wholesale acquisition cost with consideration of contractual discounts and patient co-payment. The primary economic endpoint was cost per relapse avoided over a 4-year period of treatment. **RESULTS:** The ARR varied across the five DMDs with interferon beta-1a SC injection (Rebif®) showing the highest results (0.72) and interferon beta-1a IM injection (Avonex®) the lowest (0.26). Economic results showed significant difference in the cost-effectiveness ratio (CER) among the DMDs, with interferon beta-1a SC injection (Rebif®) having the most favorable CER (US$47958/relapse avoided) and interferon beta-1a IM injection (Avonex®) having the least favorable (US$121,147/relapse avoided). Interferon beta-1b SC injection (Betaseron®), glatiramer acetate SC injection (Copaxone®), and natalizumab IV injection (Tysabri®) offer intermediate CER results of US$48,345, US$68,440, and US$93,903 per relapse avoided, respectively. **CONCLUSION:** Modeling absolute reduction in clinical endpoints provides a methodology for comparing clinical trials and demonstrates that the difference in cost-effectiveness results among the DMDs is significant.

PNL6

EXAMINATION OF THE COST-EFFECTIVENESS OF DOPAMINE AGONISTS FOR THE TREATMENT OF RESTLESS LEGS SYNDROME

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OBJECTIVE: To examine the cost-effectiveness of ropinirole for the treatment of primary restless legs syndrome (RLS) versus the alternative off-label therapies of pramipexole and pergolide. **METHODS:** A cost-effectiveness analysis was conducted from the societal perspective using a cohort of 10,000 United States adults 45 years old and older with moderate-to-severe primary RLS. A decision tree was used to model cost-effectiveness for a two-year period following commencement of dopamine agonist therapy. Outcome probabilities were obtained from a systematic review of randomized controlled trials and observational studies. Costs were derived from standard 2005 health care cost references. Cost-effectiveness decision models were created for base-case analyses. One-way and probabilistic sensitivity analyses were conducted to test the robustness of the findings. **RESULTS:** In terms of changes in the International Restless Legs Syndrome Study Group Rating Scale (IRLS) score for RLS severity, pergolide dominates ropinirole given the base-case. Pergolide is cost-saving when compared to both ropinirole and pramipexole, resulting in a saving of $1687 and $556 per one-point improvement in IRLS score. One-way sensitivity analyses indicated that the IRLS scores for augmentation strongly influenced the calculated incremental cost effectiveness ratios (ICERs). Probabilistic sensitivity analyses revealed variation in the results indicating a lack of clear dominance. **CONCLUSIONS:** None of the therapies is clearly dominant in terms of cost per IRLS score change. Although ropinirole is currently the only U.S. Food and Drug Administration (FDA) approved medication for the treatment of RLS, it is not more cost-effective than alternate off-label dopamine agonists prescribed for RLS.

PNL7

COST-EFFICACY ANALYSIS OF MULTIPLE SCLEROSIS THERAPIES: ASSESSING THE IMPACT OF NEUTRALIZING ANTIBODIES

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OBJECTIVE: To determine the effect of neutralizing antibodies (NAbs) on the cost-effectiveness of disease-modifying agents (DMAs) used to treat multiple sclerosis (MS). **METHODS:** A cost-effectiveness model was developed using relapse rate and disability progression endpoints from pivotal phase III trials of currently approved DMAs for MS (interferon beta [IFNB]-1a IM [Avonex], IFNB-1a SC [Rebif], IFNB-1b [Betaseron], and glatiramer acetate [GA; Copaxone]). The model was created from a managed care perspective with time horizons of 24 and 48 months. Cost-effectiveness is expressed as a ratio of total utilization costs per percent relative risk reduction for relapses and disability progression; daily cost-effectiveness is shown as per percentage point reduction. The incidence of NAbs and their effect on efficacy was obtained from prescribing information, open-label extension studies of IFNB products, and a large population study. The model includes the following assumptions: comparison of similar endpoints across different clinical trials; constant adverse event rates among products; constant burden of relapse over time; constant persistence/compliance rates among products; similar laboratory testing/frequency among IFNB products. A one-way sensitivity analysis was conducted to test the robustness of the model to changes in NAb incidence. **RESULTS:** At 24 months, the cost-effectiveness for disability progression was $824 ($1.13/day) for IFNB-1a IM, $1222 ($1.67/day) for IFNB-1a SC, $1150 ($1.57/day) for IFNB-1b, and $2558 ($3.50/day) for GA. After the development of NAbs, at 48 months cost-effectiveness was $1659 ($1.14/day) for IFNB-1a IM, $2536 ($1.74/day) for IFNB-1a SC, $2433 ($1.67/day) for IFNB-1b, and $5117 ($3.50/day) for GA. Results were similar for relapse rate. Results of sensitivity analyses confirmed the robustness of the model. **CONCLUSIONS:** NAbs reduce the cost-effectiveness of IFNB products. IFNB-1a IM (Avonex) was the most cost-efficacious DMA before (24 months) and after (48 months) the development of NAbs.

PNL8

ASSESSING THE COST-EFFECTIVENESS OF IMMUNOMODULATORY THERAPIES FOR RELAPSING-REMITTING MULTIPLE SCLEROSIS BASED ON LONG-TERM DATA

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OBJECTIVES: Using long-term follow-up data from clinical trials, this analysis assesses the cost-effectiveness of five treatment strategies in patients diagnosed with relapsing-remitting multiple sclerosis (RRMS): symptom management alone (SMA) and symptom management combined with subcutaneous glatiramer acetate (SCGA), intramuscular interferon beta-1-a (IM-IFNβ1-a), subcutaneous interferon beta-1-a (SC-IFNβ1-a), or subcutaneous interferon beta-1-b (SC-IFNβ1-b). **METHODS:** A literature-based Markov model was developed to assess the cost-effectiveness of five treatment strategies for managing a hypo-