and secondary analysis, respectively. Extensive sensitivity analyses indicated that results were robust, with the median number of relapses avoided for the overall study population was 0.74 per patient over 2 years. The average cost-effectiveness of 44 mcg scIFNβ-1a was estimated to be $107,861 per relapse avoided for the EDSS >3.5–5.0 cohort. The average cost-effectiveness for the overall study population was estimated to be $181,208 per relapse avoided. Sensitivity analyses showed that results were robust to changes in key input parameters such as SMD costs, the number of relapses in untreated patients, the relative risk reduction in clinical relapse rates, the rate of adherence, and the average cost of relapse.

**CONCLUSIONS:** Based on model results, the average cost-effectiveness of 44 mcg scIFNβ-1a was favorable for both the overall study population and the EDSS >3.5–5.0 cohort.

**PND4 A COST-UTILITY ANALYSIS OF SARCOS TITAN ANTERIOR ROOT STIMULATION (SARS) COMPARED TO MEDICAL TREATMENT IN COMPLETE SPINAL CORD INJURED PATIENTS WITH A NEUROLOGICAL BLADDER**

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**OBJECTIVES:** To estimate the cost-utility of sacral anterior root stimulation (SARS, using the Finetech-Brindley device) compared to medical treatment (anticholinergics + catheterization) in complete spinal cord injured patients with a neurological bladder. **METHODS:** A probabilistic Markov model was elaborated with a 10-year time horizon, one-year cycles and a 2.5% discount rate. Three irreversible states were defined: 1) treatment without urinary complication, 2) surgery for urinary complication (spincterotomy, urinary derivation); 3) death. Reversible states (urinary calculus, retropubic surgery, mortality) were updated every year. The decision analytic model was populated with real-world inputs and related data but developed independently to understand the impact of their structural differences on model predictions. The aim of this study was to compare a Markov cohort model (MM) and a discrete-event simulation (DES) model that were based on common clinical disease progression and treatment effects.

**RESULTS:** A similar population was simulated in the MM and the DES model, aggregated cost and utility estimates were compared over varying time horizons. The average expanded disability status scale (EDSS) of the Italian National Health Service (INHS) and French National Health System (FNSH) viewpoint. Health care resources included those related to diagnosis, treatment (CPAP only) and follow-up of OSA; management of hypertension, diabetes, HT, AF, post-MI, stroke, post-stroke, atrial fibrillation (AF), heart failure (HF), and death; was developed to compare costs, outcome of interest, and model assumptions of the Italian and French healthcare systems, respectively. The model results showed that SARS using Finetech-Brindley device offers the most important benefit and should be considered cost-effective at a 30,000€ ceiling ratio. Despite a high uncertainty, EVPI and partial EVPI may indicate that further research would not be profitable to inform decision making.

**PND5 COMPARISON OF A MARKOV COHORT MODEL AND A DISCRETE-EVENT SIMULATION FOR ECONOMIC ANALYSES OF TREATMENTS FOR MULTIPLE SCLEROSIS**

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**OBJECTIVES:** Multiple sclerosis (MS) is a disease with lifelong impact, making the cost-effectiveness (CE) of its treatments particularly sensitive to assumptions regarding health state valuations. Our model designs were embedded in those designs. The primary aim of this study was to compare a Markov cohort model (MM) and a discrete-event simulation (DES) model that were based on common clinical disease progression and treatment effects. The aim of this study was to compare a Markov cohort model (MM) and a discrete-event simulation (DES) model that were based on common clinical disease progression and treatment effects.

**RESULTS:** A similar population was simulated in the MM and the DES model, aggregated cost and utility estimates were compared over varying time horizons. The average expanded disability status scale (EDSS) of the Italian National Health Service (INHS) and French National Health System (FNSH) viewpoint. Health care resources included those related to diagnosis, treatment (CPAP only) and follow-up of OSA; management of hypertension, diabetes, HT, AF, post-MI, stroke, post-stroke, atrial fibrillation (AF), heart failure (HF), and death; was developed to compare costs, outcome of interest, and model assumptions of the Italian and French healthcare systems, respectively. The model results showed that SARS using Finetech-Brindley device offers the most important benefit and should be considered cost-effective at a 30,000€ ceiling ratio. Despite a high uncertainty, EVPI and partial EVPI may indicate that further research would not be profitable to inform decision making.

**PND6 THE LONG-TERM VALUE OF GLATIRAMER ACETATE FOR THE TREATMENT OF RELAPSING REMITTING MULTIPLE SCLEROSIS IN THE NETHERLANDS**

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**OBJECTIVES:** To evaluate the cost-effectiveness of glatiramer acetate (Copaxone®) as a disease-modifying treatment (DMT) for relapsing-remitting multiple sclerosis (RRMS) in the Netherlands. The impact of key modeling decisions in this study, a Markov and a DES model showed that natural history predictions diverge over long time horizons, in part due to the consideration of disease history in the DES model. A better understanding of the differences between the two model designs helps ensure interpretation of the model results while taking into consideration the assumptions embedded in those designs.

**PND7 COST-EFFECTIVENESS OF SUBCUTANEOUS INTERFERON BETA-1A IN A SUB-POPULATION OF MULTIPLE SCLEROSIS PATIENTS (KURTZKE EXPANDED DISABILITY STATUS SCALE [EDSS]) >3.5–5.0**

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**OBJECTIVES:** To evaluate the cost-effectiveness of 44 mcg subcutaneous interferon beta-1a (scIFNβ-1a) in patients with multiple sclerosis (MS) with Kurtzke Expanded Disability Status Scale (EDSS) score >3.5–5.0. **METHODS:** The analysis was performed using a Markov cohort model. The economic perspective of the analysis was society. The decision analytic model was populated with real-world inputs and related data but developed independently to understand the impact of their structural differences on model predictions. The aim of this study was to compare a Markov cohort model (MM) and a discrete-event simulation (DES) model that were based on common clinical disease progression and treatment effects. The aim of this study was to compare a Markov cohort model (MM) and a discrete-event simulation (DES) model that were based on common clinical disease progression and treatment effects. The aim of this study was to compare a Markov cohort model (MM) and a discrete-event simulation (DES) model that were based on common clinical disease progression and treatment effects.

**RESULTS:** A similar population was simulated in the MM and the DES model, aggregated cost and utility estimates were compared over varying time horizons. The average expanded disability status scale (EDSS) of the Italian National Health Service (INHS) and French National Health System (FNSH) viewpoint. Health care resources included those related to diagnosis, treatment (CPAP only) and follow-up of OSA; management of hypertension, diabetes, HT, AF, post-MI, stroke, post-stroke, atrial fibrillation (AF), heart failure (HF), and death; was developed to compare costs, outcome of interest, and model assumptions of the Italian and French healthcare systems, respectively. The model results showed that SARS using Finetech-Brindley device offers the most important benefit and should be considered cost-effective at a 30,000€ ceiling ratio. Despite a high uncertainty, EVPI and partial EVPI may indicate that further research would not be profitable to inform decision making.

**PND8**

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