Markov model was constructed to analyse CHB patients’ life expectancy (LE) of no antiviral treatment versus 18-month, 36-month, and unrestricted duration of lamivudine treatment, and their associated reimbursement cost from Taiwan National Health Insurance (TNHI) perspective. Disease progression, clinical effectiveness and patient population information were obtained from systematic review of published studies. Costs of medication, diagnostics, physician’s fees, and hospitalization were included. Incremental cost-effectiveness ratios (ICERs) compared to disease progression without antiviral treatment were derived. The annual cost of lamivudine treatment was based on a 10% recruitment rate from 120,000 eligible 30-year-old CHB patients. All costs and health outcomes were discounted at 3%.

RESULTS: CHB without antiviral treatment results in LE loss of 21.7 years for 30-year-old CHB patients. Lamivudine used for 18-months, 36-months, and unrestricted treatment duration could increase LE by 2.5, 4.0, and 5.1 years respectively; continuing treatment in patients with cirrhosis could increase LE by 10.2 years. Expected lifetime costs to the TNHI for no antiviral treatment were US$12,854 per patient. Incremental costs of using lamivudine for 18-month, 36-month, and unrestricted duration were US$697, US$1031 and US$1278 respectively. ICERs for 18-month, 36-month, and unrestricted were US$757.7, US$542.5, and US$30.3; and US$1820.4 for treating cirrhotic patients. Expected maximal annual budget for lamivudine was US$13.0 m, US$15.5 m, and US$15.3 m for 18-month, 36-month, and unrestricted respectively; and US$32.3 m for continuing treatment in cirrhotic patients. CONCLUSIONS: CHB results in marked LE loss to patients. Lamivudine treatment notably improves LE. The effectiveness of lamivudine increased with increased treatment duration and when continued in cirrhotic patients. Long-term antiviral treatment of CHB with lamivudine is a cost effective strategy in Taiwan with a manageable impact on budgets.

**PGI3**

**COST-EFFECTIVENESS OF HELICOBACTER PYLORI TESTING FOR PATIENTS WITH PERSISTENT DYSPESIA IN THE UK**

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OBJECTIVES: To assess the cost-effectiveness of three tests for HP detection in adults and develop decision analysis models to compare “test—no test” strategies for the treatment of persistent dyspepsia. METHODS: Two decision analytic models were constructed and analysed from the perspective of the health service. The first model was a simple decision tree of three types of HP test, allowing for true and false test results, with the ‘number of true outcomes’ as the measure of effectiveness. Tests considered were the serological test, the C-urea breath test and the monoclonal faecal antigen test. The second model was based on published guidelines for managing dyspepsia and procedures in secondary care. Measures of effectiveness for the second model include numbers in each end state, number of endoscopies performed, and number of HP eradication treatments given inappropriately and the extent of wasted resources consumed. Data used to furnish the models were gathered from the literature and available published costs. RESULTS: The monoclonal faecal antigen test was the most cost effective solution with an ICER of £2 per additional true outcome, but was highly dependent on the sensitivity and specificity of the serological test. The stool test and the breath test either dominate or are relatively cost effective in relation to the serological test unless the specificity of the serological test exceeds 0.93. The stool test either dominates or is relatively cost effective in relation to serological test up to a cost of £18.67 per stool test. Preliminary results from the second model suggest that the decision is highly dependent on values attached to the variables in the model, especially in relation to costs of treatment and costs associated with malignancy. CONCLUSION: In the UK, the faecal antigen test is a cost effective solution to testing for HP in dyspepsia patients.

**PGI4**

**TREATMENT OF CIRRHOSIS OF THE LIVER WITH SILYMARIN, A COST-EFFECTIVENESS ANALYSIS, BASED ON GERMAN DATA**

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OBJECTIVES: To clarify whether the therapy of liver cirrhosis with silymarin shows a higher cost-effectiveness than a treatment without from of the third party payers perspective. METHODS: To calculate the incremental cost-effectiveness based upon a clinical study, the liver-related mortality rates of patients with liver cirrhosis after four years, treated with or without silymarin, were compared. Adverse effects (AE) and adverse drug reactions (ADR) were also be considered. Comparative parameters were costs, effectiveness and tolerability of both alternatives. Costs were generated by the drug therapy of liver cirrhosis, medical care, and treatments of AE and ADR, which were derived from previous studies and portrayed in a core-model. The calculation of the model was performed by utilising the program DATA Professional. Two sensitivity-analyses were conducted. RESULTS: For liver-related mortality total costs of €5467 for silymarin and €3333 without silymarin were generated. The effectiveness-adjusted costs were calculated at €5970 for silymarin and €4009 for treatment without silymarin. This entails that for the longer survival time of 9.12 months, incremental costs of €1961 were calculated per silymarin patient. However, as an effect, less AEs occurred and longer survival of patients could be achieved with silymarin treatment of liver cirrhosis. CONCLUSION: With silymarin treatment of liver cirrhosis less AEs and longer survival of patients could be achieved. By considering the concept of prolonged life, cost amounting to €2580 was estimated per life year gained (lyg).

**PGI5**

**THE COST-EFFECTIVENESS OF PEGINTERFERON ALFA-2B (12KD) PLUS RIBAVIRIN VS. INTERFERON ALFA-2B PLUS RIBAVIRIN FOR CHRONIC HEPATITIS C (CHC) IN A DEVELOPING COUNTRY—BRAZIL**

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OBJECTIVES: Peginterferon alfa-2b (12KD)/ribavirin (PEG2b) has been shown to produce a higher rate of sustained virological response (SVR) than non-pegylated combination therapy (non-PEG) in CHC, but the cost effectiveness of this improved efficacy has not been assessed in Brazil. METHODS: We developed a Markov model to describe the clinical history of CHC in which the cohorts of hepatitis C virus (HCV) patients received PEG2b or non-PEG for either 48 or 24 weeks according to genotype and liver histology and were followed for their expected lifetime. The reference patient was a 30-year-old male with CHC without cirrhosis. The SVRs to PEG2b and non-PEG were 48% and 34% for HCV genotype 1 and 88% and 80% for non-1, respectively. Quality of life for each health state was based on literature. Costs for each health state were based on three Delphi panels, one with hepatologists, one with intensivists and another with oncologists. Costs in 2004 reais and benefits were discounted at 3%. RESULTS: In HCV genotype 1, PEG2B increases life expectancy (LY) by 1.79 years and quality adjusted life expectancy (QALY) by 0.82 years compared to non-PEG. The
incremental cost per QALY gained is 21.074 reais. In HCV non-
genotype patients, PEG2B increases LY by 1.02 and QALY by 0.47 years in comparison to non-PEG. The incremental cost per QALY gained is 15.057 reais. The weighted average incremental cost-effectiveness ratio, using population-based HCV genotype distribution estimates, for all genotypes was 17.832 per QALY. CONCLUSIONS: Peginterferon alfa-2b (12 KD)/ribavirin are a cost-effective therapy for treatment of naive adults with CHB compared with standard interferon alfa-2b/ribavirin, regardless of HCV genotype. ESOMEPRAZOLE IS COST-EFFECTIVE COMPARED WITH PANTOPRAZOLE IN THE ACUTE AND MAINTENANCE TREATMENT OF REFUX ESOPHAGITIS IN FINLAND

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OBJECTIVES: To assess the cost-effectiveness of two treatment strategies for reflux esophagitis (RE) in Finland: acute treatment with esomeprazole 40 mg qd followed by maintenance treatment with 20 mg qd, or acute treatment with pantoprazole 40 mg qd followed by maintenance treatment with 20 mg qd. METHODS: A decision analysis model was developed to compare the two treatment strategies with regard to direct medical costs (drugs, physician visits, investigations, procedures) and productivity costs (absence from work and reduced productivity while at work) using a 7-month time horizon. Probabilities for treatment success were based on results from a large multinational, randomised, double-blind clinical study of up to 8 weeks acute (n = 3170) and 6 months maintenance (n = 2766) treatment of RE. The proportion of patients with treatment success and an estimated number of weeks with symptoms of gastro-esophageal reflux disease (GERD) were used as effectiveness measures. Sensitivity analyses were made by using upper and lower 95% confidence limits of the clinical study results, as well as by changing patient management assumptions. RESULTS: The proportion of patients with treatment success, defined as healed RE within 8 weeks acute treatment and no relapse during subsequent maintenance treatment, was 83.4% and 69.6% for esomeprazole and pantoprazole, respectively (i.e. an absolute difference of 13.8%). This corresponded to 1.1 weeks less with GERD per patient by using esomeprazole. In the base case analysis, the mean estimated direct medical cost per patient was slightly lower for the esomeprazole strategy (£33) and the estimated productivity loss per patient was considerably lower for the esomeprazole strategy (£114). Sensitivity analyses supported robustness of main findings. CONCLUSION: The esomeprazole treatment strategy was found to be cost-effective compared with the pantoprazole treatment strategy, since esomeprazole provides better effectiveness and savings in work productivity costs at similar or lower direct medical costs.

ECONOMIC EVALUATION OF ADACOLUMN® APHERESIS FOR THE TREATMENT OF PATIENTS WITH MODERATE TO SEVERE CROHN’S DISEASE (CD)/ULCERATIVE COLITIS (UC)

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The two inflammatory bowel diseases (IBD), Ulcerative colitis CD and Crohn’s disease UC are chronic relapsing diseases. As the major part of the health care costs of IBD consists of hospitalizations and surgery, there is a great potential for novel therapies to reduce costs and improve quality of life (QoL) if they could reduce the relapse rate and maintain patients in remission. A novel treatment option in these patients is the Granulocyte and monococyte/macrophage apheresis (Adacolumn®). OBJECTIVES: To estimate the cost-effectiveness of treating (CD) and (UC) patients with Adacolumn® apheresis compared to standard treatment. METHODS: We developed a Markov model for the treatment of UC and CD. The model and our cost-effectiveness application for CD and UC is based on four data sources: (a) an uncontrolled clinical study of the first 100 patients treated with Adacolumn® apheresis for IBD in clinical practice [The Scandinavian study], (b) a cohort of 147 IBD patients treated with usual care from Denmark [Danish Crohn Colitis Database-Copenhagen County] including 1 304 patient years (c) prices of health care and pharmaceuticals from Sweden, (d) and QALY data from literature. RESULTS: Surgical operations and days in hospital were reduced by 90 cent. The cost per QALY gained by treating patients for three years with Adacolumn® is US$19,015 for UC and US$70,142 for CD, respectively. CONCLUSION: The comparison between the usual care treatment and the Adacolumn® treatment is based on the matching of two cohorts. Our results will be compared with forthcoming data from a randomized clinical trial. Compared to usual care Ada-