ACHIEVE

Dyne® THERAPEUTICS

DELIVER

Achieving the Promise of

FORCE

to Deliver for Patients

FORCE

ACHIEVE & DELIVER CLINICAL UPDATE | MAY 20, 2024

Forward-Looking Statements & Disclaimer

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this presentation, including statements regarding Dyne's strategy, future operations, prospects and plans, objectives of management, the potential of the FORCE platform, the anticipated timelines for reporting additional data from the ACHIEVE and DELIVER clinical trials and initiating registrational cohorts, expectations regarding the timing and outcome of interactions with global regulatory authorities and the availability of accelerated approval pathways for DYNE-101 and DYNE-251, and plans to provide future updates on pipeline programs, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "objective," "ongoing," "plan," "predict," "project," "potential," "should," or "would," or the negative of these terms, or other comparable terminology are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Dyne may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including: uncertainties inherent in the identification and development of product candidates, including the initiation and completion of preclinical studies and clinical trials; uncertainties as to the availability and timing of results from preclinical studies and clinical trials; the timing of and Dyne's ability to enroll patients in clinical trials; whether results from preclinical studies and initial data from early clinical trials will be predictive of the final results of the clinical trials or future trials; uncertainties as to the FDA's and other regulatory authorities' interpretation of the data from Dyne's clinical trials and acceptance of Dyne's clinical programs and the regulatory approval process; whether Dyne's cash resources will be sufficient to fund its foreseeable and unforeseeable operating expenses and capital expenditure requirements; as well as the risks and uncertainties identified in Dyne's filings with the Securities and Exchange Commission (SEC), including the Company's most recent Form 10-Q and in subsequent filings Dyne may make with the SEC. In addition, the forward-looking statements included in this presentation represent Dyne's views as of the date of this presentation. Dyne anticipates that subsequent events and developments will cause its views to change. However, while Dyne may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing Dyne's views as of any date subsequent to the date of this presentation.

This presentation also contains estimates, projections and other statistical data made by independent parties and by the Company relating to market size and growth and other data about the Company's industry and business. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. The Company has not independently verified the accuracy and completeness of the information obtained by third parties included in this presentation. In addition, projections, assumptions and estimates of the Company's future performance and the future performance of the markets in which the Company operates are necessarily subject to a high degree of uncertainty and risk.

Program

Opening remarks
John Cox, President & CEO

DYNE-101 ACHIEVE Trial in DM1 Data
DYNE-251 DELIVER Trial in DMD Data

Wildon Farwell, M.D., MPH, Chief Medical Officer

Q&A

Closing Remarks
John Cox, President & CEO

OUR MISSION

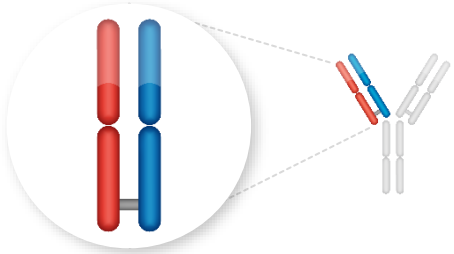
Life-transforming therapies

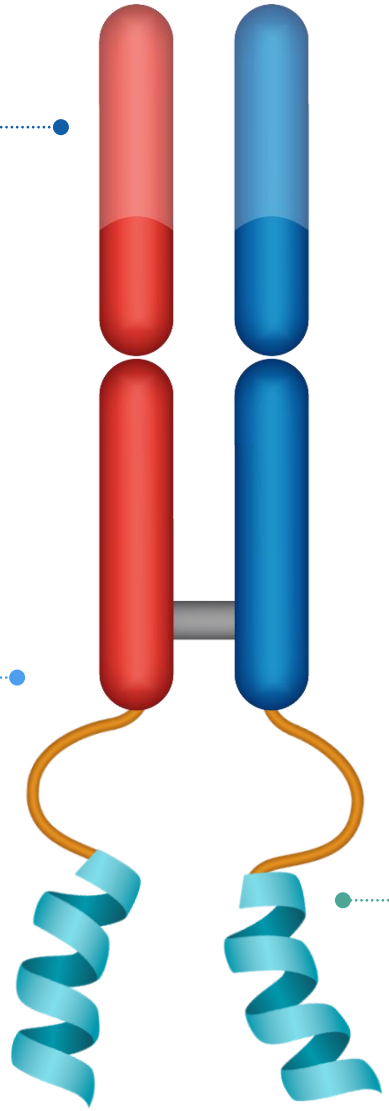
for patients with serious muscle diseases

Dyne FORCE™ Platform: Modern Oligo Therapeutics for Muscle Diseases

ANTIBODY

Proprietary Fab targets TfR1 to enable muscle delivery



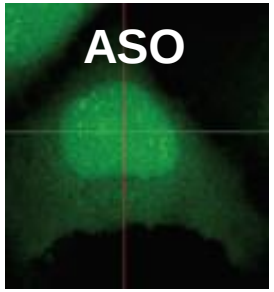


LINKER

Clinically validated, enables precise conjugation of multiple payloads to a single Fab

PAYLOAD

Modularity enables rational selection of payload to target the genetic basis of disease



Nuclear localization

Cytoplasmic localization

Adapted from Ohrt T., et al. *Nucleic Acids Res* 2006;34:1369.

Compelling Clinical Profiles for DYNE-101 and DYNE-251 Reinforce Opportunity to Transform the Treatment of DM1 and DMD

ACHIEVE

Potential first-in-class DM1 therapy with differentiated efficacy and safety profile

- ✓ Dose-dependent muscle delivery and compelling splicing correction consistent across patients
- ✓ Meaningful improvement in multiple clinical endpoints, including myotonia, muscle strength, timed functional assessments and patient reported outcomes
- ✓ Early indication of durable effect beyond monthly dosing supports exploration of Q8W dosing
- ✓ Deepening of response with longer time on therapy
- ✓ Favorable safety profile to date[1]; 6.8 mg/kg Q8W cohort fully enrolled

DELIVER

Potential best-in-class DMD exon skipping franchise with differentiated efficacy and safety profile

- ✓ Dose-dependent increase in muscle delivery and dystrophin expression
- ✓ At 10.0 mg/kg Q4W dose, DYNE-251 showed compelling profile at 6 months
  - 3.2% unadjusted and 7.6% muscle content adjusted dystrophin
  - Trends in improvement in functional outcomes, including NSAA and SV95C[3]
- ✓ Favorable safety profile to date[2]; 40 mg/kg Q8W cohort fully enrolled

Based on Recent Regulatory Interactions, Pursuing Expedited Approvals for Both Programs with Update on Registrational Pathway Expected by Year-End 2024

1. DYNE-101 data as of May 8, 2024. 2. DYNE-251 data as of April 30, 2024. 3. NSAA: North Star Ambulatory Assessment; SV95C: Stride Velocity 95th Centile.

Program

Opening remarks
John Cox, President & CEO

DYNE-101 ACHIEVE Trial in DM1 Data
DYNE-251 DELIVER Trial in DMD Data

Wildon Farwell, M.D., MPH, Chief Medical Officer

Q&A

Closing Remarks
John Cox, President & CEO

Developing Transformative Therapies for People Living with DM1

Overview

- Mutation in the *DMPK* gene
- Onset at any point, depending on DM1 phenotype
- Life expectancy of 45 - 60 years

Clinical Presentation

- Myotonia
- Muscle weakness
- Cardiac arrhythmia
- Pulmonary abnormalities
- CNS manifestations

Population

- >40,000 (US)
- >74,000 (Europe)

NO approved therapies

OUR APPROACH

Disease-Modifying Nuclear *DMPK* Knockdown

Targeting toxic gain of function *DMPK* RNA to potentially **stop or reverse** disease progression

DM1 Community Urgently Needs Treatment Options

“In a nutshell, it's a huge, complex disease. It not only affects every muscle in your body, but also your brain, cognition, your stamina, your endurance. And also, I think myotonic dystrophy is not just a physical disability, it also involves mental health.”

Sarah, *living with DM1*

Phase 1/2 Clinical Trial to Evaluate DYNE-101 in Patients with DM1

ACHIEVE

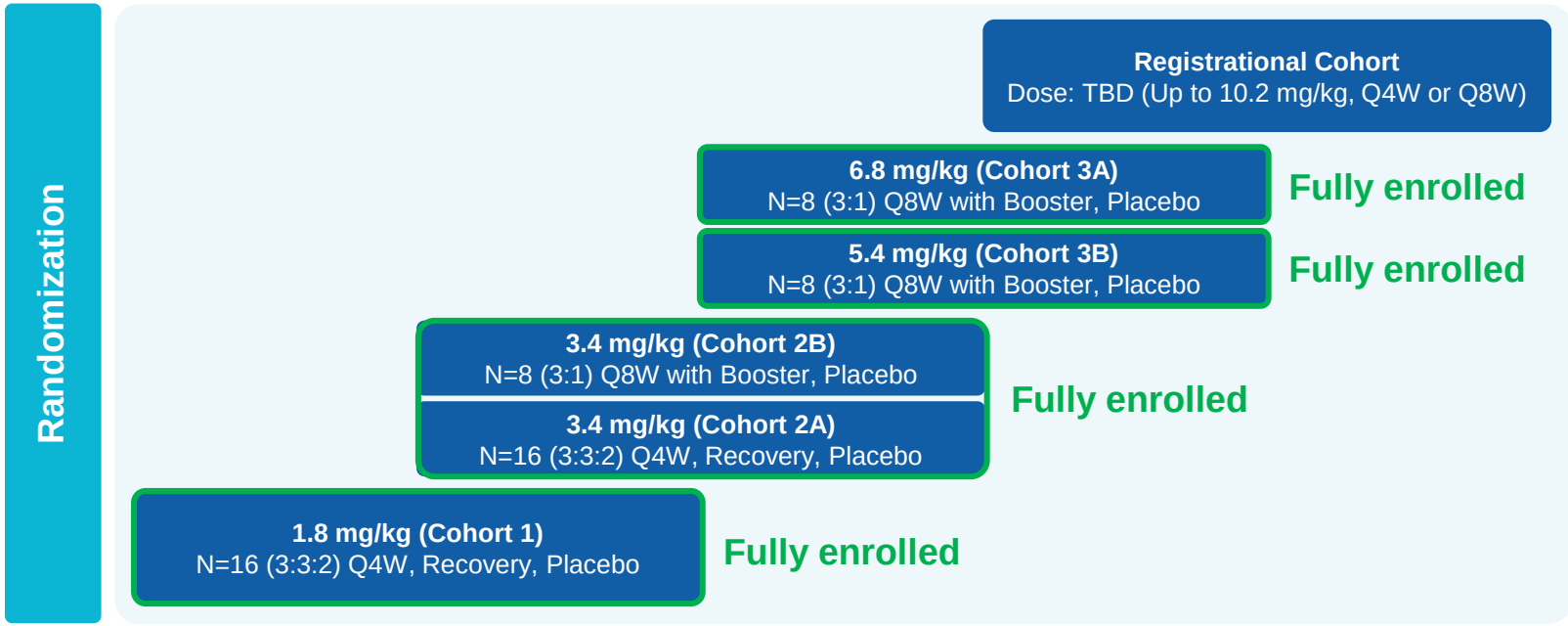
Population	Primary Endpoints	Additional Endpoints	Stages of ACHIEVE
• Adult patients living with DM1 • Ages 18 to 49 years	• Safety and tolerability	• Pharmacokinetics • Change from baseline of: – Splicing – *DMPK* RNA expression – Multiple assessments of muscle strength and function – Patient-reported outcomes, including DM1-ACTIV^{c} and MDHI	• Multiple Ascending Dose (MAD): 24 weeks • Open-Label Extension (OLE): 24 weeks • Long-Term Extension (LTE): 96 weeks

Additional endpoints include select secondary and exploratory endpoints. DM1-ACTIV^{c}: Myotonic Dystrophy type 1 Activity and participation scale. MDHI: Myotonic Dystrophy Health Index.

ACHIEVE Trial Design

ACHIEVE

Global, Randomized, Placebo-Controlled Stage Evaluating Once Monthly or Less Frequent Administration of DYNE-101 in Adult Patients Living with DM1



MAD Study Details

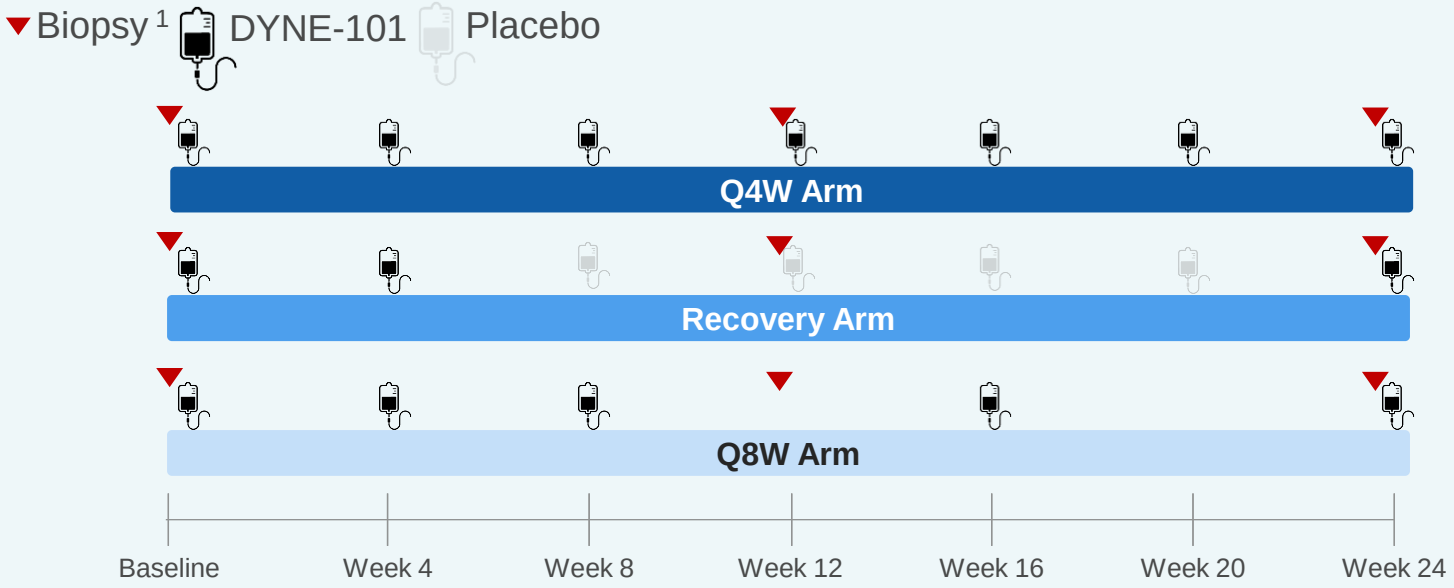
- IV administration of DYNE-101 or placebo every 4 weeks or every 8 weeks
- Muscle biopsies: Baseline, 12 weeks, 24 weeks
- Patients in MAD study escalated to highest tolerable dose in OLE and LTE

Global Strategy & Adaptive Trial Design To Enable Rapid Achievement of Potentially Registrational Clinical Data

Doses provided refer to ASO component of DYNE-101. Recovery cohort Q4W x 2 doses then placebo for the remainder of the 24W placebo-controlled period. Q8W with booster includes Q4W x 3 doses then Q8W dosing. Study protocol allows for dosing up to 10.2 mg/kg.

Dosing Schedules for Treatment Arms

ACHIEVE



1. Needle biopsies taken from alternating TA muscles prior to dosing at baseline, Day 85, and Day 169.

Note: Represents dosing during 24-week multiple ascending dose (MAD) stage. Patients in MAD study escalated to highest tolerable dose in 24-week OLE and 96-week LTE.

ACHIEVE Baseline Participant Characteristics: By Cohort

Mean(SD) or n(%)	1.8 mg/kg Q4W (N=16) [1]	3.4 mg/kg Q4W (N=16) [1]	5.4 mg/kg Q8W (N=8) [2]
Age (years)	34.6 (10.4)	34.3 (7.6)	39.6 (7.0)
Female n(%)	7 (43.8%)	3 (18.8%)	5 (62.5%)
BMI (kg/m^2)	22.4 (5.3)	23.8 (3.8)	21.7 (2.7)
CASI	0.62 (0.26)	0.67 (0.20)	0.79 (0.14)
CTG Repeats	375 (217)	527 (241)	586 (294)
vHOT (sec) (middle finger)	11.2 (4.3)	8.0 (5.7)	10.1 (6.2)
QMT Total (% predicted)	49.6 (10.9)	47.8 (10.6)	45.8 (16.1)
10M-RWT (sec)	3.5 (0.8)	3.6 (0.7)	4.7 (2.1)
5 Times Sit to Stand (sec)	9.33 (2.02)	10.05 (3.03)	12.28 (5.96)
DM1-ACTIV^c Total	43 (7)	42 (7)	44 (6)
MDHI Total	25 (20)	25 (20)	16 (9)

1. Q4W, recovery, and placebo arms are reported together for baseline characteristics. 2. Q8W and placebo arms are reported together for baseline characteristics.

DYNE-101 Safety Profile Is Favorable to Date

Summary of Treatment Emergent Adverse Events (TEAEs)[1]

TEAE Category	Participants with ≥1 TEAE – n (%)					
	1.8 mg/kg Q4W+Rec. N=16	3.4 mg/kg Q4W+Rec. N=16	3.4 mg/kg Q8W N=8	5.4 mg/kg Q8W N=8	6.8 mg/kg Q8W N=8	Overall (N=56)
Any TEAE	16 (100%)	16 (100%)	7 (88%)	8 (100%)	6 (75%)	53 (95%)
Any related TEAE	7 (44%)	6 (38%)	1 (13%)	3 (38%)	5 (63%)	22 (39%)
Any serious TEAE	4 (25%)	0	0	0	0	4 (7%)
Any serious related TEAE	0	0	0	0	0	0
Any TEAE leading to withdrawal	1 (6%)[2]	0	0	0	0	1 (2%)[2]
Any TEAE leading to death	0	0	0	0	0	0

Most TEAEs Were Mild or Moderate in Intensity

- 4 serious TEAEs unrelated to study drug
  - Atrioventricular block first degree (1)[3]
  - Pneumonia (1)
  - Pulmonary embolism (2)[4]
- Most common TEAEs (≥10% participant incidence)[5]
  - Nasopharyngitis (20%)
  - Procedural pain (18%)
  - Influenza; pyrexia (each 16%)
  - Diarrhea; headache (each 14%)
  - Back pain (13%)

Additional Safety Data

- Liver enzyme elevations have been observed in ~19% of participants
  - No impact on liver function (bilirubin or coagulation)
  - Interpretation is complicated by underlying disease and elevated baseline values up to ~2.5x greater than the upper limit of normal
- No participants have demonstrated persistent related anemia or thrombocytopenia

~500 Doses Administered to Date Representing Over 40-patient Years of Follow-Up

1. Data as of May 8, 2024. 2. Single participant withdrawal due to infusion related reaction in absence of respiratory signs or symptoms after completing MAD and receiving multiple doses of study drug in OLE. 3.Transient worsening of atrioventricular (AV) block in a participant with ongoing medical history of first-degree AV block. 4. Attributed to risk factors for pulmonary embolism. 5. All cohorts combined; preferred terms are reported

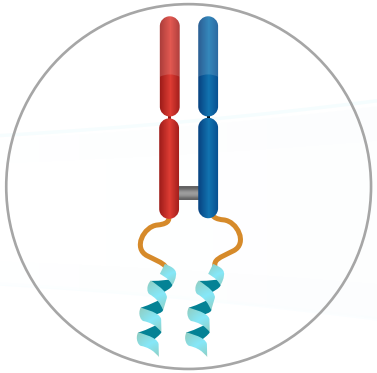
DYNE-101 Designed to Address the Foundational Spliceopathy of DM1 to Enable Comprehensive Functional Improvement

Robust Delivery

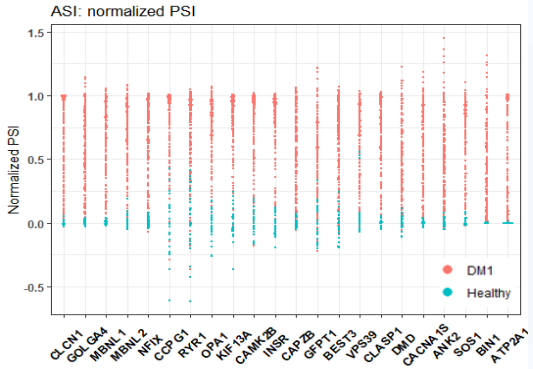
Validated Biomarker

Early Indicator of Functional Improvement

Broad Functional Improvement



FORCE Platform



Splicing

Myotonia

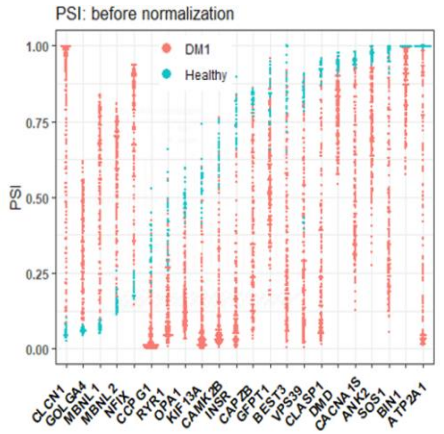
Muscle Strength:
Quantitative Muscle Testing

Functional Assessments:
10-Meter Walk / Run;
5x Sit to Stand

Patient Reported Outcomes:
Myotonic Dystrophy Health Index (MDHI); DM1-ACTIV[c]

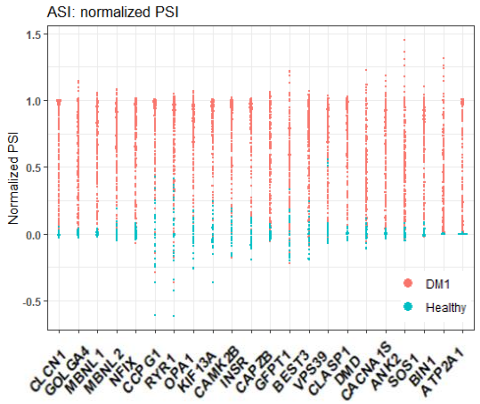
DMCRN NHS Enabled Establishment of Composite Alternative Splicing Index (CASI) as Biomarker Correlating with Clinical Function in DM1

PSI = Percent Spliced In



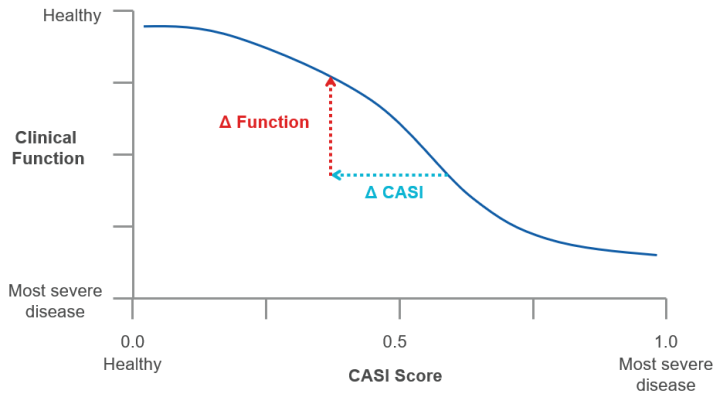
Targeted sequencing reads to calculate Percent Spliced In (PSI) of specific exons

ASI: Alternative Splicing Index



Normalize to reference PSI from healthy controls and patients from DM1 natural history studies [1]

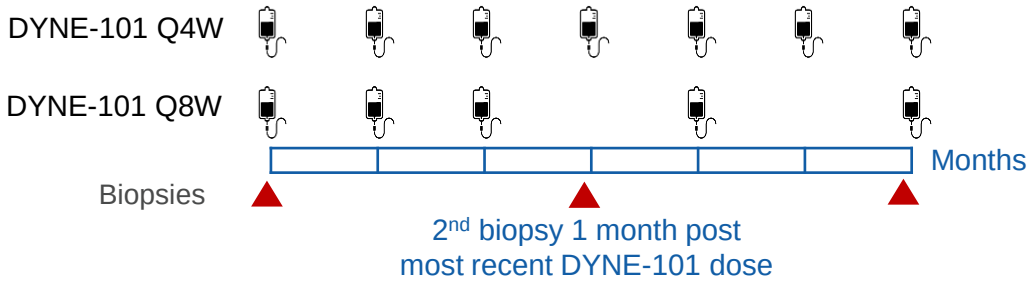
CASI: Composite Alternative Splicing Index

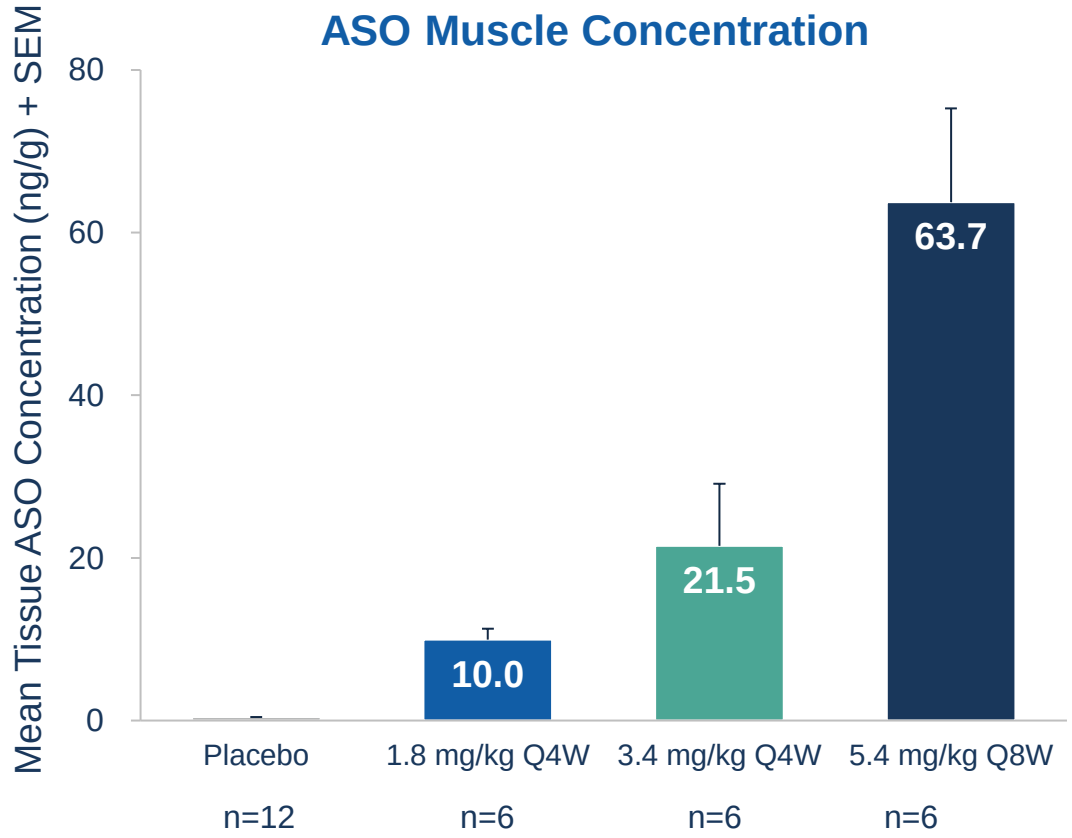


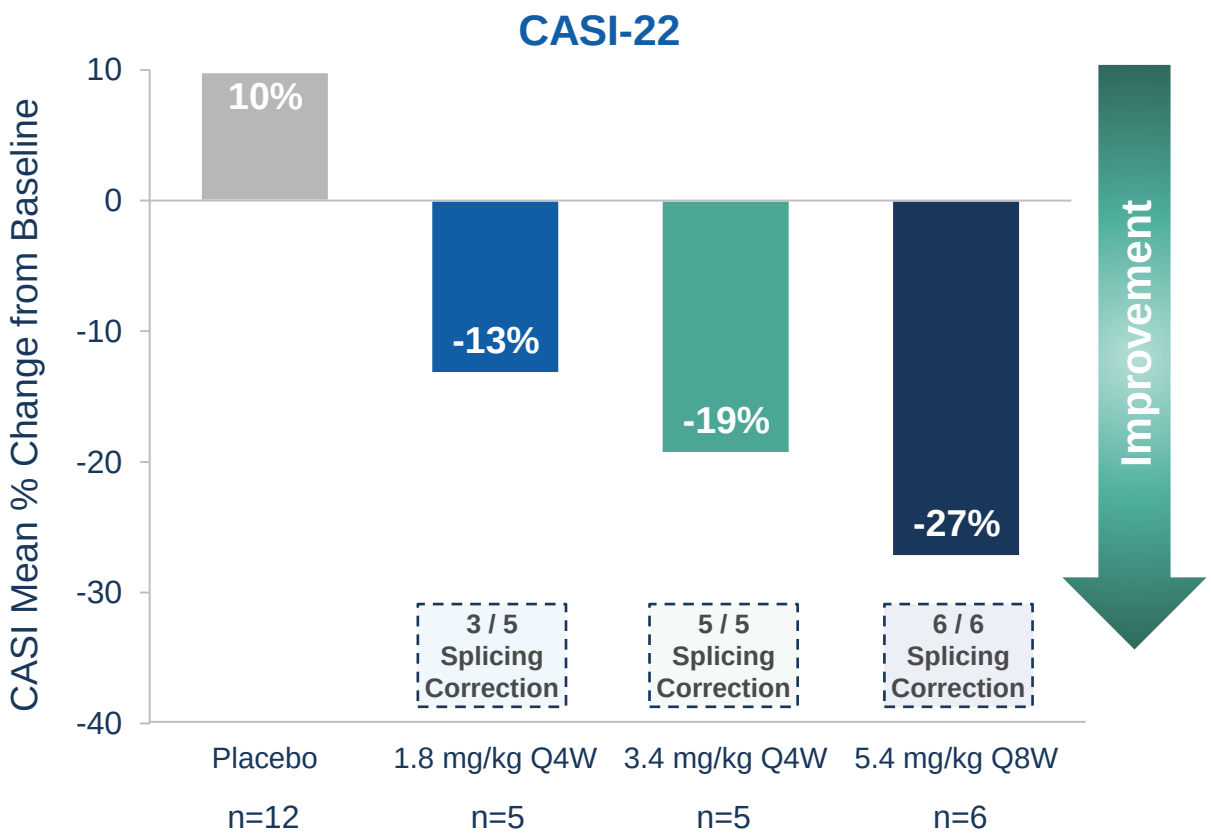
Compute the mean of normalized PSI from a panel of 22 genes.
0 representing median score of healthy subjects; 1 representing 95th percentile severity of DM1 patients

1. Reference PSI described within Thornton CA et al., *Lancet Neurol*, 2023; 22: 218–228; DMCRN NHS: Myotonic Dystrophy Clinical Research Network natural history study.

Monthly Dosing of DYNE-101 Demonstrated Dose-Dependent Delivery and Consistent Splicing Correction at 3 Months



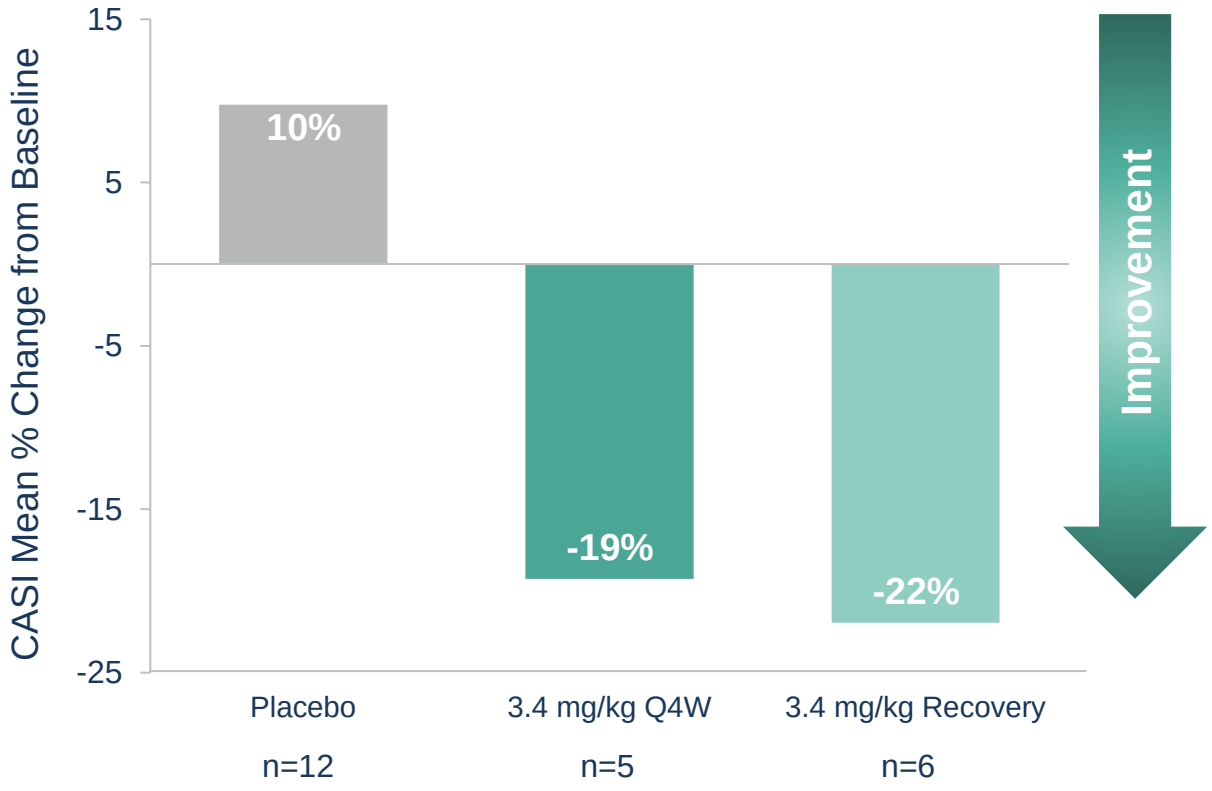




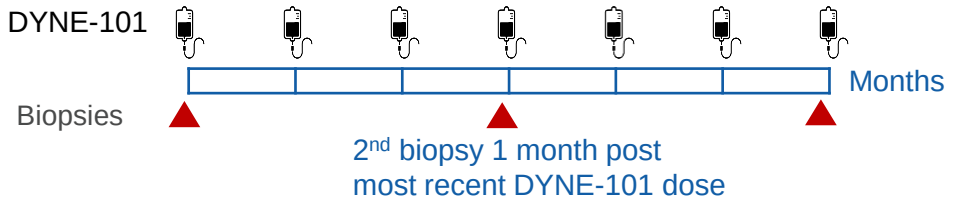
Note: One post-baseline sample in 3.4 mg/kg Q4W treatment group not included within splicing assay as the sample did not meet QC criteria.

Recovery Data Supports Less Frequent Dosing Regimen

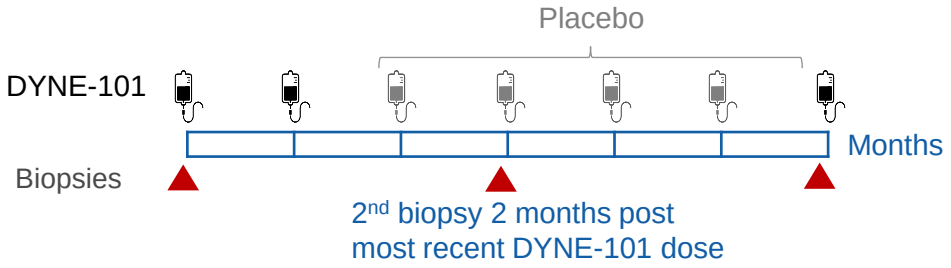
CASI-22 at 3 Months



Q4W Active Arm



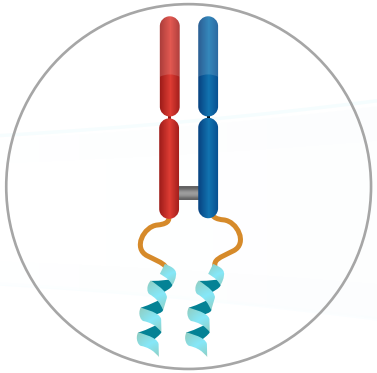
Q4W Recovery Arm



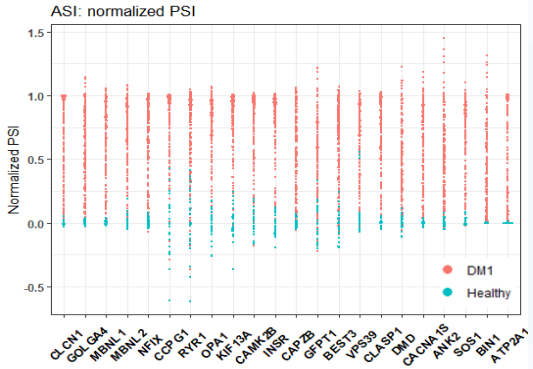
Robust Splicing Correction in Both Q4W and Recovery Arm with 3.4 mg/kg Dose

DYNE-101 Designed to Address the Foundational Spliceopathy of DM1 to Enable Comprehensive Functional Improvement

Robust Delivery | **Validated Biomarker** | **Early Indicator of Functional Improvement** | **Broad Functional Improvement**



FORCE Platform



Splicing

Myotonia

Muscle Strength:
Quantitative Muscle Testing

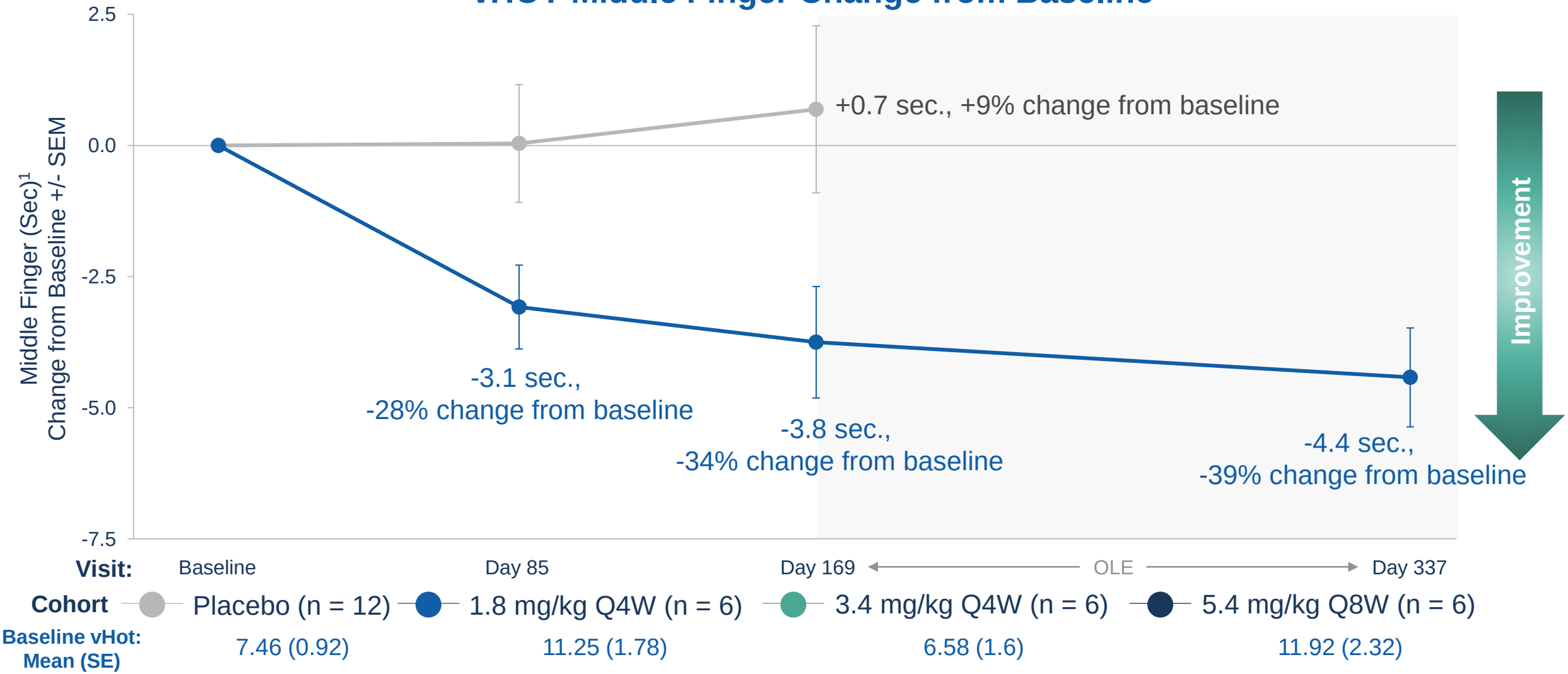
Functional Assessments:
10-Meter Walk / Run;
5x Sit to Stand

Patient Reported Outcomes:
Myotonic Dystrophy Health Index (MDHI); DM1-ACTIV[c]

Continued Improvement in Functional Myotonia at 6 and 12 Months

1.8 mg/kg Q4W myotonia benefit increased from 3.1 seconds at 3 Months to 4.4 seconds at 12 Months

vHOT Middle Finger Change from Baseline

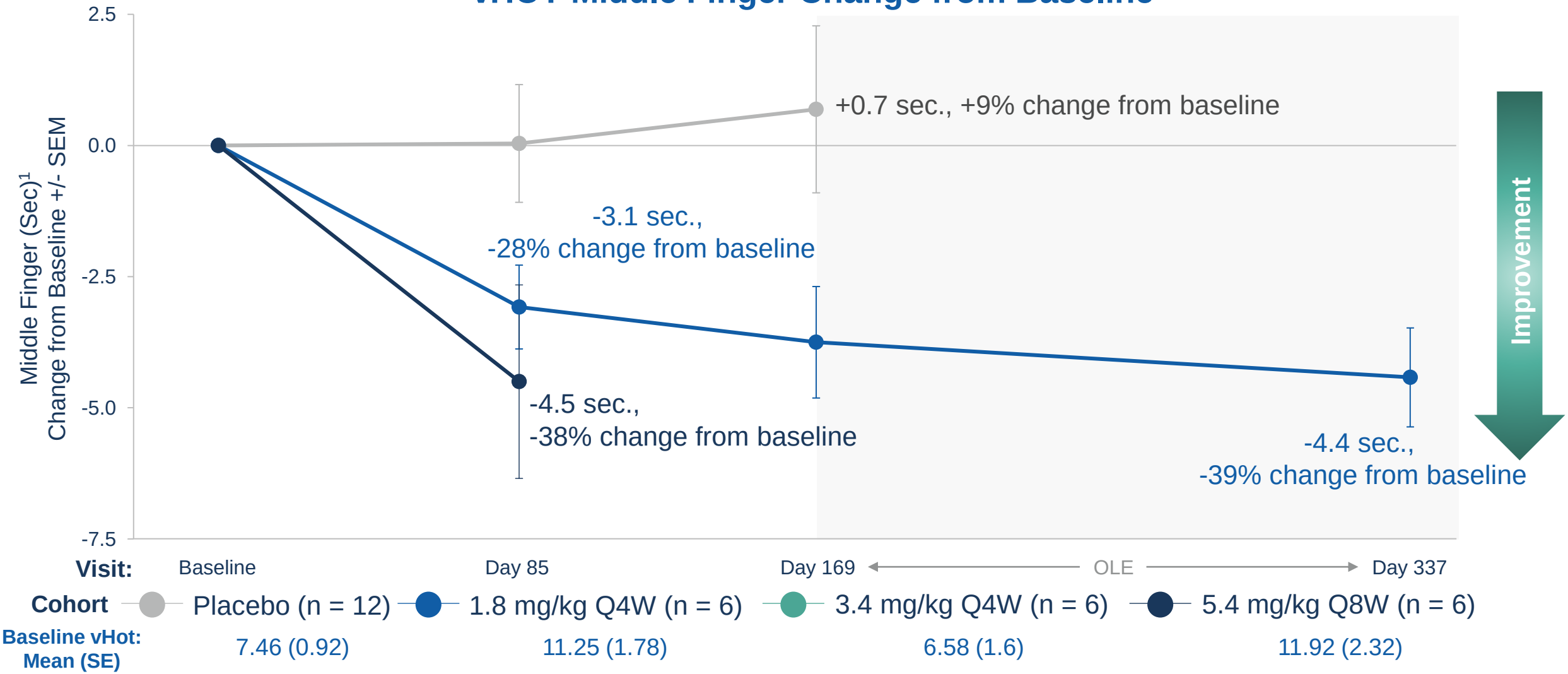


1. Middle Finger (sec) is the average of all myotonia trials for an individual participant in ACHIEVE.
Note: Placebo group includes 12 participants at Day 85 and 8 participants at Day 169. Mean percent change from baseline for placebo group are based on baseline values from 12 patients.

Continued Improvement in Functional Myotonia at 6 and 12 Months

1.8 mg/kg Q4W myotonia benefit increased from 3.1 seconds at 3 Months to 4.4 seconds at 12 Months

vHOT Middle Finger Change from Baseline

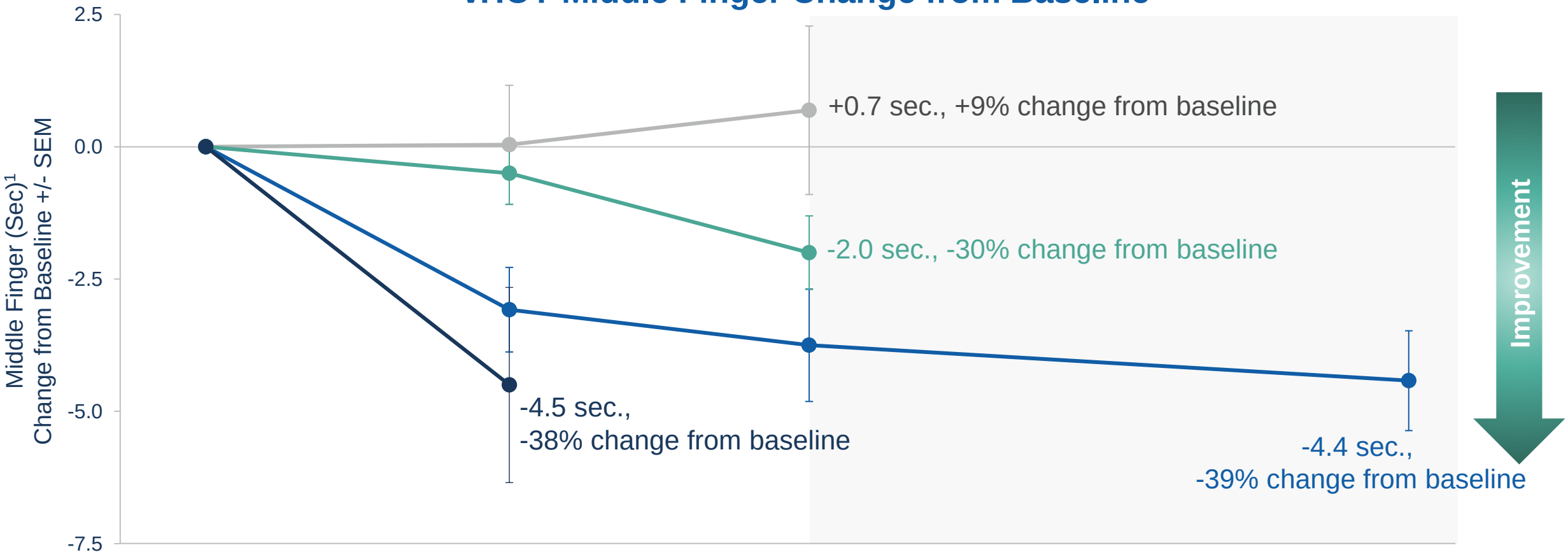


1. Middle Finger (sec) is the average of all myotonia trials for an individual participant in ACHIEVE.
Note: Placebo group includes 12 participants at Day 85 and 8 participants at Day 169. Mean percent change from baseline for placebo group are based on baseline values from 12 patients.

Continued Improvement in Functional Myotonia at 6 and 12 Months

1.8 mg/kg Q4W myotonia benefit increased from 3.1 seconds at 3 Months to 4.4 seconds at 12 Months

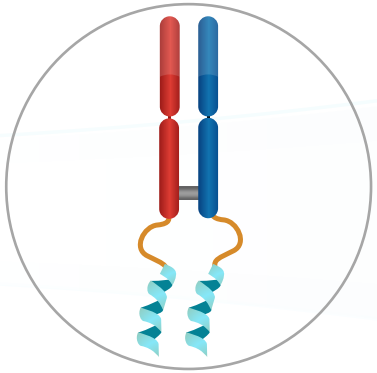
vHOT Middle Finger Change from Baseline



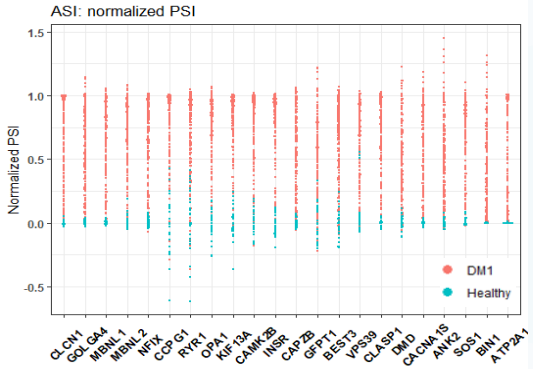
1. Middle Finger (sec) is the average of all myotonia trials for an individual participant in ACHIEVE.
Note: Placebo group includes 12 participants at Day 85 and 8 participants at Day 169. Mean percent change from baseline for placebo group are based on baseline values from 12 patients.

DYNE-101 Designed to Address the Foundational Spliceopathy of DM1 to Enable Comprehensive Functional Improvement

Robust Delivery | **Validated Biomarker** | **Early Indicator of Functional Improvement** | **Broad Functional Improvement**



FORCE Platform



Splicing

Myotonia

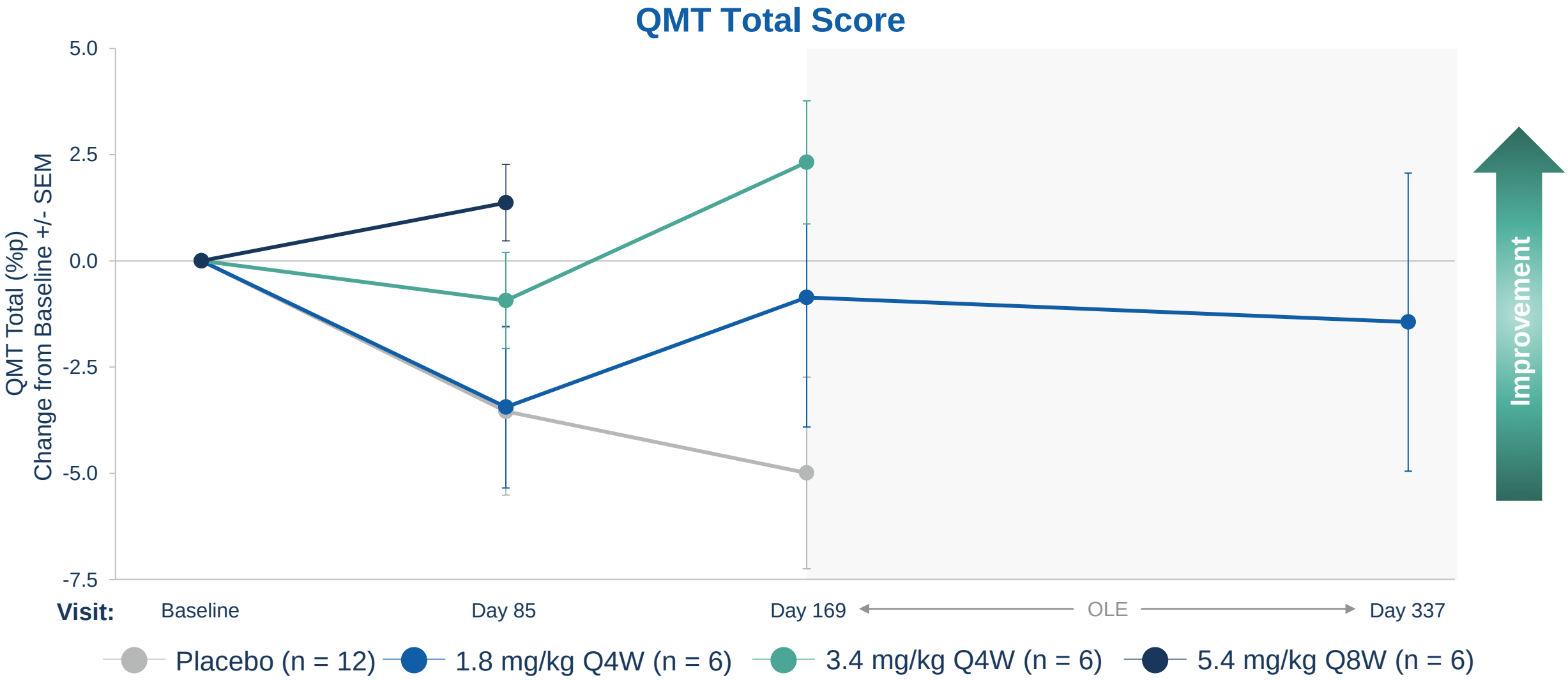
Muscle Strength:
Quantitative Muscle Testing

Functional Assessments:
10-Meter Walk / Run;
5x Sit to Stand

Patient Reported Outcomes:
Myotonic Dystrophy Health Index (MDHI); DM1-ACTIV[c]

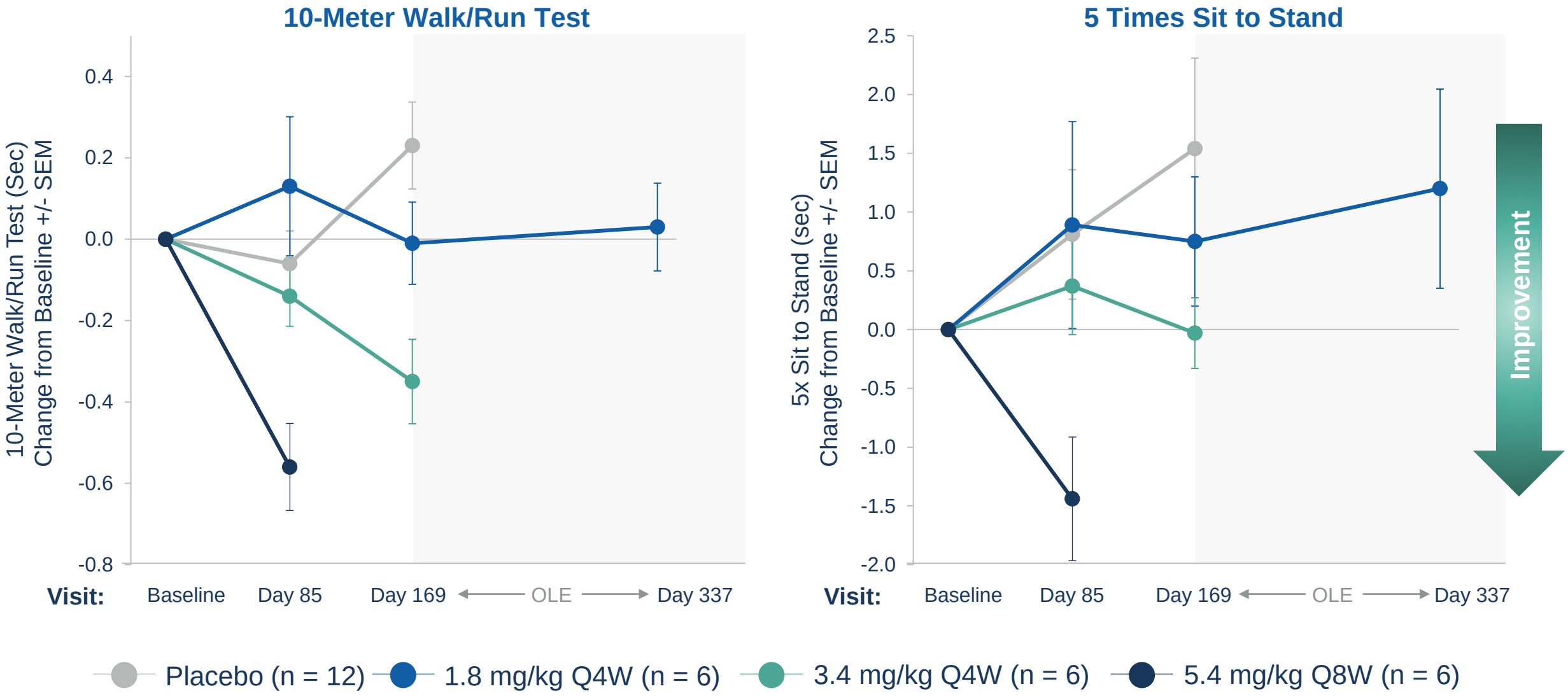
DYNE-101 Demonstrated Improvement in Muscle Strength

Measured by Quantitative Muscle Testing (QMT)



Note: Placebo group includes 12 participants at Day 85 and 8 participants at Day 169.

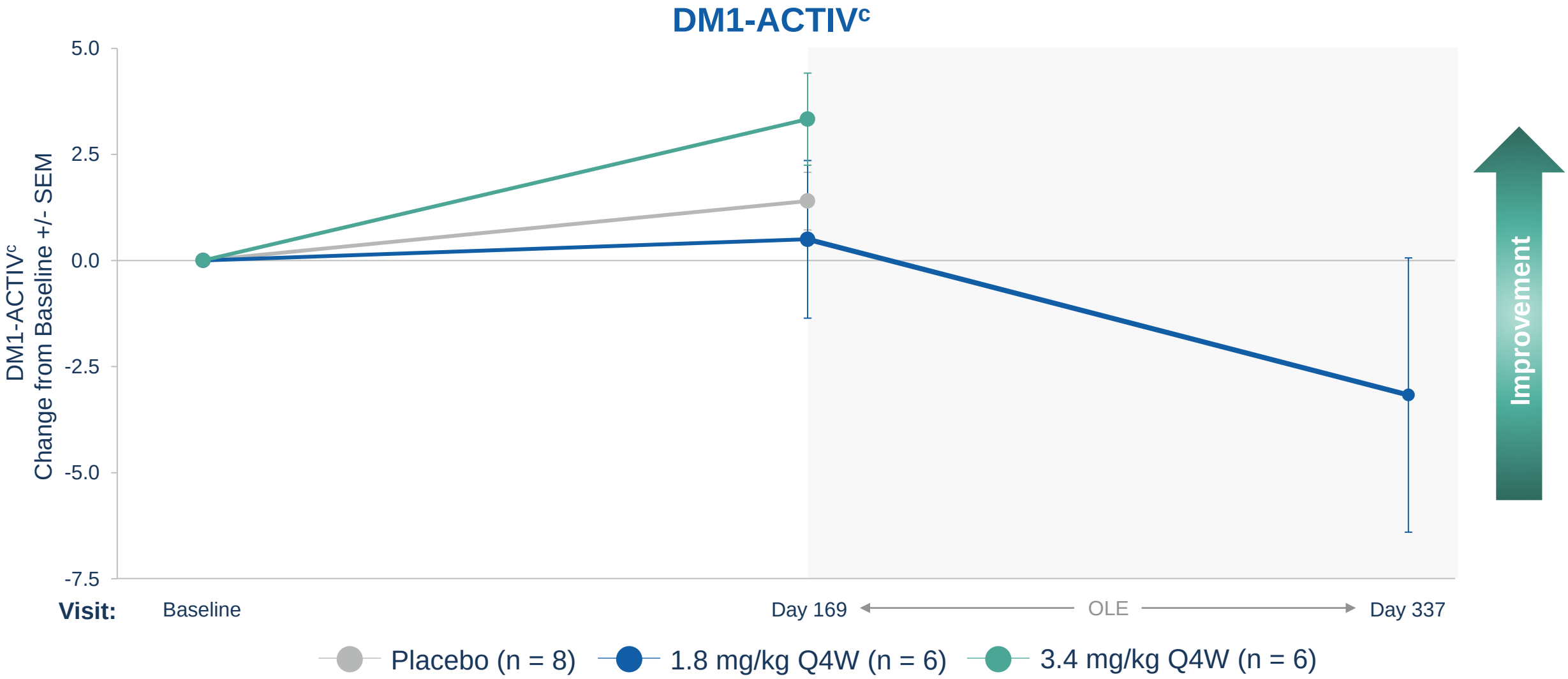
DYNE-101 Demonstrated Early and Sustained Potential Benefit Across Multiple Timed Function Tests



Note: Placebo group includes 12 participants at Day 85 and 8 participants at Day 169.

DYNE-101 Showed Improvement from Baseline in Activities of Daily Living

Measured by DM1-ACTIV^{c} Patient Reported Outcome

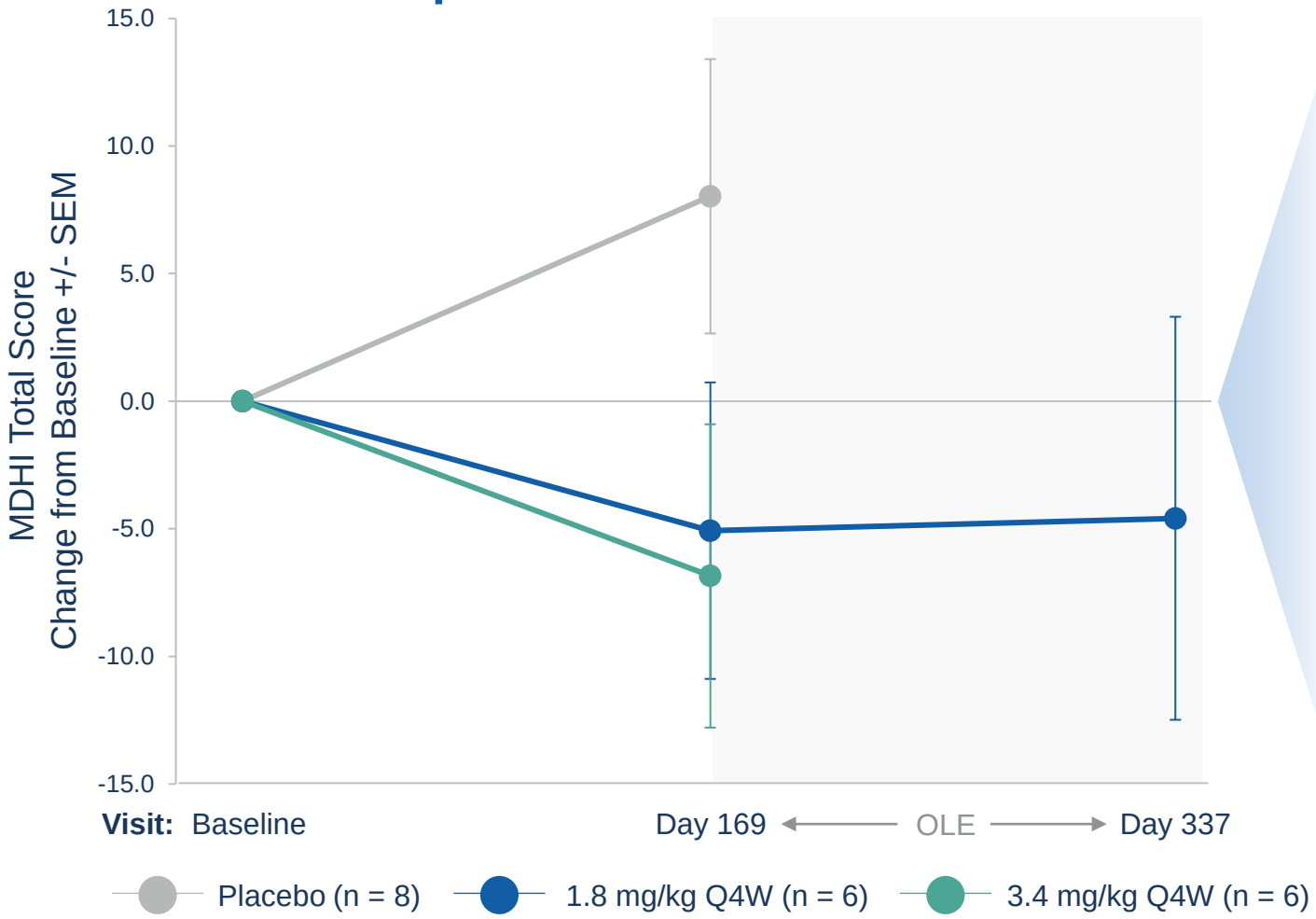


Notes: Patient-reported outcomes (PRO), including DM1-ACTIVc, collected at baseline, day 169 and day 337.

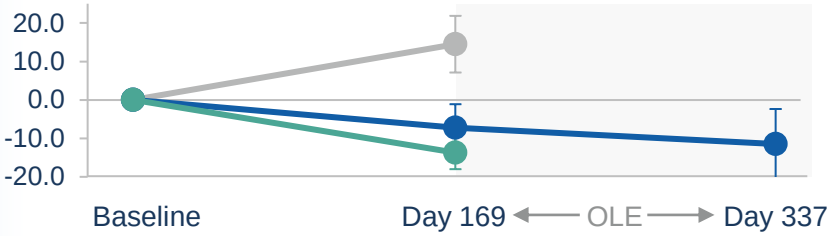
DYNE-101 Demonstrated Clinical Benefit Based on Well-Validated PRO

Showed Benefit in 17 out of 17 MDHI Subscales

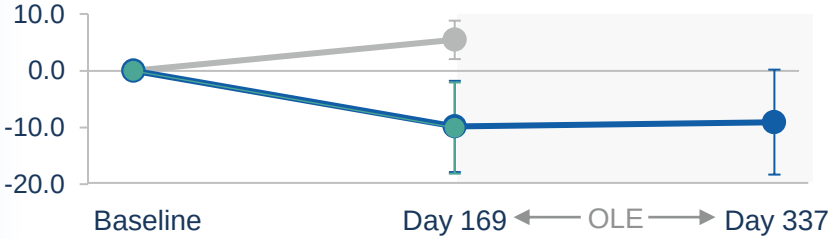
Improved MDHI Total Score



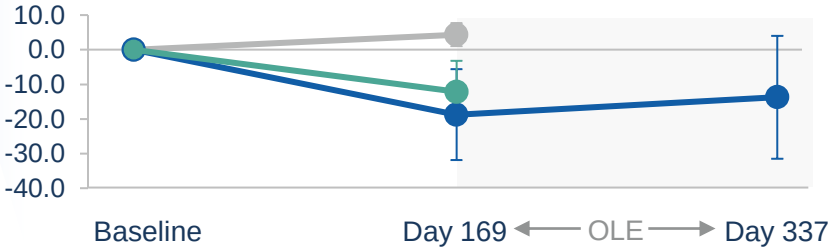
Upper Extremity Function



Gastrointestinal Issues



Fatigue



MDHI Total and Subscale Improvement

Note: Patient-reported outcomes (PRO), including Myotonic Dystrophy Health Index (MDHI) collected at baseline, day 169 and day 337.

ACHIEVE Data Demonstrated DYNE-101 Best-in-Class Potential

ACHIEVE

- ✓ Dose-dependent muscle delivery and compelling splicing correction consistent across patients
- ✓ Meaningful improvement in multiple clinical endpoints, including myotonia, muscle strength, timed functional assessments, and patient reported outcomes
- ✓ Early indication of durable effect beyond monthly dosing supports exploration of Q8W dosing
- ✓ Deepening of response with longer time on therapy
- ✓ Favorable safety profile to date[1]; 6.8 mg/kg Q8W cohort fully enrolled

Pursuing expedited approval based on recent regulatory interactions and strength of results

Update on path to registration for DYNE-101 expected by YE 2024

1. Data as of May 8, 2024.

Building a Global DMD Franchise of Transformative Therapies

Overview

- Mutation in the *DMD* gene that encodes for dystrophin
- Onset in first few years of life
- Life expectancy ~30 years

Clinical Presentation

- Muscle weakness
- Progressive loss of function
- Loss of ambulation
- Respiratory/cardiac failure

Population

- ~12,000 - 15,000 (US)
- ~ 25,000 (Europe)

Current Approved Exon 51 Therapies Only Increased Dystrophin Production

<1%

OUR APPROACH

Potential Best-in-class Targeted Exon Skipping

Increase dystrophin expression and enable less frequent dosing to potentially **stop or reverse disease progression**

DMD Community Has Urgent Need for Improved Treatment Options

“A potentially transformative treatment for me would be halting the progression of DMD and that would change everything for me and so many other people with it.

And because right now the progression of it, yeah, it's very tough. Great people are dying every day from it. It's always a big surprise, people die so suddenly from this. So, I think halting the progression would really change everything.”

Alan, *living with DMD*

Phase 1/2 Clinical Trial to Evaluate DYNE-251 in Patients with DMD

Population

- Male patients with DMD with mutations amenable to exon 51 skipping therapy
- Ages 4 to 16 years
- Ambulant and non-ambulant

Primary Endpoints

- Safety and tolerability
- Change from baseline in dystrophin protein levels by Western Blot

Additional Endpoints

- Pharmacokinetics
- Change from baseline of:
  - Exon 51 skipping levels
  - Muscle tissue PDPF
  - Multiple assessments of muscle function, including NSAA score, SV95C and certain timed functional tests

Stages of DELIVER

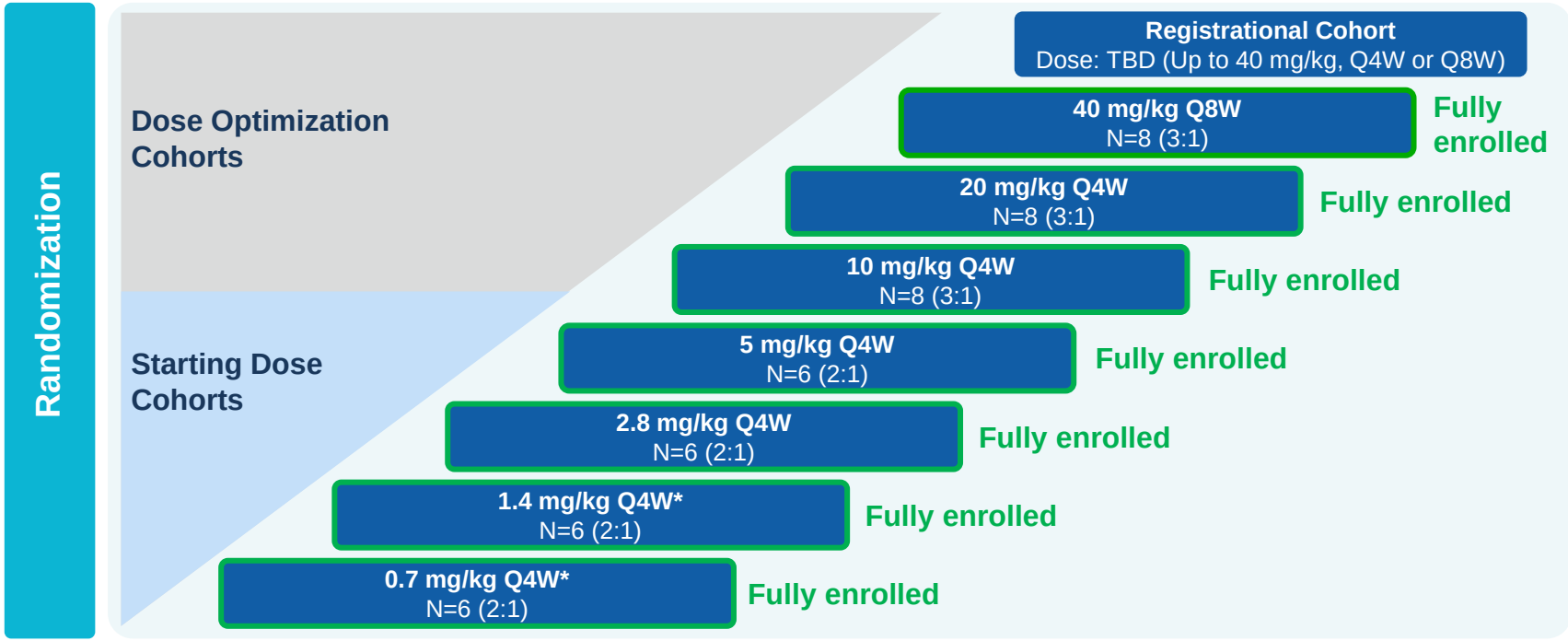
- Multiple Ascending Dose (MAD): 24 weeks
- Open-Label Extension (OLE): 24 weeks
- Long-Term Extension (LTE): 96 weeks

Note: Additional endpoints include select secondary and exploratory endpoints
PDPF: percent dystrophin-positive fibers; NSAA: North Star Ambulatory Assessment; SV95C: Stride Velocity 95th Centile.

DELIVER Trial Design

DELIVER

Global, Randomized, Placebo-Controlled Stage Evaluating Administration of DYNE-251 in Ambulant and Non-Ambulant Male DMD Patients with Mutations Amenable to Exon 51 Skipping Therapy



MAD Study Details

- IV administration of DYNE-251 or placebo every 4 weeks or every 8 weeks
- Muscle biopsies: Baseline and 24 weeks*
- Patients in MAD study escalated to highest tolerable dose in OLE and LTE

Global Trial Designed to be Registrational and to Enable Rapid Achievement of Predicted Pharmacologically Active Dose Levels

Doses provided refer to PMO component of DYNE-251. Cohorts randomized to active arm or placebo. Study protocol allows for dosing up to 40 mg/kg.
* Muscle biopsies taken at baseline and 24 weeks in 2.8 mg/kg Q4W cohort to 20 mg/kg Q4W cohort; muscle biopsies taken at baseline and 48 weeks in 40 mg/kg Q8W cohort; biopsies not taken in 0.7 mg/kg and 1.4 mg/kg cohorts.

DELIVER Baseline Participant Characteristics: By Cohort

mean (SD) or n(%)	0.7 mg/kg (N=6)	1.4 mg/kg (N=6)	2.8 mg/kg (N=6)	5 mg/kg (N=6)	10 mg/kg (N=8)
Age (years)	10.8 (2.2)	7.8 (3.3)	10.7 (2.9)	8.3 (2.8)	6.6 (2.2)
BMI (kg/m^2)	19.5 (3.4)	18.6 (2.3)	22.6 (6.3)	20.9 (1.6)	18.3 (3.2)
Age of Symptom Onset (years)	3.7 (1.8)	4.5 (2.1)	2.8 (1.8)	3.7 (3.1)	2.8 (1.6)
Corticosteroid dosing regimen (n (%))[1] Daily Other	 4 (66.7%) 2 (33.3%)	 4 (66.7%) 3 (50.0%)	 5 (83.3%) 1 (16.7%)	 6 (100.0%) 0	 8 (100.0%) 0
Prior DMD Therapy (n (%)) Eteplirsen Other	 4 (66.7%) 2 (33.3%)	 2 (33.3%) 1 (16.7%)	 5 (83.3%) 0	 1 (16.7%) 0	 1 (12.5%) 1 (12.5%)
NSAA Total Score	22.2 (7.2)	22.8 (10.5)	20.3 (9.0)	21.0 (7.0)	25.3 (6.4)
10 Meter Run/Walk (sec)	6.1 (1.5)	6.3 (5.2)	6.9 (3.6)	5.1 (1.5)	4.6 (1.9)
Time Rise From Floor (sec)	8.5 (4.0)	3.1 (0.3)	6.9 (4.9)	5.0 (2.6)	6.3 (5.6)
Stride Velocity 95th Percentile (m/sec)	N/A	N/A	N/A	N/A	1.9 (0.5)

Note: Q4W and placebo arms are reported together for baseline characteristics. N/A: not applicable as data not collected.
1. Historical corticosteroid regimen based on medical history; a participant can be counted in multiple categories.

DYNE-251 Safety Profile Is Favorable to Date

Summary of Treatment Emergent Adverse Events (TEAEs)[1]

TEAE Category	Participants with ≥1 TEAE – n (%)							
	0.7mg/kg Q4W N=6	1.4 mg/kg Q4W N=6	2.8 mg/kg Q4W N=6	5 mg/kg Q4W N=6	10 mg/kg Q4W N=8	20 mg/kg Q4W N=8	40 mg/kg Q8W N=8	Overall[1] N=48
Any TEAE	6 (100%)	6 (100%)	3 (50%)	6 (100%)	7 (88%)	7 (88%)	4 (50%)	39 (81%)
Any related TEAE	3 (50%)	3 (50%)	0	5 (83%)	2 (25%)	3 (38%)	2 (25%)	18 (38%)
Any serious TEAE	0	0	1 (17%)	0	0	1 (13%)	0	2 (4%)
Any serious related TEAE	0	0	0	0	0	0	0	0
Any TEAE leading to withdrawal from study drug	0	0	0	0	0	0	0	0
Any TEAE leading to death	0	0	0	0	0	0	0	0

Most TEAEs Were Mild or Moderate in Intensity

- The 2 serious TEAEs are unrelated to study drug
  - Dehydration due to gastroenteritis (1)
  - Left femoral neck fracture (1)
- Most common TEAEs (>10% participant incidence)[2]
  - Headache (23%)
  - Pyrexia; fall (each 21%)
  - Nasopharyngitis; vomiting; infusion-related reaction[3] (each 19%)
  - Cough (17%)
  - Upper respiratory tract infection (13%)

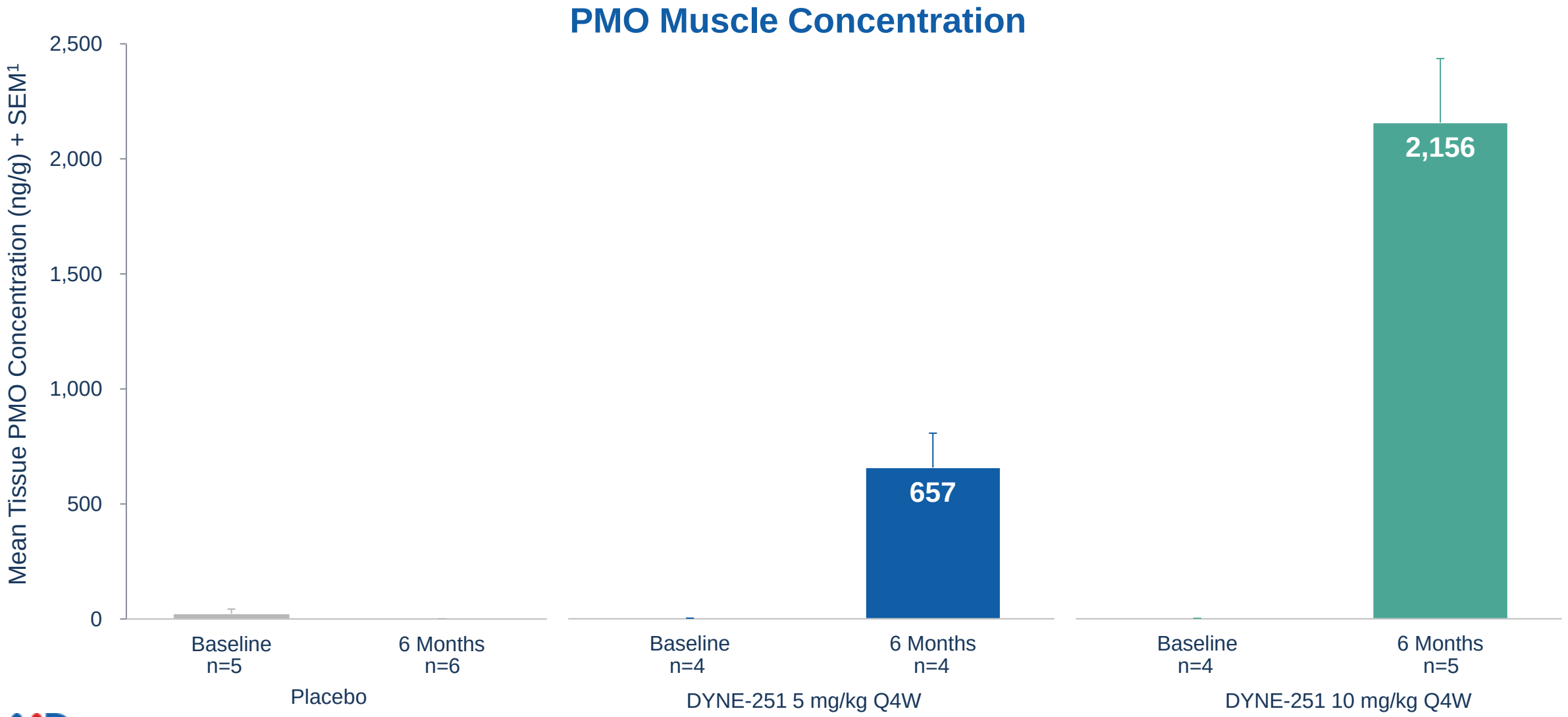
Additional Safety Data

- No participants have demonstrated persistent related anemia or thrombocytopenia
- No participants have demonstrated kidney injury
- No participants have demonstrated clinically meaningful changes in electrolytes, including magnesium

~480 Doses Administered to Date Representing Over 35-patient Years of Follow-Up

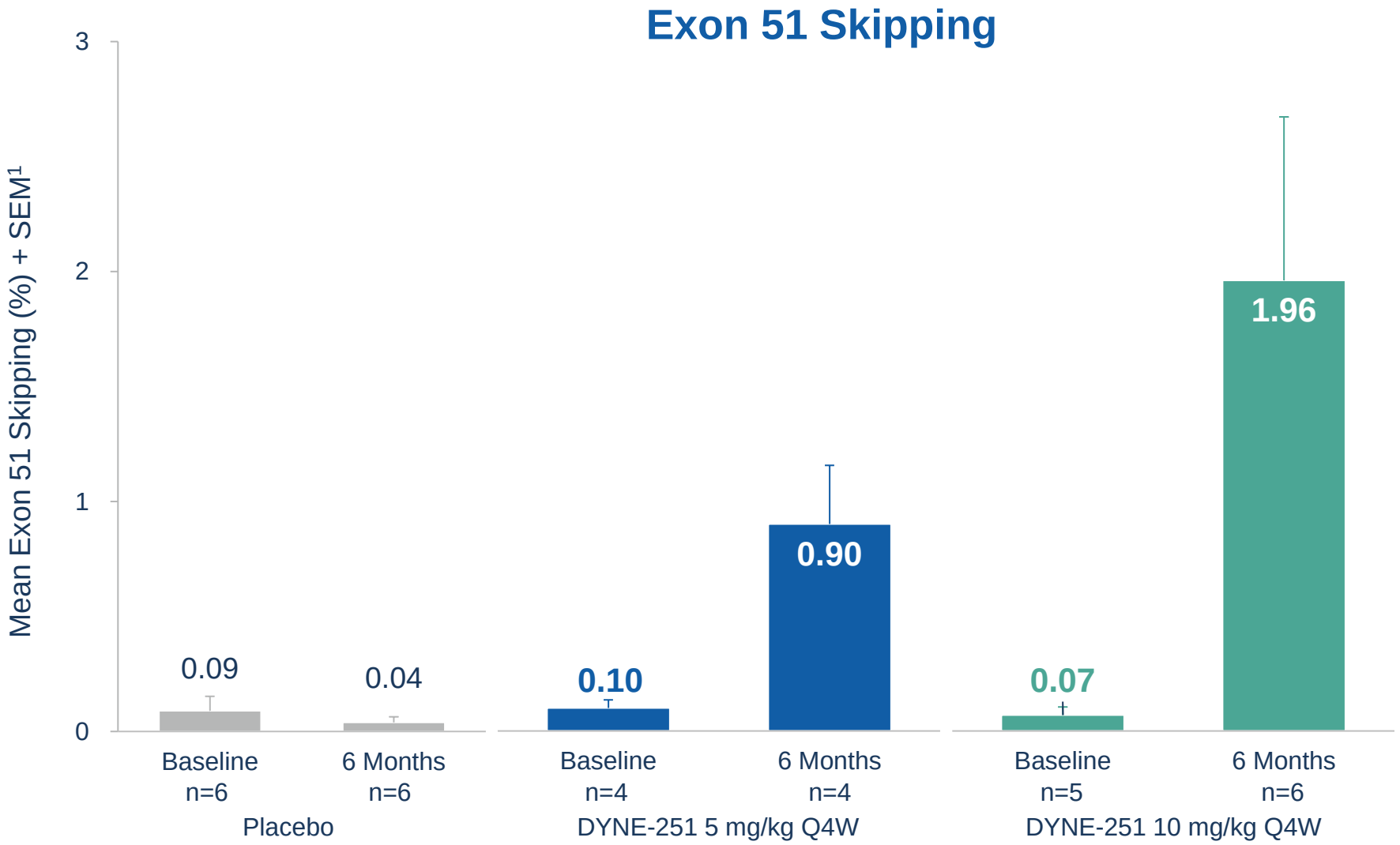
1. Data as of April 30, 2024. 2. All cohorts combined; preferred terms are reported. 3. All infusion related reactions have been mild or moderate in intensity; dosing has continued in all participants.

DYNE-251 Drove Dose Dependent Delivery of PMO to Muscle



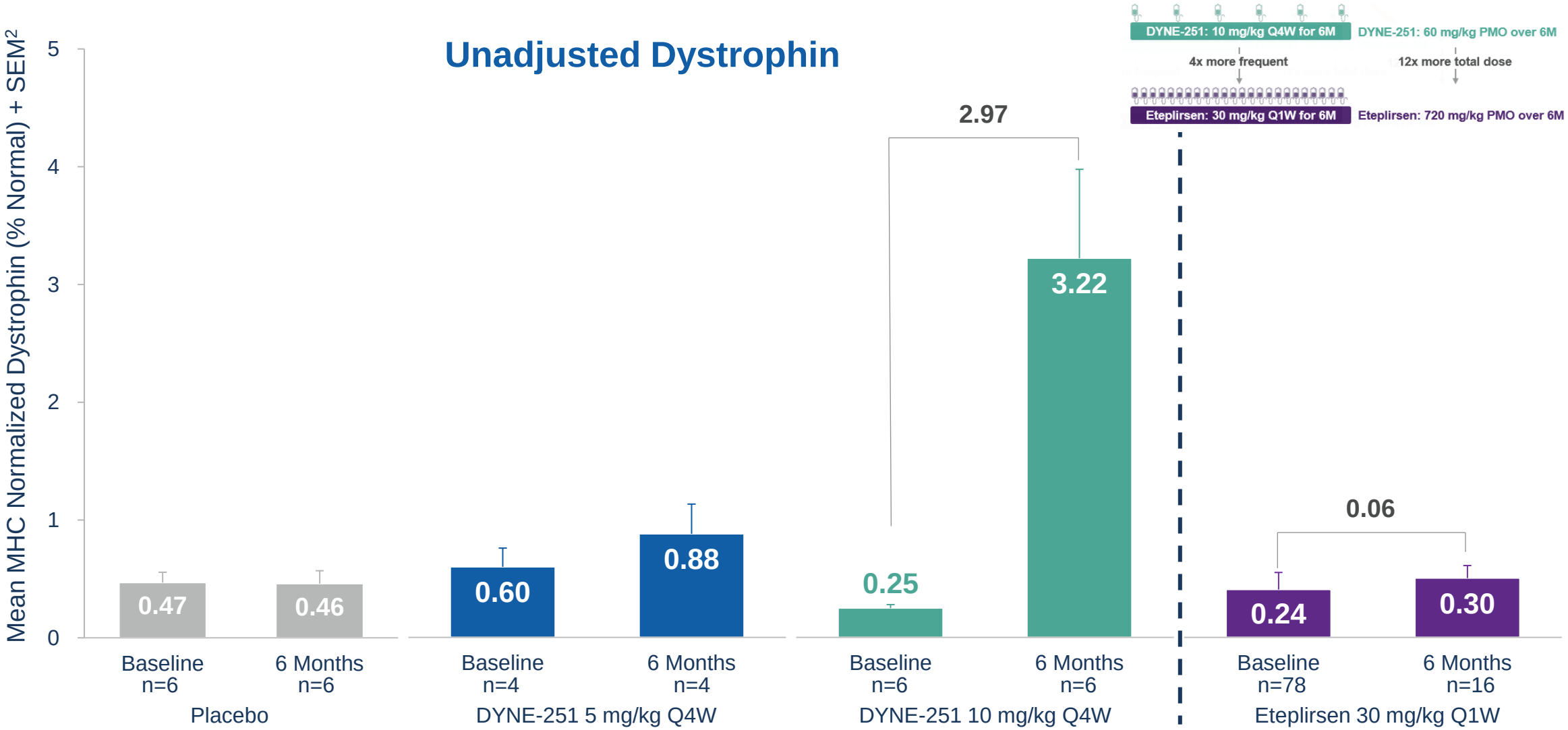
1. DELIVER biopsy taken approximately 28 days after most recent dose; 6 months = Week 25 for DELIVER.

DYNE-251 Demonstrated Dose-Dependent Exon Skipping



1. DELIVER biopsy taken approximately 28 days after most recent dose; 6 months = Week 25 for DELIVER

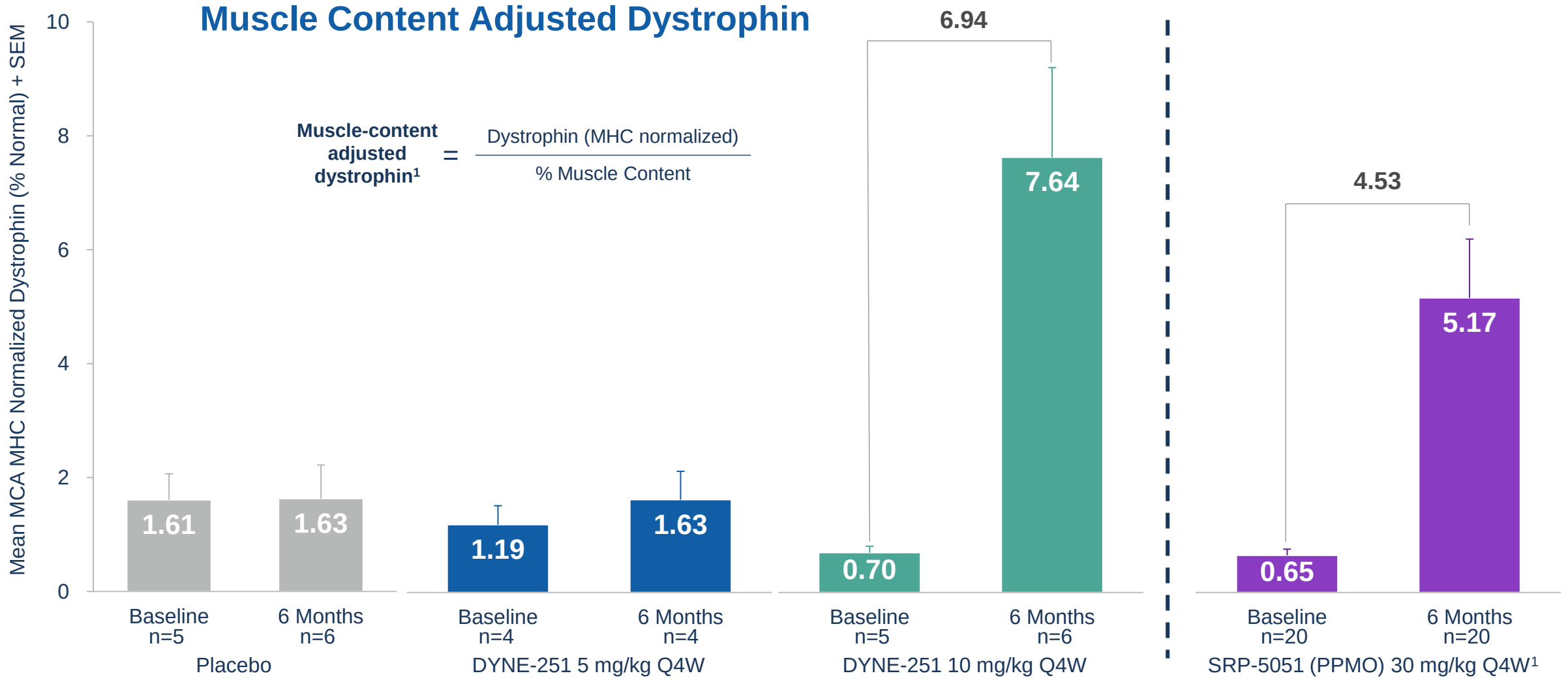
DYNE-251 Showed >10 Fold Higher Dystrophin at 6 Months than Eteplirsen Study with 12 Fold Lower PMO Dose Administered 4 Times Less Frequently [1]



1. No head-to-head trials have been conducted comparing DYNE-251 to eteplirsen. Eteplirsen data may not be directly comparable due to differences in trial protocols, dosing regimens and patient populations. Accordingly, these cross-trial comparisons may not be reliable. Eteplirsen data from *J Neuromuscul Dis* 2021; 8(6):989–1001; 2. DELIVER biopsy taken approximately 28 days after most recent dose; 6 months = Week 25 for DELIVER and Week 24 for eteplirsen data.

DYNE-251 Achieved 7.6% Muscle Content Adjusted Dystrophin at 6 Months

DYNE-251 dosed 10 mg/kg Q4W, SRP-5051 (PPMO) dosed 30 mg/kg Q4W

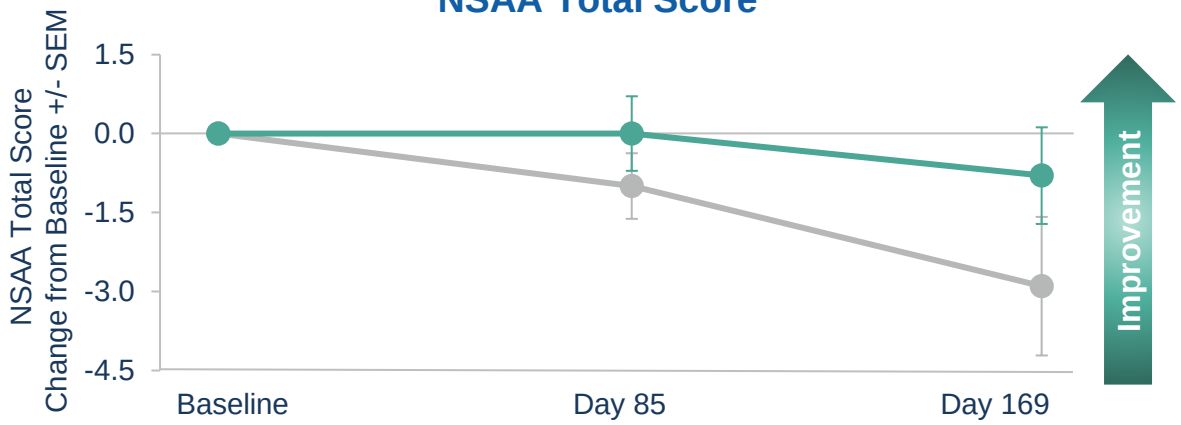


1. No head-to-head trials have been conducted comparing DYNE-251 to SRP-5051. SRP-5051 data may not be directly comparable due to differences in trial protocols, dosing regimens, methodologies for calculating muscle content adjusted dystrophin and patient populations. Accordingly, these cross-trial comparisons may not be reliable. SRP-5051 data from *Clinical Update: MOMENTUM (Study SRP-5051-201, Part B)* Jan. 29, 2024 ; 2. DELIVER biopsy taken approximately 28 days after most recent dose; 6 months = Week 25 for DELIVER and Week 28 for SRP-5051 data.

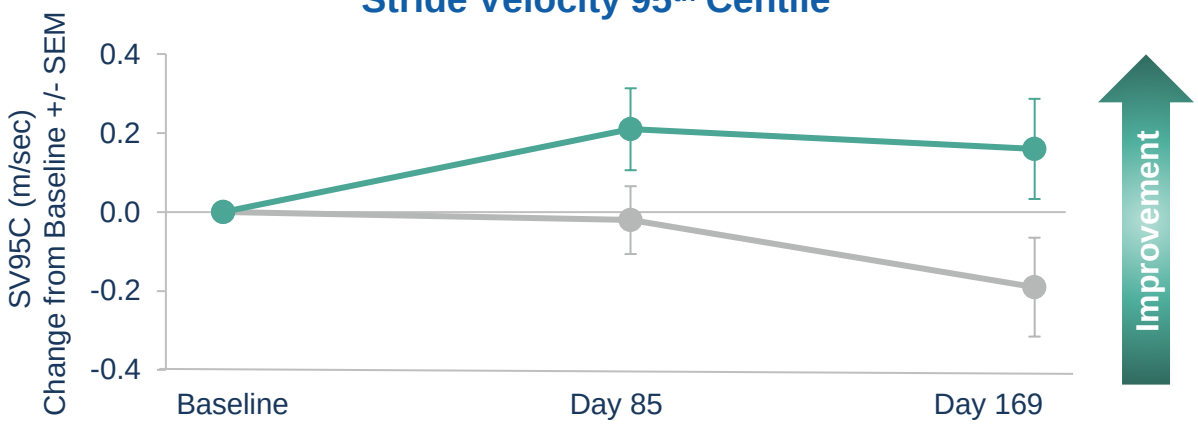
Encouraging Trends Across Multiple Functional Endpoints

Baseline values inform interpretation of data; ongoing exploration of higher dose cohorts and longer time points

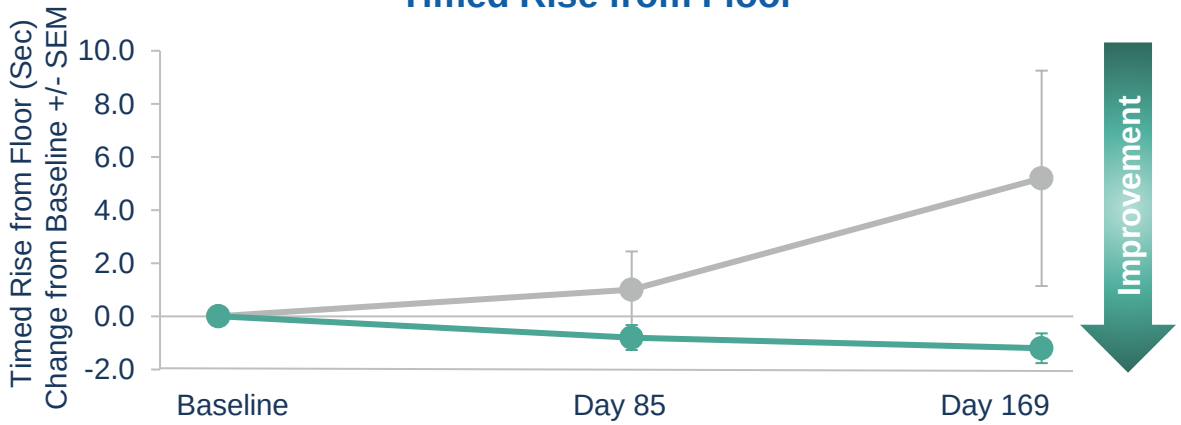
NSAA Total Score



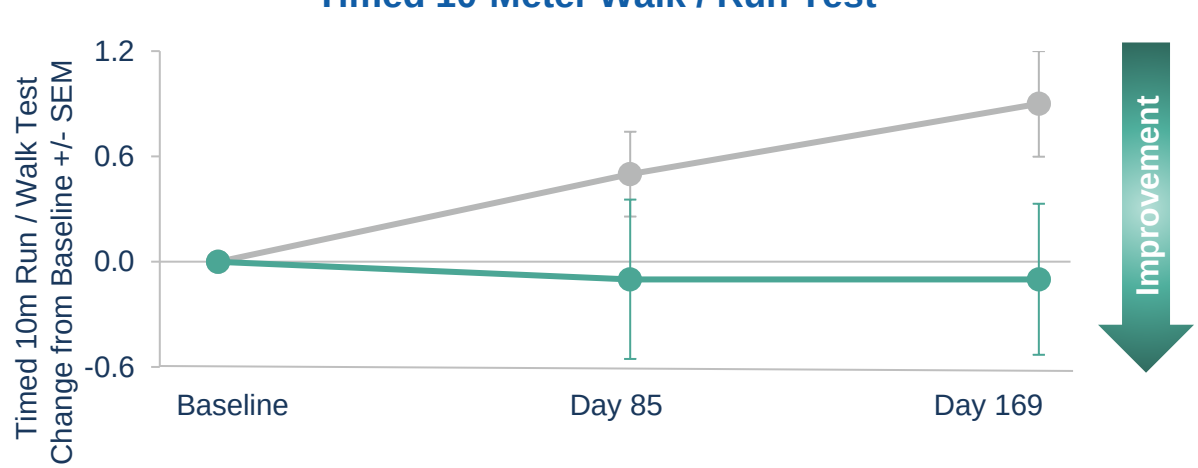
Stride Velocity 95th Centile



Timed Rise from Floor



Timed 10-Meter Walk / Run Test



Placebo (n=3 for SV95C and n=9 for other endpoints)

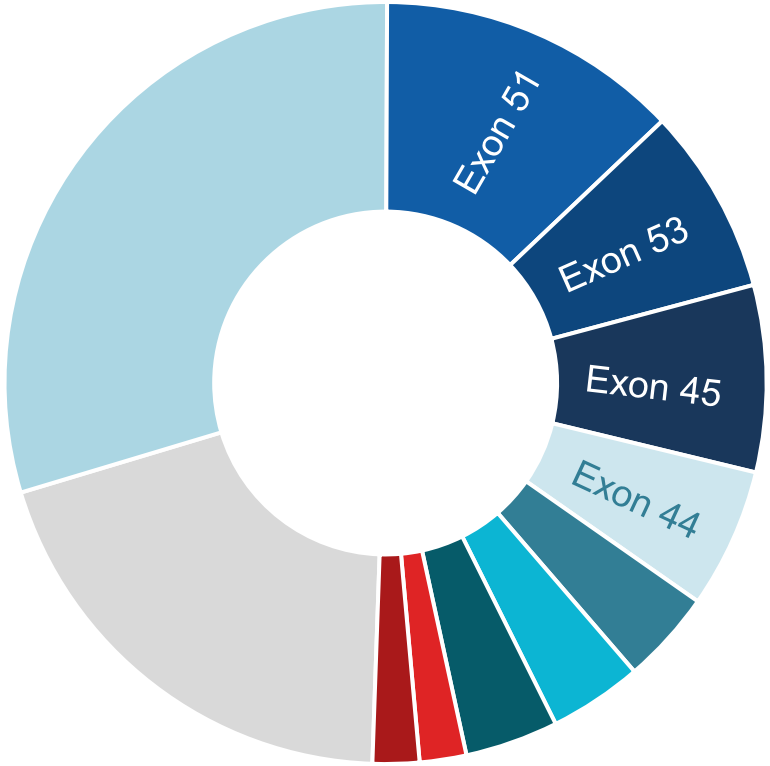
DYNE-251 10 mg/kg Q4W (n = 5 for all endpoints)

Opportunity to Build a Global DMD Franchise: Leading with DYNE-251, Payloads Identified for Exons 53, 45, 44

Approximately

80% of patients

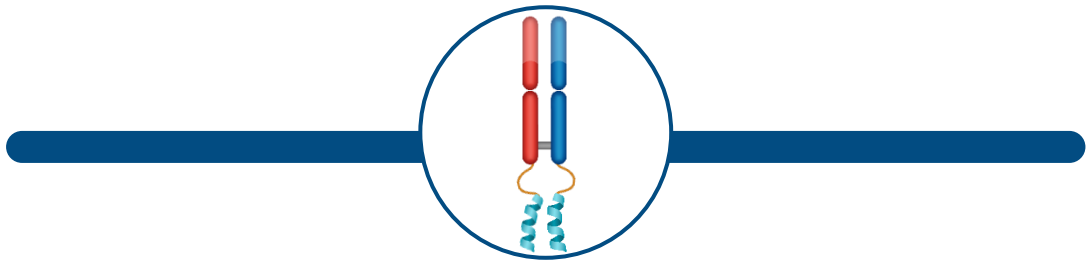
have genotypes amenable to exon skipping



- Exon 51 – **13%**
- Exon 53 – **8%**
- Exon 45 – **8%**
- Exon 44 – **6%**
- Exon 50 – **4%**
- Exon 52 – **4%**
- Exon 43 – **4%**
- Exon 55 – **2%**
- Exon 8 – **2%**
- Other exon skips – **~30%**
- May not be amenable to exon skipping – **~20%**

FORCE Positions Dyne With Potential Leading Role in Evolving DMD Therapeutic Landscape

FORCE



Potency	✓ Targeted muscle delivery, near full-length dystrophin
Durability	✓ Durable target engagement
Dosing	✓ Re-dosable, titratable
Tolerability	✓ Favorable safety profile
Manufacturing	✓ Well-established, scalable

- Muscle delivery is the challenge
- Clinical data to date validates FORCE's targeted delivery to muscle
- Non-targeted delivery modalities face significant challenges, including an acceptable therapeutic index
- SMA landscape strong analogue to DMD with ZOLGENSMA (gene therapy) and SPINRAZA (oligo) playing an important role in evolving standard of care

DELIVER Data Demonstrated Potential for DMD Exon Skipping Franchise with Differentiated Efficacy and Safety Profile

✓ At 10.0 mg/kg Q4W dose, DYNE-251 showed compelling profile vs. eteplirsen standard-of-care reported at 6 months[1]:

- 3.2% unadjusted and 7.6% muscle content adjusted dystrophin expression
- Trends in improvement in functional outcomes, including NSAA and SV95C

✓ Favorable safety profile to date[2]; 40 mg/kg Q8W cohort fully enrolled

✓ Supports further development of DMD global franchise

Pursuing expedited approval based on recent regulatory interactions and strength of results

Update on path to registration for DYNE-251 expected by YE 2024

1. No head-to-head trials have been conducted comparing DYNE-251 to eteplirsen. Eteplirsen data may not be directly comparable due to differences in trial protocols, dosing regimens and patient populations. Accordingly, these cross-trial comparisons may not be reliable. Eteplirsen data from *J Neuromuscul Dis* 2021; 8(6):989–1001;
2. Data as of April 30, 2024.

Program

Opening remarks
John Cox, President & CEO

DYNE-101 ACHIEVE Trial in DM1 Data
DYNE-251 DELIVER Trial in DMD Data

Wildon Farwell, M.D., MPH, Chief Medical Officer

Q&A

Closing Remarks
John Cox, President & CEO

Driving Towards Potentially Transformative DM1 and DMD Therapies

ACHIEVE

DELIVER

Delivered on the Promise of FORCE: Enhanced Delivery of Therapeutics to Muscle

Compelling Impact on Key Disease Biomarkers and Improvement in Multiple Functional Endpoints in Both DM1 and DMD

Favorable Safety & Tolerability Profile Supporting Dose Escalation

Fully Enrolled Through 6.8 mg/kg

Fully Enrolled Through 40 mg/kg

Pursuing Expedited Approvals for Both Programs with Update on Registrational Pathway by YE 2024

Advancing Robust Portfolio Focused on Muscle Diseases

Pipeline Update by YE 2024 Including FSHD and Other Pipeline Programs

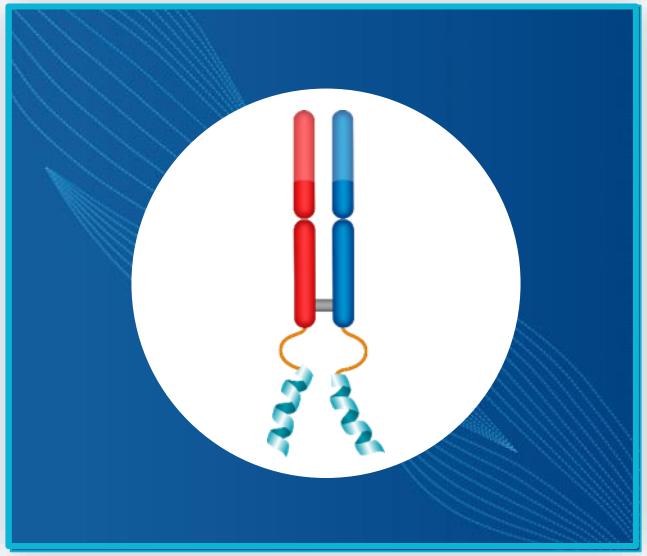
DISEASE	TARGET	DISCOVERY / PRECLINICAL / PHASE 1/2	ESTIMATED PATIENTS
Myotonic Dystrophy Type 1 (DM1)	DMPK	**DYNE-101**	US: **>40,000** Europe: **>74,000**
Duchenne Muscular Dystrophy (DMD)	Exon 51	**DYNE-251**	US: **~12,000-15,000** Europe: **~25,000**
	Exon 53		
	Exon 45		
	Exon 44		
	Other Exons		
Facioscapulohumeral Muscular Dystrophy (FSHD)	DUX4	**DYNE-301**	US: **~16,000-38,000** Europe: **~35,000**

Pipeline Expansion Opportunities

- **Rare Skeletal**
- **CNS**
- **Cardiac**
- **Metabolic**

Building the World's Leading Muscle Disease Company

Win in DM1, DMD, FSHD



Own Muscle Delivery & Leverage FORCE

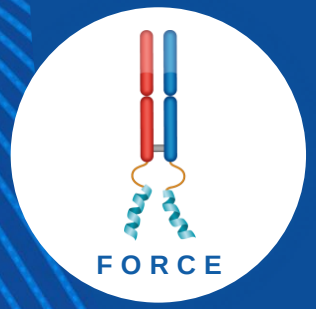
Dynamo Culture

ACHIEVE

Dyne® THERAPEUTICS

DELIVER

Achieving the Promise of
FORCE
to Deliver for Patients



ACHIEVE & DELIVER CLINICAL UPDATE | MAY 20, 2024