Cost effectiveness of Cladribine Tablets for treatment of RRMS in the Netherlands

INTRODUCTION

- Multiple sclerosis (MS) is a chronic and degenerative neurological condition that is associated with neurological impairment, severe disability and premature mortality.
- In the Netherlands, the overall age-sex-standardized incidence rate of MS was 4.8 per 100,000 person-years and prevalence was estimated to be 1 in 1,000 people.
- There are two broad categories for MS: relapsing disease and progressive disease. Relapsing disease is categorized in clinically isolated syndrome (CIS) and relapsing-remitting disease (RRMS). Over time, approximately 90% of patients with RRMS will develop Secondary Progressive disease (SPMS), a condition that bypasses the relapsing course of disease and is associated with fewer relapse events and a gradual progression in disability between relapses. The RRMS phenotype is primary interest for this poster, with special focus on the high disease activity (HDA) and rapidly evolving severe (RES) subpopulations.
- Recently, Cladribine Tablets have become available in the Netherlands for patients with RRMS, as a disease modifying drug (DMD) that reduces the frequency and severity of relapses and delays disability progression.

OBJECTIVE

This study aimed to evaluate the cost-effectiveness of Cladribine Tablets compared to alemtuzumab and fingolimod in the treatment of RRMS patients with HDA and natalizumab in the treatment of patients with RES MS in the Netherlands.

METHODS

A previously developed Markov model6 was adapted to simulate costs and effects of RRMS treatments in the Netherlands. Disease progression was modeled using the Kurtzke’s Expanded Disability Status Scale (EDSS) system, for RRMS, SPMS and general mortality (Figure 1).

RESULTS

In the HDA sub-population, Cladribine Tablets is the dominant option compared to alemtuzumab and fingolimod. Cladribine Tablets was also the dominant option compared to natalizumab in the RES sub-population.

Table 3 shows the costs by health state (€). The costs for each relapse estimated at € 1,024.

Table 4 shows the results from the base case analysis.

CONCLUSIONS

- In the Netherlands, treatment of RRMS with Cladribine Tablets is cost-effective versus alemtuzumab and fingolimod in HDA patients, and cost-effective versus natalizumab in RES patients, at a threshold of €50,000.
- Cladribine Tablets was dominant in all base case analyses.
- Probabilistic sensitivity analysis showed that outcomes for Cladribine Tablets vs alemtuzumab are inconclusive, as roughly half are in the southeast quadrant (dominant) and half in the northwest quadrant (dominated).
- A key strength of this study is the model considers cost-effectiveness across two important sub-populations of MS from a full societal perspective.
- The study included a VOI analysis quantifying the value of eliminating uncertainty in the model.

REFERENCES

3. Tullman, MJ. 2013. American J of Managed Care 15(12):

DISCLOSURES

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