assumed equal for everolimus, while utilities for the post progression stages were obtained from the literature. Resource use was determined by a panel of five experienced experts to reflect Portuguese clinical practice. Official unit costs were used, following the Portuguese National Health Service perspective. The model adopted a lifetime frame (15 years) with a 5%discount rate. **RESULTS:** Axitinib allowed an increment of 0.20 years of progression free survival, 0.53 years of overall survival, and 0.32 quality adjusted life years compared to everolimus. Despite having a similar daily cost, the use of axitinib implied an incremental cost of 9,100€, mainly due to the increase in progression free survival, that matches second line treatment duration. Consequently the cost per quality adjusted life year was 28,598€. Sensitivity analyses showed that results were robust to model parameters specification, with the main uncertainty source being clinical efficacy. **CONCLUSIONS:** Axitinib increased progression free and overall survival, which allowed patients to benefit from more quality adjusted life years at a cost increase. Overall, it was possible to advocate that axitinib is cost-effective, as the cost per QALY is below commonly accepted thresholds.

PCN147

ECONOMIC EVALUATION OF PACLITAXEL ALBUMIN, PACLITAXEL, AND DOCETAXEL AS A SECOND LINE TREATMENT FOR METASTATIC BREAST CANCER

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OBJECTIVES: Clinical studies have shown that docetaxel to be superior to paclitaxel in overall survival (OS) and progression free survival (PFS) (median OS: 1.28 vs 1.06 year; median PFS: 0.47 vs 0.30 year) for the treatment of patients with metastatic breast cancer progressing after an anthracycline-based regimen. Other studies have shown paclitaxel-albumin extended OS by 9.7 weeks, and TTP by 4 weeks. An economic evaluation based on these two clinical trials was performed to compare paclitaxel albumin, paclitaxel, and docetaxel as a second line treatment for metastatic breast cancer. **METHODS:** A Markov model was conducted using three health states: PFS, progressed, and death to estimate overall survival, cost, life year gain (LYG) and quality adjusted life year (QALY). Efficacy data for the treatments were obtained from the published literature. In the absence of head-to-head trials, comparative efficacy and safety of taxanes were estimated using indirect comparisons. A 3% discount rate for cost and outcomes was used. Cost of chemotherapy, administering, monitoring the disease, loss of productivity, and adverse drug reactions for patients on treatment were included from the US societal perspective. **RESULTS:** Compared to docetaxel, paclitaxel albumin was found to be less expensive ($36,241 vs $73,510) and more effective in term of QALYs (0.782 vs 0.710). The incremental cost effectiveness ratio (ICER) for paclitaxel albumin compared to paclitaxel was $77,670/QALY. The probabilistic sensitivity analysis showed that paclitaxel albumin has 70% probability of being cost effective at $100,000/QALY threshold value. **CONCLUSIONS:** Paclitaxel-albumin is an attractive treatment option for the treatment of metastatic breast cancer in patients who have failed 1st-line treatment for metastatic disease. The primary analysis comparing paclitaxel albumin to docetaxel demonstrated that paclitaxel albumin dominated docetaxel because it was less costly and more effective.

PCN148

COST EFFECTIVENESS ANALYSIS OF TARGETED INTRAOPERATIVE RADIOTHERAPY ALONE (TARGIT-A) IN EARLY BREAST CANCER PATIENTS

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OBJECTIVES: Whole-breast external beam radiotherapy (EBRT) is normally given over 3-6 weeks after lumpectomy in early breast cancer patients to reduce recurrence and mortality. An individualised risk-adapted approach to adjuvant radiotherapy has been tested in the randomised TARGIT-A trial which tested the efficacy of one dose of radiation to tumour bed during lumpectomy. The objective of the present study was to assess the cost effectiveness of TARGIT-A in these patients. **METHODS:** A model based economic evaluation compared single dose TARGIT-A with current practice of EBRT in UK. A state transition Markov model approach was used to simulate the treatment outcomes in a time horizon of 20 years post-surgery. The primary outcome of interest was quality adjusted life years gained (QALY) and analysis was conducted from the health care payer's perspective. To address decision uncertainty, probabilistic sensitivity analysis was performed. A discount rate of 3.5% was applied to future costs and effects. **RESULTS:** In the Base Case Analysis TARGIT-A was a dominant strategy yielding higher QALYs at a lower cost than EBRT. Discounted EBRT and IORT costs for the time horizon of 20 years were £ 20,926 and £ 14,461 respectively. Discounted incremental QALY gained by use of IORT was 0.0069. Model results were robust to parameter uncertainty and probabilistic results were similar to the deterministic results. Application of the net monetary benefit (NMB) framework revealed higher NMB for TARGIT-A in all Monte Carlo simulations. Cost effectiveness acceptability curves show that TARGIT-A is cost effective at various willingness to pay thresholds. **CONCLUSIONS:** TARGIT-A is a cost effective strategy to treat early breast cancer patients in the UK. Implementation of this one-off radiation treatment within a risk-adapted approach could improve quality of life by sparing them from the protracted course of EBRT, improve compliance, prevent unnecessary mastectomies and save valuable NHS resources.

PCN149

EARLY COST-EFFECTIVENESS MODELING FOR TUMOR INFILTRATING LYMPHOCYTES (TIL) -TREATMENT VERSUS IPILIMUMAB IN METASTATIC MELANOMA PATIENTS

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OBJECTIVES: Metastatic melanoma has a poor prognosis with 10 year survival being <5%. Standard therapy is the effective but costly Ipilimumab. An emerging 1st line treatment is Tumor Infiltrating Lymphocytes (TIL), with response rates >50% and expected survival rates of 25%-42% versus 45% (1yr) and 23,5% (2yr) for Ipilimumab. TIL is highly personalized, however complex and requests substantial upfront investments from the hospital in expensive lab-equipment, staff expertise and training, as well as extremely tight hospital logistics. Therefore, an early health economic modelling study, supporting a Coverage with Evidence Development (CED) program, was performed. **METHODS:** We used a Markov decision model to estimate the expected costs and outcomes (quality adjusted life years; QALYs) for TIL versus Ipilimumab in metastatic melanoma patients from a societal perspective over a life long time horizon. Three mutually exclusive health states (stable disease, progressive disease and death) were modelled, divided in first and second line treatment. Technical failures and non-compliance were incorporated to reflect the dynamic nature of the technology. To inform further research prioritization, Value of Information (VOI) analysis was performed. **RESULTS:** TIL is expected to yield more QALYs compared to Ipilimumab (0.99 vs 0.52 respectively) at lower total costs (€83,588 vs €87,834 respectively). Based on current information TIL has a probability of 88% for being cost effective at a cost/QALY threshold of €30,000. Expected Value of Perfect Information (EVPI) amounted to €1,2 million. Partial EVPI (EVPPI) was highest for survival data (€550,000). Expected Value of Sample information was estimated €355,000 for an optimal sample size of n=50. **CONCLUSIONS:** TIL is expected to improve QALYs compared to Ipilimumab at lower incremental cost and has the highest probability of being cost-effective. To reduce decision uncertainty, a future clinical trial to investigate survival seems most valuable, and should preferably be undertaken as part of a CED program.

PCN150

A COST EFFECTIVNESS ANALYSIS OF EVEROLIMUS COMPARED WITH AXITINIB IN THE TREATMENT OF METASTATIC RENAL CELL CARCINOMA IN THE UNITED KINGDOM

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OBJECTIVES: This study assessed the cost-effectiveness of everolimus versus axitinib for the treatment of advanced metastatic renal cell carcinoma (mRCC) in the United Kingdom (UK). **METHODS:** A Markov model was developed with three health states: stable disease, disease progression and death. The model time horizon was 12 years and a UK NHS perspective was considered. There are no head to head studies comparing everolimus with axitinib, thus evidence from a weighted adjusted indirect analysis based on the RECORD-1 and AXIS trials was used to compare progression-free survival (PFS) for everolimus versus axitinib. Survival distributions for PFS were fitted to the post-matched population and fit statistics were generated. As overall survival (OS) data were not available from the AXIS trial at the time of the indirect analysis, the model assumed that the OS for axitinib was equivalent to that of everolimus, based on OS from the RECORD-1 trial. The Weibull survival distribution was used for both PFS and OS. Quality of life data were derived from the Swinburn et al. study and drug costs were obtained from the British National Formulary. **RESULTS:** Everolimus resulted in a progression-free life expectancy of 0.60 years compared to 0.57 with axitinib. Everolimus resulted in 0.65 QALYs compared to 0.63 QALYs for axitinib. Active drug costs were £8,105 for everolimus and £25,723 for axitinib. Total costs were higher for axitinib (£42,533) compared to everolimus (£24,387). The cost difference reflects the higher treatment costs per month and longer treatment duration for axitinib compared to everolimus. Therefore, the incremental cost of axitinib compared with axitinib was -£18,146, highlighting that everolimus is less expensive. The incremental cost per QALY gained was -£1,048,954. **CONCLUSIONS:** This cost-effectiveness analysis demonstrates that everolimus likely dominates axitinib, i.e. it is more effective and less expensive compared with axitinib in the treatment of mRCC.

PCN151

COST-MINIMIZATION ANALYSIS OF TRASTUZUMAB INTRAVENOUS VERSUS TRASTUZUMAB SUBCUTANEOUS FOR THE TREATMENT OF PATIENTS WITH HER2+ EARLY BREAST CANCER AND METASTATIC BREAST CANCER IN GREECE

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OBJECTIVES: To conduct an economic evaluation comparing Herceptin subcutaneous formulation (Herceptin-SC) with -Herceptin intravenous formulation (Herceptin-IV), in the treatment of patients with human epidermal growth factor receptor 2-positive (HER2+) early and metastatic breast cancer (EBC-MBC), in the Greek health care setting. **METHODS:** A cost-minimization model was developed to compare the total cost of care, from the hospital perspective, for new and existing patients, over 18 cycles therapy course. Total cost of therapy reflects drug acquisition cost, consumables dispensed, hospital overheads, physician and other staff time. Costing data were obtained from official Government sources (in 2014) and resource utilization data from a local validation of an international time and motion study. Due to the short time horizon of the study, costs were not discounted. **RESULTS:** The mean total cost of therapy per patient on Herceptin-IV was estimated at €24,163 compared to €23,042 per patient receiving Herceptin-SC. Drug acquisition costs accounted for €22,630 and €22,579 of total therapy costs for Herceptin-IV and Herceptin-SC, respectively. Following drug acquisition costs, the administration cost was €518 and €161 for Herceptin-IV and Herceptin-SC, respectively. Moreover, the central venous access device cost was €290 and €0 of the total costs of Herceptin IV and Herceptin SC, respectively. Finally, overhead costs made up approximately €725 of the total cost for Herceptin-IV and €302 for Herceptin-SC. Sensitivity analysis showed that the results of the model were sensitive to drug acquisition costs and patient weight. **CONCLUSIONS:** The cost of treatment with Herceptin-SC is