Drivers of new rozanolixizumab treatment cycles in patients with generalized myasthenia gravis in the Phase 3 MycarinG and open-label extension studies

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Introduction

- In the Phase 3 MycarinG study (NCT03971422), one 6-week cycle of weekly rozanolixizumab significantly improved MG-ADL and QMG scores versus placebo[1]
- After MycarinG, patients could enroll in OLE studies (MG0004/NCT04124965 then MG0007/NCT04650854, or into MG0007 directly) to receive rozanolixizumab treatment
- In MG0007, after the initial treatment cycle, subsequent cycles were initiated based on MG symptom worsening at the investigator's discretion
- The objective of this *post hoc* analysis was to understand whether MG-ADL and QMG score changes were associated with the decision to initiate the next cycle of rozanolixizumab

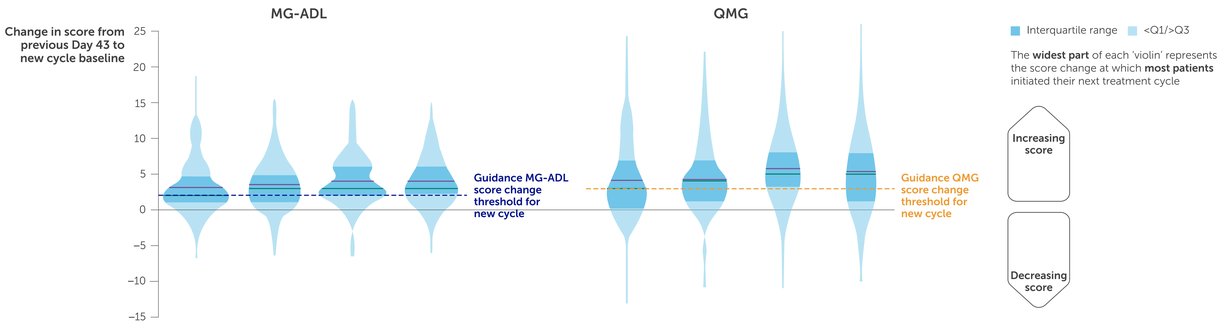
Methods

- Patients aged ≥18 years, with MGFA Disease Class II–IVa, AChR Ab+ or MuSK Ab+ gMG, an MG-ADL score ≥3 (non-ocular symptoms) and a QMG score ≥11 enrolled in MycarinG
- Patients who completed MycarinG or whose disease severity worsened during the observation period were re-randomized to receive rozanolixizumab 7 mg/kg or 10 mg/kg, given weekly in MG0004 or as symptom-driven cycles in MG0007 (N=167)
  - In MG0007, guidance was given to consider a new 6-week treatment cycle when MG-ADL scores worsened by ≥2 points or QMG scores worsened by ≥3 points, but the decision to initiate a new cycle was at the physician's discretion
- A *post hoc* analysis of MG-ADL and QMG score changes from the end of the previous cycle (Day 43) to the start of a new cycle was carried out for patients receiving or waiting for the first symptom-driven cycle after initial rozanolixizumab treatment
  - Data from patients with available MG-ADL and QMG data (n=145) were pooled across MycarinG (excluding placebo data), MG0004 (first 6 weeks), and MG0007 (interim analysis; data cut-off: July 8, 2022)

Results

- Baseline characteristics are shown in **Table 1**
- There was wide variation in MG-ADL and QMG score changes from Day 43 of the previous rozanolixizumab cycle to the start of the next cycle (**Figure 1**)
- Initiation of a new rozanolixizumab cycle was generally preceded by worsening in observed scores in at least one assessment (≥2-point increase in MG-ADL score or ≥3-point increase in QMG score) (**Figure 2**)
  - However, new cycles were also initiated in 22.1% (32/145) of patients whose scores did not meet the advisory protocol guidance threshold for worsening in either score (**Figure 2**)

Figure 1 Variability of MG-ADL and QMG score change between end of previous treatment cycle and start of next symptom-driven cycle



Cycle	1	2	3	4	1	2	3	4
N	120	99	79	57	119	99	79	57
Mean	3.1	3.6	3.9	3.9	4.1	4.4	5.7	5.3
Median	2.0	3.0	3.0	3.0	3.0	4.0	5.0	5.0

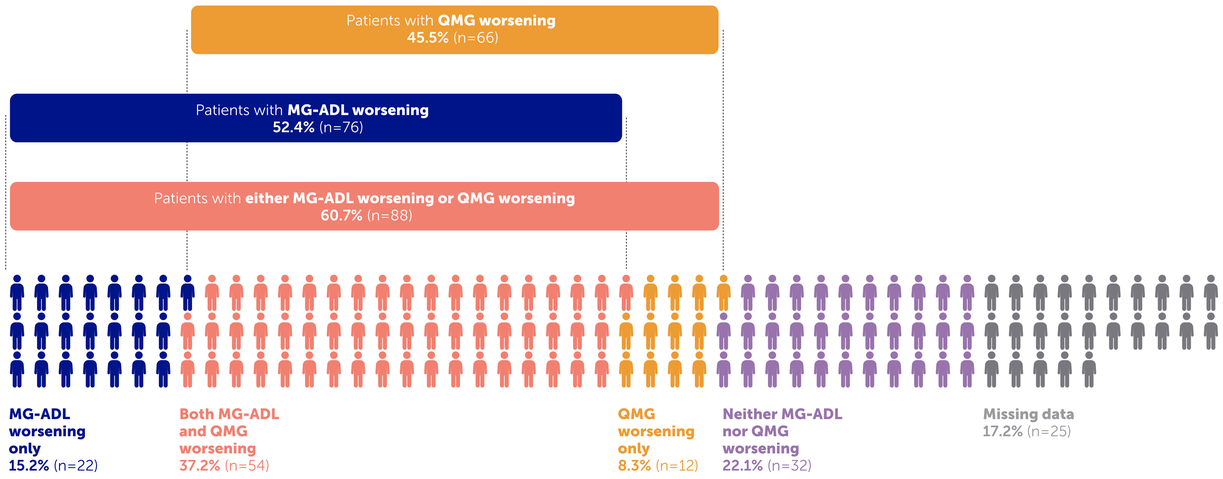
Summary and conclusions

- Initiation of a new cycle of rozanolixizumab treatment was at the investigator's discretion, with advisory protocol guidance to consider a new cycle when MG-ADL or QMG scores worsened
- In this *post hoc* analysis, initiation of a new rozanolixizumab cycle was generally driven by worsening in observed changes in MG-ADL and/or QMG scores, but changes in MG-ADL and QMG scores prior to symptom-driven cycles were highly variable between patients
- Physicians initiated a new cycle in approximately 1 in 5 patients with MG-ADL or QMG score changes outside of the advisory protocol guidance thresholds for new cycle initiation
- This variability suggests that treatment is personalized based on individual patient needs

Table 1 Baseline characteristics

Variable	Rozanolixizumab overall N=167
Age, mean (SD)	**52.7** (16.3)
Female, n (%)	**96** (57.5)
MGFA Disease Class at baseline, n (%)	
IIa	**33** (19.8)
IIb	**36** (21.6)
IIIa	**58** (34.7)
IIIb	**35** (21.0)
IVa	**5** (3.0)
Disease duration, years, mean (SD)	**8.4** (8.5)
MG-specific autoantibody status, n (%)	
AChR Ab+	**152** (91.0)
MuSK Ab+	**16** (9.6)
MG-ADL score at baseline, mean (SD)	**8.4** (3.5)
QMG score at baseline, mean (SD)	**15.7** (3.6)

Figure 2 Reasons for initiating a new treatment cycle



Proportion of patients who had MG-ADL and QMG worsening between the end of the previous treatment cycle and the start of the next symptom-driven cycle.
MG-ADL worsening: ≥2-point increase in MG-ADL score; QMG worsening: ≥3-point increase in QMG score.

Abbreviations: Ab+, autoantibody positive; AChR, acetylcholine receptor; gMG, generalized myasthenia gravis; MG, myasthenia gravis; MG-ADL, Myasthenia Gravis Activities of Daily Living; MGFA, Myasthenia Gravis Foundation of America; MuSK, muscle-specific tyrosine kinase; OLE, open-label extension; Q, Quartile; QMG, Quantitative Myasthenia Gravis; RLZ, rozanolixizumab; SD, standard deviation.

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Reference: 1. Bril V, et al. Lancet Neurol. 2023;22(5):383–394.

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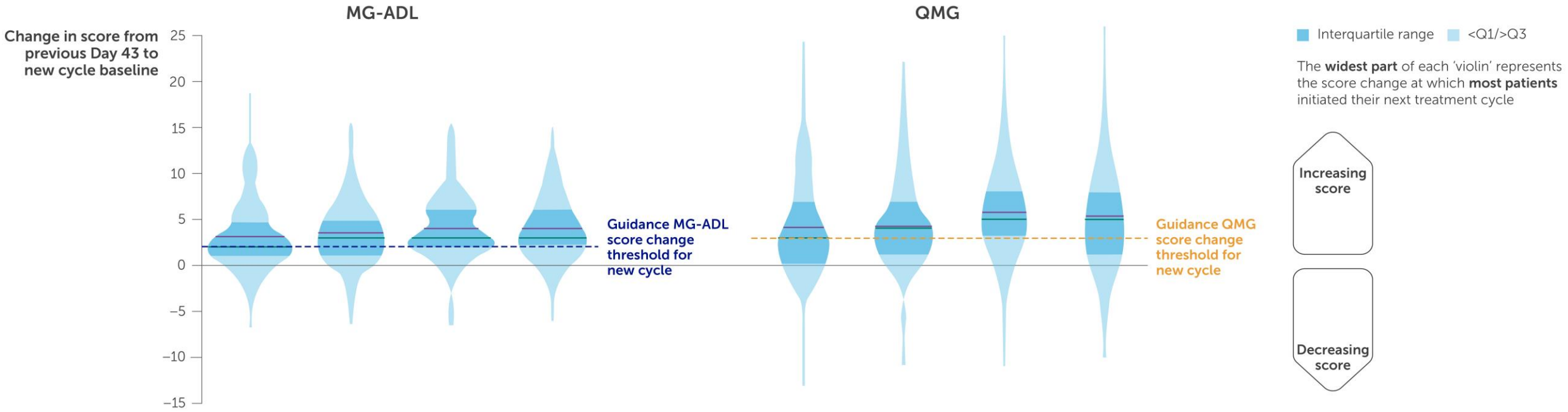

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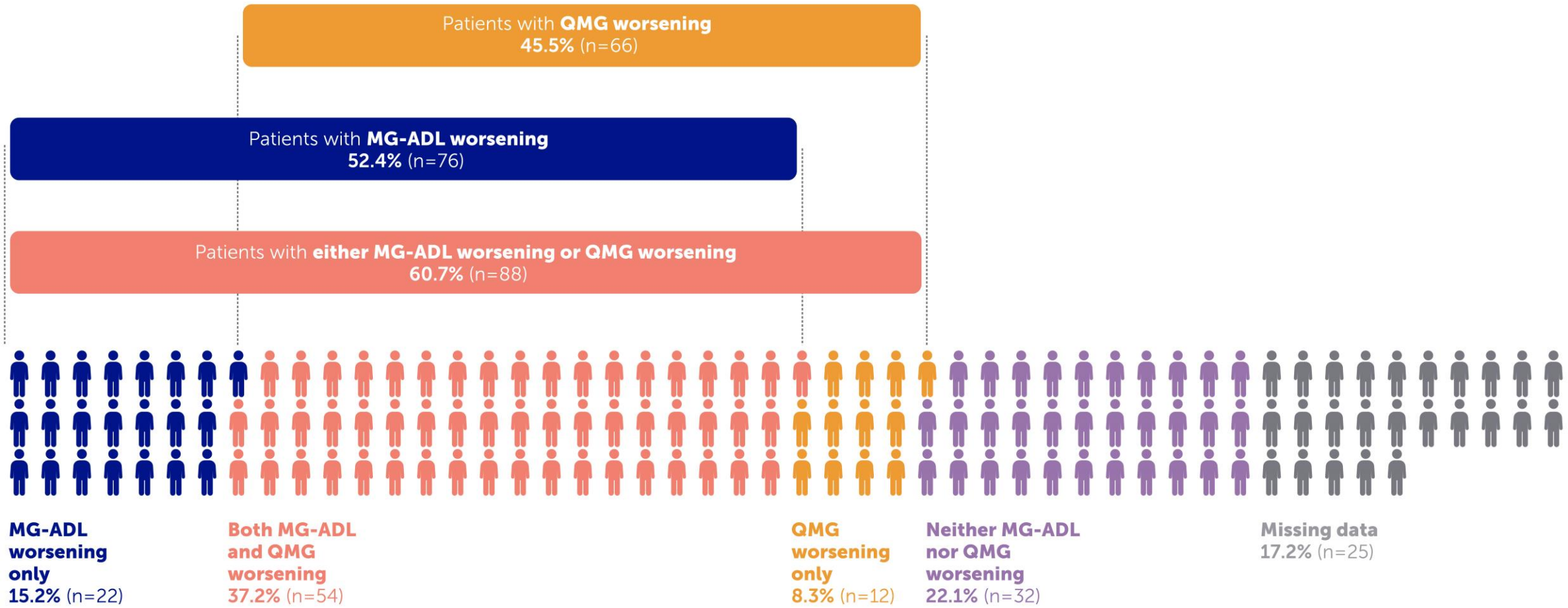

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