was conduced from the National Public Health System (SUS) perspective. A Markov model was constructed using TreeAge Software to simulate the clinical of patients that undergo to liver transplantation, with 10 years of horizontal time. In the model, the expected cost and effectiveness were compared between EVR+rTAC versus TAC. In both treatment strategies, there were the possibilities of rejection, graft loss, renal failure and renal transplantation and death. The probabilities were taken from a multicenter clinical randomized study that followed the patients for 2 years after liver transplantation using TAC or EVR+rTAC. The chosen endpoints were rejection, graft loss and renal dysfunction (creatinine clearance<60, MDRD4, mL/min/1.73m2). The estimative of 525 patients that will need a liver transplantation at SUS per year was used in Monte Carlo microssimulation, based on 2014 data. **RESULTS:** EVR+rTAC strategy preserved 26.2% of renal function, decreased 7.2% of rejections, avoided 1.9% of renal transplantation and 7.8% of liver re-transplantation. The treatment with EVR+rTAC increased the annual public costs in $172.78 (the first year) and $361.08 (the first two years) per patient. The simulation of EVR+rTAC only in patient who will have renal dysfunction after liver transplantation resulted in an annual median cost of $251.02 per patient per complication avoided, 37% less than when all patients used TAC ($1,312.32). The Monte Carlo microsimulation for 525 potential patients resulted in a cost of $1,072.51 per year per patient free of complications treated with EVR+rTAC, 18% less than when all patients were treated with TAC. **CONCLUSIONS:** Everolimus associated with reduced tacrolimus doses is cost-effective when analyzing the renal dysfunction avoided in the liver transplantation.

PGI27

EARLIER DETECTION AND TREATMENT OF NON-ALCOHOLIC FATTY LIVER DISEASE: AN ECONOMIC EVALUATION TO APPRAISE AN INNOVATIVE DIAGNOSTIC PATHWAY TO DETECT AND INTERVENE WHERE THERE ARE KNOWN RISK FACTORS

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OBJECTIVES: The prevalence of liver disease is increasing and often remains undetected until the late stages.The study estimated cost-effectiveness of an innovative diagnostic pathway (IDP) targeting adults with risk factors of non-alcoholic fatty liver disease (NAFLD) from an NHS England perspective. **METHODS:** Economic evaluation compared IDP (algorithm applied in a general practice to identify adults with risk factors for NAFLD, then stratifying disease severity using a Fibroscan to test liver stiffness, followed by hepatologist-led treatment appropriate to disease stage) with standard care (SC, hepatology referral due to abnormal LFTs). Probabilistic modelling of NAFLD progression was combined with the diagnostic accuracy of IDP and SC estimated from a feasibility study, incorporating fibrosis stages (no/mild disease, moderate liver disease, compensated cirrhosis) split into health states: 'identified' and 'unidentified' risk factor/disease. Advanced NAFLD states were: decompensated cirrhosis, hepato-cellular carcinoma, liver transplant and death. Transition probability, utility and resource use data were based on uptodate UK sources, or – if not possible - on expert panel responses to indicate early disease management and its estimated effectiveness. Lifetime Markov cohort modelling with starting age of 68, annual cycle, and costs and utilities discounted at 3.5%-rate, was applied. Cost-effectiveness planes and cost-effectiveness acceptability curves, based on 5000-sample Monte Carlo simulation, were constructed. **RESULTS:** IDP yielded increased QALYs (95% CI) (0.24 (-0.18, 0.63)) and reduced costs (-£2661 (-10831, 7099), compared with SC, with 69.7%-probability of dominance, and 88.3%-probability of cost-effectiveness at £20000/QALY threshold. The results were associated with high levels of uncertainty due to the poor quality of data available for transition probabilities in early liver disease. **CONCLUSIONS:** Indicative economic evaluation showed that IDP may be cost-effective, compared with standard care. Due to large uncertainty of model input parameters and no data around progression and management of early liver disease, further studies on IDP implementation are needed.

PGI28

COST-EFFECTIVENESS OF SIMEPREVIR VS. TELAPREVIR FOR THE TRIPLE THERAPY OF HEPATITIS C IN KAZAKHSTAN

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OBJECTIVES: Hepatitis C Virus(HCV) is a growing health problem in the world. The aim of this study is to estimate a cost-effectiveness of a triple therapy(TT) with simeprevir compared to a TT with telaprevir for the previously treated with double therapy HCV patients in Kazakhstan. **METHODS:** Markov model build in Tree-Age Pro 2013 was used for cost-effectiveness analysis from the perspective of Ministry of Health with a lifetime horizon. The model consists of two phases: (1)period of treatment with TT (48 weeks), and (2)lifetime follow-up. Cycle of the first phase is measured in weeks, the second - in years of life. The effectiveness was determined by the sustained virologic response(SVR), defined as HCV RNA<25 IU/mL after 12 weeks after completion of antiviral therapy. Effectiveness data was obtained from published RCTs, the direct costs adjusted to local settings are expressed in 2015 Kazakhstani Tenge(KZT). The average age of reference patient was 40 years. All future costs and health outcomes(QALYs) were discounted for 3% per year. One way sensitivity analysis was performed to test the robustness of model. **RESULTS:** Over 30-year stimulation of the model, TT with simeprevir incurred 6.81mln KZT and 24.2053 QALYs per patient, whereas TT with telaprevir incurred 10.98mln KZT and 24.2593 QALYs per patient. There was insignificant difference (p>0.05) in health outcomes between options. TT with simeprevir is expected to save 4.17mln KZT per patient if replases TT with telaprevir. The results of model were robust to changes in key parameters. **CONCLUSIONS:** The introduction of simeprevir as part of TT for HCV patients that had null or partial responce to previous double antiviral therapy seems to be a cost-effective option in Kazakhstan from the perspective of Ministry of Health compared to current TT with telaprevir. These findings may better inform decision makers regarding formulary inclusion and reimbursement.

PGI29

ECONOMIC EVALUATIONS OF TREATMENTS FOR INFLAMMATORY BOWEL DISEASES

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OBJECTIVES: The last decade witnessed great advances in the treatment of inflammatory bowel diseases (IBD) with the introduction of biologic therapies. Several economic evaluations have been run to evaluate these treatments. The goal of this study was to analyze the existing evidences and key parameters included in IBD cost-effectiveness studies. **METHODS:** A systematic literature review was conducted to identify economic evaluations of IBD therapy. Electronic databases (Embase and Medline) were used to identify full economic evaluations published from 2004 to 2015. Cross-references of selected articles and gray literature search were also performed to find additional publications. The health outcomes, costs, incremental cost-effectiveness (ICERs) and cost-utility ratios (ICURs) were analyzed. **RESULTS:** The literature review allowed identifying 3,631 potentially relevant studies. Titles and abstracts screening allowed the selection of 53 articles. After assessment of those articles, 36 were found pertinent for the review. Four other studies were added from gray literature. Different treatments were evaluated including biologics (53%), immunosuppressants (3%), biologics and immunosuppressants combination (5%) and mesalamine (28%). Infliximab was the most common biologic treatment evaluated (65%). In the cost-utility analyzes (88%), 35% had utility scores derived from IBD severity scores. The remaining studies used direct and indirect utility measurement methods, including EQ-5D (43%), standard gamble (33%), time trade off (25%) and visual analog scale (8%). Markov modeling, decision tree or a combination of both were used in 38%, 38% and 5% of the studies respectively. All studies included drug acquisition costs, 50% included treatment administration costs, 65% included hospitalization costs and 45% included surgical costs. **CONCLUSIONS:** Several economic evaluations especially involving biologics were conducted in the past decade. This study showed that there are significant trends in key parameters, such as model development, utility measurements and costs included, which will be helpful in the feasibility of further cost-effectiveness analyses.

PGI30

SHOULD SOFOSBUVIR-BASED ALL-ORAL TREATMENT BE CONSIDERED IN ELDERLY CHRONIC HEPATITIS C PATIENTS?

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OBJECTIVES: A relevant proportion of patients affected by Chronic Hepatitis C(CHC) is older than 65 years. These patients have been undertreated in the past two decades, due to poor eligibility to interferon-containing regimens. New all-oral, interferon-free antivirals may represent a valuable option for this population. Our aim was to assess the cost-effectiveness of sofosbuvir plus ledipasvir(SOF/LDV) therapy in genotype 1(G1) and 4(G4) CHC elderly patients. **METHODS:** A Markov model of CHC natural history was built. The model focuses on CHC patients older than 65 years and assessed the impact of liver fibrosis (METAVIR F3 and F4), age and frailty phenotype, defined by Fried's (not frail, pre-frail and frail), on the cost-effectiveness of SOF/LDV versus no treatment. The model estimated costs, Life Years and Quality-Adjusted Life Years (QALY) using the lifetime time horizon and the National Health System perspective. Results were presented as incremental cost-effectiveness ratios (ICERs) per QALY gained. **RESULTS:** The cost-effectiveness of all-oral and IFN-free treatment regimen in HCV elderly patients is influenced by all three parameters assessed in our simulation. ICER was higher in lower fibrosis stages and increased with age and frailty phenotype. In F3 and F4 patients ICER was below 40,000 €/QALY up to age 83.3 and over 85 years in non-frail patients, up to age 79.5 and 82.5 in pre-frail and up to age 76.5 and 79.5 in frail, respectively. The ICER was more sensitive to drug price and SVR probability. Further, the mortality rate not-liver related had a higher impact in the not-frail patients. **CONCLUSIONS:** Age and fibrosis stage are not enough to assess the cost-effectiveness of anti-HCV treatment in elderly subjects. A careful assessment of the patient geriatric status should be mandatory, especially in patients older than 75 years, to better allocate the resources available and to prioritize the access to the treatment.

PGI31

KEY DRIVERS OF COST EFFECTIVENESS IN CROHN'S DISEASE

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OBJECTIVES: A published economic model of biological therapies for moderate to severe Crohn's disease was used recently in the National Institute for Health and Care Excellence (NICE) technology appraisal for vedolizumab. The objective of this study was to identify key drivers of cost effectiveness in Crohn's disease. **METHODS:** The published economic model was reconstructed using data from Bodger et al. (2009), supplemented by the vedolizumab NICE submission. Costs were updated to 2013/14, and efficacy data were taken from the submission as this used a recent network meta-analysis (NMA). The reconstructed model omitted aspects of the vedolizumab submission that were heavily criticised by the Evidence Review Group (ERG). The deterministic incremental cost-effectiveness ratios (ICER) from the reconstructed model were compared with those reported for the published model. A one-way sensitivity analysis of vedolizumab versus standard care was performed using the same assumptions as the submission base case, and the outputs of both models were compared. **RESULTS:** For the base case results, Bodger et al. reported ICERs versus standard care of £19,050 for infliximab and £7,190 for adalimumab. In contrast, the reconstructed model reported ICERs of £54,077 and £31,210. These are similar to the results from the vedolizumab submission model, indicating that the differences are principally due to the use of NMA data from the submission. The key drivers were broadly similar between the reconstructed model and the submission