OBJECTIVES: To assess the cost-effectiveness of pembrolizumab or paclitaxel or docetaxel monotherapy in patients with locally advanced or metastatic urothelial cancer, who have previously received treatment with platinum-containing chemotherapy in England. METHODS: A three-state partition survival model was developed, projecting costs and outcomes over a 35-year time horizon with a one-week cycle. As per the NICE guidance case, costs and outcomes were discounted with a 3.5% annual discount rate. Clinical efficacy, adverse events and quality of life data were derived from KEYNOTE-045; a phase III randomised trial of pembrolizumab versus investigator’s choice of chemotherapy. Due to the use of subsequent immunotherapy regimens in the chemotherapy arm, the observed survival overall (OS) was confounded, and as such adjusted using the on-study adjustment method. Within the model, OS was extrapolated using a piece-wise approach, utilising Kaplan-Meier data (data cut-off date 18th January 2017) until week 40, and the log-normal distribution for the remainder of the time horizon. Alternative extrapolation cut-off and extrapolation assumptions were developed and scenario analysed. The results of 18,641 adjusted life years (QALYs) were estimated using time-to-death utilities derived from EQ-5D data collected in the KEYNOTE-045 trial. Costs were applied from the NHS perspective. To assess model uncertainty, probabilistic and deterministic sensitivity analyses were performed. RESULTS: The use of pembrolizumab as modelled above demonstrates an increase in life expectancy by 1.18 years for patients, corresponding to a gain of 0.90 QALYs versus paclitaxel with a willingness-to-pay threshold of £50,000 per QALY, as per NICE end-of-life criteria.

A three-state partition survival model was developed and populated with a 20-year time horizon and a weekly cycle. KEYNOTE-052, phase II single arm clinical trial informed the clinical efficacy and adverse events parameters of pembrolizumab in the model. Overall survival (OS) was extrapolated using a piece-wise approach, utilising Kaplan-Meier data until week 32 and using a log-normal distribution for the remainder of the time horizon. A network meta-analysis, enabled through the use of subsequent immunotherapy regimens in the chemotherapy arm, the observed survival overall (OS) was confounded, and as such adjusted using the on-study adjustment method. Within the model, OS was extrapolated using a piece-wise approach, utilising Kaplan-Meier data (data cut-off date 18th January 2017) until week 40, and the log-normal distribution for the remainder of the time horizon. Alternative extrapolation cut-off and extrapolation assumptions were developed and scenario analysed. The results of 18,641 adjusted life years (QALYs) were estimated using time-to-death utilities derived from EQ-5D data collected in the KEYNOTE-045 trial. Costs were applied from the NHS perspective. To assess model uncertainty, probabilistic and deterministic sensitivity analyses were performed. RESULTS: The use of pembrolizumab as modelled above demonstrates an increase in life expectancy by 1.18 years for patients, corresponding to a gain of 0.90 QALYs versus paclitaxel with a willingness-to-pay threshold of £50,000 per QALY, as per NICE end-of-life criteria.
OBJECTIVES: To evaluate the cost-effectiveness of different treatment strategies for metastatic colorectal cancer (mCRC) in the Brazilian public health system (SUS). METHODS: We built a Markov model to analyze costs and impacts of the incorporation of cetuximab (CET) or bevacizumab (BEV) to standard therapy (FOLFOX and FOLFIRI), over a time horizon of 15 years. The interventions were assumed to be part of four different schedules: (1) FOLFOX + CET; (2) FOLFIRI + CET; (3) FOLFOX + BEV; and (4) FOLFIRI + BEV + cetuximab (InO). Costs were derived from recent clinical trials and translated into SUS. Costs from price tables issued by the Health Ministry. Sensitivity analyses were undertaken to explore uncertainty. Adoption of infusion pumps was investigated as an alternative strategy. RESULTS: Compared to chemotherapy, the incorporation of CET and BEV resulted in incremental effectiveness ranging from 23 to 32 life years, and a considerable cost differences, as total costs ranged from SUS$ 30,053 to around SUS$60,020. Strategy 2 resulted in an incremental cost-effectiveness ratio (ICER) of SUS$181,617 compared to standard therapy, which far exceeds the pre-specified threshold for cost-effectiveness (US$27,715) considered. Strategies 3 and 4 were dominated by strategy 2. Acquisition of biological agents was the primary driver of the cost differences. Adopting an infusion pump for use at home for 100% of patients could reduce around 45% of the total costs of chemotherapy. CONCLUSIONS: From the SUS perspective, and at current prices, biologic agents are not cost-effective for the sensitization schedules. Home chemotherapy continues to be the most cost-effective approach. Home infusion should be promoted to be the standard of care for Brazilian mCRC-patients.

PCN144  
COST-EFFECTIVENESS OF CABOZANTINIB FOR PATIENTS WITH ADVANCED RECURRENT RECURRENT CARCINOMA AFTER FAILURE OF PRIOR THERAPY IN SOUTH KOREA
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OBJECTIVES: To compare the cost-effectiveness of cabozantinib compared to nivolumab for patients advanced renal cell carcinoma (RCC) who progressed after previous vascular endothelial growth factor receptor (VEGFR) tyrosine kinase inhibitors (TKIs) treatment from a societal perspective in South Korea. METHODS: A partitioned-survival model with three health states, progression-free, progression and death, was developed to compare the costs and effectiveness of cabozantinib and nivolumab over a 30 year-time horizon with a cycle length of 28 days. A nested meta-analysis was conducted to compare progression-free survival (PFS) and overall survival (OS) outcomes between cabozantinib and nivolumab by using two pivotal clinical trials: METEOR trial and CheckMate 238 trial including individual patient level data. This analysis included costs related with medication (cabozantinib 60 mg/day and nivolumab 240 mg/2 weeks), best supportive care, monitoring, adverse events, hospitalization, transportation to hospital and nursing with a micro-cost approach. Sensitivity analyses and drug wastage scenarios were conducted. Incremental cost-effectiveness ratios (ICERs) for InO compared with SoC were estimated and assessed against benchmark willingness to pay thresholds. RESULTS: The ICER for InO in South Korea was estimated to be 190,829 per QALY under wage consideration. Sensitivity analyses and drug wastage scenarios were conducted. Incremental cost-effectiveness ratios (ICERs) for SoC were estimated and assessed against benchmark willingness to pay thresholds. RESULTS: The ICER for InO was estimated to be 190,829 per QALY under wage consideration. Sensitivity analyses and drug wastage scenarios were conducted. Incremental cost-effectiveness ratios (ICERs) for InO compared with SoC were estimated and assessed against benchmark willingness to pay thresholds. CONCLUSIONS: Drug wastage has a significant influence on the cost-effectiveness of InO when compared with SoC. Further studies are needed to estimate the value-based price of Ino when hematopoietic stem cell transplantation (HSCT) is considered.

PCN145  
COST-EFFECTIVENESS OF NINTEDANIB FOR THE TREATMENT OF NON-SMALL LUNG CANCER IN PORTUGAL
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OBJECTIVES: Lung cancer is the main cause of cancer related deaths worldwide, with non-small lung cancer (NSCLC) representing approximately 85% of all cases. Nearly 30-40% of NSCLC patients have metastatic disease at diagnosis (mNSCLC). Five-year survival rates for mNSCLC are below 36%. This study aimed to establish if nintedanib (InO) is associated with better survival outcomes than SOC in the treatment of patients with refractory (R/R) acute lymphoblastic leukemia (ALL), I00 comes with a high price tag. As a result, the value of this intervention remains unclear. The purpose of this study was to evaluate the value-based drug price of InO in patients with R/R ALL, accounting for drug wastage. This study was conducted according to a U.S. Medicare perspective. METHODS: A Markov model composed of 3 health states: progression-free, progression, and death was developed and populated from multiple sources, including the INO-VATE trial. Transition probabilities for the Markov model were derived from individual patient data reconstruction from published Kaplan-Meier progression-free survival (PFS) curves (INO) and Cox proportional hazards models (SoC). Costs and outcomes were discounted at 3% annually. Sensitivity analyses and drug wastage scenarios were conducted. Incremental cost-effectiveness ratios (ICERs) for InO compared with SoC were estimated and assessed against benchmark willingness to pay thresholds. RESULTS: The ICER for InO was estimated to be 190,829 per QALY under wage consideration. Sensitivity analyses and drug wastage scenarios were conducted. Incremental cost-effectiveness ratios (ICERs) for SoC were estimated and assessed against benchmark willingness to pay thresholds. CONCLUSIONS: Drug wastage has a significant influence on the cost-effectiveness of InO when compared with SoC. Further studies are needed to estimate the value-based price of Ino when hematopoietic stem cell transplantation (HSCT) is considered.

PCN146  
INOTUBUM OZOGAMICIN IN PATIENTS WITH RELAPSED OR REFRACTORY (R/R) ACUTE LYMPHOCYTIC LEUKEMIA (ALL): ESTABLISHING A VALUE-BASED COST— PRELIMINARY RESULTS
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OBJECTIVES: Although the INO-VATE trial showed that inotuzumab ozogamicin (InO) is associated with better survival outcomes than SOC in the treatment of patients with refractory (R/R) acute lymphoblastic leukemia (ALL), InO comes with a high price tag. As a result, the value of this intervention remains unclear. The purpose of this study was to evaluate the value-based drug price of InO in patients with R/R ALL, accounting for drug wastage. This study was conducted according to a U.S. Medicare perspective. METHODS: A Markov model composed of 3 health states: progression-free, progression, and death was developed and populated from multiple sources, including the INO-VATE trial. Transition probabilities for the Markov model were derived from individual patient data reconstruction from published Kaplan-Meier progression-free survival (PFS) curves (INO) and Cox proportional hazards models (SoC). Costs and outcomes were discounted at 3% annually. Sensitivity analyses and drug wastage scenarios were conducted. Incremental cost-effectiveness ratios (ICERs) for InO compared with SoC were estimated and assessed against benchmark willingness to pay thresholds. RESULTS: The ICER for InO was estimated to be 190,829 per QALY under wage consideration. Sensitivity analyses and drug wastage scenarios were conducted. Incremental cost-effectiveness ratios (ICERs) for SoC were estimated and assessed against benchmark willingness to pay thresholds. CONCLUSIONS: Drug wastage has a significant influence on the cost-effectiveness of InO when compared with SoC. Further studies are needed to estimate the value-based price of Ino when hematopoietic stem cell transplantation (HSCT) is considered.