PCN70 COST EFFECTIVENESS ANALYSIS OF SUNITINIB, BEVACIZUMAB + INTERFERON-ALFA AND TEMSIROLIMUS AS FIRST-LINE THERAPY OF METASTATIC RENAL CELL CARCINOMA IN SWEDEN
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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 evaluations 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 (PFY), 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 PFY, 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 PFY, 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 263,044/QALY) compared to a threshold of 95% SEK 500,000/QALY (€47,169/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 RITUXIMAB COMBINED WITH FLUDARABINE AND CYCLOPHOSPHAMIDE IN PREVIOUSLY UNTREATED PATIENTS WITH CHRONIC LYMPHOCYTIC LEUKEMIA IN FRANCE
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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 Singleness Fund perspective. METHODS: A 3 health state (PSF, 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 (in CIN2 and CIN3 EQ-SD York Tariff). Resource use was estimated based on published data and expert opinion. The analysis was restricted to direct medical costs, including bone marrow transplantation and blood transfusions reported in CLL-8. The unit costs were obtained from French official sources. Costs were discounted at 3% per annum. Probabilistic sensitivity analyses were performed around a 95% confidence intervals (CI) report. 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 R-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 0.73–1.67), at a cost of €131,855 and €162,226 per life year and quality adjusted life year regained, respectively. Univariate and probabilistic sensitivity analyses confirmed the stability of the model and resulted in ICERs consistently below commonly cited willingness to pay thresholds. CONCLUSIONS: R-FC is a clinically effective in first-line treatment of CLL patients as well as an economically optimal strategy in the management of CLL in France.

PCN72 EPIDEMIOLOGICAL AND COST-EFFECTIVENESS ANALYSIS OF THE CROSS PROTECTION DIFFERENCE BETWEEN THE BIVALENT AND THE QUADRIVALENT HPV VACCINES IN FRANCE
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OBJECTIVES: Compare the epidemiological and economic impact of accrued cross-protection against oncogenic human papillomavirus (HPV) types beyond 16/18 provided by the bivalent vaccine (bv-HPV) vs. additional protection against non-oncogenic HPV types 6/11 of the quadrivalent vaccine (quadri-v), in France. METHODS: A lifetime Markov model calibrated to the French setting was developed to reflect the natural history of low- (evolving to genital warts—GWs) and high-risk HPV (evolving to cervical cancer—CC) infections, together with screening and vaccination effects, for a single age cohort of 370,000 14-year-old girls (70% coverage). Transition probabilities, costs and utility were estimated from literature, official tariffs and expert opinions. Vaccine efficacy was obtained from recent phase III clinical trials (HPV-008 for bv-HPV and FUTURE III for quadri-v), for comparable cohorts on pre-sexual debut population (infection naive). Life-long protection was assumed for both vaccines. Numbers of Cervical Intraepithelial Neoplasia lesions (CIN) and diagnoses of cancer (Cancer) were calculated in France, Germany, and the UK. RESULTS: The cost of one CIN was M37,810 in France, M44,323 in Germany, and M49,755 in the UK. Both vaccines were cost-saving at a 3% discount rate, but the cost savings per year were larger in France (M1,351) versus Germany (M1,191) and the UK (M867). The cost per QALY gained was below the threshold in all three countries. CONCLUSIONS: There is evidence of cost-effectiveness across Europe. However, the economic implications are more favorable in France than in Germany and the UK. Further studies are needed to confirm these findings.

PCN73 COST-EFFECTIVENESS OF ADDING ZOLDRONIC ACID TO ENDOCRINE THERAPY IN PREMENOPAUSAL WOMEN WITH HORMONE-RESPONSIVE EARLY BREAST CANCER IN GREECE, BASED ON THE ABCSG-12 STUDY
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OBJECTIVES: The ABCSG-12 trial demonstrated that adding zoledronic acid 4 mg 3 monthly infusions (ZOL) to endocrine therapy with goserelin 3.6 mg monthly (ET) resulted in 3 yrs of ZOL (medication and administration) was €1802. Under the trial benefits scenario, costs of breast cancer recurrence were reduced by €58; ZOL was therefore projected to increase total costs by €1764. Under the lifetime benefits scenario, costs of breast cancer recurrence were reduced by €1348; 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 €4102 and €196 under the two scenarios, respectively. CONCLUSIONS: Adding ZOL to ET in premenopausal women with HR+ breast cancer is cost-effective for the Greek health care system perspective even under conservative assumptions regarding the duration of ZOL benefits.

PCN74 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
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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-in 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. ZOL was therefore projected to increase total costs by €1764. Under the lifetime benefits scenario, costs of breast cancer recurrence were reduced by €1348; 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 €4102 and €196 under the two scenarios, respectively. CONCLUSIONS: ZOL is cost-effective for the Greek health care system perspective even under conservative assumptions regarding the duration of ZOL benefits.