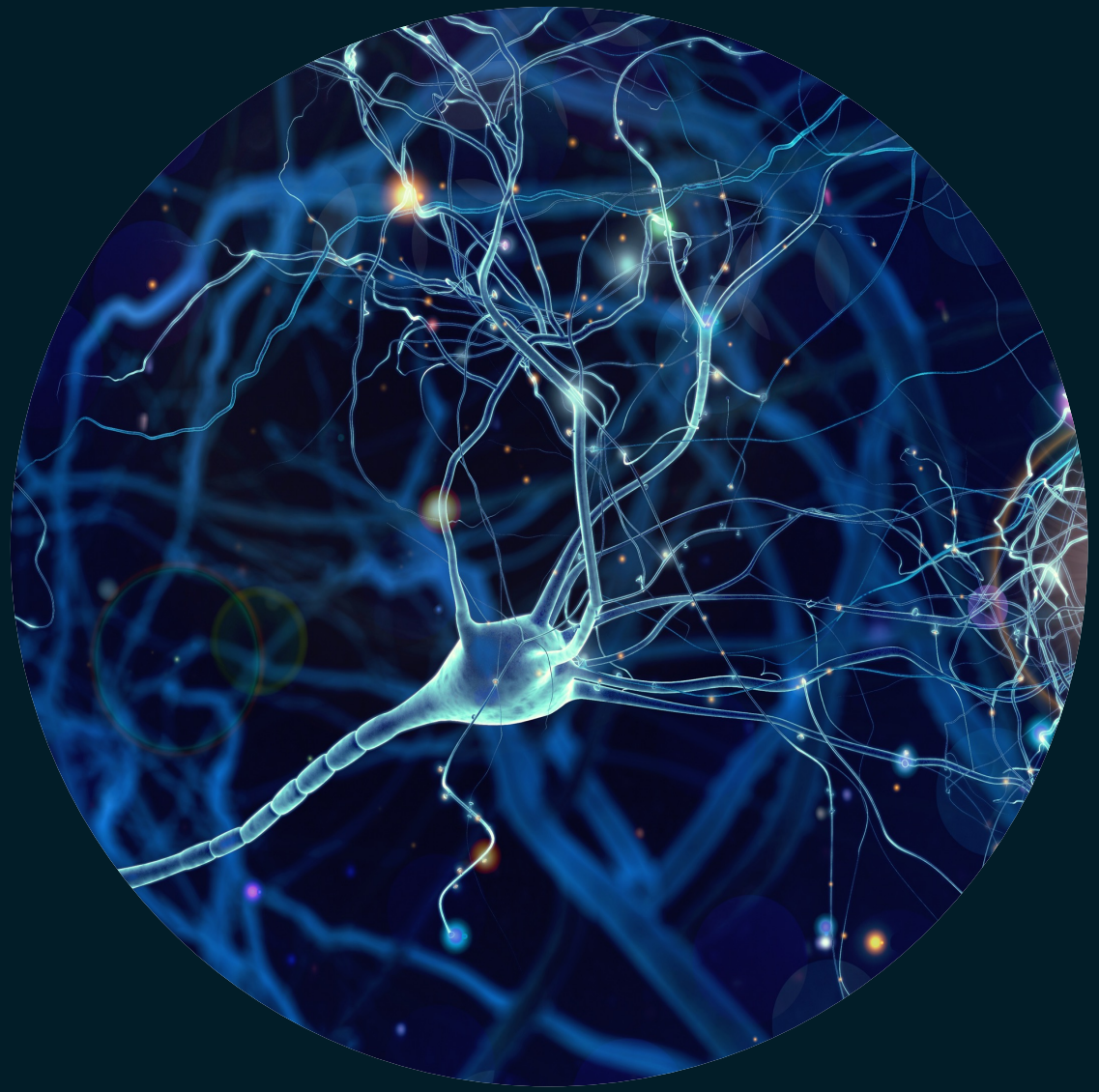


Brainstorm Cell Therapeutics

January 2023 I NASDAQ: BCLI

Biotech Showcase

Forward-Looking Statements

Statements in this announcement other than historical data and information constitute "forward-looking statements" and involve risks and uncertainties that could cause BrainStorm Cell Therapeutics Inc.'s actual results to differ materially from those stated or implied by such forward-looking statements. Terms and phrases such as "may", "should", "would", "could", "will", "expect", "likely", "believe", "plan", "estimate", "predict", "potential", and similar terms and phrases are intended to identify these forward-looking statements. The potential risks and uncertainties include, without limitation, risks associated with BrainStorm's limited operating history, history of losses; minimal working capital, dependence on its license to Ramot's technology; ability to adequately protect the technology; dependence on key executives and on its scientific consultants; ability to obtain required regulatory approvals; and other factors detailed in BrainStorm's annual report on Form 10-K and quarterly reports on Form 10-Q available at http://www.sec.gov.

These factors should be considered carefully, and readers should not place undue reliance on BrainStorm's forward-looking statements. The forward-looking statements contained in this press release are based on the beliefs, expectations and opinions of management as of the date of this press release. We do not assume any obligation to update forward-looking statements to reflect actual results or assumptions if circumstances or management's beliefs, expectations or opinions should change, unless otherwise required by law. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

NurOwn®

Autologous, consistent, reliable and convenient

Autologous and Convenient

NurOwn® autologous cell therapy uses the patient's own cells

- Safety and cell persistence

Cryopreservation creates an 'off-the-shelf' product for each patient

A single bone marrow harvest creates several years of therapy

Short cycle time, 7 days from thawing to injection in the clinic

Consistent and Reliable

No animal proteins, antibiotics, genetic modifications or viral vectors used in the manufacturing

NurOwn® is culture-rescued creating very high cell viability and consistent performance characteristics

Cell release criteria confirm ensure consistent product characteristics in the manufacturing process

Manufacturing Progress

Successful commercial technology transfer to Catalent GMP manufacturing sites since 2021, successful production of NurOwn for the Expanded Access program

Total of 4 successful technology transfers during the development of NurOwn demonstrating the robustness of the manufacturing process

Brainstorm's Pipeline

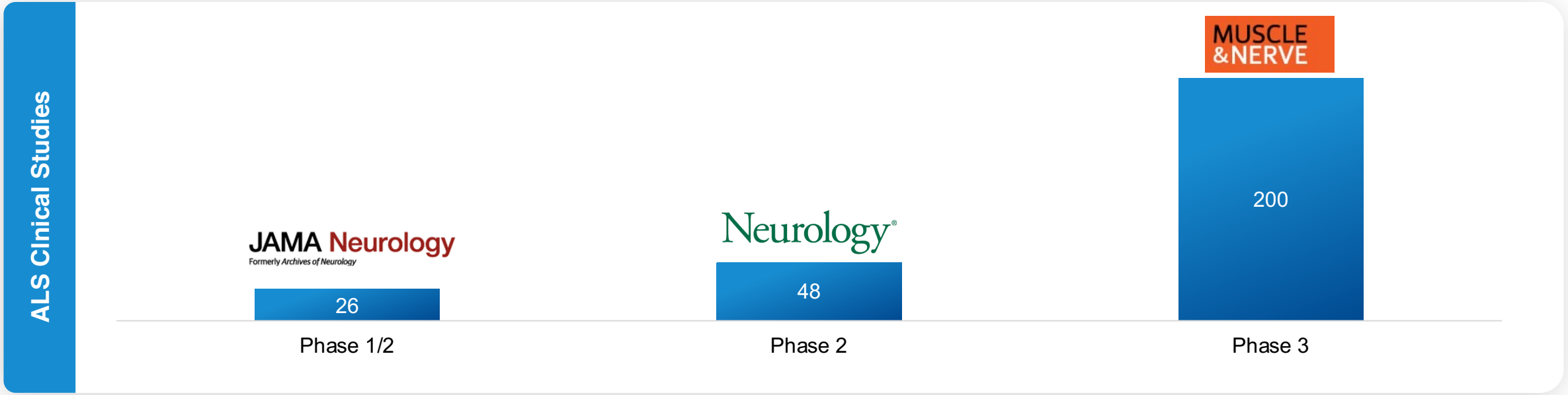
Indication	Preclinical	IND Enabling	Phase 1	Phase 2	Phase 3	Milestones
NurOwn® MSC-NTF Cells Platform						
ALS					completed	Manuscript Published Muscle & Nerve Dec 2021*
Progressive MS				completed		Published in Multiple Sclerosis Journal Sept 2022**
Alzheimer's Disease						
Parkinson's Disease						
Huntington's Disease						
Autism Spectrum Disorder						
Peripheral Nerve Injury						
MSC-NTF Cell Exosome Platform						
ARDS						

ARDS: *Acute respiratory distress syndrome*

*https://onlinelibrary.wiley.com/doi/10.1002/mus.27472

**https://journals.sagepub.com/doi/full/10.1177/13524585221122156

NurOwn in ALS: 10+ Years Clinical Development

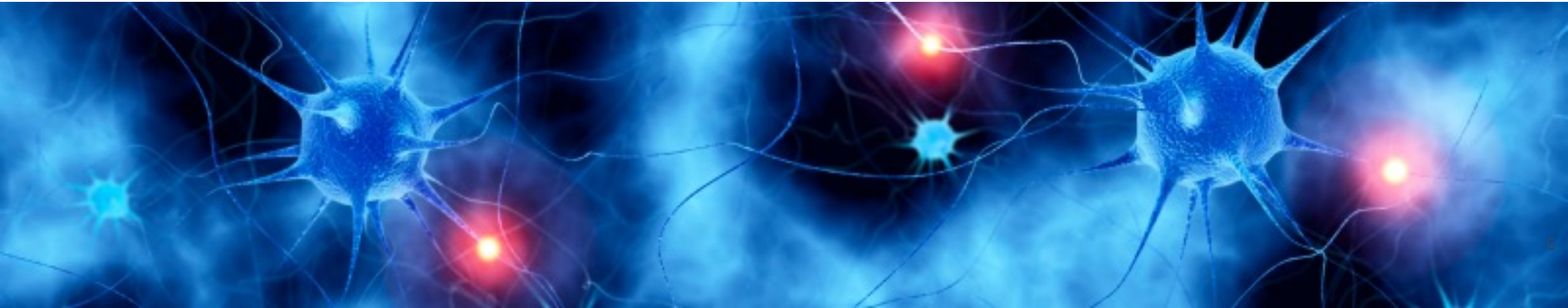


2007	2010	2014	2017	2019	2020
NurOwn Preclinical Development	ALS Phase 1/2a Open label	ALS US Phase 2 Randomized trial	ALS US Phase 3 Randomized trial	ALS US Phase 3 Fully Enrolled	ALS US Phase 3 Topline Data Readout

[1]Petrou, P, et al JAMA, 2016; [2]Berry, JD, et al Neurology, 2019; [3]Cudkowitz, M, et al Muscle Nerve, 2022

NurOwn® Phase 3 results

Advancing ALS treatment



Manufacturing Sites

City of Hope

City of Hope Center for Biomedicine & Genetics

DANA-FARBER CANCER INSTITUTE

Dana-Farber Harvard Cancer Center

Cell Manipulation Core

Treatment Centers

University of Massachusetts Medical School

MASSACHUSETTS GENERAL HOSPITAL

MAYO CLINIC

UCIRVINE

CEDARS-SINAI

Sutter Health
Sutter Pacific Medical Foundation

Funding

CIRM
CALIFORNIA'S STEM CELL AGENCY

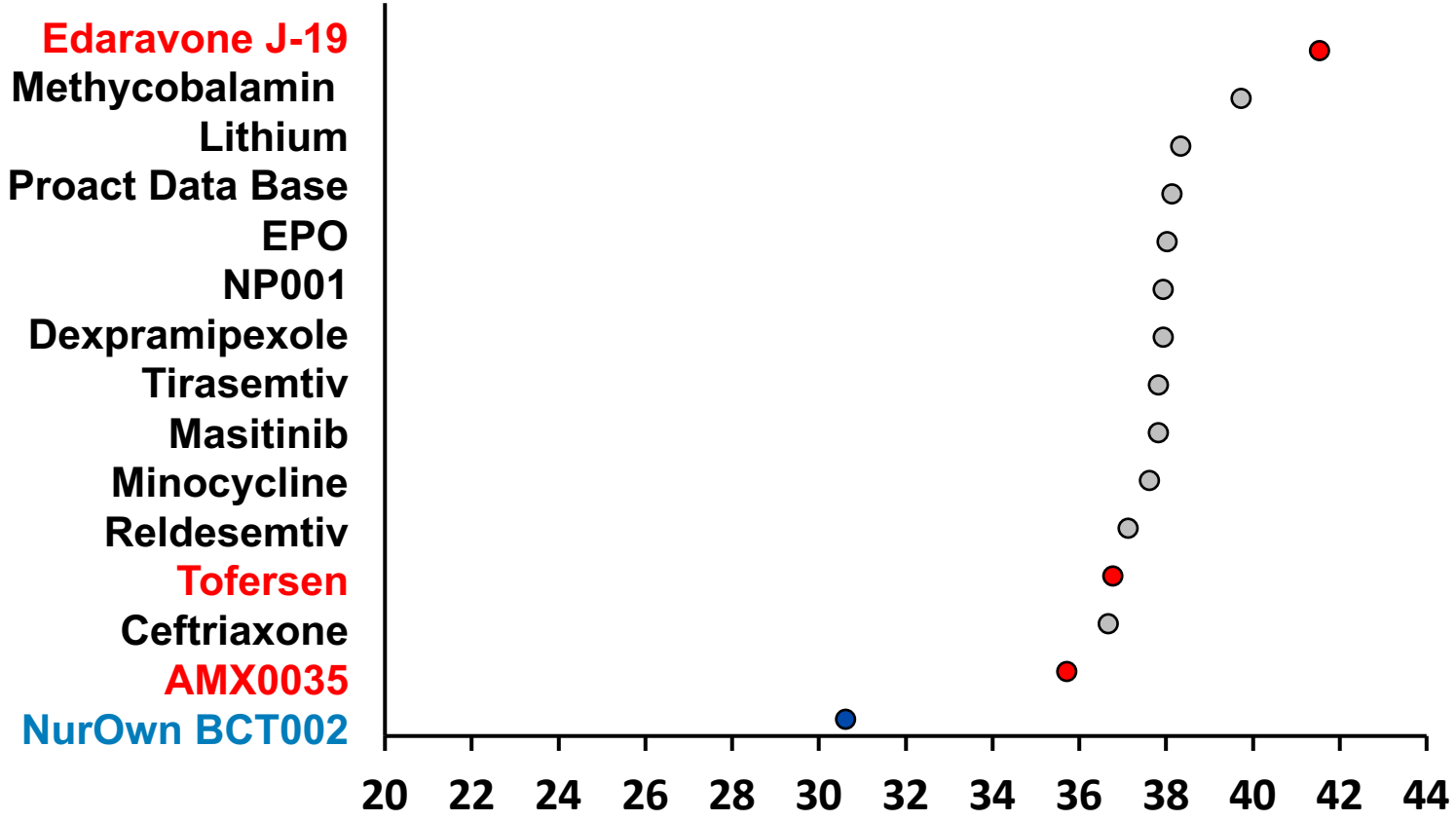
ALS ASSOCIATION

I AM ALS

Participants with baseline ALSFRS-R ≤ 25 are impacted by the floor of the scale*

ALSFRS-R Subscale	% participants with value of 0 at baseline
Bulbar	7%
Fine Motor	42%
Gross Motor	37%
Respiratory	1%

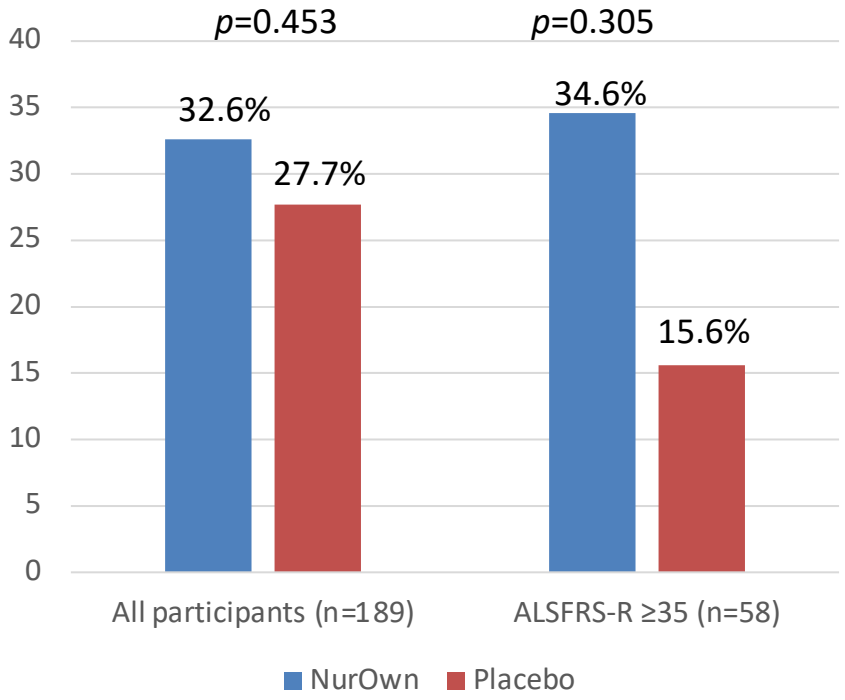
NurOwn Phase 3 featured participants with advanced ALS disease resulting in a floor effect



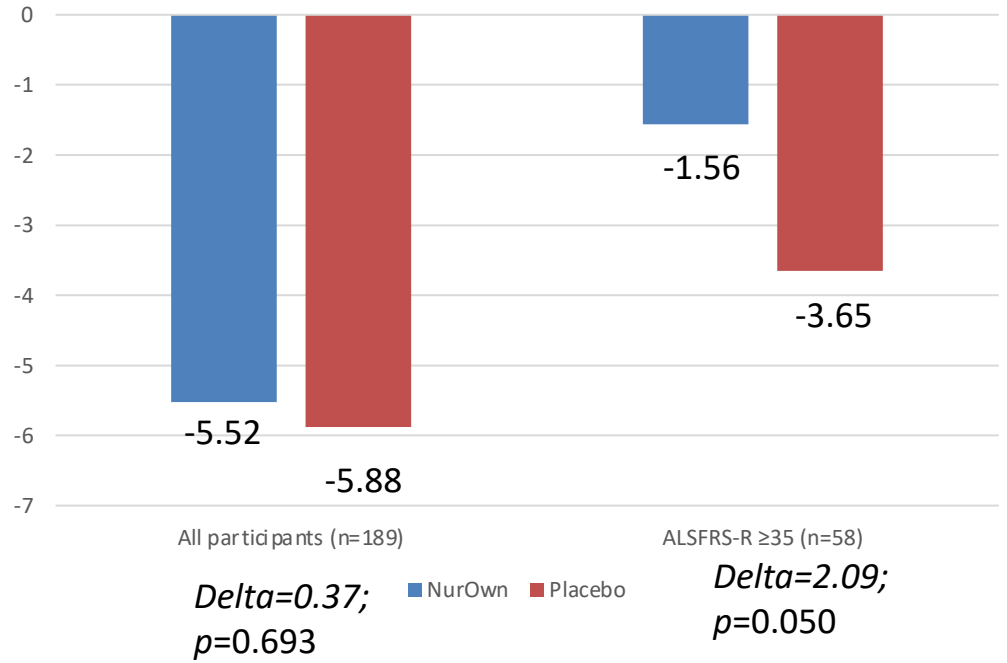
* *Number of participants with baseline ALSFRS-R ≤25 = 44 of 189 (23.3%)*

NurOwn fails to reach statistical significance in primary endpoint in overall study, suggests treatment effect in participants with less severe disease

Primary Endpoint: % Response at week 28†



Secondary Endpoint: Average Change from baseline to Week 28, ALSFRS-R



Delta=0.37; *p*=0.693

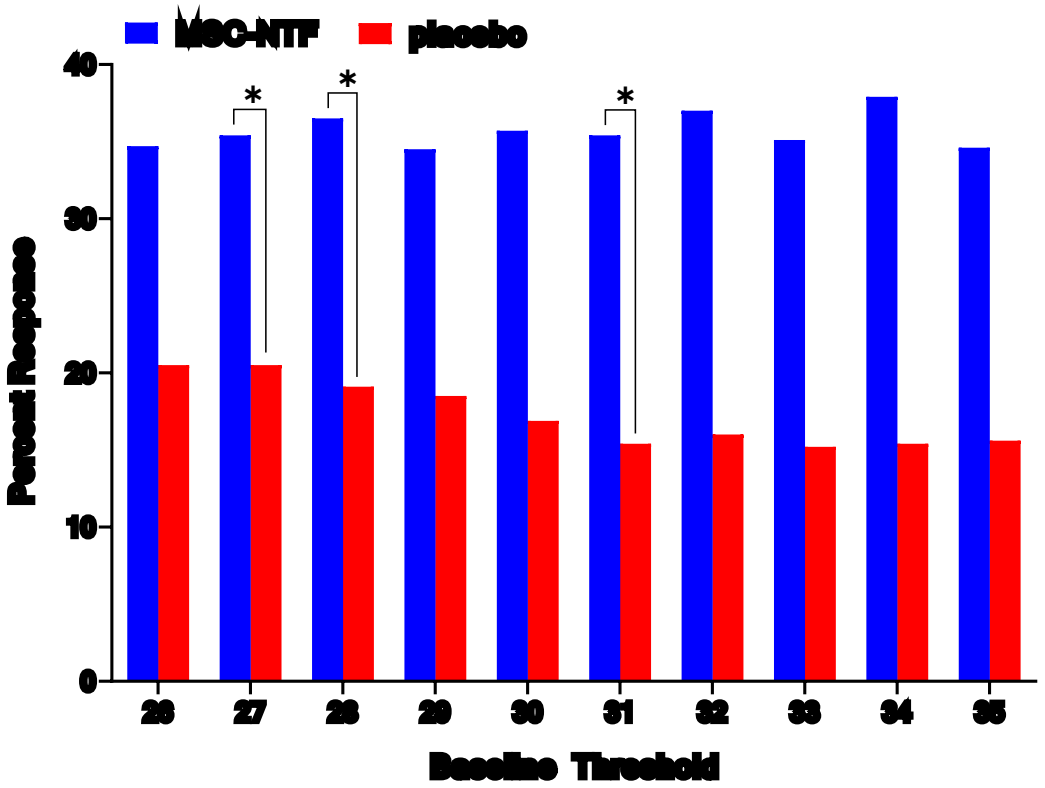
Delta=2.09; *p*=0.050

Cudkowicz, M, Lindborg S, Goyal N, et al. Musc Nerve, Jan 2022
Supplemental File & Erratum published Aug 2022

†Evidence on the primary endpoint aligns with historical data and power calculations (35% NurOwn vs. 15% placebo response) when the ALSFRS-R floor effect is accounted for. Primary endpoint is underpowered with the pre-specified subgroup.

Primary Endpoint as pre-specified

Baseline ALSFRS-R value by cut-points and their impact on the Primary Analysis



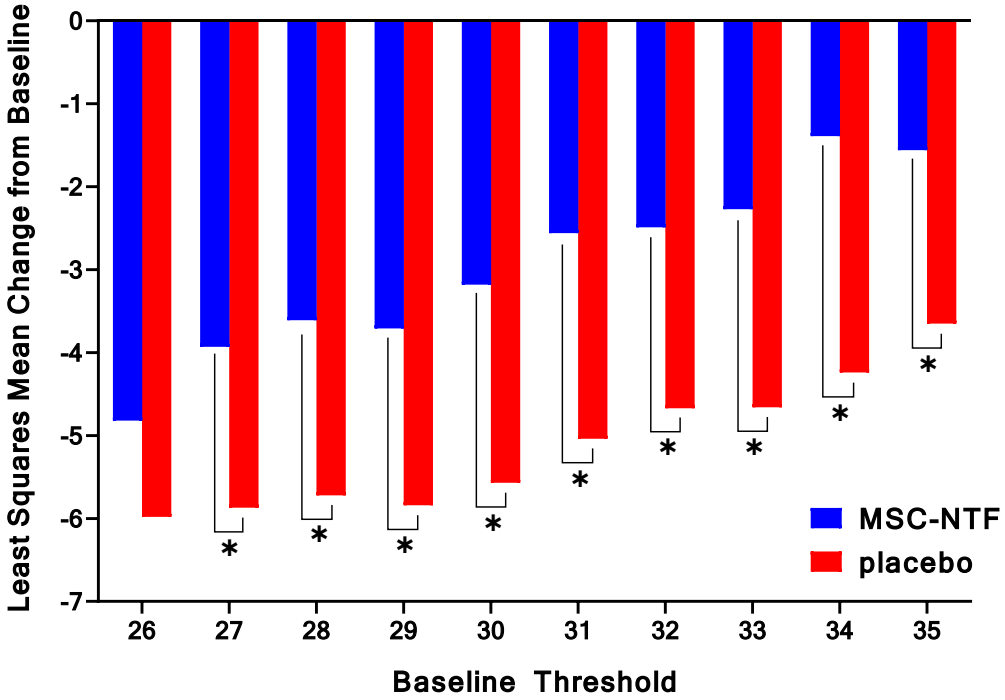
Participants included, by baseline:	n (%) of total participants:	% NurOwn Response	% Placebo Response	p-value#
≥35	n=58 (31%)	34.6%	15.6%	0.305
≥34	n=68 (36%)	37.9%	15.4%	0.179
≥33	n=83 (44%)	35.1%	15.2%	0.103
≥32	n=96 (51%)	37.0%	16.0%	0.056
≥31	n=100 (53%)	35.4%	15.4%	0.043
≥30	n=115 (61%)	35.7%	16.9%	0.103
≥29	n=123 (65%)	34.5%	18.5%	0.056
≥28	n=131 (69%)	36.5%	19.1%	0.022
≥27	n=138 (73%)	35.4%	20.5%	0.026
≥26 (>25)	n=145 (77%)	34.7%	20.5%	0.053

*$p \leq 0.05$

#Firth regression is used for account for sparse data

ALS Phase 3 Secondary Endpoint by Baseline ALSFRS-R > 25: NurOwn participants with less advanced disease had greater preservation of function compared to Placebo

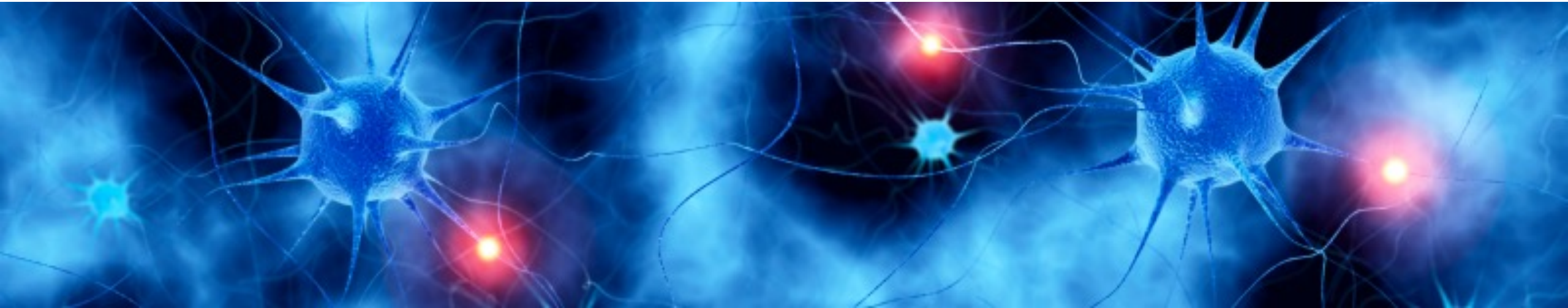
ALSFRS-R MMRM Change from Baseline to Week 28 Secondary Endpoint					
ALSFRS-R Baseline Score	**n (%) total participants**	**MSC-NTF LS mean (SE)**	**Placebo LS mean (SE)**	**Delta**	**p-value**
≥ 35	48 (25)	-1.56 (0.82)	-3.65 (0.70)	2.09	0.050*
≥ 34	57 (30)	-1.39 (0.96)	-4.24 (0.80)	2.86	0.022*
≥ 33	69 (37)	-2.27 (0.90)	-4.66 (0.79)	2.39	0.044*
≥ 32	78 (41)	-2.49 (0.78)	-4.67 (0.74)	2.18	0.040*
≥ 31	80 (42)	-2.56 (0.78)	-5.04 (0.75)	2.48	0.020*
≥ 30	92 (49)	-3.18 (0.72)	-5.57 (0.69)	2.39	0.016*
≥ 29	97 (51)	-3.71 (0.74)	-5.84 (0.69)	2.13	0.033*
≥ 28	105 (56)	-3.61 (0.71)	-5.72 (0.68)	2.11	0.030*
≥ 27	110 (58)	-3.93 (0.72)	-5.87 (0.68)	1.94	0.046*
≥ 26 (>25)	116 (61)	-4.82 (0.73)	-5.98 (0.72)	1.16	0.250



Consistent preservation of function across baseline thresholds

Brainstorm, *p ≤ 0.05

Biomarker ALS Phase 3 study



NurOwn MOA: Lessons learned from Phase 2, Replicated in Phase 3

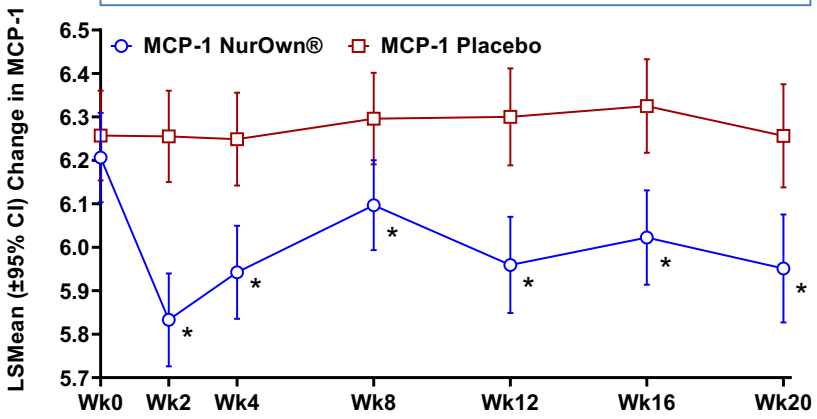
Neuroinflammation, Neurodegeneration, and Neuroprotection Biomarkers

Underlying pathologies of ALS, pMS, and AD	NurOwn MSC-NTF MOAs
Neuroinflammation and Microglial Activation	**Reduced Neuroinflammation** Reduces CSF MCP-1, SDF-1, S100b, MSR1
Neuronal Degeneration	**Reduced Neurodegeneration, Cell death** Reduces CSF NfL, pNfH, DR6, Tweak, UCHL1
Loss of Neurotrophic Support	**Enhanced neuroprotector effect** Increases CSF VEGF, BDNF, GDF-15, NMAT1, Clusterin

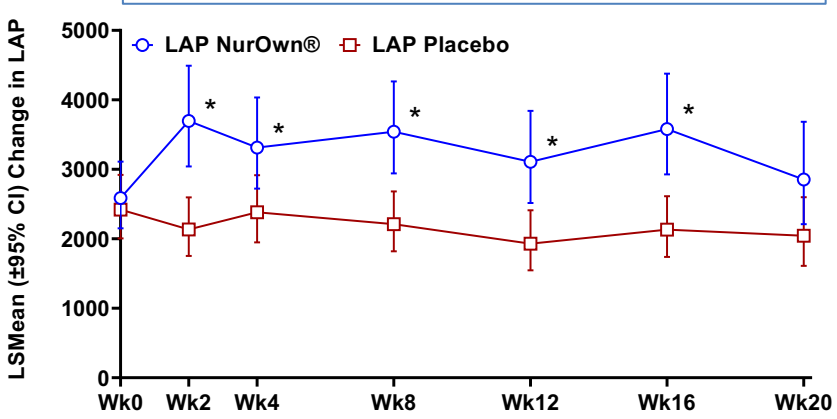
ALS: Amyotrophic lateral sclerosis; pMS: Progressive multiple sclerosis; AD: Alzheimer's Disease; MOAs: Mechanisms of action

NurOwn Improves Biomarkers Across Multiple Pathways Over Time, LS Mean (95%CI)

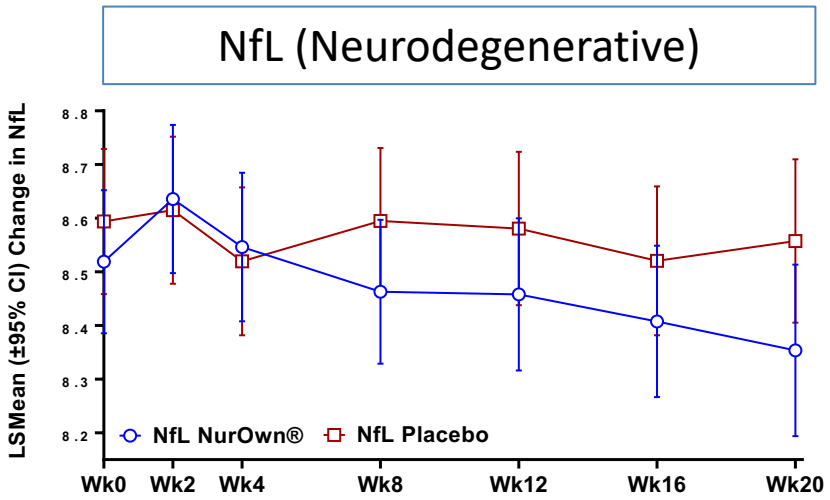
MCP-1 (Pro-Inflammatory)



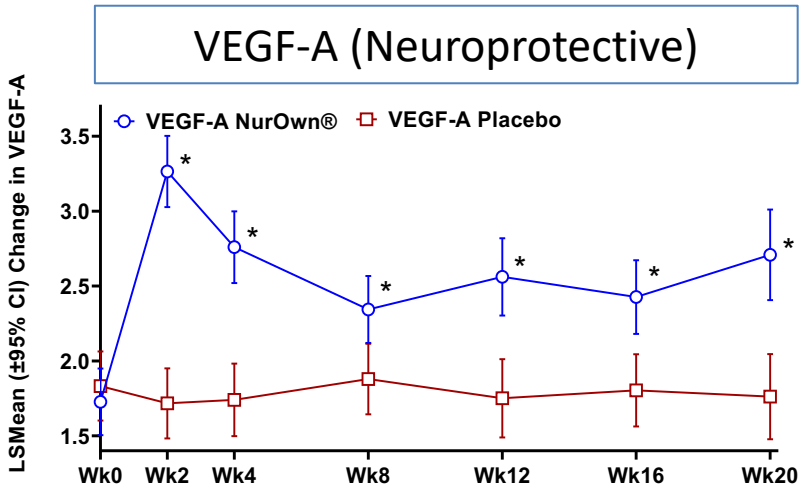
LAP (Anti-inflammatory)



NfL (Neurodegenerative)



VEGF-A (Neuroprotective)

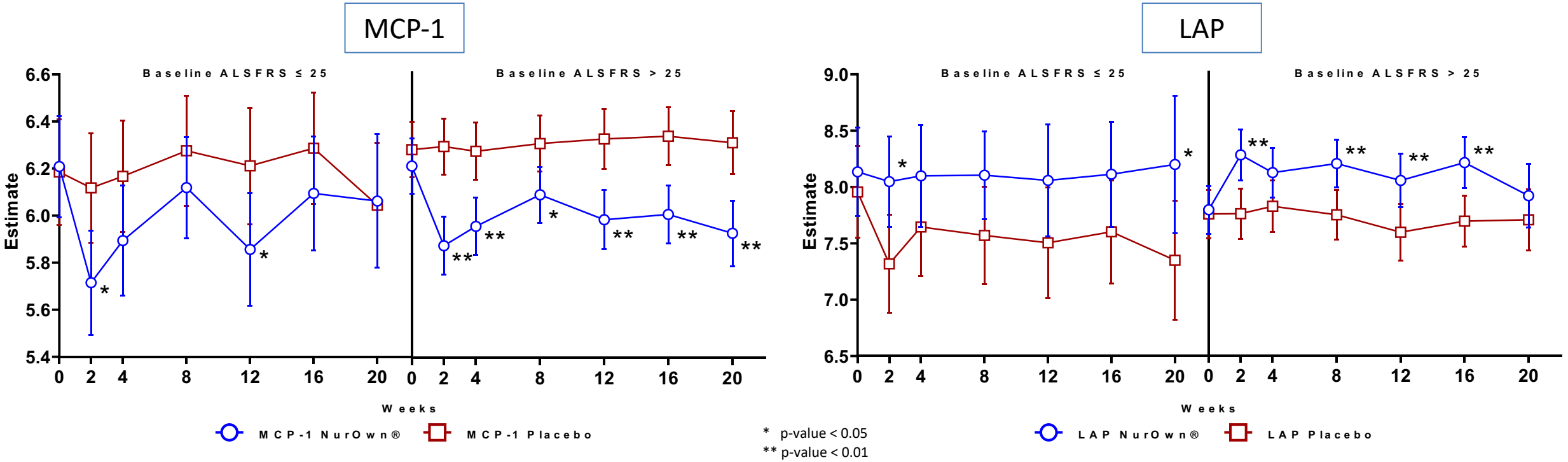


NurOwn®

Placebo

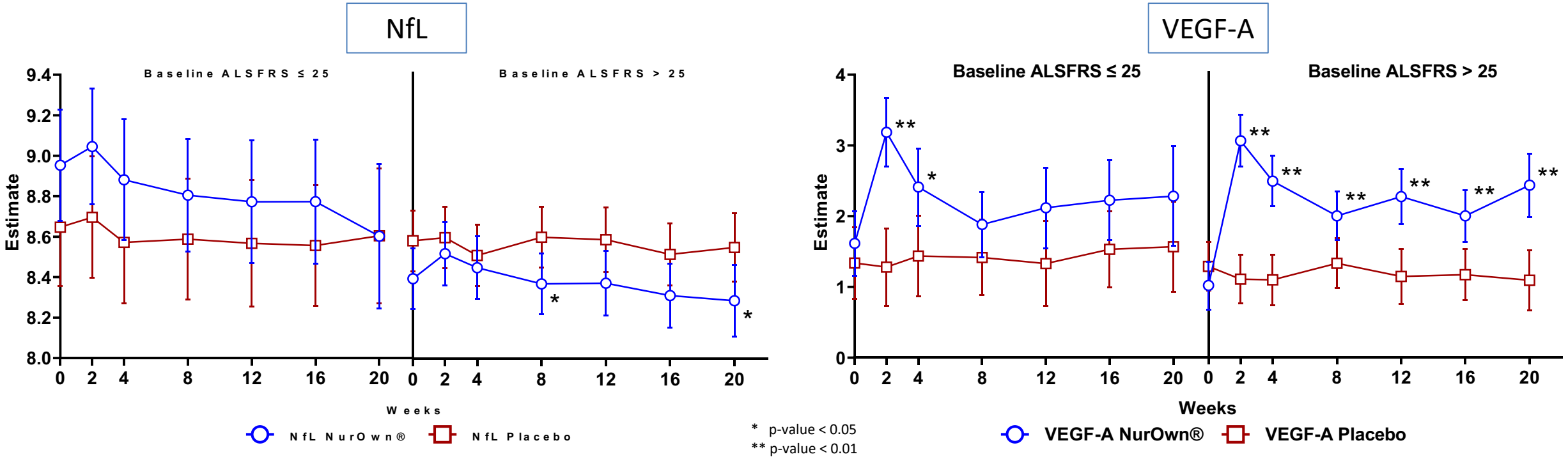
*p < 0.05

Biomarkers are not impacted by the floor effect of the ALSFRS-R



- Pro- and Anti-Inflammation Biomarkers: A large difference is observed between NurOwn and Placebo at the first post-treatment visit, indicating a treatment effect in reducing inflammation quickly following treatment with NurOwn
- Large p-values from the interaction terms with Baseline ALSFRS-R score indicate no significant difference in the ≤25 subgroup and >25 subgroup

Biomarkers are not impacted by the floor effect of the ALSFRS-R



- Neurodegeneration: NfL values decreased for NurOwn participants while the placebo group showed a flat trend
- Neuroprotection: VEGF values increase rapidly in both subgroups relative to placebo, remain elevated.

Thank you