Safety and Tolerability of 30-minute Ublituximab Infusions: Updates from the ENHANCE Study

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KEY FINDINGS

- 30-min infusion outcomes
  - 100% of 30-min infusions were completed
  - 93% of infusions were completed without interruption or slowing
  - 91% of participants received non-drowsy antihistamines as premedication
  - Low rate of infusion-related reactions (IRRs) was reported
- Treatment Satisfaction Questionnaire for Medication (TSQM-9) responses at Week 24
  - 93% of participants responded positively to all TSQM-9 questions

CONCLUSIONS

- Data from ENHANCE continues to support that 450 mg may be safely administered in 30 minutes.
- The ENHANCE study is ongoing, and additional efficacy, safety and tolerability will be reported in the future, including the evaluation of the potential to eliminate the Day 15 dose.

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REFERENCE:

1. Ross AP, Killestein J, Berger T, et al. Safety of Shorter Ocrelizumab Infusion Confirmed Over Multiple Administrations: Results of the ENSEMBLE PLUS Substudy. Presented at the 2023 Annual Meeting of the Consortium of Multiple Sclerosis Centers (CMSC); May 31–June 3, 2023; Aurora, CO, USA.

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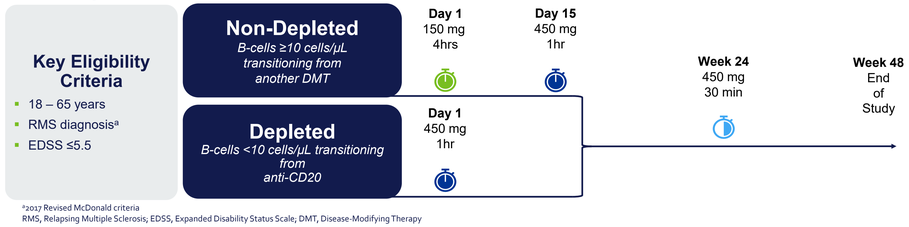
BACKGROUND

- Ublituximab is an anti-CD20 monoclonal antibody glycoengineered for enhanced antibody-dependent cellular cytotoxicity.
- Ublituximab is approved for relapsing forms of multiple sclerosis (RMS) in adults with an administration schedule of 150 mg dose on Day 1 followed by 450 mg doses on Day 15, Week 24, and subsequently every 24 weeks.
- Previous anti-CD20 therapies have demonstrated no relationship between infusion duration and the severity of IRRs.[1] Improvements in patient convenience may be achieved through the introduction of shorter duration infusions.

METHODS

- ENHANCE is a multi-center, open-label, 48-week study in participants with RMS designed to evaluate optimized dosing regimens for ublituximab.
- The study is actively enrolling participants with RMS who are treatment-naïve or transitioning from other disease-modifying therapies. Participants transitioning from prior anti-CD20 therapy in a B-cell depleted state (<10 cells/μL) received a 450 mg ublituximab infusion in 1 hour on Day 1. Non-depleted participants (B-cells ≥10 cells/μL) received 150 mg of ublituximab in 4 hours on Day 1 followed by 450 mg of ublituximab administered in 1 hour on Day 15. At Week 24, all participants received a 30-minute, 450 mg ublituximab infusion.
- Recommended premedications included a non-drowsy antihistamine, corticosteroid, and antipyretic at each infusion.
- The TSQM-9 was administered at Weeks 24 and 48.

Figure 1. Study Schema



[a]2017 Revised McDonald criteria

RMS, Relapsing Multiple Sclerosis; EDSS, Expanded Disability Status Scale; DMT, Disease-Modifying Therapy

RESULTS

Table 1. Baseline Characteristics by Population

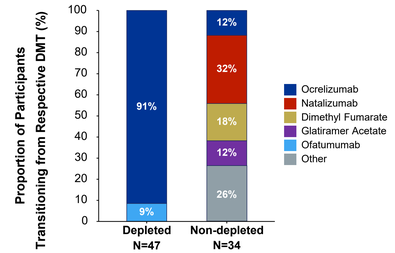
B-cell Depletion Status Day 1 Dose Infusion Duration	Depleted 450 mg 1 hr N=47	Non-depleted 150 mg 4 hrs N=34	Overall N=81
Age, years, median (range)	45 (24, 65)	49 (28, 65)	47 (24, 65)
Female, n (%)	30 (64%)	18 (53%)	48 (59%)
Race, n (%) White Black or African American Asian Other	 38 (81%) 7 (15%) 1 (2.1%) 1 (2.1%)	 27 (79%) 5 (15%) 2 (5.9%) 0 (0%)	 65 (80%) 12 (15%) 3 (3.7%) 1 (1.2%)
Years since MS diagnosis, median (range)	8 (1, 29)	9 (1, 28)	8 (1, 29)
Years since MS onset, median (range)	9 (1, 36)	13 (1, 29)	10 (1, 36)
Relapses in prior 2 years, median (range)	0 (0, 1)	0 (0, 2)	0 (0, 2)

RESULTS, CONT.

Table 2. Participants Who Switched from Ocrelizumab

B-cell Depletion Status Day 1 Dose Infusion Duration	Depleted 450 mg 1 hr N=43	Non-depleted 150 mg 4 hr N=4	Overall N=47
# of Prior Anti-CD20 Infusions, median (range)	7 (3, 14)	5 (4, 12)	7 (3, 14)
Duration of Last Anti-CD20 Infusion (minutes), median (range)	140 (120, 300)	120 (120, 120)	135 (120, 300)
Experienced Wearing-Off Effect on Prior Anti-CD20, %	56%	50%	55%

Figure 2. Most Recent DMTs by B-cell Depletion Status



Other DMTs: Fingolimod (n=3), Ozanimod (n=3), Evobrutinib (n=1), Interferon Beta-1a (n=1), Teriflunomide (n=1)

Figure 3. Low Rate of IRRs Observed Among 30-min Infusions

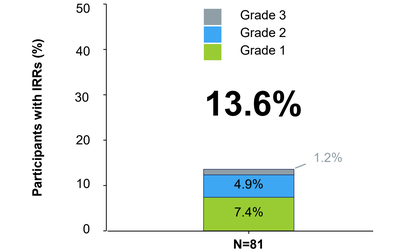
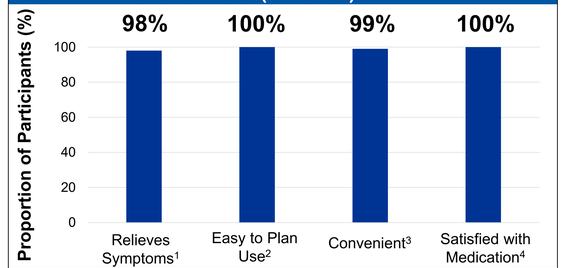


Figure 4. Patients Reported Satisfaction with Ublituximab at Week 24 (TSQM-9)



1) Proportion of participants reporting Extremely Satisfied, Very Satisfied, Satisfied, Somewhat Satisfied
2) Proportion of participants reporting Extremely Easy, Very Easy, Easy, Somewhat Easy
3) Proportion of participants reporting Extremely Convenient, Very Convenient, Convenient, Somewhat Convenient
4) Proportion of participants reporting Extremely Satisfied, Very Satisfied, Satisfied, Somewhat Satisfied

30-min Infusion Experience:

- 100% of 30-min infusions were completed
- 93% of infusions were completed without interruption or slowing
- Median (IQR) duration: 32 (30, 34) minutes
- 91% of participants received non-drowsy antihistamines as premedication
- IRR symptoms Reported in >1 Participant
  - 11% throat irritation
  - 3.7% itching
- All IRRs resolved completely

TSQM-9 Patient Questionnaire

- 93% of participants had overall positive questionnaire

IQR, Interquartile Range