Quality of Life in Patients with Generalized Myasthenia Gravis Achieving Sustained vs Transient Minimal Symptom Expression in the Phase 3 Vivacity-MG3 Trial

Elena Cortés Vicente[1], Nolan Campbell[2], Kavita Gandhi[2], Marie Fitzgibbon[2], Ibrahim Turkoz[3]

[1]Hospital Santa Creu i Sant Pau, Barcelona, Spain; [2]Johnson & Johnson, Horsham, PA, USA; [3]Johnson & Johnson, Titusville, NJ, USA

Background

Generalized myasthenia gravis (gMG) is a chronic, immunoglobulin G autoantibody-mediated autoimmune neuromuscular disease associated with unpredictable, fluctuating muscle weakness[1,2]

In the phase 3 Vivacity-MG3 study (NCT04951622), participants with gMG who received nipocalimab demonstrated improved and sustained efficacy versus those receiving placebo[3]

Minimal symptom expression (MSE), defined as a Myasthenia Gravis Activities of Daily Living (MG-ADL) score of ≤1, is a treatment goal in gMG;[4] however, functional outcomes associated with achieving sustained MSE have not been fully explored

Objective

The purpose of this post-hoc analysis was to evaluate MSE treatment response and quality of life in participants achieving sustained versus transient MSE in Vivacity-MG3

Methods

Participants

- This Vivacity-MG3 post-hoc analysis included participants in the prespecified efficacy analysis population
  - Randomized participants who received ≥1 dose of study drug (nipocalimab or placebo) in the double-blind phase and were antibody positive for a gMG-related pathogenic antibody (anti-acetylcholine receptor, anti-muscle-specific tyrosine kinase, or anti-lipoprotein-receptor-related protein 4)
- Participants were stratified into groups based on MSE status over 24 weeks in the double-blind phase:
  - Never achieved MSE (no MSE)
  - Achieved MSE at least once but was not sustained for ≥8 weeks (transient MSE)
  - Achieved MSE and was sustained for ≥8 weeks (sustained MSE)

Assessments

- The proportion of participants achieving and sustaining MSE was evaluated for nipocalimab versus placebo
- Logistic regression models compared likelihood (odds ratio) of achieving transient or sustained MSE (reference = no MSE) for nipocalimab versus placebo
- Treatment groups were combined, stratified by MSE status, and then the impact of MSE status on quality of life was evaluated
  - Least squares mean change from baseline in Myasthenia Gravis Quality of Life-15 revised (MG-QoL-15r) total score was compared across MSE groups using analysis of covariance (ANCOVA) models at Week 24 with fixed effects for group, autoantibody status, and region, and baseline score as covariates

Key Takeaways

- **In this Vivacity-MG3 post-hoc analysis, nipocalimab-treated participants with gMG were four times more likely to achieve and sustain MSE for ≥8 weeks compared with those receiving placebo**
- **Participants achieving sustained MSE demonstrated greater improvements in MG-QoL-15r scores than those with transient MSE, reflecting meaningful improvements in patient-reported quality of life**
- **These findings suggest ≥8-week sustained MSE delivers clinically relevant quality of life benefits and should be considered as an important patient-centered treatment goal for patients with gMG receiving advanced treatments**

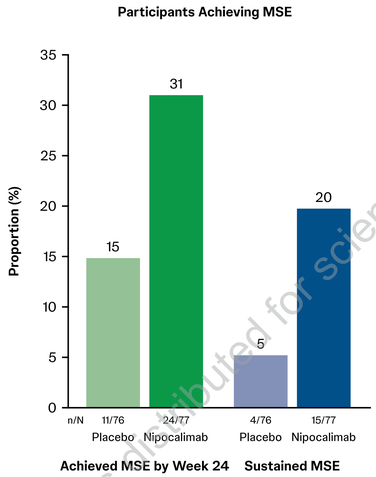
Results

Baseline participant characteristics

	Nipocalimab + SOC (n=77)	Placebo + SOC (n=76)	Total (n=153)
Age, years, mean (SD)	52.5 (15.66)	52.3 (16.37)	52.4 (15.97)
Sex, female, n (%)	50 (64.9)	42 (55.3)	92 (60.1)
Baseline MG-ADL total score, mean (SD)	9.4 (2.73)	9.0 (1.97)	9.2 (2.38)
Baseline MG-QoL-15r total score, mean (range)	15.5 (5.0–28.0)	16.9 (0.0–28.0)	16.2 (0.0–28.0)
Baseline QMG total score, mean (SD)	15.1 (4.78)	15.7 (4.92)	15.4 (4.85)
Antibody positive at screening, n (%)			
AChR	63 (81.8)	71 (93.4)	134 (87.6)
MuSK	12 (15.6)	4 (5.3)	16 (10.5)
LRP4	2 (2.6)	1 (1.3)	3 (2.0)

***AChR**=acetylcholine receptor, **LRP4**=lipoprotein-receptor-related protein 4, **MG-ADL**=Myasthenia Gravis Activities of Daily Living, **MG-QoL-15r**=Myasthenia Gravis Quality of Life-15 revised, **MuSK**=muscle-specific tyrosine kinase, **QMG**=Quantitative Myasthenia Gravis, **SD**=standard deviation, **SOC**=standard of care.*

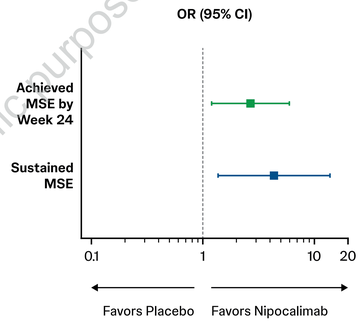
Proportion of participants in each treatment group who achieved MSE by Week 24 and ≥8-week sustained MSE



***MSE**=minimal symptom expression.*

- Of 153 participants included in this analysis, 35 (23%) achieved MSE by Week 24 and 19 (12%) had sustained MSE

Treatment effect for achieving MSE by Week 24 and ≥8-week sustained MSE. Nipocalimab-treated participants were significantly more likely to achieve and sustain MSE versus placebo-treated participants

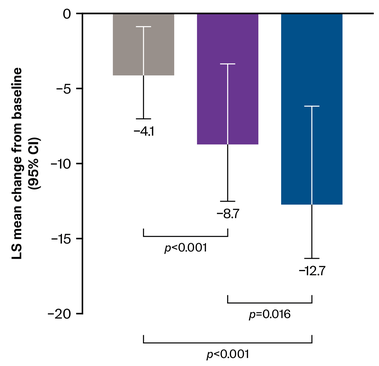


	OR (95% CI) Nipocalimab vs placebo	*p*-value
Achieved MSE by Week 24	2.68 (1.20–5.96)	0.020
Sustained MSE	4.35 (1.37–13.81)	0.013

p-values are from Fisher's exact test.

***CI**=confidence interval, **MSE**=minimal symptom expression, **OR**=odds ratio.*

MG-QoL-15r improvement at Week 24. Participants who achieved sustained MSE demonstrated significantly greater improvements in MG-QoL-15r scores versus those with transient MSE and versus those with no MSE

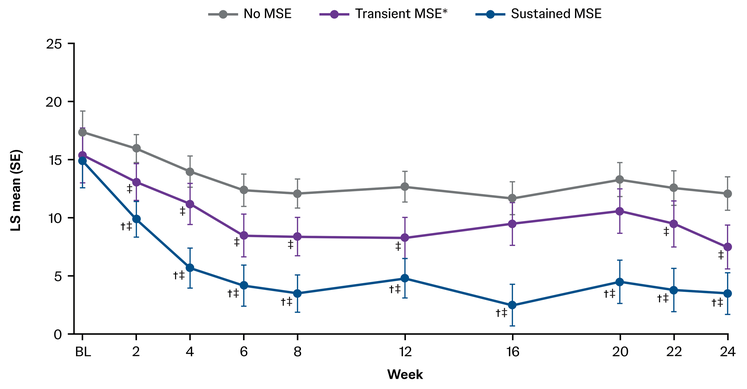


■ No MSE (n=96) ■ Transient MSE* (n=14) ■ Sustained MSE (n=19)

*p-values are for change from baseline between group comparisons from an ANCOVA model with fixed effects for group, autoantibody status, and region, and baseline score as covariates. *The transient MSE cohort only includes patients who did not meet the sustained MSE condition during the 24-week follow-up period.*

***ANCOVA**=analysis of covariance, **CI**=confidence interval, **LS**=least squares, **MG-QoL-15r**=Myasthenia Gravis Quality of Life-15 revised, **MSE**=minimal symptom expression.*

MG-QoL-15r improvement over time. Significantly greater improvements in MG-QoL-15r scores were demonstrated in participants achieving sustained MSE at Week 2 and maintained through Week 24 compared with those achieving transient MSE and those not achieving MSE



No MSE n=	115	115	111	112	112	104	103	102	98	99
Transient MSE* n=	16	16	16	15	16	15	15	14	13	14
Sustained MSE n=	19	19	19	19	18	19	18	18	19	19

*p-values are for change from baseline between group comparisons from an ANCOVA model with fixed effects for group, autoantibody status, and region, and baseline score as covariates. *The transient MSE cohort only includes patients who did not meet the sustained MSE condition during the 24-week follow-up period. †p<0.05 vs transient MSE. ‡p<0.05 vs no MSE.*

***ANCOVA**=analysis of covariance, **BL**=baseline, **LS**=least squares, **MG-QoL-15r**=Myasthenia Gravis Quality of Life-15 revised, **MSE**=minimal symptom expression, **SE**=standard error.*

PRESENTED AT: The 27th Annual Neuromuscular Study Group (NMSG) Scientific Meeting; San Antonio, TX, USA; September 25–27, 2026. **REFERENCES: 1.** Gilhus N. *N Engl J Med.* 2016;375:2570–81. **2.** Law N, et al. *Neurol Ther.* 2021;10:1103–25. **3.** Antozzi C, et al. *Lancet Neurol.* 2025;24:105–16. **4.** Muppidi S, et al. *Muscle Nerve.* 2022;65:630–9. **ACKNOWLEDGMENTS:** This study was sponsored by Johnson & Johnson. Medical writing and editorial support were provided by Margaret Van Horn, PhD, CMPP (Johnson & Johnson), under the direction of the authors in accordance with Good Publication Practice guidelines (*Ann Intern Med.* 2022;175:1298–304). Poster layout and graphic design support were provided by Twist Medical and funded by Johnson & Johnson. **DISCLOSURES: ECV** received public speaking honoraria and compensation for advisory boards and/or consultation fees from Alexion, argenx, Johnson & Johnson, Lundbeck, and UCB. **NC** was an employee at the time of study and may hold stock in Johnson & Johnson. **KG**, **MF**, and **IT** are employees of and may hold stock in Johnson & Johnson. **PREVIOUSLY PRESENTED AT:** The 2026 American Academy of Neurology (AAN) Annual Meeting; Chicago, IL, USA; April 18–22, 2026.