compared with ipilimumab over a 20-year time horizon. Costs and health outcomes were discounted at an annual rate of 5%. Data from an interim analysis (cut-off date: March 3, 2015) of a randomized phase 3 study, KEYNOTE-006, comparing pembrolizumab and ipilimumab, were used to populate the model. The model used Kaplan Meier (KM) estimates of PFS and OS from the trial with extrapolation based on parametric functions and data from the literature. Costs related to drug acquisition, treatment administration, adverse event management, and clinical management of advanced melanoma were included in the model. Drug acquisition costs were based on Canadian list prices. Quality of life information was derived based on EQ-5D data from KEYNOTE-006. A series of one-way and probabilistic sensitivity analyses was performed to test the robustness of the result. **RESULTS:** Pembrolizumab is projected to increase the life expectancy of patients by 1.36 years, which corresponds to a gain of 1.05 QALYs over ipilimumab over a 20-year time horizon. In the base-case analysis, the (discounted) incremental cost per QALY gained with pembrolizumab vs. ipilimumab is $52,829/QALY. Results of one-way and probabilistic sensitivity analyses show that the results are cost-effective in most scenarios. **CONCLUSIONS:** Pembrolizumab improves the QALYs and is a cost-effective therapeutic option compared to ipilimumab in advanced melanoma patients.

PCN113

COST EFFECTIVENESS OF CETUXIMAB AND PANITUMUMAB FOR FIRST-LINE RAS WT METASTATIC COLORECAL CANCER

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OBJECTIVES: Liver resection is a treatment offering long-term survival in patients with metastatic colorectal cancer (mCRC). However, the majority of such patients are not suitable for curative hepatectomy due to widespread nature of their disease. Chemotherapy can significantly downsize primarily unresectable metastases and increase the possibility of resection in mCRC patients. It has been shown that chemotherapy combined with biological agents, cetuximab (CET) and panitumumab (PAN), is clinically beneficial for treating RAS WT tumors (tumors without mutations in KRAS/NRAS exons 2/3/4). This study is aimed: (1) to estimate the cost-effectiveness of combination chemotherapies with CET and PAN for people with previously untreated RAS WT mCRC, not eligible for liver surgery; and (2) to assess CET and PAN against the National Institute for Health and Care Excellence (NICE) end-of-life (EoL) criteria, to inform a Health Technology Assessment for NICE. **METHODS:** We proposed an economic model estimating costs and benefits of mCRC treatments over patient lifetime horizon. In our base case, we estimated incremental cost-effectiveness ratio (ICER) for CET+FOLFOX versus FOLFOX, PAN+FOLFOX versus FOLFOX, and CET+FOLFIRI versus FOLFIRI. Probabilistic and univariate deterministic sensitivity analyses were performed to estimate uncertainty in model predictions. The cost-utility analysis was based on three randomised controlled trials and undertaken from the NHS and personal social service perspective. Estimated costs and quality-adjusted life years were discounted at 3.5% per annum. **RESULTS:** CET and PAN are not cost-effective at willingness-to-pay thresholds of £30,000. Moreover, ICERs remain above £30,000 even under zero prices for CET and PAN. Based on the available evidence, neither CET nor PAN fulfils the NICE EoL criteria to be considered as life-extending EoL treatments. **CONCLUSIONS:** Although CET and PAN appear to be clinically beneficial for RAS WT patients, they are likely to represent poor value for money when judged by cost-effectiveness criteria used in the UK.

PCN114

COST EFFECTIVENESS OF PEMBROLIZUMAB (KEYTRUDA®) VERSUS IPILIMUMAB IN PATIENTS WITH ADVANCED MELANOMA IN THE UNITED STATES

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OBJECTIVES: To evaluate the cost-effectiveness of pembrolizumab versus ipilimumab in patients with advanced melanoma who are previously untreated with ipilimumab from US Medicare perspective. **METHODS:** A partitioned-survival model was developed, which partitioned the overall survival (OS) time into progression-free survival (PFS) and post-progression (post-PD) survival. Time horizon for the base-case was 20 years. Costs and health outcomes were discounted at a rate of 3% per year. Clinical data, including quality of life data from an interim analysis (cut-off date: March 3, 2015) of a randomized phase 3 study, KEYNOTE-006, comparing pembrolizumab and ipilimumab, and cost data from public sources were used to populate the model. The model used Kaplan Meier estimates of PFS and OS from the trial with extrapolation based on parametric functions and literature data. Cost data include drug acquisition, treatment administration, adverse event management, and clinical management of advanced melanoma. Incremental cost effectiveness ratio (ICER) expressed as cost per quality-adjusted life years (QALYs) was derived as the main outcome. A series of one-way and probabilistic sensitivity analyses was performed to test the robustness of the result. **RESULTS:** Pembrolizumab is projected to increase the life expectancy of US advanced melanoma patients by 1.42 years, corresponding to a gain of 1.20 QALYs over ipilimumab (undiscounted). The model predicts an increase of $68,862 in the average per-patient direct cost of treatment with pembrolizumab versus ipilimumab (discounted). The discounted ICER gained was $71,417/QALY over a 20-year time horizon. With $100,000/QALY as the threshold, the base-case result is cost-effective. When input parameters are varied in the one-way sensitivity analyses, the results are cost-effective in all scenarios. Probabilisticsensitivity analyses show that the ICER is cost-effective in 99% of the simulations. **CONCLUSIONS:** Compared to ipilimumab, pembrolizumab improves QALYs and is cost-effective for the treatment of patients with advanced melanoma in the US.

PCN115

COST-UTILITY ANALYSIS OF ERLOTIB VERSUS STANDARD CHEMOTHERAPY IN FIRST-LINE TREATMENT OF ADVANCED EGFR MUTATION-POSITIVE NON-SMALL CELL LUNG CANCER IN VIETNAM

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OBJECTIVES: Erlotinib, a representative of targeted therapy, has been approved by FDA for first-line therapy in EGFR-mutations positive NSCLC. However the high price of drug created a large barrier in practice especially in Vietnam. The aim of this study is to estimate the cost-utility of erlotinib versus the standard chemotherapy as first-line therapy in advanced EGFR mutation-positive NSCLC in Vietnam. **METHODS:** A 3-state Markov model was developed to evaluate the cost-utility of erlotinib versus the standard chemotherapy over life-time horizon. The discount rate of 3% has been evaluated for both cost and QALY. One-way sensitivity analysis was performed to evaluate uncertainties of parameters. **RESULTS:** Compared with standard therapy, erlotinib regimen in first-line therapy in EGFR-mutations positive NSCLC resulted in the increase of 439.02 million VND treatment cost (534.16 million and 95.14 million VND, respectively) with the increase of 0,11 QALY (1.38 vs 1.27, respectively). The ICUR of erlotinib versus standard chemotherapy was 4.1 billion VND/QALY, which is 34 times higher than the willingness-to-pay of Vietnam (around 120 million VND). One-way sensitivity analysis showed such influencing factors on ICUR as drug price, price of medical services, discount rate, from which price of erlotinib was the most influencing factor. **CONCLUSIONS:** Erlotinib was not cost-effective compared with standard chemotherapy in first-line therapy in EGFR-mutations positive NSCLC. Cost- effectiveness of erlotinib was most sensitive to the price of erlotinib.

PCN116

COST-EFFECTIVENESS ANALYSIS OF ABIRATERONE IN PATIENTS WITH METASTATIC, CASTRATION-RESISTANT, PROSTATE CANCER WITH PROGRESSION AFTER RECEIVING CHEMOTHERAPY WITH DOCETAXEL, COMPARED WITH RECEIVING ONLY PALLIATIVE SUPPORT: THE PERSPECTIVE OF THE COSTA RICAN PUBLIC HEALTH SYSTEM (CAJA COSTARRICENSE DE SEGURO SOCIAL)

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OBJECTIVES: Prostate cancer is the most frequent malignant tumor in the Costa Rican male population. To date, in the CCSS there is not available any antitumor therapy for patients with metastatic castration resistant prostate cancer (mCRPC), with progression after receiving chemotherapy with docetaxel. This research aims to evaluate the cost/effectiveness (and cost/utility) of Abiraterone in the treatment of patients with mCRPC, with disease progression after chemotherapy treatment based on docetaxel, compared with only giving palliative care, from the perspective of CCSS. **METHODS:** Markov Model, designed to estimate the ICER and ICUR of treatment with Abiraterone compared to only giving prednisolone. It considers a cohort of 50 patients based on epidemiological information in Costa Rica. Health states: Stable disease, progressive disease and death. Probabilities for transition were based on COU-AA-301 Study. Time horizon is 10 years. Cycle longitude is 3 months. Efficiency threshold is $30.000. Discount rate is 3%. Costs expressed in 2015 US dollars. The resources needed for the care were obtained from expert consultation following the Delphi Method. The costs of resourses were obtained from the CCSS tariff model. We used ex-factory prices of abiraterone. **RESULTS:** Treating with abiraterone plus prednisolone requires an additional investment of $36,691.51; produces 0.81 additional LYG and additional 0.47 QALY gained. The ICER (ICUR) was estimated in $78,077.23/QALY. The most sensitive parameters modifying the results of the model in the one-way sensitivity analysis are the utility value assigned to the health state progressive disease, and medication price. After running one thousand iterations of the probabilistic sensitivity analysis, the average ICUR was $80,203.42 per QALY gained. **CONCLUSIONS:** Given the conditions of Costa Rica's economy, and the results of the current study, offering treatment with abiraterone to patients with mCRPC is not an efficient intervention, compared to giving only prednisolone and palliative care.

PCN117

DALTEPARIN VERSUS VITAMIN K ANTAGONISTS FOR THE PREVENTION OF RECURRENT VENOUS THROMBOEMBOLISM IN PATIENTS WITH CANCER AND RENAL IMPAIRMENT: PHARMACOECONOMIC ANALYSIS OF A PROSPECTIVE RANDOMIZED TRIAL

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OBJECTIVES: Patients with cancer are at increased risk of venous thromboembolism (VTE) and the risk is further elevated after a primary VTE. To reduce the risk of recurrent VTE, prolonged prophylaxis with VKA is available. However in a large randomized trial (CLOT; Lee et al, 2003), extended duration dalteparin reduced the relative risk of recurrent VTE by 52% compared to VKA (P=0.002). A recent subgroup analysis of patients with moderate to severe renal impairment at randomization also revealed lower absolute VTE rates with dalteparin (3% vs. 17%; $p = 0.011$). To measure the current economic value of secondary prophylaxis with dalteparin in patients with cancer and renal impairment, a patient level cost utility analysis was conducted. **METHODS:** Resource use data captured during the CLOT trial were linked to current Canadian unit cost estimates ($Can2015). Univariate and multivariate regression analyses were conducted to compare the total direct cost of therapy between patient groups. Health state utilities were then measured using the Time Trade-Off technique in 24 randomly selected members of the general Canadian public. **RESULTS:** When the costs were quantified for the entire CLOT trial population (n=676), patients in the dalteparin group had higher mean overall costs than the VKA group ($Can 5,771 vs. $Can 2,569; $p < 0.001$). However, the utility assessment revealed that 21 of 24 respondents (88%) selected dalteparin over VKA, with an associated gain of 0.14 (95%CI: 0.10 to 0.18) QALYs. This translated to a cost per QALY gained of $Can 23,100 (95%CI: $19,200 to $25,800). The analysis in patients with moderate to severe renal impairment suggested even better economic value with the cost per QALY gained being less than $Can14,000. **CONCLUSIONS:**