

# Economic Analysis for Introduction of Cladribine Tablets as a Treatment for Relapsing Multiple Sclerosis patients with High Disease Activity in Kuwait

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## INTRODUCTION

- Multiple sclerosis (MS) is a chronic demyelinating neurological disorder characterized by loss of sensory and motor functions.<sup>1</sup>
- In 2019, the estimated prevalence and incidence of MS in Kuwait per 100,000 people was 104.9 and 5.39, respectively.<sup>2</sup>
- Cladribine tablets is the first oral short course treatment approved for the highly active relapsing multiple sclerosis across various geographies.<sup>3</sup>

## OBJECTIVES

To estimate the budget impact (BI) of introducing Cladribine Tablets compared to other disease-modifying drugs for the treatment of High Disease Active (HDA) relapsing MS (RMS) patients from payer's perspective in Kuwait

## METHODS

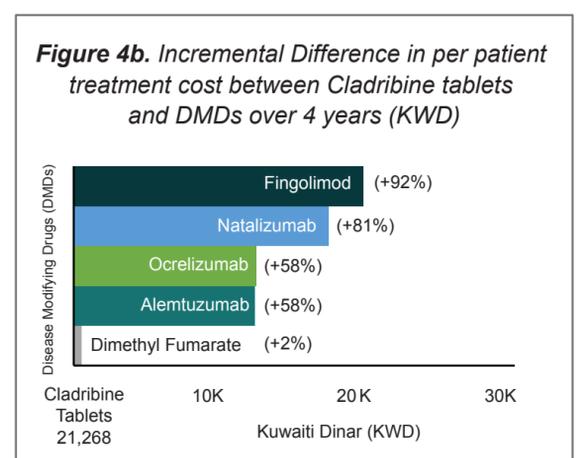
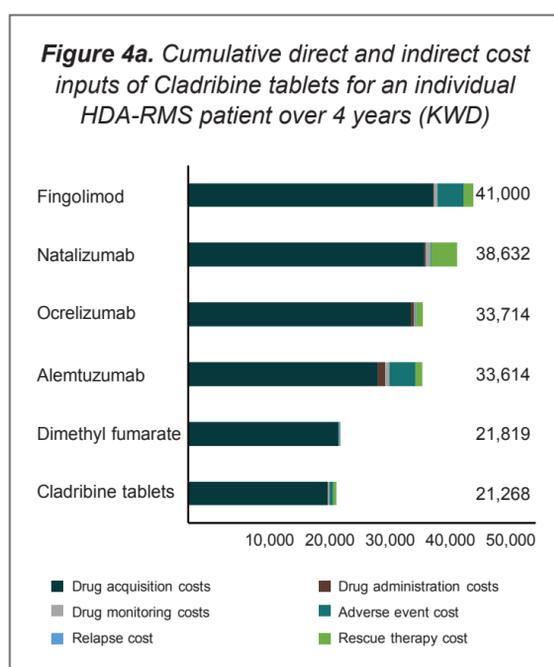
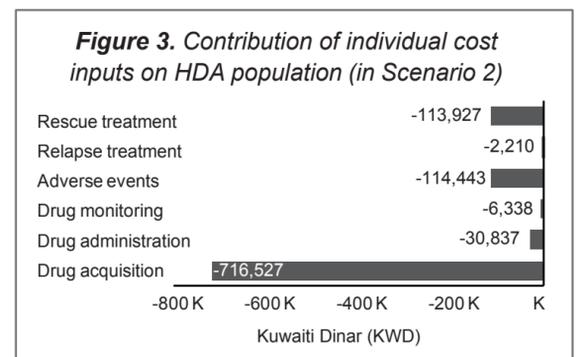
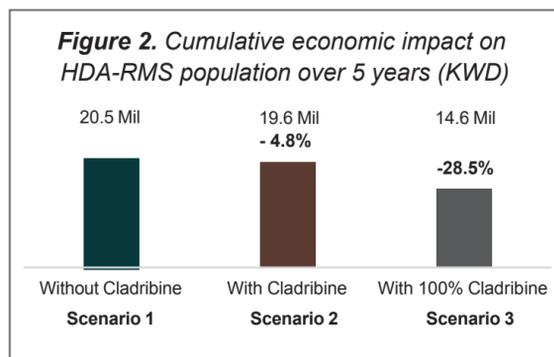
- This BI analysis was performed using an excel-based BI model. Three scenarios, 'MS treatments without cladribine' and 'MS treatments with cladribine gradual introduction' and 'MS treatments with full replacement with cladribine' were assessed over a five-year time horizon based on the perspective of MS experts in Kuwait. The comparators included dimethyl fumarate, fingolimod, natalizumab, ocrelizumab and alemtuzumab.
- The model inputs included total number of HDA-RMS patients, market shares, and costs associated with drug administration, monitoring, adverse events management, and relapse therapy. The inputs were retrieved from literature and/or obtained by interviewing the key experts in Kuwait representing governmental sectors. All costs were presented in Kuwaiti Dinars (KWD).
- The results of the model were presented to the interviewed MS experts and payers for validation. The outcome of the BI model are endorsed by the authors.

Figure 1. Detailed Methodology



## RESULTS

- A gradual introduction of cladribine tablets for the treatment of HDA-RMS (starting by 5% in first year and reaching up to 18% market share in year five) resulted in an estimated cost savings of 4.8% (KWD 984,282). Whereas with a 100% replacement of existing treatments with cladribine tablets, the estimated cost savings was 28.5% (KWD 5,9 millions). (Figure 2)
- The major contributors for cost savings in HDA budget were drug acquisition cost, expenditure associated with adverse event and rescue treatment. (Figure 3)
- The cumulative treatment cost per HDA- RMS patient (including all cost inputs) over 4 years with cladribine tablets was KWD 21,268 which is the least option compared most of the currently used disease modifying drugs (DMDs). (Figure 4a)
- On comparison with cladribine tablets, the incremental difference in per patient treatment cost for HDA patient over 4 years, was highest for fingolimod by 92%, natalizumab by 81% then ocrelizumab and alemtuzumab by 58%. (Figure 4b)



## CONCLUSION

Introduction of cladribine tablets in Kuwait as a treatment option in HDA relapsing MS patients shows cost-saving from the payer's perspective. The savings in budget improved with an increase in the cladribine tablets market share

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