PSY39
COST-EFFECTIVENESS OF BIOLOGIC THERAPIES IN PSORIASIS BASED ON A 24-WEEK EVALUATION STUDY
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OBJECTIVES: Psoriasis is a systemic inflammatory chronic disease with increasing morbidity worldwide. Psoriasis is associated with many comorbidities such as diabetes and obesity. In the last years, treatment options have been based on biologic therapies to reduce symptoms, improve quality of life and reduce disease progression. Biologic drugs have played a major role in reducing the management and complications costs in psoriasis therapy. The goal of this study was to evaluate the costs-effectiveness of three psoriasis biologic therapies used in a large general hospital in Ecuador. **METHODS:** The study evaluated during a 24-week period the efficacy of three biologic therapies for psoriasis management used a large public hospital in Quito, Ecuador, namely adalimumab (40 mg/subcutaneously, every other week), etanercept (dose 50 mg/subcutaneously, weekly), and infliximab (dose 3 mg/kg intravenously every 8 weeks). Efficacy was defined by a Psoriasis Area Severity Index (PASI) of 75 or 90 and by the Patient Global disease Activity (PGA). Treatment and management costs of the disease were calculated from the local database and from the Ecuadorian Reference Costs (2014) manual. Sensitivity analysis was performed by Monte-Carlo simulations. **RESULTS:** In terms of cost per patient and PASI 75 improvements, adalimumab was also the most cost–effective biologic agent with a costs/patient amount of 4,396.16 USD followed by infliximab with 6,635.94 USD and finally etanercept 7,469.65 USD. When considering PGA/01 evaluation, adalimumab was the most cost-effective biologic therapy with an amount of 12,324.95 USD, followed by infliximab (36,752 USD) and etanercept (126,984 USD). **CONCLUSIONS:** Adalimumab, followed by infliximab, were the most cost-effective biologic agents in psoriasis management based on PASI 75 improvements. For PGA/01, adalimumab was also optimal followed by infliximab.

PSY40
ECONOMIC EVALUATION OF BENDAMUSTINE PLUS RITUXIMAB IN THE FIRST-LINE TREATMENT OF PATIENTS WITH CHRONIC LYMPHOCYTIC LEUKEMIA
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OBJECTIVES: Advances in the understanding of the biology of chronic lymphocytic leukemia (CLL) have led to the development of new targeted therapies. Although there have been several trials evaluating different treatment regimens for the first-line treatment of CLL, direct comparisons between active treatments are limited. The purpose of this analysis was to estimate the cost-effectiveness of the different treatment options currently available. **METHODS:** A literature search was performed to identify all phase 3 clinical trials that were conducted in first-line CLL. Treatments selected for this economic evaluation were: bendamustine monotherapy, bendamustine + rituximab (BR), chlorambucil monotherapy (CLB), chlorambucil + rituximab (CLB+R), chlorambucil + obinutuzumab (CLB+OBI) and chlorambucil + ofatumumab (CLB+OFA). Data on the median progression free survival (PFS) were extracted from these clinical trials. Canadian costs for each treatment modalities were estimated based both on the dosage used in clinical trials and current list prices. For each treatment modality cost-effectiveness ratios were calculated. **RESULTS:** A total of 10 phase 3 clinical trials reporting PFS in first-line treatment of CLL were retrieved and analyzed. Inclusion criteria were variable. Reported median PFS for bendamustine monotherapy, BR, CLB, CLB+R, CLB+OBI and CLB+OFA were 21.2, 41.0, 12.1, 19.2, 29.5 and 22.4 months respectively. BR was the most effective treatment in terms of median PFS. Therefore, an incremental cost-effectiveness ratio (ICER) was calculated for each treatment strategy in comparison to BR. Estimated ICER for bendamustine monotherapy, CLB, CLB+R, CLB+OBI and CLB+OFA were respectively $13,373, $20,709, $13,771, $8,218 and $5,098 per life year saved. **CONCLUSIONS:** Among first-line treatment options selected for this evaluation, the combination of BR may be the most efficacious combination with a median PFS of 41 months. Also, BR appears cost-effective for upfront therapy with ICERs in all cases, much below the usually accepted thresholds. Differences in the patients may impact our findings.

PSY41
ECONOMIC EVALUATION OF LENALIDOMIDE IN THE TREATMENT OF LOWER RISK MYELODYSPLASTIC SYNDROMES WITH DEL5Q (MDS DEL5Q) IN MEXICO
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OBJECTIVES: Lenalidomide is an effective treatment for patients with lower risk MDS del5q. It has effects reducing disease-related transfusion requirements due to the disease, and inhibits the malignant clone and causes a delay in tumor growth. There are also benefits in terms of quality of life and use of other health care resources. The objective is to perform an economic evaluation of lenalidomide for transfusion-dependent patients with Low/Intermediate-1-risk MDS del5q from the perspective of the public health care sector in Mexico. **METHODS:** We developed a cost-effectiveness analysis using a Markov model of 5 stages: MDS transfusion-dependent, MDS transfusion-independence, complications from transfusion, acute myeloid leukemia, and death. The time analyzed was 5 years. Discount rate of 5% after year 1 was applied. Efficacy was elicited from a phase III clinical trial MDS-004 (Fenaux P, 2011)a which shows lenalidomide benefits on patients achieving transfusion independence in 56.1% vs 5.9% with lenalidomide vs placebo. There were also benefits with lenalidomide related to overall survival and risk of acute myeloid leukemia. Unitary cost are from public price list of IMSS, and resources use was calculated from a Delphi panel methodology with clinical Hematologists. A multivariate sensitivity analysis using a Monte Carlo technique was done. **RESULTS:** Over a 5 year, each patient on lenalidomide avoided 487 days of transfusion, on average. The incremental cost per life-year without transfusion dependence is USD$14,072 (Exchange Rate= 1USD=17.55 MXN). According to the sensitivity analysis the model is robust. If all expected patients are treated, their cost would be ~USD$19.7 million, which represents 0.18% of the total budget in the public health sector. **CONCLUSIONS:** Lenalidomide provides important clinical benefits in the treatment of myelodysplastic syndromes with del5q, with a limited economic impact and with a cost per life-year without transfusion with less than 3 times the GDP in Mexico.

PSY42
COST-EFFECTIVENESS ANALYSIS OF OCTREOTIDE LAR VERSUS LANREOTIDE SR FOR THE TREATMENT OF PATIENTS WITH ACTIVE ACROMEGALY IN CHINA
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OBJECTIVES: To evaluate the cost-effectiveness of octreotide LAR vs lanreotide SR for the treatment of postoperative acromegalic patients with elevated levels of growth hormone (GH) and insulin-like growth factor-I (IGF-I) in China. **METHODS:** A decision tree model was constructed and the treatment impact was projected for one year. The model simulated 1,000 acromegalic patients each in the octreotide LAR and lanreotide SR arms in Chinese setting. The clinical efficacy measure used was the percentage of patients achieving normalization (control) of either IGF-I or GH levels. As a single measure, IGF-I has the advantage over GH based on the AACE Acromegaly Guidelines. Efficacy of octreotide LAR and lanreotide SR, incidence of comorbidities, impact of acromegaly on health-related quality of life, and drug-related side effects data were obtained from literature. The cost of medication was collected through a chart review from various hospitals in five cities of China. Clinical experts from these hospitals were asked to complete a questionnaire to document the utilization of medical resources, costs of comorbidities, and cost of administration. **RESULTS:** When either IGF-I or GH control were used as the efficacy measure, patients in the octreotide LAR group exhibit less comorbidities and need less continued treatment with a second operation and radiotherapy than those in lanreotide SR group. When IGF-1 was used as efficacy measure, octreotide LAR not only achieved better efficacy but resulted in overall cost-saving, with a total cost savings of ¥ 3,145,776, which demonstrated that octreotide LAR was a dominant cost-saving strategy. When GH control was used as the efficacy measure, octreotide LAR achieved a better overall clinical efficacy with a slightly higher total costs. Sensitivity analysis didn't change the conclusion that octreotide LAR remains dominant. **CONCLUSIONS:** Octreotide LAR achieved better overall biochemical control compared with lanreotide SR which result in less comorbidity rate, second operation and radiotherapy as well as related costs.

PSY43
COST EFFECTIVENESS OF ICATIBANT FOR HEREDITARY ANGIOEDEMA IN BRAZIL: CHALLENGES IN THE ECONOMIC EVALUATION OF ORPHAN DRUGS
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OBJECTIVES: Drugs for rare disorders rank among the most expensive medicines on a cost-per-patient basis. Economic issues to prioritize resource allocation decisions are increasingly being done by public health decision-makers in Brazil. Even though, there is not a clear threshold of willingness to pay. In this study, we did a narrative review of icatibant; an orphan drug considered the first choice for angioedema crisis and discussed the cost-effectiveness of its incorporation in Brazil. **METHODS:** The costs were estimated from the Brazilian Unified Health System perspective. Cost-effectiveness was evaluated using the incremental cost-effectiveness ratio (ICER). Considering the manufacturer`s prices, which represents the highest price for which a laboratory or drug distributor may sell a drug on Brazilian market, the average icatibant´s cost per patient crisis was estimated in 1,255.75 US dollars. The quality adjustment factors of each state in this study were derived from Brazilian health state preference (utility) data. We estimated the utilities according to two scenario assumptions: extreme pain and moderate anxiety (EuroQol 3L 11312; 0.644 utility) or extreme pain, moderate anxiety and being confined to bed (EuroQol 3L 31312; 0.26 utility). These two scenarios were compared to a complete resolution, a EuroQol 3L 11111 scenario; 1.0 utility). **RESULTS:** Considering the longest time crisis being 51 hours, the total number of crisis hours per patient was estimated in a maximum 0.0021 years. We estimated an ICER between U$ 243,618.33 and U$ 506,397.66 per Qaly. **CONCLUSIONS:** In this study, an assumption of states that someone could expect during HA crisis was utilized for the first time. We considered icatibant not cost-effective. In Brazil, there is no well-defined threshold of cost-effectiveness for policymakers and payers. There is an urgent need to discuss and define the Brazilian society criteria and cost effectiveness limits related to orphan drugs.

PSY44
THE COST EFFECTIVENESS OF AFAMELANOTIDE FOR THE TREATMENT OF ERYTHROPOIETIC PROTOPORHYRIA
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OBJECTIVES: EPP is an ultra-rare genetic disease resulting in protoporphyria IX tissue accumulation. Exposure to light (and UV) leads to phototoxicity, acute intolerable reactions and 2nd degree burns of exposed skin. Afamelanotide was approved by the EMA under exceptional circumstances. Economic arguments for afamelanotide are being evaluated. **METHODS:** An Excel® model was constructed using a lifetime time horizon, a societal perspective and discount rates of 3.5% p.a. for costs and benefits. EPP symptoms were quantified as mild, moderate or severe. The proportion of patients in each state was derived from trial based quality of life scores. Disability Adjusted Life Years (DALY) were used to quantify benefit in the base case,