PCN70
COST EFFECTIVENESS ANALYSIS OF SUNITINIB, BEVACIZUMAB + INTERFERON-ALFA AND TEMSIROLIUM AS FIRST-LINE THERAPY OF METASTATIC RENAL CELL CARCINOMA IN SWEDEN
Rand E1, van den Burg R2, Hammarström U1, Sundararaman P1, REMARK1, 2
1United BioSource Corporation, London, UK, 2Pfizer AB, Solentuna, Sweden, 3Karolinska University Hospital, Stockholm, Sweden
OBJECTIVES: The introduction of targeted therapies for the treatment of metastatic renal cell carcinoma (mRCC) has greatly improved patient prognosis compared with interferon-alpha (IFN-α). As these therapies differ in clinical efficacy and costs, economic analyses are needed to help decision makers allocate scarce resources. We evaluated the cost effectiveness of sunitinib versus bevacizumab plus IFN-α and temsirolimus in patients with mRCC. METHODS: A cost-effectiveness model applying a third-party payer perspective was developed to simulate disease progression and survival using hazard ratios (HRs) for each treatment against IFN-α. The HRs were taken from latest data available for the pivotal phase III sunitinib trial and the phase II and III clinical trials of temsirolimus and bevacizumab plus IFN-α. Two comparative evaluations were made: (1) sunitinib versus bevacizumab + IFN-α in all patients and (2) sunitinib versus temsirolimus in patients with modified MSKCC poor-risk profile only. Swedish clinical experts’ opinions and published data on routine follow-up, treatment-related adverse events, disease progression, best supportive care of terminally ill patients, and costs were used to complement clinical trial-based parameters and quality of life measures. Model outcomes included life-years (LY), progression-free LY (PFLY), and quality adjusted LY (QALY) gained, treatment costs (2008 Swedish krona [SEK]), and incremental cost-effectiveness ratios. RESULTS: Sunitinib was more effective (gains of 0.19 PFLY, 0.23 LY and 0.16 QALY) and less costly (SEK 307,879) than bevacizumab plus IFN-α over 10 years for all patients. In poor risk patients, sunitinib was more effective (gains of 0.12 PFLY, 0.08 LY and 0.07 QALY) and more costly (SEK 18,024) than temsirolimus over 10 years. Sunitinib was cost-effective versus temsirolimus (SEK 265,044/QALY) compared to a threshold of SEK 500,000/QALY (€47,698/QALY). CONCLUSIONS: Sunitinib is a cost-effective alternative to bevacizumab plus IFN-α and temsirolimus for the first-line treatment of mRCC in Sweden.

PCN71
COST-EFFECTIVENESS OF RITUXUMAB COMBINED WITH FLUDARABINE AND CYCLOPHOSPHAMIDE IN PREVIOUSLY UNTREATED PATIENTS WITH CHRONIC LYMPHOCYTIC LEUKEMIA IN FRANCE
Roussel M1, Troussard X2, Delmer A3, Paino M1, Mudi-Fargier H4
1ROCHE, Neuilly sur Seine Cedex, France, 2Clemenceau University Hospital, Caen Cedex 9, France, 3Robert Debré University Hospital, Reims Cedex, France, 4IMS Health, Puteaux Cedex, France, 1MS Health, Puteaux, France
OBJECTIVES: This study assessed the cost-effectiveness of Rituximab (R) in combination with Fludarabine and Cyclophosphamide (FC) as first-line treatment for patients with Chronic Lymphocytic Leukemia (CLL) versus FC from the French sickness fund perspective. METHODS: A 3 health state (PFS, Progression and Death) Markov model with a 15 year life time horizon was developed from the phase III CLL-8 trial (Hallek et al., 2008) with 2.2 years median follow-up. Utility values originated from a HTA study in CLL. Costs were based on EQ-DY York Tariff. Resource use was estimated from published data and expert opinion. The analysis was restricted to direct medical costs, including bone marrow transplantation and blood transusions reported in CLL-8. The unit costs were obtained from French official sources. Costs were discounted at 3% per year. Probabilistic sensitivity analyses were performed at the 95% confidence intervals (CI) reported. RESULTS: Patients treated with FC compared with R-FC spent longer in progression (0.23 years (CI 0.05–0.44), the mean cost of supportive care for progression represented the main cost driver. The total per patient mean costs were higher for FC-compared to FC alone due to the higher drug acquisition costs. However, this was partially offset by the reduction in the mean cost of supportive care for progression. Mean incremental life expectancy for patients treated with R-FC compared to FC was 1.21 years (CI 0.75–1.67), and when quality adjusted to life expectancy represented the main cost driver. Mean incremental cost was $32,646, resulting in additional 556 QALY gained for bi-v and FUTURE I-II for quadri-v), for comparable cohorts on pre-sexual debut for bi-v and 29,587 CIN1, 2,928 CIN2+ and 32 deaths prevented, while quadri-v prevented 14,102 GWs. It resulted in additional 556 QALY gained for bi-v. The remaining CIN, CC and GW not prevented by vaccines would cost ME396 and ME367 for the current public prices of $111.82 for bi-v and $126,636 for quadri-v per dose, the vaccination program would cost MRC3 and MRC50 and be cost-effective at at least $10,611 and $11,833 respectively vs. the absence of vaccination. CONCLUSIONS: Both vaccines have different epidemiological impacts with an increased number of cancer cases prevented for bi-v, though in France, the economic impact of HPV mass vaccination is similar whatever the vaccine selected.

PCN72
EPIDEMIOLOGICAL AND COST-EFFECTIVENESS ANALYSIS OF THE COMPARISON OF THE COST-EFFECTIVENESS OF ZOLEDRONIC ACID THERAPY FOR RENAL CELL CARCINOMA (RCC) PATIENTS WITH BONE METASTASES IN FRENCH, GERMAN, AND THE UK POPULATIONS
Obermann AB1, 2,3, Botteman MF1, Kaura S2
1PharMerit North America LLC, Bethesda, MD, USA, 2Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA, 3Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA
OBJECTIVES: The ABCSG-12 trial demonstrated that adding zoledronic acid 4 mg IV monthly (ZOL) to endocrine therapy with goserelin 3.6 mg (ET) resulted in additional 556 QALY gained for bi-v compared to FC. The UKABC-12 study showed that ZOL was therefore projected to increase total costs by £176. Under the current benefits scenario, costs of breast cancer recurrence were reduced by £58; ZOL was therefore projected to increase total costs by £176. Under the lifetime benefits scenario, costs of breast cancer recurrence were reduced by £134; total expected lifetime costs were therefore increased by £273. QALYs gained with ZOL were 0.43 years under the trial benefits scenario and 1.39 years under the lifetime benefits scenario. Cost per QALY gained was £410.2 and £196 under the two scenarios, respectively. CONCLUSIONS: Adding ZOL to ET in premenopausal women with HR+ EB is highly cost-effective from the Greek health care system perspective even under conservative assumptions regarding the duration of ZOL benefits.

PCN73
COMPARISON OF THE COST-EFFECTIVENESS OF ZOLEDRONIC ACID THERAPY FOR RENAL CELL CARCINOMA (RCC) PATIENTS WITH BONE METASTASES IN FRENCH, GERMAN, AND THE UK POPULATIONS
Obermann AB, Kaura S
PharmNord North America LLC, Bethesda, MD, USA, Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA
OBJECTIVES: Zoledronic acid (ZOL) is efficacious in reducing skeletal-related events (SREs) due to bone metastases in RCC patients. However limited information is available on its cost-effectiveness. This study evaluated the economic impact of ZOL therapy for RCC patients in France, Germany, and the UK. METHODS: The source for this analysis was a retrospective evaluation of a 9-month trial comparing ZOL vs. placebo with concomitant antineoplastic treatment in RCC patients with bone metastases. A model was developed to simulate quality-adjusted life years (QALYs) and costs by integrating relevant assumptions and published information pertaining to SRE-incidence, costs, and effects on quality-of-life (QoL), mortality, drug and administration costs. It was assumed that patients experienced a 20 to 80% decrease in QoL for a month following an SRE, depending on the SRE type. SRE costs were based on diagnosis-related group (DRG) tariffs and the published literature. RESULTS: ZOL-treated patients (n = 27) experienced 1.07 fewer SREs, gained discounted QALYs (France and Germany = 0.1636; the UK = 0.1375), and incurred substantially lower discounted SRE-related costs (France = €419k, Germany = €3436, the UK = €3155). CONCLUSIONS: The model used was the first to compare with patients who were on placebo (n = 19). Inclusive of the treatment costs, ZOL savings per patient by country were as follows: France = €1315, Germany = €1223, and the UK = €719. According to probabilistic sensitivity analyses, ZOL treatment savings in 67% to 77% of model simulations, depending on the country. The cost per QALY gained was below the threshold of €30,000 in approximately 93% of the cases across all countries. CONCLUSIONS: ZOL is a cost-saving therapy for bone health management of advanced RCC patients in France, Germany, or the UK. This is because ZOL effectively prevents SREs,