Rationale and Design of Classic-MS Study Evaluating Long-Term Efficacy for Patients with Multiple Sclerosis Treated with Cladribine Tablets

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CONCLUSION



CLASSIC-MS is an exploratory study that may provide valuable information on the long-term efficacy of patients with multiple sclerosis (MS) treated with cladribine tablets.



The results from this study may benefit patients with MS and clinicians by helping to inform future treatment approaches and treatment decision-making.



INTRODUCTION

- Cladribine tablets 10 mg (cumulative dose 3.5mg/kg over 2 years demonstrated efficacy versus placebo over 2 years in CLARITY, CLARITY Extension,² and ORACLE-MS,³ showing sustained efficacy in MS patients without further active treatment in CLARITY Extension.
- Long-term safety in this population has been previously assessed in the PREMIERE registry.⁴
- CLASSIC-MS is an exploratory, lowinterventional, multicenter, ambispective, Phase IV study of patients with MS, or those with a first clinical demyelinating event enrolled into the Phase III trials and who received ≥1 course of cladribine tablets or placebo.



OBJECTIVES

CLASSIC-MS will explore long-term efficacy and real-world treatment patterns in CLARITY, **CLARITY Extension and ORACLE-MS** trial patients.





- Following pre-baseline screening and assessment for eligibility, long-term retrospective data will be obtained from medical records at Study Visit 1; prospective data will be collected at Study Visits 1 and 2.
- Patients will be enrolled during 17 months between Q3 2019–Q4 2020
- The last Patient Last Visit is expected in Q1 2021.

Figure 1. CLASSIC-MS Study Visit and Data Collection

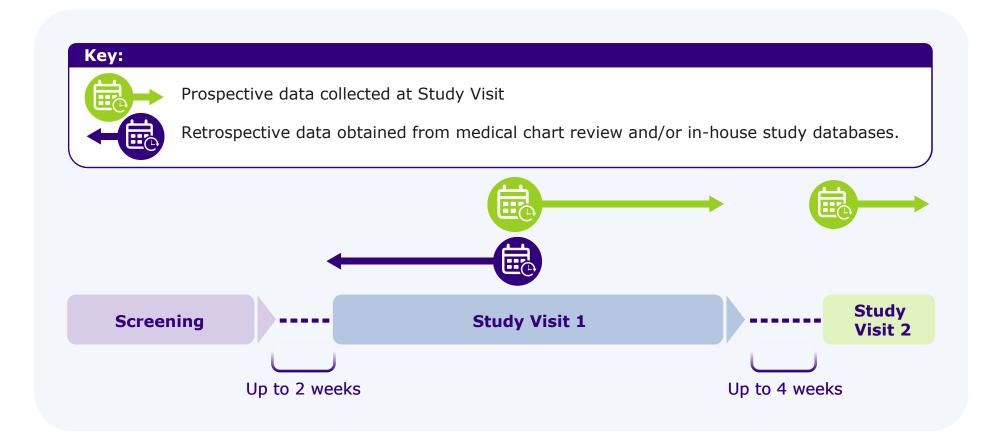


Table 1. CLASSIC-MS Study Objectives

Objective		
Primary	Evaluation of long-term mobility	
Secondary	Differences in clinical and MRI characteristics between long-term responders* and non-responders	
	Real-world treatment patterns	
	Durability of clinical outcomes, quality of life, and cognitive outcomes after treatment with IMP	
Tortions	Durability of outcome on brain imaging after treatment with IMP	
Tertiary	Association between high-disease activity and long-term response	
	Differences in genetics between long-term responders* and study participants requiring alternate therapies following treatment with IMP	

 st Study participants who did not demonstrate any evidence of disease reactivation based on Investigator assessment of clinical and imaging outcomes until Year 4 or later following their last dose of IMP and who did not receive disease-modifying treatment until Year 4 or later following their last dose of IMP.

 ${f IMP}$, investigational medicinal product (cladribine tablets or placebo); ${f MRI}$, magnetic resonance imaging.

Table 2. CLASSIC-MS Schedule of Data Collection

Assessments & Procedures	Screening	Study Visit 1*	Study Visit 2 [†]		
Informed consent	X				
Inclusion and exclusion criteria	X				
Sociodemographic and clinical characteristics	X				
Prospective Data Collection					
Physical examination		X			
EDSS telephone assessment		X			
EDSS, EQ-5D-3L, BVMT-R, SDMT		X			
Optional blood sample for pharmacogenetic testing		X			
Adverse events and concomitant medications		X	X		
End of study form		X	X		

Retrospective data collection (based on chart review)

	Medical and disease history	X		
	EDSS from end of parent study to Study Visit 1		X	
	Details of subsequent DMDs, including physician questions on treatment decisions		X	
	Date of first use of an ambulatory device or wheelchair		X	
	Date of first time bedridden		X	
	Relapse history from end of parent study to Study Visit 1		X	
	SPMS conversion		X	
	CDMS conversion		X	
	PPMS diagnosis		X	
	Adverse drug reactions related to cladribine tablets		X	
	MRI sub-study			

clinically definite MS; DMD, disease-modifying drug; EDSS, Expanded Disability Status Scale; EQ-5D-3L, EuroQoL-5 Dimensions; MRI, magnetic resonance imaging; PPMS, primary progressive MS; SDMT, Symbol Digit Modalities Test; **SPMS**, secondary progressive MS.



RESULTS

Figure 2. Enrollment of Sites into CLASSIC-MS

In 2018, a feasibility survey was sent to 225 centers

110 centers provided positive responses and were included, representing 48% of sites originally enrolled in the Phase III studies

*Following agreement to participate these sites finally declined citing reasons such as budgeting or resourcing issues.

115 centers were not included: 81 were not willing to participate 13 were dropped* 16 were non-responders 5 were rejected

The CLASSIC-MS Study: NCT03961204

1. Giovannoni G, et al. N Engl J Med. 2010;362:416-426. 2. Giovannoni G, et al. Mult Scler. 2018;24:1594-1604. 3. Leist TP, et al. Lancet Neurol. 2014;13:257-267. 4. Cook S, et al. Mult Scler Relat Disord. 2019;29:157-167.

 AB has received honoraria as member of working groups, advisory boards and participated in clinical trials supported by Actelion, Biogen Argentina, Merck KGaA (Darmstadt, Germany), Novartis, Sanofi-Genzyme, and Teva Argentina as well as professional presentations for Biogen Argentina, Merck KGaA (Darmstadt, Germany), Novartis, Sanofi-Genzyme, and Teva Argentina as well as professional presentations for Biogen Argentina, Merck KGaA (Darmstadt, Germany), Novartis, Sanofi-Genzyme, and Teva Argentina as well as professional presentations for Biogen Argentina, Merck KGaA (Darmstadt, Germany). travel / accommodations stipends. **GE** has received consulting fees and research support from Biogen, Genzyme, Merck KGaA (Darmstadt, Germany), Novartis, Roche, and Teva. **GE** has received consulting fees from Actelion, Bayer Schering Pharma, Biogen, FivePrime, GlaxoSmithKline, GW Pharma, GW Phar Ironwood, Merck & Co., Merck & Co., Merck KGaA (Darmstadt, Germany), Novartis, Pfizer Inc., Protein Discovery Laboratories and travel expenses for scientific meetings, has been a steering committee member of clinical trials or participated in advisory boards of clinical trials in the past 3 years with Actelion, Biogen, Celgene, EXCEMED, Genentech, Genzyme, Merck Serono, Merck Serono, MSIF, NMSS, Novartis, Roche, Sanofi-Aventis, and Teva Pharmaceuticals. KR has received honoraria for lectures and Teva Neuroscience. TL has received consulting fees from Acorda, Bayer, Biogen, Daiichi, EMD Serono, Novartis, ONO, Pfizer, and Teva Neuroscience. TL has received consultancy fees or clinical research grants from Acorda, Bayer, Biogen, Daiichi, EMD Serono, Novartis, Roche/Genentech, Genzyme, Merck Serono, MSIF, NMSS, Novartis, Roche, Sanofi-Aventis, and Teva Neuroscience. Biogen, Serono, and Teva Neuroscience; speaker fees from Acorda, Biogen, Elan, EMD Serono, and Teva Neuroscience. BY has received honoraria for lectures and advisory boards from Bayer, Biogen, Merck KGaA (Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), Novartis, and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and has received honoraria for lectures and advisory boards from Bayer, Biogen, Merck KGaA (Darmstadt, Germany), and Novartis; and has received honoraria for lectures and advisory boards from Bayer, Biogen, Merck KGaA (Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA, Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA (Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA (Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA (Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA (Darmstadt, Germany), and Novartis; and Pfizer. BGA and EVDC are employees of Merck KGaA (Darmstadt, Germany), and Pfizer. BGA and EVDC are employees of Merck KGA (Darm Editorial support for preparation of this poster was provided by Joseph Ward and Matthew Bexon of inScience Communications, Springer Healthcare Ltd, UK, and was funded by Merck KGaA, Darmstadt, Germany.

Urine pregnancy test

MRI assessment