MODEL OF RASAGILINE VERSUS STANDARD OF CARE FOR PARKINSON’S DISEASE: COMPARISON OF PROGRESSION EFFECTS

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OBJECTIVES: To incorporate the rasagiline effects observed in the ADAGIO trial into a 25-year Parkinson’s Disease (PD) progression model. A model evaluating economic gains from slow progression was previously developed but progression reduction effects had been hypothetical, including rasagiline effects would be informative.

ADAGIO’s relative difference in the Activities of Daily Living–Unified Parkinson’s Disease Rating Scale (ADL-UPDRS) from week 0 to 36 for placebo vs. rasagiline (1 mg/day) were used to parameterize the reduction in progression rate for rasagiline. Relative differences in total UPDRS changes were also evaluated. Effects observed in the clinical trials were assumed to persist over the course of the model. Medicare claims data for 25,577 patients over 9 years were used to parameterize direct medical costs by H&Y stage. Patients were age 62, 61% male, and 50% H&Y1/50% H&Y2 at baseline. Costs and life-years were discounted at 3%. RESULTS: Based on the relative rate of change in ADL-UPDRS, rasagiline reduced progression rates by 76.1%. Rasageline added $48,226 in drug costs over 25 years. Total direct costs (medical and pharmacy) for untreated patients were $264,389 and $148,736 for rasagiline treated patients; incremental direct costs were $115,653 in favor of rasagiline. Incremental life years gained were 1.97 in favor of rasagiline. At 10 years, the rasagiline treated patients; incremental direct costs were $115,653 in favor of rasagiline. Incremental costs varied between treatments.

In summary, compared with placebo, rasagiline yields substantial economic and clinical benefits over a 25 year horizon.

REFERENCES: 1. Hoehn and Yahr stage. 2. Degenerative disease.