ambulatory hospital care in the LTG group (LTG 20 vs. LEV 10). No significant difference was found concerning the self-reported health status of the patients (mean EQ VAS at follow-up: LTG 75.2 ± 1.81 vs. LEV 74.8 ± 2.47) nor depression (mean BDI sumscore at follow-up: LTG 7.1 ± 5.9 vs. LEV 5.9 ± 7.3). CONCLUSIONS: No significant differences were detected between the two treatment arms concerning ambulatory or stationary resource use, self-reported health status or depression. Non-inferiority should be proven with an adequate trial design.

PND24 TREATMENT OF ADVANCED PARKINSON’S DISEASE IN THE UNITED STATES: A COST-UTILITY MODEL

Tarrant ML1, Groenendael MP, Armand C2
1Teus Nutsinencien, Kaares, City, NIC, USA, 2Vase Consulting, Boulder, CO, USA, 3H Lundbeck A/S, Paris, France

OBJECTIVES: To assess the cost-utility of rasagiline or entacapone (COMT) as adjunctive therapy to levodopa (LD) versus carbidopa/levodopa/entacapone (LCE) versus standard LD therapy in patients with advanced PD and motor fluctuations in the US. As PD progresses, patients and their families experience substantial health and economic burdens. Because motor fluctuations are linked to poor quality of life and higher health care costs minimizing off-time is an effective strategy for reducing costs associated with PD. METHODS: A two-year Markov model was utilized to examine the cost-effectiveness of advanced PD treatments. Patients may transition therapy every four months. Transition probabilities were obtained from clinical trial data. Medical costs, drug costs and utility weights were obtained from published literature. RESULTS: Over 7 years, all therapy options showed greater effectiveness than LD alone. Rasagiline and LCE were cost saving from a payer perspective; while COMT was cost saving from a societal perspective. Benefits over 2 years were 0.12 additional QALYs for rasagiline, COMT and LCE and 3.08 additional months with ≤25% off-time for rasagiline 4.85 for COMT and LCE versus LD alone. CONCLUSIONS: From a payer perspective, rasagiline and LCE were dominant therapies to LD monotherapy; while COMT was effective at higher cost. With no additional cost over a 2 year period, rasagiline presents a valuable alternative to COMT, LCE and LD mono-therapy as the treatment of advanced PD patients. Results from this cost-utility model and prior adjunctive clinical data provides ongoing support for rasagiline’s adjunctive use in moderate to advanced PD patients with motor fluctuations.

PND25 COST-EFFECTIVENESS OF MEMANTINE IN THE TREATMENT OF MODERATE TO SEVERE ALZHEIMER’S DISEASE IN NORWAY

Toumi M1, Lauruvi P1, Grishenko P2, Cochran J, Rowe B1
1University Claude Bernard Lyon 1, Villeurbanne Cedex, France, 2Lundbeck SAS, Paris, France

OBJECTIVES: To assess the cost-effectiveness of memantine, compared with standard care, in moderate to severe Alzheimer’s disease (AD) patients. METHODS: A cost-utility analysis was conducted based on a 3-state Markov model, which simulated 5-year evolution of pre Full-Time-Care (FTC) patients with and without memantine treatment in addition to any background AD therapy, in terms of time-to-FTC, Quality-Adjusted-Life-Years (QALYs), and cost. Transition from the pre-FTC to the FTC state was modelled using new predictive equations estimating time-to-FTC based on clinical assessment of cognition, function, and behaviour. The equations were derived from cohort of patients with dementia followed for four years. Treatment effect was estimated based on the published meta-analysis of six memantine RCTs. Both health utilities (EQ-5D) and resource utilization for the model came from a Scandinavian Study of Cost and Quality of Life in AD. Costs were valued from the societal perspective and covered routine patient management, hospitalization, social community services, institutionalisation, medications, loss in productivity, and leisure time. Memantine cost was accounted for until patients required FTC (conservative). Costs and benefits were discounted at an annual rate of 3%. Results were reported in Euros (NOK), 2008. The model underwent extensive stochastic and one-way sensitivity analyses testing the impact of model assumptions and changes in input values for treatment effect, health utilities, cost, and discounting rates. RESULTS: Memantine was associated with a longer time-to-FTC of 21 days, QALYs gained of 0.02 and a cost saving of above €900 (~7,300NOK). Lower costs in memantine group were due to prolonged pre-FTC time and offset drug acquisition cost. Memantine was cost-effective at €40,000 (300,000NOK) thresholds (72.86%). The sensitivity analyses confirmed the robustness of the base-case scenario. CONCLUSIONS: Memantine is associated with higher benefits for no additional costs relative to standard care, and is a cost-effective treatment.

PND26 COST-UTILITY OF INTERFERON BETA-1B IN THE TREATMENT OF PATIENTS WITH A CLINICALLY ISOLATED SYNDROME SUGGESTIVE OF MULTIPLE SCLEROSIS IN SPAIN

Arbuta T1, Pino C2, Casado V3
1Hospital de Elche, Hospital de Llóberget, Barcelona, Spain, 2Hospital de Sant Joan de Reus, Barcelona, Spain, 3Hospital de la Santa Creu i Sant Pau, Barcelona, Spain

OBJECTIVES: Estimate the cost-utility of interferon beta 1B (IFNB-1b) in patients with a clinically isolated syndrome (CIS) suggestive of multiple sclerosis (MS). METHODS: A Markov model was developed using the epidemiology and treatment of CIS and MS. The model simulates outcomes over time horizons ranging from 2 years to lifetime. A hypothetical cohort of 1,000 patients with incident CIS, with initial health states defined by Kurtzke’s Expanded Disability Status Scale (EDSS), was specified. The cohort was assumed alternatively to be treated with IFNB-1b (250 mg of following an immunomodulatory event suggestive of MS or not treated until confirmation of MS. Data from study BENEFIT was used to model EDSS progression over time and transitions from CIS to MS. Exacerbations (relapses) were estimated from BENEFIT and published natural history data. Following transition to MS, all patients were assumed to be treated with IFNB-1b until EDSS of 6.4. Medical costs of MS treatment and IFNB-1b were estimated from published literature and pricing schedules. Patient utilities were derived from EQ-SD data, supplemented by published data defined by EDSS score and relapse occurrence. Mortality was estimated. Costs ($2008) and outcomes were discounted at 3% per annum. Sensitivity analyses were performed on all key model parameters. RESULTS: Use of IFNB-1b was associated with slower EDSS progression (longer time to MS diagnosis), and reduced relapse burden. In the base case (50-year time horizon), use of IFNB-1b versus no treatment was $20,500/ QALY gained at 3% per annum. Postings of oncologic criteria and dominates using McDonald diagnostic criteria. Findings were sensitive to simulation time horizon, IFNB-1b cost and treatment effect (underlying rate of disease progression). CONCLUSIONS: IFNB-1b—treatment of patients with CIS appears to offer reasonable value for money relative to many well accepted health care interventions.

PND27 A DISCRETE EVENT SIMULATION OF PREGABALIN COMPARED TO USUAL CARE IN REFRACTORY NEUROPATHIC PAIN

Lister S1, Gordon JP3, McElwan P4
1Pfizer Limited, Tadworth, Surrey, UK, 2CHKS Health Economics Unit, Cardiff, UK

OBJECTIVES: Medicines must be shown to be both clinically and cost-effectively compared to alternatives in order to be recommended by the NHS. This study evaluated the cost-effectiveness of pregabalin compared to usual care, in patients with refractory neuropathic pain (NP), i.e., those who had achieved an inadequate response to, or were intolerant of, earlier medication including amitryptil- fine and gabapentin. METHODS: A Discrete Event Simulation (DES) model was constructed to evaluate clinical and economic outcomes of pregabalin versus usual care in patients with refractory NP. An open-label, long term study evaluating pregabalin’s effectiveness in refractory NP patients over 15 months was used as the clinical input to the model. The ‘usual care’ comparator was defined as a group of pain medications comprising weak opioids, strong opioids, NSAIDs and/or anagelsics. New utility data was collected using the EQ-5D via a UK postal survey of hospital patients with refractory NP. This survey also collected costs of other pain medication and other health care resources consumed by patients. In each 6-month ‘time-on’ point, accrued costs and benefits associated with their pain score in that cycle, which was uniquely defined by the input clinical data. Adverse events and withdrawals, and their cost and disutility, were estimated, also based on the input clinical data. Total costs and benefits were summed and extrapolated over the five-year time horizon of the model to calculate the ICER. RESULTS: The base case analysis estimated the ICER at £10,803/QALY. One-way sensitivity analyses showed that the ICER was stable to changes in all input parameters. CONCLUSIONS: This economic evaluation used new, real-world utility data in refractory NP to show that pregabalin provides additional benefit in patients with refractory NP at a reasonable cost. To our knowledge, this is the first economic model to specifically evaluate a refractory NP population.

PND28 ADHERENCE AS A PREDICTOR OF THE UTILIZATION OF HEALTH CARE RESOURCES IN A MULTIPLE SCLEROSIS POPULATION USING INTERFERONS

Faris R1, Steinberg S1, Chang CF2, Tang J1, Tankersley MA1
1Accredo Health Group, Memphis, TN, USA, 2University of Memphis, Memphis, TN, USA

OBJECTIVES: To determine if adherence to interferons used to treat patients with Multiple Sclerosis (MS) impacts the utilization of health care resources. METHODS: A retrospective cohort study design was used. Pharmacy and medical claims data for MS patients were extracted for 2006–2008. Adherence was measured using two methods for Medication Possession Ratio (MPR), one that incorporates persistence and one that does not. Patients were classified as adherent if they met a standard cutoff off point. The number of hospitalizations, ER visits, and physician office visits were measured for each patient year. A series of regression models were used to assess the impact of adherence on the utilization of health care resources. RESULTS: A total of 3590 patients were included in the study. Based on the two MPR methods, compliance ranged from 76.6% to 89.8%. Patient adherence is a significant predictor of whether patients have at least 1 ER visit, with those who are adherent having a lower risk of ER visits. Patients considered adherent had a significantly lower risk of being admitted to the hospital than those considered non-adherent. Adherent patients were at higher risk of having at least 2 physician office visits. The full descriptive and inferential statistics, and individual year data will be included in the presentation. CONCLUSIONS: Interferon therapy is considered an effective treatment for MS patients. This study demonstrates that patient adherence to interferon therapy is important in reducing the use of expensive, acute health care resources. Patients who were adherent to the interferon therapy were less likely to have at least 1 ER visit and at least 1 hospitalization, and more likely to have at least 2 physician office visits. Reducing health care resource use can reduce the total cost of care for MS patients, and as well as increase an individual’s long term productivity in society.