2 (2.90%) patients belong in each aforementioned category. No patients from either group were hospitalized for MG after SFMEG. Conclusions: Preliminary results demonstrate no difference in frequency of poor outcomes between patients who had 20 or more pairs observed and those who had 12 pairs observed, supporting the safety of shortening the test in appropriate situations.

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Post-hoc evaluation of the clinical effects of nipocalimab, a neonatal fragment crystallizable blocker, over time in the Vivacity MG3 study

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Background: In generalized myasthenia gravis (gMG), there remains an unmet need for treatments providing meaningful symptom control. Methods: Mean changes in MG-ADL were compared between nipocalimab + standard-of-care (SoC) and placebo+SoC. The proportion of patients achieving: Minimal Symptom Expression (MSE), MG-ADL score 0/1, time with MSE, sustained within person meaningful change (WPMC) starting from Week 4, and time spent with WPMC were compared. Results: Nipocalimab+SoC demonstrated significant improvement in MG-ADL compared to placebo+SOC, LS-mean-change[SE] -4.7[0.329] vs -3.25[0.335]; Difference in means [SE]=-1.45 [0.470], p=0.002. The mean difference favoured nipocalimab+SoC, and was significant as early as week 1: LS-mean-change[SE]: -2.72[2.979] vs -1.77[2.426]; Difference in means[SE] -0.82[0.410], p=0.046. Nipocalimab+SoC patients were three times more likely to achieve MSE at any point during the study vs placebo; Odds Ratio[95% CI]: 3.0[1.3, 6.8]; 31.2% vs. 13.2%. For the 25 patients reaching MSE, the time sustaining MSE [percent time with MSE] was 101.5 days, (60.4%, nipocalimab+SOC) vs 55 days, (32.7%, placebo+SOC). Similarly, the proportion of patients with sustained WPMC favored nipocalimab+SOC, 55.8% vs 26.3%, placebo+SOC, p<0.001. The median percent time spent with WPMC was 84.5%, nipocalimab+SOC vs 39.9%, placebo+SOC, p=0.007. Conclusions: Based on MG-ADL data from Phase 3, nipocalimab an FcRn blocker, demonstrated rapid, substantial, and sustained symptom control.

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A randomized, open-label study on the effect of Nipocalimab on vaccine responses in healthy participants

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Background: Nipocalimab is a human IgG1 monoclonal antibody targeting FcRn that selectively reduces IgG levels without impacting antigen presentation, T- and B-cell functions. This study describes the effect of nipocalimab on vaccine response. Methods: Open-label, parallel, interventional study randomized participants 1:1 to receive intravenous 30mg/kg nipocalimab at Week0 and 15mg/kg at Week2 and Week4 (active) or no drug (control). On Day 3, participants received Tdap and PPSV®23 vaccinations and were followed through Wk16. Results: Twenty-nine participants completed the study and are included (active, n=15; control, n=14). Participants with a positive anti-tetanus IgG response was comparable between groups at Wk2 and Wk16, but lower at Wk4 (nipocalimab 3/15 [20%] vs control 7/14 [50%]; *P*=0.089). All maintained anti-tetanus IgG above the protective threshold (0.16IU/mL) through Wk16. While anti-pneumococcal-capsular-polysaccharide (PCP) IgG levels were lower during nipocalimab treatment, the percent increase from baseline at Wk2 and Wk16 was comparable between groups. Post-vaccination, anti-PCP IgG remained above 50mg/L and showed a 2-fold increase from baseline throughout the study in both groups. Nipocalimab co-administration with vaccines was safe and well-tolerated. Conclusions: These findings suggest that nipocalimab does not impact the development of an adequate IgG response to T-cell–dependent/independent vaccines and that nipocalimab-treated patients can follow recommended vaccination schedules.

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Miglustat: a first-in-class enzyme stabiliser for late-onset Pompe Disease

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Background: Late-onset Pompe disease (LOPD) is caused by a deficiency of acid ⍰-glucosidase (GAA), leading to progressive muscle and respiratory decline. Cipaglucosidase alfa (cipa), a recombinant human GAA naturally enriched with bis-mannose-6-phosphate, exhibits improved muscle uptake but is limited by inactivation at near-neutral blood pH. Miglustat (mig), an enzyme stabiliser, binds competitively and reversibly to cipa, enhancing its stability and activity. Methods: In dose-finding studies, *Gaa*-/- mice were treated with cipa (20 mg/kg) +/- mig (10 mg/kg; equivalent human dose ~260 mg). Clinical study methodologies have been published (Schoser *et al. Lancet Neurol* 2021:20;1027–37; Schoser *et al. J Neurol* 2024:271;2810–23). Results: In *Gaa*-/- mice, cipa+mig improved muscle glycogen reduction more than cipa alone and grip strength to levels approaching wild-type mice. LOPD patients (n=11) treated with cipa alone showed dose-dependent decreases in hexose tetrasaccharide (Hex4) levels by ~15% from baseline, decreasing another ~10% with added mig (260 mg). In a head-to-head study, cipa+mig had a similar safety profile to alglucosidase alfa. Among 151 patients (three trials), mig-related adverse events occurred in 21 (13.9%), none serious. Conclusions: Mig stabilised cipa in circulation, improving cipa exposure, further

reducing Hex4 levels and was well tolerated in clinical studies in patients with LOPD. Sponsored by Amicus Therapeutics, Inc.

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Clinical predictors of disease progression and survival in ALS: insights from the Canadian Neuromuscular Disease Registry

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Background: Amyotrophic Lateral Sclerosis (ALS) leads to progressive functional decline and reduced survival. Identifying clinical predictors like ALSFRS-R and FVC is essential for prognosis and disease management. Understanding progression profiles based on diagnostic characteristics supports clinical trial design and assessment of treatment response. This study evaluates disease progression and survival predictors in ALS patients from the CNDR. Methods: 1565 ALS patients in the CNDR were analyzed to assess baseline ALSFRS-R, FVC, time from symptom onset to diagnosis, and their association with disease progression and survival. Results: At diagnosis, ALSFRS-R was 44.7 (SD = 5.46), with 72.3% scoring ≥44. Mean FVC was 84.2% (SD = 23.3), with 78.3% of patients having FVC ≥65%. ALSFRS-R declined at 1.06 points/month (SD = 1.33), with faster progression in patients diagnosed within 24 months (1.61 points/month). Patients with ALSFRS-R ≥44 had a median survival of 41.8 months, compared to 30.9 months for those <44 ($p < 0.001$). Similarly, FVC ≥65% was associated with longer survival (35.4 vs. 29.5 months, $p = 0.002$). Conclusions: ALSFRS-R and FVC at diagnosis predict survival and inform clinical decision-making. These findings highlight the importance of early diagnosis and targeted interventions to slow disease progression and improve patient outcomes.

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Effectiveness and safety of ravulizumab in generalized Myasthenia Gravis (gMG): Updated analysis from a global registry

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Background: The complement C5 inhibitor (C5IT), ravulizumab, is approved in Canada for the treatment of anti-acetylcholine receptor antibody-positive (AChR-Ab+) generalized myasthenia gravis (gMG). Updated effectiveness and safety results from the ongoing MG SPOTLIGHT Registry (NCT04202341) are reported. Methods: MGFA classification and MG-ADL total scores were assessed in patients who received ravulizumab only (ravu-only) or transitioned from eculizumab to ravulizumab (ecu-to-ravu), with data available prior to C5IT initiation ("pre-C5IT") and ≥1 assessment post-initiation ("post-ravu"). Results: Of 52 patients with 2 post-ravu assessments, average treatment duration was 10.4 months at last assessment (LA). Mean±SD MG-ADL scores improved (pre-C5IT: 7.6±3.6; LA: 3.4±3.3), as did the proportions of patients with minimal symptom expression (MSE, MG-ADL≤1) (pre-C5IT: 1/52 [2%]; LA: 17/52 [33%]) and MGFA classification 0-II (pre-C5IT: 18/45 [40%]; LA: 40/45 [89%]). In the ravu-only subgroup, outcomes improved (pre-C5IT vs LA): MG-ADL, 6.3 ±3.0 vs 4.0±3.4; MGFA 0-II, 9/14 [64%] vs 12/14 [86%]. The ecu-to-ravu subgroup sustained continued gradual improvement from last eculizumab assessment to LA: MG-ADL, 4.4±4.2 vs 3.0±2.8; MGFA 0-II, 19/21 [90%] vs 20/21 [95%]. Ravulizumab was well tolerated; no meningococcal infections were reported. Conclusions: These results demonstrate the long-term effectiveness and safety of ravulizumab in routine clinical practice in patients with gMG.

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A portrait of generalized Myasthenia Gravis in Canada: analysis of the Adelphi MG II disease specific programme

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Background: Generalized myasthenia gravis (gMG) is a rare, chronic, autoimmune disease characterized by muscle weakness and fatigue. This study aims to describe the natural history, disease burden and treatment patterns of gMG patients in Canada. Methods: Data was analyzed from the Adelphi MG II DSP™, a gMG patient-level cross-sectional database, collected through surveys between February-June 2024. Neurologists provided sociodemographic, symptomatology, and treatments data. Results: Fifteen neurologists provided data for 46 gMG patients. The cohort's mean (SD) age was 58.1 (14.7) years, 52.2% male, 82.6% White/Caucasian and 89.1% were anti-AChR Ab positive. Mean time since diagnosis was 3.4 (3.1) years, 22% reported a change in employment status due to gMG. Most had public insurance (68.9%). Disease severity was mostly MGFA class II (78.2%) patients. Common symptoms included eyelid ptosis (76.1%), dysarthria (50.0%), and dyspnea (54.3%) – mean MG-ADL was 5.6 (5.1). During their disease course, 34.9% experienced ≥1 myasthenic crisis, while 25.6% reported symptom exacerbation. At time of survey, patients had used 1.8 (0.9) lines of maintenance treatment. Most prescribed treatments (alone or in combinations) were pyridostigmine (95.6%), corticosteroids (48.9%), non-steroidal immunosuppressants (42.2%), Immunoglobulins (31.1%), and biologics (22.2%). Conclusions: gMG patients continue to experience symptoms burden and crisis/exacerbations. These findings highlight an unmet need for