relevant from an economic perspective. The "flower" introduces 12 value elements whereof 8 are potentially novel. This study is a review of published, empirical studies of the novel elements in order to assess their relative importance and potential overlap. ***Methods:*** A review of the literature was performed by applying iteratively defined search terms found in articles, in addition to searching for cross-references ("pearl-growing"). ***Results:*** The insurance value was found to be the dominant value element. Standard cost per QALY approach was found to capture as little as 20% of the total value in some studies and including insurance value could increase value by a factor of 2-3. Moreover, insurance value could incorporate significant parts of other potentially novel value elements including severity, real option value and equity. ***Conclusions:*** The result of this study suggest that excluding insurance value leads to a significant underestimation of true value from an economic perspective. This applies to all types of health care technologies but can be expected to be especially relevant for new medical technologies with potentially large health benefits aimed at severe, rare diseases. Future research and discussions are needed to find the best approach to incorporate insurance value. Whether to adjust QALY estimates, adding separate values in addition to QALY estimates, or replacing QALY estimates with willingness-to-pay (WTP).

EE425
ECONOMIC MODELING OF WEB EMBOLIZATION VS COILING VS STENT-ASSISTED COILING FOR THE ENDOVASCULAR TREATMENT OF UNRUPTURED INTRACRANIAL ANEURYSMS

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Objectives: The Woven Endobridge (WEB) is an emerging endovascular treatment for patients with unruptured intracranial aneurysms. Compared to conventional coiling, WEB has better occlusion rates, and compared to stent-assisted coiling (SAC), WEB has advantage of dismissing the need of long-term anti-platelet medication. The objective was to assess the cost-effectiveness and cost-utility of WEB vs. coiling vs. SAC from the perspective of the German Statutory Health Insurance. ***Methods:*** A lifetime patient-level simulation model was constructed to simulate patients (mean age: 55, standard deviation:10.2) with an unruptured middle-cerebral artery aneurysm (size: 3-11 mm). Input data were derived from literature (e.g., morbidity, angiographic outcome, retreatment, procedural and rehabilitation costs, utilities and rupture rates) and a retrospective cost data. Incremental cost-effectiveness ratios (ICERs) were calculated and expressed as €/quality-adjusted life years (QALYs) and €/neurologic morbidity avoided (NMA). Deterministic and probabilistic sensitivity analyses (DSA and PSA) were performed. ***Results:*** In the base case, lifetime QALYs were 13.24 for the WEB, 12.92 for SAC and 12.68 for coiling. Lifetime costs were 20,440€ for the WEB, 23,167€ for SAC, and 8,200€ for coiling. The ICER for the WEB was 21,826 €/QALY (27,112 €/NMA) compared to coiling, and -8,501 €/QALY (-4,821 €/NMA) compared to SAC. DSA showed that the discount rate, material costs and retreatment rates had the largest impact on the ICERs, but SAC remained absolutely dominated by both coiling and WEB. At a (hypothetical) willingness-to-pay was of 30,000€/QALY, WEB is the more cost-effective strategy with 53% probability. SAC was the cost-effective method in less than 2%. ***Conclusions:*** The WEB might be a cost-effective endovascular technique compared to coiling and SAC. Coiling had the lowest cumulative costs, even though the lower occlusion rates resulted in higher retreatment costs. SAC is unlikely cost-effective, and should be restricted as primary option to more complex aneurysms not amenable to either coiling or WEB.

EE426
BUDGET IMPACT ANALYSIS OF ATEZOLIZUMAB IN 1ST LINE TREATMENT FOR PATIENTS WITH PD-L1 HIGH METASTATIC NSCLC FROM A FRENCH PAYOR PERSPECTIVE

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Objectives: Lung cancer is the 2nd most common cancer for men and the 3rd for women with 46 363 new cases in France in 2018. Non-small-cell lung cancer (NSCLC) is the predominant subtype. Atezolizumab (Tecentriq®) as monotherapy received a favorable opinion by the Transparency Commission in October 2021 for the 1st line treatment of metastatic NSCLC whose tumours have a PD-L1 expression ≥ 50% tumour cells or ≥ 10% tumour-infiltrating immune cells and who do not have EGFR mutant or ALK-positive NSCLC. The objective of this analysis is to estimate the budget impact of the introduction of atezolizumab in this indication from the French payer perspective. ***Methods:*** A 3-year model was developed to compare worlds with and without atezolizumab considering both first- and second-line treatment options. Comparators were pembrolizumab and all other regimens recommended in France. The target population was estimated from the data in the Transparency Commission's opinion. Population's characteristics and clinical data were obtained from clinical trials of atezolizumab and its comparators. Drugs' acquisition, drugs' administration, disease management and end of life costs were considered. ***Results:*** Over the three-year horizon and at a list price of 3,496.101 € excluding VAT, for a cumulated number of 18,300 patients in 1st line, the availability of atezolizumab in the new indication would result in a decrease in total expenditure for the French National Health Insurance estimated at 74,486,446 € (with an annual incremental cost of 16,446,339 €, 25,773,611 € and 32,266,497€ for years 1 to 3 respectively). This budgetary impact corresponds to a decrease of approximately 4.35% of current Health Insurance expenditure in this indication due to lower drug acquisition costs. ***Conclusions:*** In addition to the direct benefit linked to the efficacy of atezolizumab in terms of overall survival, this therapeutic option allows savings for French Health Insurance expenditures.

EE427
ANNUAL COST SAVINGS FROM THE USE OF EMPAGLIFLOZIN OVER DPP4I IN SELECT ASIA-PACIFIC COUNTRIES – ESTIMATES BASED ON THE EMPRISE EAST ASIA STUDY

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Objectives: The recently published findings of the EMPRISE East Asia study that looked at patients with type 2 diabetes mellitus (T2DM) in Japan, South Korea, and Taiwan demonstrated that empagliflozin treatment was associated with lower inpatient care needs and other healthcare resource utilization (HRU) than dipeptidyl peptidase-4 inhibitors (DPP4i) in routine clinical practice. The aim of this analysis was to estimate the annual costs savings arising from the reduction in the rates of HRU arising from the use of empagliflozin over DPP4i in select Asia-Pacific countries (Australia, Indonesia, Malaysia, Philippines, Thailand and Vietnam) based on the EMPRISE East Asia study findings. ***Methods:*** The annual HRU rates were taken from the above-mentioned study and assumed to represent the corresponding rates for all countries in this analysis. A literature review was undertaken to estimate the per visit or event all-cause resource costs in the selected countries. Local costs were inflated to latest values local Consumer Price Index estimates and subsequently converted to 2020 international US dollar (Intl$) estimates for easier comparison. ***Results:*** Annual hospitalization and outpatient cost savings per 1,000 T2DM patients ranged from Intl$ 66,000 in Vietnam to nearly Intl$ 800,000 in Thailand. On an average, the use of empagliflozin over DPP4i could potentially reduce these costs by nearly 20% in the assessed countries. Since emergency room visits were excluded from the analysis, these represent a conservative estimate of the cost savings. ***Conclusions:*** The use of empagliflozin over DPP4i in T2DM patients is expected represent significant savings in terms of hospitalization and outpatient costs.

EE428
COST-EFFECTIVENESS OF COLLAGEN LAMININ-BASED DERMAL MATRIX COMBINED WITH RESVERATROL MICROPARTICLES IN TREATMENT OF DIABETIC FOOT ULCER TREATMENT IN TURKEY

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Objectives: Collagen Laminin-Based Dermal Matrix Combined with Resveratrol Microparticles (Dermalix) is a wound dressing developed to heal the diabetic wounds. Diabetic foot wound is a major complication of diabetes with considerable burden both on patients and health systems. Around a quarter of diabetic foot infections end with amputation and around a quarter of health expenditures on diabetes are made for this complication. This implies the importance of cost-effective interventions for treatment. The objective of this study is to assess the cost-effectiveness of Dermalix + standard wound care in treatment of diabetic foot ulcers in comparison to only standard wound care in Turkey. ***Methods:*** The analysis was made from the payer perspective (SGK). A decision tree was developed to meet the objectives of the study. Effectiveness was assessed by the level of wound healing of the ulcer, measured by wound area. Probabilities in the model were taken from the clinical trial (DERMAN) of Dermalix. Diabetic foot ulcer recurrence and amputation probabilities were taken from the literature. Costs included the public reimbursement cost of Dermalix, standard wound care, amputation, prothesis and monitoring costs. Amputation costs were derived from expert views. ICER was estimated as the incremental cost for incremental healing in the wound. Standard wound care comprised of cleaning with saline solution and standard dressing. The duration of treatment was 4 weeks, and no discounting was applied to the results. ***Results:*** The ICER was calculated as 14,290 TRY. There is no officially published threshold to be used in cost-effectiveness analysis in Turkey. According to the recommendations based on GDP per capita calculations, the ICER is below the amount estimated for 2021 (GDP per capita=85.672TRY). One-way sensitivity analysis showed that the results were robust. ***Conclusions:*** Treatment of diabetic foot ulcer wounds with Dermalix + standard wound care is a cost-effective option in Turkey.

EE429
COST-EFFECTIVENESS AND BUDGET IMPACT ANALYSES OF ENZALUTAMIDE FOR THE TREATMENT OF NON-METASTATIC CASTRATION-RESISTANT PROSTATE CANCER IN MEXICO

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Objectives: To estimate the cost-effectiveness and budget impact of enzalutamide treatment in patients with high-risk non-metastatic castration-resistant prostate cancer (nmCRPC) from the Mexican healthcare perspective. ***Methods:*** A cost-effectiveness analysis (CEA) and budget impact analysis (BIA) were performed to compare apalutamide with enzalutamide for the treatment of patients with high-risk nmCRPC. The estimates of the target population were calculated based on the total number of adult (≥18 years) males in Mexico and patient segmentation (incidence of prostate cancer, percentage of patients with CRPC, non-metastatic status, high-risk status, and insurance status within the Mexican public system). The costs were extracted from the published databases of the Mexican healthcare system and included monthly drug costs, medical costs (androgen deprivation therapy [ADT], monitoring, office/inpatient visits), and cost associated with adverse event management. CEA was performed using a Markov model and effectiveness was measured as life years gained (LYG). BIA estimated the differences in total cost between the current reimbursed scenario (ADT + apalutamide) and future scenario (inclusion of ADT + enzalutamide) over a 5-year time horizon without discounting. All costs are expressed in United States dollars (USD). ***Results:*** The estimated target population included in the analyses over a 5-year time horizon ranged from 353 to 370 patients. CEA estimated that treatment with enzalutamide reduced total cost by USD 4,309 and the difference in LYG was 0.04 compared to apalutamide. The incremental cost-effectiveness ratio revealed that enzalutamide was the dominant treatment. A comparison of the current and future scenario in the BIA estimated an average 5-year reduction of cost by USD 200,164 in the future scenario. ***Conclusions:*** Enzalutamide is a cost-effective treatment option for patients with high-risk nmCRPC and can provide potential savings for the Mexican healthcare system.

EE430
COST-EFFECTIVENESS OF FARICIMAB IN PATIENTS WITH DIABETIC MACULAR EDEMA IN CANADA

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Objectives: Faricimab is a bispecific antibody targeting ANG-2 and VEGF for the treatment of diabetic macular edema (DME). In the YOSEMITE and RHINE trials, patients treated with faricimab in a Treat & Extend (T&E) regime required less frequent treatments compared to Aflibercept given every eight weeks (Q8W) with non-inferior vision changes. However, clinical practice in DME in Canada is typically characterized by pro re nata (PRN) regimens as well as T&E. This research aims to assess the cost-effectiveness of faricimab vs. anti-VEGF treatments applied in such regimens. ***Methods:*** A Markov cohort model was developed to estimate bilateral visual acuity changes linked to quality of life, injection frequency and associated costs from a Canadian payer as well as a societal perspective. Transition probabilities and injection frequency were informed by the faricimab trials and a network-meta analysis. Deterministic and probabilistic sensitivity analyses were performed for costs and key model parameters. ***Results:*** The deterministic base case resulted in a mean QALY gain of 0.48, 0.21 and 0.53 vs. ranibizumab, aflibercept and bevacizumab respectively using PRN regimens and 0.55 vs. ranibizumab using a T&E regimen. From a payer perspective, faricimab generated lower costs (CAD) vs. ranibizumab (PRN & T&E) and aflibercept of 22,031, 20,600 and 8,480 as well as higher costs of 31,019 vs. bevacizumab enabling patients to spend more than 1.5 additional years without visual impairment. The ICER for the latter from a payer and societal perspective was 58,637 and 33,516. Faricimab was also associated with a better durability profile than current treatment options. Sensitivity analyses were consistent with the base case. ***Conclusions:*** The results indicate that faricimab is dominating ranibizumab and aflibercept administered in flexible regimens typically used in clinical practice. It is associated with an ICER vs. bevacizumab that is within the typically acceptable range especially from a societal perspective.

EE431
THE COST-EFFECTIVENESS OF HOME-BASED CARDIAC REHABILITATION INTERVENTIONS: A SYSTEMATIC REVIEW

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Objectives: Cardiac rehabilitation (CR) is recognised as a cost-effective intervention which can be offered to people following a cardiac event. Home-based alternatives are being increasingly used (versus centre-based options), particularly since the COVID-19 pandemic. This study aimed to assess whether home-based interventions in the CR pathway have been demonstrated to be cost-effective, compared to conventional centre-based delivery, in a population undergoing CR. ***Methods:*** Electronic searches of the PsycINFO, MEDLINE and Embase databases (via Ovid) were conducted to identify relevant published full economic evaluations. Studies were included if they reported a full economic evaluation of home-based CR programmes or an intervention that may be classed as an individual aspect of a comprehensive home-based CR programme, compared to centre-based CR options. The review was restricted to English language studies published within the last 15 years. The protocol was registered on the PROSPERO database (CRD42018108226). ***Results:*** Database searches identified 2,572 initial records (1,865 after the removal of duplicates). Following screening of titles/abstracts, 53 full-text articles were assessed. Nine studies were included in the review. Interventions were heterogeneous in terms of delivery, components of care (e.g. exercise and behaviour change) and duration. All studies were economic evaluations alongside clinical trials, with sample sizes ranging from 53 to 778. All studies reported quality-adjusted life-years (QALYs), with the EQ-5D as the most common measure of health status (6/9 studies). Most studies (7/9 studies) concluded that home-based CR was cost-effective compared to centre-based options. ***Conclusions:*** Evidence suggests that home-based CR is cost-effective, which is particularly pertinent given the need for non-centre-based options following the COVID-19 pandemic. There were some limitations to the evidence base, including sample size and limited time horizons. Given heterogeneity in intervention design and delivery, future research is needed to investigate patient preferences for CR intervention and the cost-effectiveness of different modes of delivery.

EE432
BUDGET IMPACT ANALYSIS OF AVELUMAB + BEST SUPPORTIVE CARE (BSC) AS FIRST-LINE MAINTENANCE TREATMENT IN PATIENTS WITH LOCALLY ADVANCED OR METASTATIC UROTHELIAL CARCINOMA (LA/MUC) IN IRELAND

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Objectives: To estimate the budget impact of avelumab + BSC in the overall la/mUC treatment paradigm in Ireland and to demonstrate potential cost offsets. ***Methods:*** A budget impact model (BIM) was developed in line with the National Centre for Pharmacoeconomics (NCPE) BIM template. This Excel-based model was used to derive the gross budget impact (GBI) and net budget impact (NBI) results (scenarios with and without avelumab as first-line maintenance treatment). Two approaches to estimate the eligible population were explored, using Irish epidemiology estimates where available. The BIM adopted the perspective of the Health Service Executive (HSE); only direct medical costs were considered over a 5-year time horizon. NCPE guidelines for medicine acquisition costs were followed. Avelumab medicine acquisition costs were estimated using time-on-treatment data derived from the accompanying avelumab + BSC cost-effectiveness analysis. For the NBI results, the current and future treatment paradigms for patients with la/mUC were identified and validated by clinical experts. Dosing information for different lines of treatment regimens was informed by national treatment protocols and product licenses. ***Results:*** Approximately 95 patients may be eligible for maintenance treatment with avelumab each year (5-year cumulative N=475). Estimated 5-year GBI is €32.57 million. From an NBI perspective, reflecting scenarios with and without the introduction of avelumab maintenance into the treatment paradigm is estimated to cost the HSE €17.93 million over 5 years. An average of €3.59 million annually would facilitate access to avelumab as part of overall treatment for la/mUC, reflecting the impact of displacing second-line treatments. ***Conclusions:*** Avelumab is the first licensed maintenance treatment for la/mUC. Avelumab has the potential to address unmet clinical needs and improve survival outcomes while maintaining health-related quality of life for patients with la/mUC, with a modest budget impact. Additional savings may also be realized through final HSE negotiations.

EE433
COST-EFFECTIVENESS ANALYSIS OF A NEW SECOND-LINE TREATMENT FOR ADVANCED INTRAHEPATIC CHOLANGIOCARCINOMA IN TAIWAN: GENETIC TEST-BASED TARGETED THERAPY OF PEMIGATINIB VERSUS CHEMOTHERAPY OF 5-FU

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Objectives: The National Comprehensive Cancer Network recommends a second-line treatment of pemigatinib for intrahepatic cholangiocarcinoma (ICC) with fibroblast growth factor receptor 2 (*FGFR2*) fusion/rearrangement, and modified FOLFOX (mFOLFOX) for those without *FGFR2* alternations. However, these regimens are not yet under the coverage of Taiwan's National Health Insurance (NHI). This study evaluated the cost-effectiveness of pemigatinib/mFOLFOX and provided pemigatinib pricing reference as the second-line treatment for advanced ICC based on *FGFR2* status in comparison with 5-FU. ***Methods:*** A 3-state partitioned survival model with a 5-year time horizon was constructed for 1,000 hypothetical advanced ICC patients who failed the first-line therapy. Overall and progression-free survival of pemigatinib, mFOLFOX, and 5-FU were estimated from the FIGHT-202, ABC-06, and NIFTY trials, respectively. Utility of health states and disutility of adverse events were obtained from the literature. Medical costs related to advanced ICC were calculated using NHI claim data. The willingness-to-pay threshold was three times the GDP in 2021 (NT$2,889,684). A 3% discount rate was applied to quality-adjusted life-years (QALYs) and costs. Scenario analyes included gradual price reduction of pemigatinib, alternative survival models, and parameter distributions. One-way sensitivity and probabilistic sensitivity analysis (PSA) were performed. ***Results:*** The new regimen