OBJECTIVES: Approximately 20% of metastatic renal cell carcinoma (mRCC) patients receiving 1st line (1LT) sunitinib experience disease progression (PD) identified by RECIST at 90 days after 1LT initiation. Earlier PD identification would minimize futile1LT, shifting to a potential switch to more effective 2nd line therapy. Current research is evaluating biomarkers that identify rapid PD (fPD). This study’s goal was to estimate the economic impact of utilizing an angiogenesis-specific imaging (AI) test for early PD identification. METHODS: An economic model was developed for mRCC patients receiving 1LT sunitinib from a UK National Health System perspective with a 90 day time horizon. Comparator arm used RECIST monitoring, the intervention arm an AI biomarker for early PD identification. RESULTS: For AI sensitivity of 75%, 100% and lower treatment costs. Conclusions: Protracted therapy exposes non-responding patients to risks without potential clinical benefit and results in misallocated health care resources which could be directed elsewhere. Results of this study suggest that a diagnostic test enabling early PD identification may reduce futile 1LT and its negative clinical/economic consequences. Further research should evaluate additional benefits of early PD identification improving patient quality of life and/or better clinical outcomes of subsequent therapies.

PM045

ESTIMATING ECONOMIC IMPACT OF ANGIOGENESIS-SPECIFIC IMAGING IN METASTATIC BREAST CANCER

OBJECTIVES: In the UK, anti-angiogenesis (AA) drugs (e.g. bevacizumab) have not been accepted as good value for money within the general metastatic breast cancer (MBC) population. However, it may benefit some subpopulations within MBC. Angiogenesis-specific imaging tests (A-IT) under development have the potential to offer earlier, accurate determination of response to AA therapies for MBC patients, and lead to potential cost savings. METHODS: A decision-tree based model was developed to estimate the likely economic impact of A-IT from start of AA therapy through to progression of disease. Key decision nodes were presence/absence of AI-IT, sensitivity/specificity (SE/SP) of A-IT, clinician adherence to test results and treat/no treat decision. Key model inputs (and base case values): 1) median time to progression [TTP] for current MBC patients on AA therapies (9.5 months); 2) median TTP for A-IT identified responders (13 months); 3) costs of bevacizumab, one cycle (£3,591); 4) costs of hemorrhaging, per event (£9,681); 5) per patient costs for diagnostic EUS-FNA, one patient (£200); 6) per patient costs for a confirmatory AI test (£200); 7) costs of cytology but not the EUS-FNA, costs were £381, £1575, and £2642 per patient for the three strategies. Assuming the DNA is not specific enough for a negative diagnosis, the costs per MRC pregnancy were £866, £2716, and £4128 with 44%, 58%, and 64% being diagnosed. Positive diagnosis results in annual follow-up with potential for surgical resection. CONCLUSIONS: Scenarios in which negative sensitivity analysis shows A-IT could be avoided along with £350-£450 of toxicity-related costs with the biomarker. 70-90% predictive, the model estimated £2991–£3846 of TAC therapy costs/patient could be avoided along with £350-£450 of toxicity-related costs with the biomarker.

PM046

ECONOMIC ANALYSIS OF A PREDICTIVE TEST FOR TAXANE RESPONSE IN EARLY BREAST CANCER PATIENTS IN THE UK

OBJECTIVES: Patients with high risk early breast cancer (BC) frequently have adjuvant therapy that includes taxane treatment (TAX) with a 28% reduction in risk of relapse. Pre-treatment BC assessed with associated with favorable tolerability. This is the quality-of-life and only a minority of patients derive benefit from the regimen. Biomarkers to predict TAX-response may improve the outcome of treatment/adverse events costs with the benefits and risks to patients. Our objective is to examine the economic impact of adding a predictive TAX test for BC in a UK health care setting. METHODS: A predictive model estimated the potential cost offsets of testing a cohort of BC patients with a biomarker to guide therapy selection vs. no pretesting. The no biomarker test group received 6 cycles of 3 weekly TAX: docetaxel (100mg/m2), doxorubicin (50mg/m2), cyclophosphamide (500mg/m2) (cost £5644 generic prices). In the biomarker tested (cost £606) cohort, only those with biomarker over-expression received TAX. Assuming test predictive ability of 70-90%, those found without over-expression (50-3% - 64.7% based upon 71.9% with no improved disease free survival from TAX trial findings, were treated with NICE guideline-recommended therapy (TAC) (cost £5644). Costs of follow-up were £640 £1000 per year for two years. The number of life-years gained without ulcer is 0.000. Furthermore, a positive effect was observed on lipid profile. The cost of endocrinologist’s visit in private sector was estimated to be 265.76 USD while this figure was 325.15 for general practitioner in public sector with insurance coverage. Total complications and mortality cost saving was 154.8 USD. The lowest ACER was calculated for the intervention done by general practitioner in public sector with insurance coverage. CONCLUSIONS: Structured SMBG results in significant improvement of glycaemic control. Moreover, it cost beneficial in public sector with insurance coverage. It seems that general practitioner visits with insurance coverage is the most affordable option for people with type 2 diabetes.

PM049

ECONOMIC EVALUATION OF REDUCED FUTILE 1ST LINE THERAPY IN METASTATIC RENAL CELL CARCINOMA PATIENTS USING EARLY ANGIGENESIS-SPECIFIC IMAGING

OBJECTIVES: Approximately 20% of metastatic renal cell carcinoma (mRCC) patients receiving 1st line (1LT) sunitinib experience disease progression (PD) identified by RECIST at 90 days after 1LT initiation. Earlier PD identification would minimize futile1LT, shifting to a potential switch to more effective 2nd line therapy. Current research is evaluating biomarkers that identify rapid PD (fPD). This study’s goal was to estimate the economic impact of utilizing an angiogenesis-specific imaging (AI) test for early PD identification. METHODS: An economic model was developed for mRCC patients receiving 1LT sunitinib from a UK National Health System perspective with a 90 day time horizon. Comparator arm used RECIST monitoring, the intervention arm an AI biomarker for early PD identification. Results indicate that use of A-IT after just one cycle of AA therapy results in savings and biomarker test costs, with all costs taken from published sources.