puts were taken from the IPASS trial, literature and publicly available sources. A two-year time horizon (based on the IPASS) was applied to calculate incremental costs, progression-free life years (PFLYs) and quality adjusted life years (QALYs). The perspective of National Health Service (NHS) in England and Wales was used. Sensitivity analyses were performed to assess uncertainty in the results. **RESULTS:** Base-case results revealed that the companion diagnostic strategy was dominant with improvements in effects (0.095 PFLYs, 0.020 QALYs) and reduction in costs (-£774). Small differences in QALY estimates were a consequence of using health utility inputs from second-line advanced NSCLC setting (intravenous treatment only). The results were sensitive to the health utilities, probability of being a responder and sensitivity, specificity and cost of the companion diagnostic. **CONCLUSIONS:** This early health technology assessment suggests that introducing a companion diagnostic prior to first-line advanced NSCLC treatment has the potential to improve effectiveness and reduce costs compared to the gefitinib for all strategy. Further research should aim at eliciting generic utility values to better estimate the potential health benefits of targeted therapies in this setting.

PCN108

ECONOMIC EVALUATION OF SUNITINIB MALATE FOR THE FIRST-LINE TREATMENT OF METASTARIC RENAL CELL CARCINOMA IN THE CHINESE HEALTH CARE SETTING

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OBJECTIVES: To assess the cost-effectiveness of sunitinib malate as a first-line treatment in metastatic renal cell carcinoma (mRCC) compared with sorafenib and interferon-alfa (IFN-α) in the Chinese healthcare setting. **METHODS:** A Markov model was developed in Microsoft Excel® to simulate disease progression and determine outcomes over 5 years of a hypothetical cohort of 1,000 patients with mRCC receiving first-line treatment (in 6-week cycles, 4 weeks treatment plus 2 weeks off treatment) with sunitinib compared with sorafenib as well as IFN-α. The model parameters were derived from the Pivotal Study A6181034-A3, published literatures, government sources as well as clinical experts' opinions. Only direct costs were considered in terms of drug treatment, routine follow-up, severe adverse events, disease progression, and costs of health care resources involved in the palliative care of terminally-ill patients. Health outcomes were measured in LYs and QALYs. The results were expressed as ICER and ICUR. Time horizon was 5 years and the discount rate of 5%/year was applied to costs and effectiveness. Sensitivity analyses were also performed. **RESULTS:** The results indicated that in terms of total average cost per patient over 5 years, sunitinb was less costly (¥611,054) than sorafenib (¥613,304), and more costly than IFN-α(¥150,159). Concerning health outcomes, the estimated gains for one patient treated with sunitnib over IFN-α were 0.25 LYs and 0.29 QALYs, and over sorafenib were 0.09 LYs and 0.13 QALYs. The ICER and ICUR of sunitinib versus IFN-α were ¥1,837,954 per LY gained and ¥1,585,357 per QALY gained, respectively. **CONCLUSIONS:** Results suggest that sunitinib has better clinical efficacy compared to sorafenib and IFN-α, and is a cost-saving alternative to sorafenib as a first-line treatment for mRCC in China. When compared with IFN, Sutent achieved better clinical outcomes with increased cost.

PCN109

COST EFFECTIVENESS OF FIRST LINE TYROSINE KINASE INHIBITOR TREATMENT IN EPIDERMAL GROWTH FACTOR RECEPTOR (EGFR) MUTATED ADVANCED NON-SMALL CELL LUNG CANCER (NSCLC) PATIENTS: A MARKOV MODEL

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OBJECTIVES: EGFR testing and first line tyrosine kinase inhibitor (TKI) for patients with activating mutations is an option for the treatment of advanced non-small cell lung cancer (NSCLC). There is few data's on the cost-effectiveness of this strategy. The objective of this study was to determine the incremental cost-effectiveness ratio of first-line treatment with TKI compared to recommended chemotherapy (cisplatin pemetrexed doublet) in patients with EGFR mutation. **METHODS:** A Markov model was developed. Clinical outcomes were derived from the EURTAC phase III trial comparing TKI to chemotherapy in first-line of NSCLC. Cost data were estimated using individual data from French randomized clinical trial or prospective cohort, whereas utility scores derived from published data's. Costs were limited to direct costs for medications, physician visits, hospitalizations and treatment of adverse events. Analysis was limited to the period between treatment initiation of until first progression. All costs were expressed in 2010 Euro. Sensitivity analyses were performed. **RESULTS:** First line treatment with TKI was more effective than recommended chemotherapy (respectively 0.730 and 0.437 QALY), but also more expensive (respectively 29 702 € and 18 796 € per patient). The incremental cost-effectiveness ratio was then estimated at 37 221 €/QALY. Sensitivity analyses showed the robustness of the results. **CONCLUSIONS:** Based on these data, first line treatment based on TKI appeared as cost effective in EFGR mutated advanced NSCLC patients.

PCN110

ECONOMIC EVALUATION OF GEFITINIB FOR FIRST-LINE TREATMENT OF EGFR MUTATION POSITIVE ADVANCED NON-SMALL CELL LUNG CANCER PATIENTS IN GREECE

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OBJECTIVES: To investigate the cost-effectiveness of Gefitinib relative to the other alternatives used for the first line treatment of EGFR mutation positive advanced lung cancer patients, including: gemcitabine/carboplatin, paclitaxel/carboplatin, vinolerbin/cisplatin, gemcitabine/cisplatin and pemetrexed/cisplatin, from a provider and payer perspective in Greece **METHODS:** A probabilistic Markov model was constructed with four health states: treatment response, stable disease, disease progression and death. Objective response rates, hazard ratios and utility decrements for Gefitinib relative to paclitaxel/carboplatin were obtained from a head-to-head trial (IPASS), while meta-analysis was used to estimate corresponding data for remaining comparators. Utilities were applied to estimate Quality Adjusted Life Years (QALYs). The databases of several hospitals were analyzed to estimate resource utilization. Unit prices were obtained from the most up to date official resources and reflect 2011. Outcomes were bootstrapped 5,000 times to deal with uncertainty and to construct uncertainty intervals (UI). A discounting rate of 3.5% was applied for all outcomes. **RESULTS:** Mean QALYs were: 1.10 (95%UI:0.89-1.28), 1.04 (95%UI:0.87-1.19), 0.95 (95%UI:0.80-1.05), 0.91 (95%UI:0.76-1.10), 0.90 (95%UI:0.77-1.00) and 0.87 (95%UI:0.73-0.99) for gefitinib, pemetrexed/cisplatin, gemcitabine/cisplatin, gemcitabine/carboplatin, paclitaxel/carboplatin and vinolerbin/cisplatin respectively. From a provider perspective, total treatment cost per patient was: €61,865 (95%UI:€52,848-€71,444), €72,817 (95%UI:€65,213-€80,014), €59,270 (95%UI:€52,830-€65,530), €60,842 (95%UI:€50,113-€71,343), €58,081 (95%UI:€53,237-€62,628) and €54,468 (95%UI:€46,874-€62,245), respectively. Hence, gefinitib dominates all other options apart from vinolerbin/cisplatin, which is the least costly option. The incremental cost per QALY gained with gefitinib relative to vinolerbin/cisplatin, was limited to €9,662. Similar were the results from a payer perspective. The incremental cost per QALY gained in this case was €27,369. Probabilistic analysis indicated that at a 50,000 willingness to pay threshold gefitinib was cost-effective in 90% of cases in both perspectives of analysis. **CONCLUSIONS:** Gefitinib may represent a cost-effective choice, compared with alternative used in the first line treatment of mutation positive non-small cell lung cancer patients in Greece.

PCN111

COST-EFFECTIVENESS OF HUMAN PAPILLOMAVIRUS VACCINATION FOR PREVENTION OF CERVICAL CANCER IN RORAIMA, A BRAZILIAN AMAZONIC REGION STATE

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OBJECTIVES: : To assess cost-utility of the prophylactic HPV vaccination on the prevention of ICC in brazilian amazonic region **METHODS:** : A Markov cohort model was developed as an analytic tool to simulate the natural history of HPV and its progress to ICC, considering the current preventive programs. Transition probabilities assumptions were based mainly on empirical data of local and national studies. The model evaluated the addition of the vaccine to 3 cervical cancer screening scenarios (0, 3 or 10 exams throughout life). **RESULTS:** : The scenario of three Pap tests resulted in satisfactory calibration (base case). The addition of HPV vaccination would reduce by 35% the incidence of ICC, in a setting of 70% vaccination coverage. The incremental ratio of cost-effectiveness (IRCE) was R$1200 for each year of quality-adjusted life (QALY) saved. The sensitivity analysis confirms the robustness of this result, and duration of immunity was the parameter with greater variation in IRCE. **CONCLUSIONS:** : Vaccination has a favorable profile in terms of cost-utility, and its inclusion in the immunization schedule would result in substantial reduction in incidence and mortality of ICC in amazonic region of Brazil

PCN112

COST-UTILITY OF TREATMENT FOR ACUTE LYMPHOBLASTIC LEUKEMIA (ALL) IN CHILDHOOD

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OBJECTIVES: Cost-utility evaluation comparing Dana-Farber Cancer Institute (DFCI) and Berlin-Frankfurt-Munster (BFM) treatment strategies for childhood ALL. **METHODS:** Children treated at 7 centres in Canada, Italy and the USA were eligible for health-related quality of life (HRQL) assessment using the Health Utilities Index Mark 3. Parents completed assessments during 4 active treatment phases and at 2-years following therapy. Mean HRQL scores were used to calculate quality-adjusted life years (QALYs). Costs were calculated from the perspective of the Ontario (Canada) health care system. Patients from 2 Ontario centres were eligible for costing. Service utilization was obtained from Canadian Institute of Health Information Discharge Abstract Database and National Ambulatory Care Reporting System records. Standard costs were used for inpatient, outpatient and physician services. Difference in mean cost was assessed by t-test. The analytical horizon was 5 years after diagnosis. Future costs and QALYs were discounted at 5% per year. Sensitivity analyses used 95% confidence bounds (CB) of mean HRQL scores and discount rates of 0% or 3%. **RESULTS:** A total of 1281 HRQL assessments were collected. Costs were measured for 28 DFCI and 66 BFM patients. Based on mean HRQL scores, BFM had 0.17 (0.16 at 3% and 0.03 at 0%) more QALYs than DFCI. On lower CB for BFM and upper CB of DFCI mean HRQL scores, BFM had 0.16 (0.16 at 3% and 0.03 at 0%) fewer QALYs than DFCI. Mean costs for BFM ($101484) and DFCI ($98760) did not differ significantly (p=0.777). **CONCLUSIONS:** The cost-utility evaluation simplified to a QALY-effectiveness analysis because of no significant difference in mean costs. Sensitivity analysis indicates that mean QALY estimates are imprecise and overlap between the two strategies. Therefore, BFM and DFCI are equally QALY-effective within the range of estimation uncertainty. Future work will focus on diagnostic sub-groups with more precise cost and QALY estimates.