For the base case scenario a 1.7 m² body surface patient was considered. One-way sensitivity analysis was conducted to check the robustness of the results. RESULTS: The total treatment cost of capecitabine is lower than UFT/LV: R$11,908 for capecitabine vs R$19,417 for UFT/LV. Capecitabine has a lower acquisition cost (R$3,205/month) than the UFT/LV scheme (R$3,457/month). Capecitabine shows a better safety profile thus costs for AE management are lower than UFT/LV (R$196 for CAP vs. R$1,089 for UFT/LV). CONCLUSIONS: Findings suggest capecitabine as a cost-saving therapy under the payers’ perspective in Brazil. Total savings could reach R$7,509 for a 3.5 month-period treatment.

PCN47

ECONOMIC EVALUATION IN THE POSTOPERATIVE MANAGEMENT OF COLORECTAL CANCER PATIENTS IN GREECE

Maniadakis N1, Fragouliakis V2, Pectasides D3, Foutzillas G4
1University of Piraeus, Piraeus, Greece, 2National Social Insurance Institute, Athens, Greece, 3Medical School, University of Athens, Haidari Athens, Greece, 4Hellenic Cooperative Oncology Group, Athens, Greece

OBJECTIVES: An economic analysis was undertaken alongside a trial evaluating chemotherapy with FOLFOX6: (5Fluouracil/Leucovorin/Oxaliplatin) versus XELOX: (Capecitabine/Oxaliplatin) as an adjuvant postoperative therapy for high risk colorectal cancer patients. METHODS: In the absence of survival difference, a cost-minimisation analysis was undertaken. Individual patient data (n = 169) were combined with 2008 unit prices to estimate the cost of chemotherapy, administration, medical consumables, drugs and laboratory testing. Patient addresses were used to estimate travelling expenditure and income data to evaluate productivity losses for those at productive ages. Raw data were bootstrapped 5000 times to correct for distortions and to undertake statistical testing. RESULTS: From a hospital perspective, the mean patient chemotherapy cost was €8,866 with FOLFOX6 and €9,723 with XELOX. Administration cost was €5,212 and €1,051, erythropoietin €2,787 and €1,744 and total treatment cost €17,485 and €12,324 respectively. Thus, XELOX reduced overall treatment cost by €4,961 (p ≤ 0.01). From a social insurance perspective, the mean chemotherapy cost was €9,265 with FOLFOX6 and €10,160 with XELOX. Administration cost was €3,113 and €1,85, erythropoietin €2,789 and €1,713 and total treatment cost €15,797 and €12,116 respectively. Thus, XELOX reduced total treatment cost by €3,680 (p ≤ 0.01). Mean patient travelling cost was €184 with FOLFOX6 and 80€ with XELOX, a difference of €104 (p ≤ 0.01). Mean productivity loss was €100 with FOLFOX6 and €31 with XELOX, a difference of €69 (p ≤ 0.01). CONCLUSIONS: Apart from being more convenient for patients, oral chemotherapy with Capecitabine(Xeloda) reduces total treatment cost for the NHS and Insurance Funds, as it reduces drastically the cost of administration. It also reduces patient travelling time and cost and productivity loss. Hence, it represents a cost saving and advantageous approach to the management of operated colorectal cancer patients.

PCN48

COST-MINIMIZATION ANALYSIS OF XELOX VERSUS FOLFOX-6 IN THE FIRST LINE TREATMENT OF METASTATIC COLORECTAL CANCER IN BRAZIL

Caponero R1, Saggia MG1, Nasciben VD1, Santos EA2, Stefani S2
1Hospital Brigadeiro, São Paulo, SP, Brazil, 2Roche Brazil, Sao Paulo, SP, Brazil, 3UNIMED and Instituto do Câncer Mãe de Deus, Porto Alegre, RS, Brazil

OBJECTIVES: A cost-minimization analysis compared total costs of XELOX (capecitabine + oxaliplatin) versus FOLFOX-6 (5FU + folinic acid + oxaliplatin) in the first line treatment for patients with metastatic colorectal cancer (mCRC) in Brazil. METHODS: An analytic-decision model for projecting costs of treating mCRC in Brazil was developed considering local guidelines and the Brazilian payers’ perspective. According to the phase III trial of Ducrœx et al 2007, we assumed the same efficacy for XELOX and FOLFOX-6 in terms of progression free-survival and overall survival. Only direct costs (drugs, IV administration, physician fees, materials, etc.) were considered for the chemotherapy and for treating adverse events. The time-horizon of this analysis was 126 days according to the mean number of Progression Free Survival found in the Ducrœx clinical trial (6 cycles of XELOX and 9 cycles of FOLFOX-6). For the base case a patient with 1.7 m² was considered. A Delphi panel was conducted to identify local practices to manage the adverse events of each scheme. Discount rate was not necessary because of the short length of the analysis. RESULTS: Drug acquisition costs for FOLFOX-6 were higher than XELOX (R$66,433 vs. R$39,637). XELOX treatment generated a R$15,465 saving per patient due to a 92% reduction in the number of IV administrations. XELOX also presented a reduction of R$2,121.65 in costs related to the management of adverse events. A one-way sensi-