**PCN95**

**COLORECTAL CANCER SCREENING: COST-EFFECTIVENESS OF CT COLONOGRAPHY**

**OBJECTIVES:** Colorectal cancer (CRC) is the third most common cancer in the UK. In 2007 the UK NHS introduced a CRC screening programme using the faecal occult blood test (FOBT) for biennial screening of individuals aged 60 to 69. CT colonography (CTC) is an alternative technology for CRC screening with the potential to prevent cancer by detecting pre-cancerous polyps as well as detecting cancer at an early stage. This economic analysis assessed the cost-effectiveness of CTC for CRC screening from a UK NHS perspective. METHODS: A state-transition Markov model was constructed to simulate the lifetime experience of a cohort of individuals screened under a range of scenarios using four different CRC screening technologies: FOBT, flexible sigmoidoscopy, optical colonoscopy and CTC. The model estimated lifetime costs and health outcomes; the cost-effectiveness measure was incremental cost per Quality Adjusted Life Year (QALY). The impact of uncertainty in model parameters was estimated in one-way and probabilistic sensitivity analyses. RESULTS: CTC screening every 10 years for individuals aged 60-69 was less expensive and yielded greater health benefits (QALYs and life years) compared to no screening or the current UK programme of biennial FOBT screening. Compared to biennial FOBT, 10-yearly CTC screening for 60-69 year olds is estimated to avoid 661 more cases of CRC and 364 more deaths per 100,000 people invited for screening. CTC was cost-effective under a range of assumptions. The model fit to observed epidemiology data well, and was robust to changes in underlying parameter values. CONCLUSIONS: CTC has the potential to provide a cost-effective option for CRC screening and may be cost saving compared to the current programme of biennial FOBT.

**PCN96**

**COST-EFFECTIVENESS OF BEVACIZUMAB COMBINATION THERAPY IN METASTATIC COLORECTAL CANCER: RESULTS OF MARKOV COHORT SIMULATION FROM A SOCIAL PERSPECTIVE IN KOREA**

**Kim JH, Lee EK**

Sook Myung Women’s University, Seoul, South Korea

**OBJECTIVES:** Bevacizumab, known as VEGF inhibitor, has demonstrated significant activity when it is used with cytotoxic chemotherapy together in metastatic colorectal cancer (mCRC). However, bevacizumab is an expensive medication known as not cost-effective (Incremental Cost-Effectiveness Ratio) in other countries. The purpose of this study was to examine the economic efficiency of treating mCRC with bevacizumab plus chemotherapy versus chemotherapy alone from the perspective of the social aspects in Korea. METHODS: Markov model was developed to compare the cost and benefits of adding bevacizumab to oxaliplatin plus FU/LV (FOLFOX) or capecitabine plus FU/LV (CapeOX) with FOLFOX or CapeOX alone. We searched clinical documentation, extracted median time to progression and median overall survival from each chemotherapy, and calculated the transition probability and death rate per cycle. Model simulates costs and outcomes in a hypothetical cohort of metastatic colorectal cancer for 5 years with 5% discount rate. We included that direct and non-direct medical cost (2009). The ICERs were calculated from incremental life-years gained (LYG) and incremental costs between single and combination therapy. Sensitivity analyses were performed on crucial parameters. RESULTS: After markov simulation model for 5 years, FOLFOX+bevacizumab gained 1.58 years/patient and FOLFOX 1.42 years/patient, whereas CapeOX+bevacizumab 1.57 years/patient and CapeOX 1.31 years/patient. Total cost of FOLFOX+bevacizumab, FOLFOX, CapeOX+bevacizumab, CapeOX, FOLFOX 73,938,752,859,151, 91,904,773,573,624, 91,386,430,530,092, respectively. The ICERs of additional bevacizumab when combined with FOLFOX, CapeOX were 89,974,151 (71,979), 81,131,641 (645,065), respectively, per life year gained. Sensitivity analysis showed that the price of bevacizumab is a key parameter of its cost-effectiveness. CONCLUSIONS: As a result, it is proven that the addition of bevacizumab to FOLFOX, CapeOX in mCRC patients is expensive given clinical benefit in terms of LYG in Korea. This findings may offer one of the useful basic data selecting chemotherapy regimens in treating for mCRC.

**PCN97**

**COST EFFECTIVENESS OF ERLOTINIB TREATMENT GIVEN BY A CLINICALLY BASED APPROACH AND AN EGFR/KRAS TESTING-GUIDED APPROACH ADVANCED IN NON SMALL-CELL LUNG CANCER: A PROSPECTIVE MULTICENTRIC FRENCH STUDY (ERMETIC)**


Institut de Cancérologie Gustave Roussy, Villejuif, France; Hospital Tenon, Paris, France; Institut Gustave Roussy, Villejuif, France; Centre Georges Fragonard Leclerc, Dijon, France; Oncology Center Hospital, Lille, France; Hospital Foch, Sumines, France; Institut Curie, Paris, France; CHU Strasbourg, Strasbourg, France; CHU Caen, Caen, France; Institut Paoli Calmettes, Marseille, France; IUCT, Paris, France; Hospital Saint antoine, APHP, Paris, France

**OBJECTIVES:** Although several clinical and biological parameters are prognostic factors, their medico-economic impact in the prescription of erlotinib has never been firmed. Although several clinical and biological parameters are prognostic factors, their medico-economic impact in the prescription of erlotinib has never been firmed. Although several clinical and biological parameters are prognostic factors, their medico-economic impact in the prescription of erlotinib has never been firmed. A French NCI prospective study aimed to determine the cost of manage- ment of advanced NSCLC patients (pts) treated by erlotinib and to evaluate the cost-effectiveness ratio in populations selected on clinical-guided or biomarkers-guided arguments. METHODS: Prospective cohort of consecutive advanced NSCLC pts newly treated by erlotinib and followed until progression or death. Costs, including erlotinib and hospitalization costs were computed from the health care system perspective with a time horizon of 2 years. Cost-effectiveness ratios (CER) were calculated as management cost divided by the number of days of life remaining (DOLR) when the treatment is initiated, in all patients, in clinical-selected patients and in biomarker-selected patients. RESULTS: A total of 522 patients were enrolled between 02/07 and 03/08. Median age was 62 years; 32% were females; 63% had adenocarci-noma.. With a 15.5 months follow-up, median PFS per line was respectively 2.4 and 3.6 mo. Mean management cost was 10284 ± 8562 per patient, with a median of 170 days remaining to live at initiation of erlotinib treatment (660 / DOLR). Direct erlotinib cost represented 78% of the cost. Non-smoking women with non-SCC histology lived 133 days longer than other patients (279 and 146 days respectively), resulting in an extra-cost management of €627 due to a longer erlotinib treatment. CER was however lower ($44/DOLR) in non-smoking women than non SCC histology than in other patients ($66/DOLR). CER of biomarkers-selected patients will be available for the congress. CONCLUSIONS: Clinical-guided argueds allowed to identify patients with lower management costs per day of life remaining to live. Planned analyses would evaluate the impact of biomarkers in term of cost management per day of life remaining.

**PCN98**

**COST-EFFECTIVENESS OF PROGNOSIS-BASED STRATEGIES TO SELECT WOMEN WITH BREAST CANCER FOR ADJUVANT CHEMOTHERAPY**

**Hab_in A, Koczulla S, Giusti Galatea, Roussy, Villejuif, France**

**OBJECTIVES:** Adjuvant chemotherapy is used to reduce the risk of relapse after surgery. Its limited efficacy in breast cancer must be weighed against induced toxicities and cost. The selection of patients eligible for adjuvant chemotherapy is based on prognostic factors. Genomic signatures would improve patient selection for adjuvant chemotherapy and avoid overtreatment. The aim of this study is to compare the cost-effectiveness of different prognosis-based selection strategies in the French context. METHODS: We used a model-based simulation. Population characteristics, survival and hospital costs (chemotherapy, chemotherapy-induced toxicities and relapses) were estimated using a patient-level data set from a retrospective cohort of patients followed up at Gustave Roussy Institute since 1990. All patients were negative for HER2 and metastasis-free after initial surgery. The other model parameters (chemotherapy efficacy, sensitivity and specificity of prognosis-based selection strategies) were obtained from literature. The cost analysis was conducted from a third-party payer’s perspective. We used a strategy with no adjuvant chemotherapy as a reference for cost-effectiveness comparisons. RESULTS: The retrospective cohort study consisted of 910 women with breast cancer. The mean age was 57 (range: 23–93). Thirty-one percent of patients were Scarff-Bloom grade I, 43% grade II and 19% grade III (7% grade missing). The mean tumor size was 9 mm (range: 1–120). Thirty-two percent of the women received adjuvant chemotherapy alone or combined with another adjuvant treatment. The median follow-up after surgery was 87 months. The median survival time was 209 months. The distant relapse rate was 10.7% The cost of adjuvant chemotherapy was €3,083 (standard deviation: €307) and the cost of distant relapse €334,920 (range: €847–€1,112,710). Cost-effectiveness analyses were performed with all the available for the meeting. CONCLUSIONS: This is the first French study to assess the cost-effectiveness of using prognostic information to select women eligible for adjuvant chemotherapy in early breast cancer.

**PCN99**

**COST-EFFECTIVENESS ANALYSIS OF IMIQUIMOD VERSUS NON-TREATMENT IN PATIENTS WITH SUPERFICIAL BASAL CELL CARCINOMA AND CONTRAINDICATION TO SURGICAL INTERVENTION/CRYOTHERAPY**

**Wałczak J, Nogas G, Dybals-Karpia A, Kloc K, Labak M, Pawlik D**

Województwo Łódzkie, Łódź, Poland

**OBJECTIVES:** To conduct a cost-effectiveness analysis (CEA) of imiquimod compared to no treatment in patients with superficial basal cell carcinoma and contraindication to surgical intervention and cryotherapy in Poland. METHODS: This analysis was based on a decision model regarding clinical effects of imiquimod in comparison to placebo (vehicle cream), obtained from randomized clinical trials. The population was defined as adults patients with superficial basal cell carcinoma (SBC) and contraindi- cation to surgical intervention/cryotherapy, also patients, who do not give consent to these forms of treatment. Clinical and histological complete clearance were assessed as health outcomes. Direct medical costs of the analysed therapies were estimated from the perspective of both parties in Poland (National Health Fund and patient). We included costs of medication, clinic visits and diagnostic assessments. Time horizon of the analysis was 18 weeks. Treatment was assumed as once a day 5x/week for 6 weeks. RESULTS: The primary analysis was calculated, assessed clinically and histologically was 0.751 for patients treated with imiquimod and 0.007 when placebo was used. Probability of histological complete clearance was 0.822 and 0.031, respectively. Total costs of imiquimod therapy were estimated at 1,075.30 PLN, while costs of no treatment were 174.80 PLN. Incremental