ambulatory hospital care in the LTG group (LTG 20 vs. LEV 10). No significant differ-
ence was found concerning the self-reported health status of the patients (mean EQ
VAS at follow-up: LTG 75.2 ± 18.1 vs. LEV 74.8 ± 24.7) nor depression (mean BDI
score at follow-up: LTG 7.1 ± 5.9 vs. LEV 5.9 ± 7.3). CONCLUSIONS: No sig-
nificant differences were detected between the two treatment arms concerning ambula-
tory or stationary care 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
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OBJECTIVES: To assess the cost-utility of rasagiline or entacapone (COMT) as
adjunctive therapies to levodopa (LD) versus carbosidopa/levodopa/entacapone (LCE)
versus standard LD monotherapy 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 derived from published literature.
RESULTS: Over 5 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 5.08 additional months with <25% off-
time. The Markov model showed 4.85 for COMT and LCE vs. LD alone. CONCLUSIONS:
From a payer perspective, rasagiline and LCE were dominant therapies to LD mono-
therapy; 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 for 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
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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 modeled 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 included routine patient management, hospitalization, social
support, 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 sensitiv-
ity 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 gains of 0.02 and a cost
saving of above 390€ (7,500NOK). Lower costs in memantine group were due to
prolonged pre-FTC-time and offset drug acquisition cost. Memantine was cost-
effective at €60,000 (300,000NOK) thresholds (72.8%). 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
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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 Symptom Scale (EDSS), was
specified. The cohort was assumed alternatively to be treated with IFNB-1b (250 mg
code) following an initial demyelinating event suggesting 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 6.5. Baseline and med-
costs of MS therapy and IFNB-1b were estimated from published literature and
pricing schedules. Patient utilities were derived from EQ-5D data, supplemented
by published data defined by EDSS score and relapse occurrence. Mortality was esti-
eated from life tables and EDSS. Costs ($2008) and utility 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),
ICUR of IFNB-1b versus no treatment was $20,500 / QALY gained using thresholds based
on a series of regression models were used to assess the impact of adherence on the utilization of health care resources. RESULTS: A total of 3,359 patients were included in the study. Based on the two MPR methods, compliance ranged from 77.6% 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 sta-
tistics, 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 hospitaliza-
tion, 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.

PND27
ADVERSE PREDICTOR AS A PIVOT OF THE UTILIZATION OF HEALTH CARE RESOURCES IN A MULTIPLE SCLEROSIS POPULATION USING INTERFERONS
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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 cut-
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 3,359
patients were included in the study. Based on the two MPR methods, compliance
ranged from 77.6% 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
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