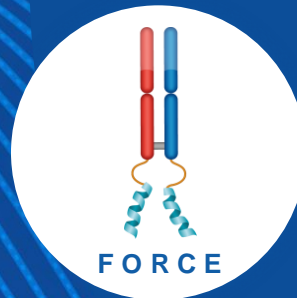




*Achieving the Promise of*  
**FORCE**  
*to Deliver for Patients*



42<sup>ND</sup> ANNUAL J.P. MORGAN HEALTHCARE CONFERENCE | JANUARY 9, 2024

# Forward-Looking Statements & Disclaimer

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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 data for the DYNE-101 and DYNE-251 trials, plans to optimize dose and dose regimen for DYNE-101 and DYNE-251, and the trial design of the DYNE-101 and DYNE-251 clinical trials, 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 initiate and 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; whether Dyne's cash resources will be sufficient to fund the Company's 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.

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**OUR MISSION**

**Life-transforming therapies**  
for patients with serious muscle diseases



# Achieving the Promise of FORCE to Deliver for Patients



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

- ✓ Proof-of-concept achieved for DYNE-101
- ✓ Dose-dependent muscle delivery, DMPK KD, and splicing correction consistent across patients
- ✓ Meaningful functional improvement in myotonia (vHOT) at lowest 1.8 mg/kg dose
- ✓ Favorable safety profile to date; 5.4 mg/kg Q8W cohort fully enrolled <sup>2</sup>



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

- ✓ Proof-of-concept achieved for DYNE-251
- ✓ At initial 5.0 mg/kg Q4W dose, DYNE-251 showed compelling profile vs. eteplirsen standard-of-care reported at 6 months:<sup>1</sup>
  - >2.5x higher dystrophin expression with 24x lower PMO dose administered 4x less frequently vs. eteplirsen<sup>1</sup>
  - 2x higher increase in exon skipping vs. eteplirsen<sup>1</sup>
  - ~2x higher change from baseline PDPF vs. eteplirsen<sup>1</sup>
- ✓ Favorable safety profile to date; 20 mg/kg Q4W cohort fully enrolled <sup>2</sup>

**Clinical Proof-of-Concept Achieved in ACHIEVE & DELIVER in Early Cohorts  
Driving Towards Potentially Transformative Therapies for DM1 & DMD Patients in Later Cohorts**

# 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

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



## Population

- Adult patients living with DM1
- Ages 18 to 49 years

## Primary Endpoints

- Safety and tolerability

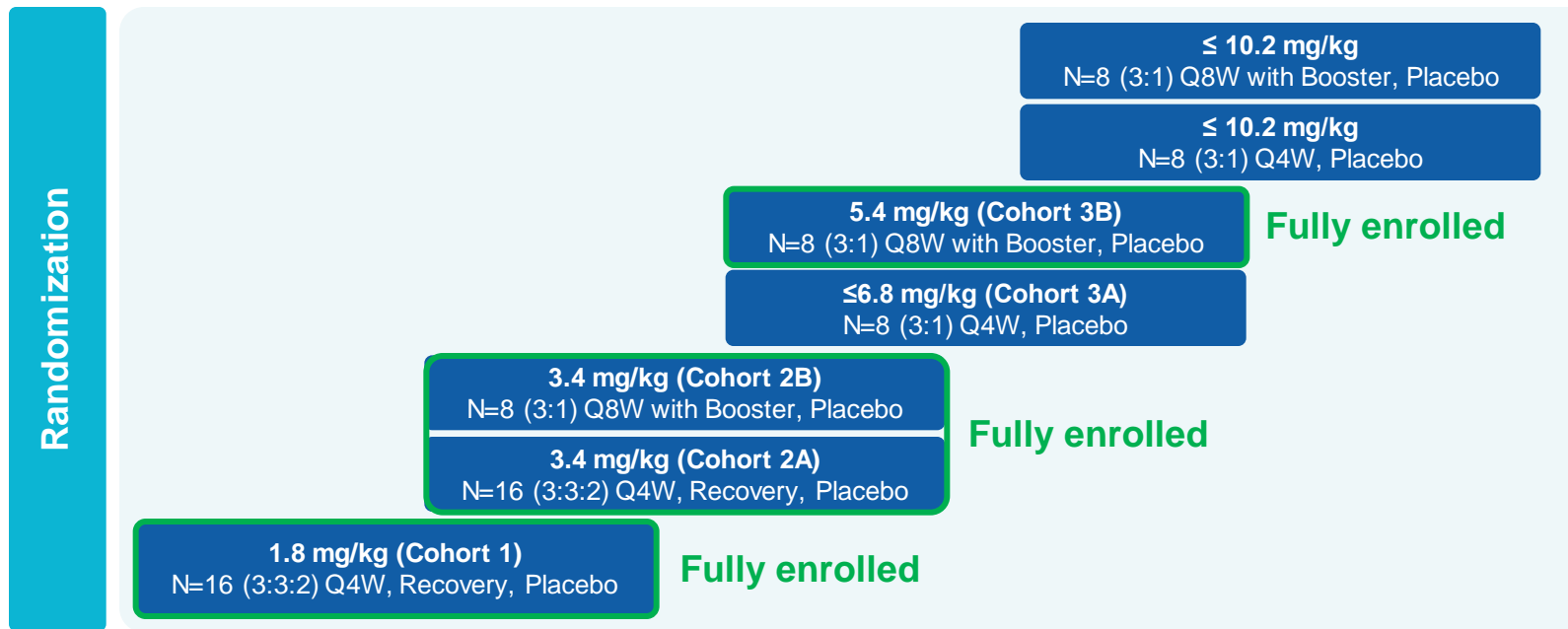
## Key Secondary

- Pharmacokinetics
- Change from baseline of:
  - Splicing
  - *DMPK* RNA expression
  - Multiple assessments of muscle strength and function

## Stages of ACHIEVE

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

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

# Baseline Participant Characteristics

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|  | <b>Cohort 1<br/>1.8 mg/kg<br/>(N=16)<sup>1</sup></b> | <b>Cohort 2A<br/>3.4 mg/kg<br/>(N=16)<sup>1</sup></b> |
|--|--|---|
| Age (years) (mean (SD))                        | 34.6 (10.4)  | 34.3 (7.6)  |
| Female (n (%))                                 | 7 (43.8%)  | 3 (18.8%)   |
| BMI (kg/m <sup>2</sup> ) (mean (SD))           | 22.4 (5.3)   | 23.8 (3.8)  |
| CASI (mean (SD))                               | 0.62 (0.26)  | 0.67 (0.20)   |
| CTG Repeats (mean (SD))                        | 375 (217)  | 527 (241)   |
| vHOT (sec) (middle finger average) (mean (SD)) | 11.2 (4.3)   | 8.0 (5.7)   |
| MDHI Total (mean (SD))                         | 25 (20)  | 25 (20)   |



# Safety Profile of DYNE-101 Is Favorable to Date

## Summary of Treatment Emergent Adverse Events (TEAEs) – Placebo-Controlled Period <sup>1</sup>

| 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=5 | Overall (N=45) |
| Any TEAE                                       | 16 (100%)                         | 13 (81%)                | 5 (63%)           | 1 (20%)           | 35 (78%)       |
| Any related TEAE                               | 6 (38%)                           | 6 (38%)                 | 0                 | 1 (20%)           | 13 (29%)       |
| Any serious TEAE                               | 2 (13%)                           | 0                       | 0                 | 0                 | 2 (4%)         |
| Any serious related TEAE                       | 0                                 | 0                       | 0                 | 0                 | 0              |
| Any TEAE leading to withdrawal from study drug | 0                                 | 0                       | 0                 | 0                 | 0              |
| Any TEAE leading to death                      | 0                                 | 0                       | 0                 | 0                 | 0              |

## Most TEAEs Were Mild or Moderate in Intensity (Placebo-Controlled Period)

- 2 serious TEAEs unrelated to study drug
  - Atrioventricular block first degree\*
  - Pneumonia
- Most common TEAEs (≥5% participant incidence)\*\*
  - Nasopharyngitis (11%)
  - Fatigue (9%)
  - Infusion site rash (9%)
  - Headache (9%)
  - Procedural pain (7%)
  - Diarrhea (7%)
- 1 severe, non-serious, TEAE, unrelated to study drug
  - Recurrence of worsening AV block in participant with the SAE of AV block
- Liver enzyme elevations have been observed in ~18% 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

## Additional Safety Data

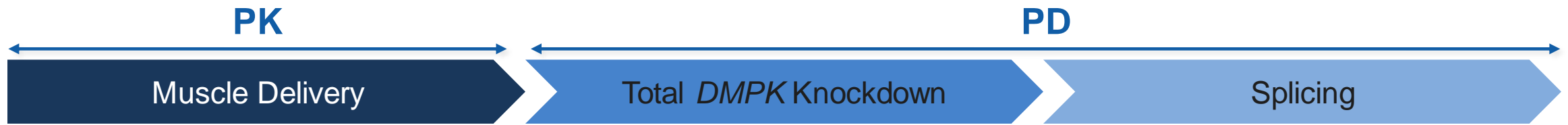
- No participants have demonstrated anemia or thrombocytopenia<sup>3</sup>
- No participants have demonstrated kidney injury<sup>4</sup>

\* Transient worsening of atrioventricular (AV) block in a participant with ongoing medical history of first-degree AV block

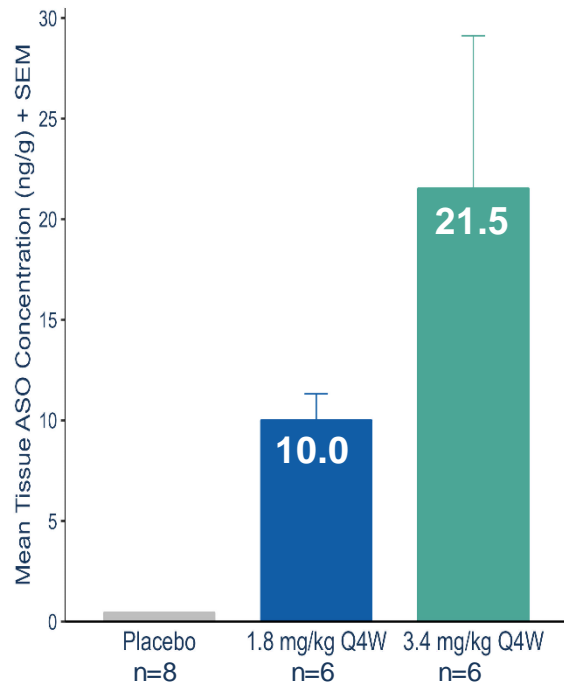
\*\* All cohorts combined; preferred terms are reported

**Favorable Safety Profile, with ~300 Doses Administered To Date, Has Supported Dosing Up to 6.8 mg/kg <sup>2</sup>**

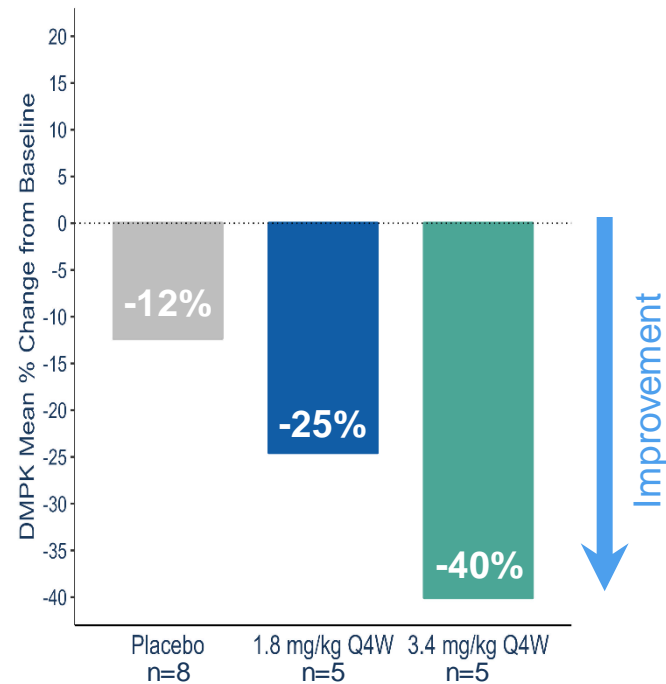
# DYNE-101 Demonstrated Dose-Dependent Muscle Drug Concentration, DMPK Knockdown, and Splicing at 3 Months



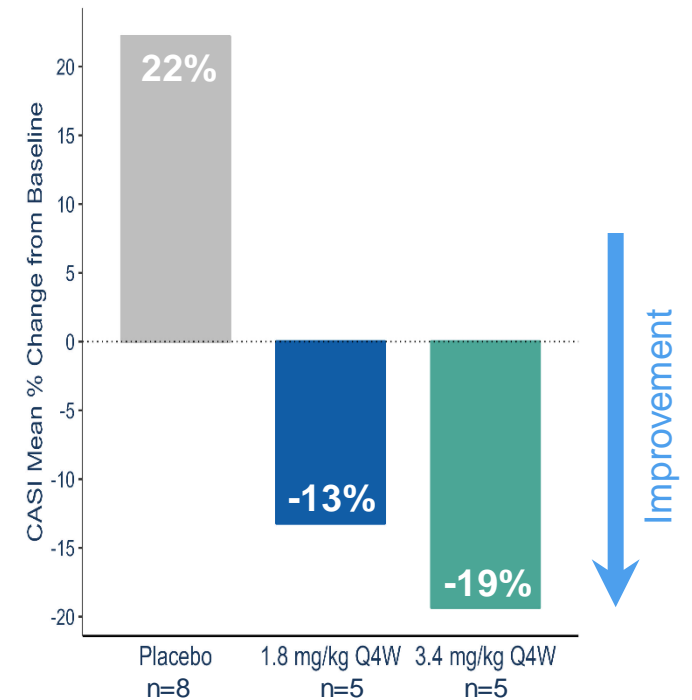
## ASO Muscle Concentration



## DMPK KD



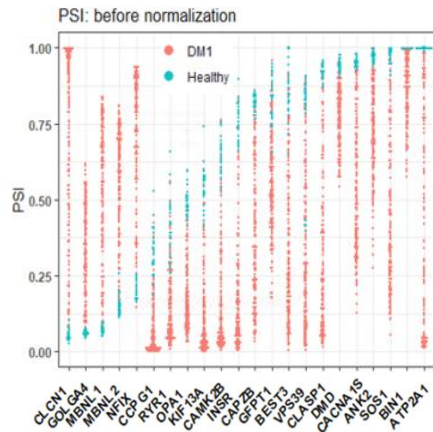
## CASI-22



Favorable Safety Profile, with ~300 Doses Administered To Date, Has Supported Dosing Up to 6.8 mg/kg <sup>1</sup>

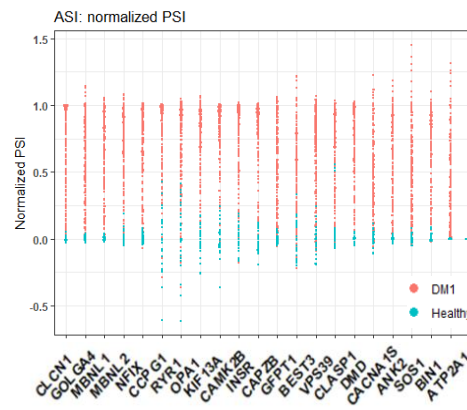
# DMCRN NHS Enabled Establishment of Composite Alternative Splicing Index (CASI) as Biomarker Correlating with Clinical Function in DM1

## PSI = Percent Spliced In



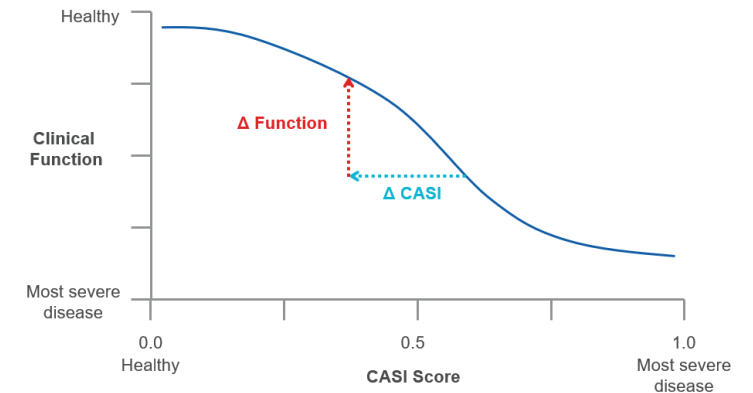
Targeted sequencing reads to calculate Percent Spliced In (PSI) of specific exons

## ASI: Alternative Splicing Index



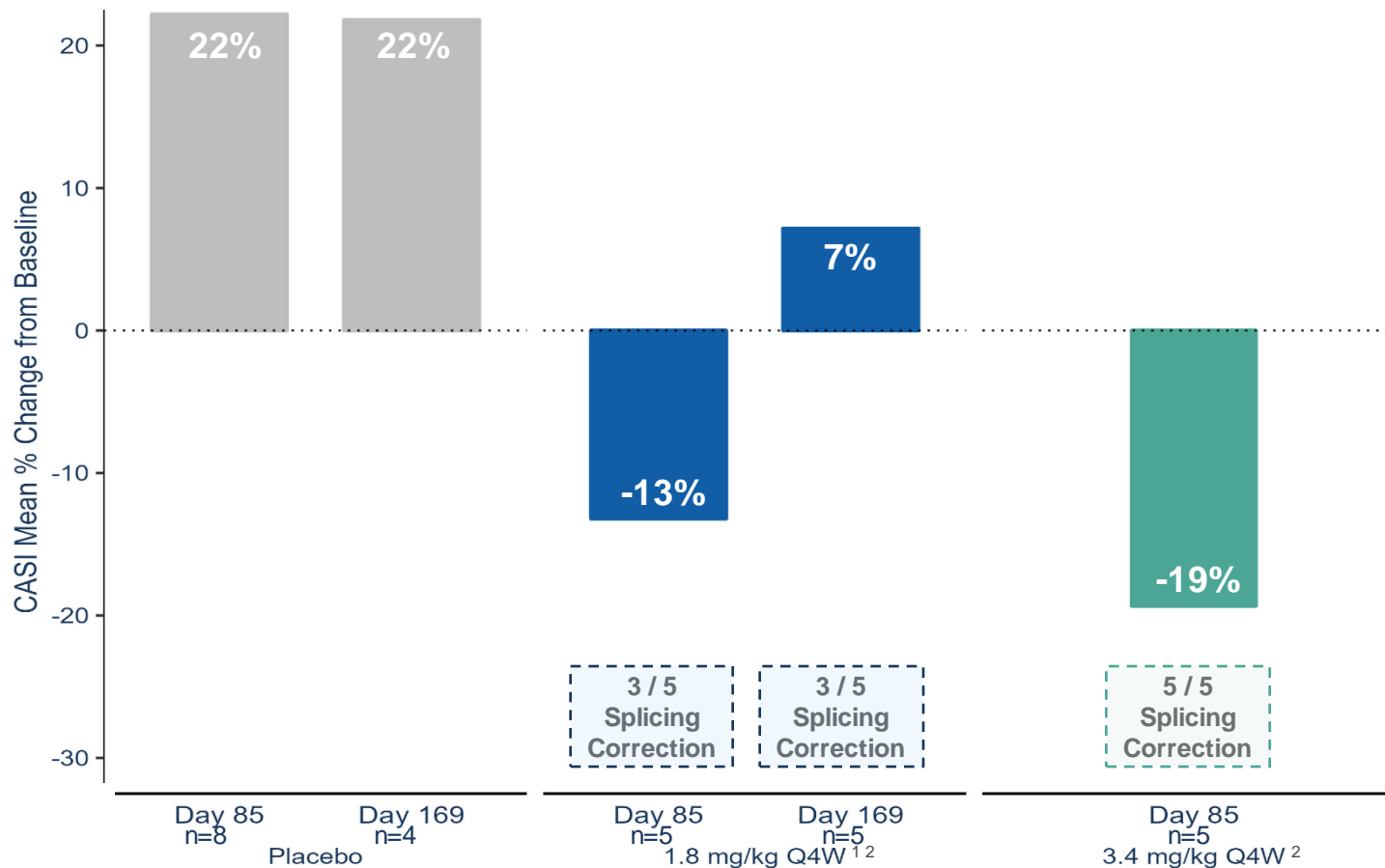
Normalize to reference PSI from healthy controls and patients from DM1 natural history studies <sup>1</sup>

## 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

# Dose-Dependent Splicing Correction with Consistency of Response Achieved At Higher Doses Across 22-Gene Panel



- **Dose response**

- DYNE-101 3.4 mg/kg Q4W demonstrated mean 19% correction of splicing from baseline at Day 85 vs. 13% correction for 1.8 mg/kg Q4W

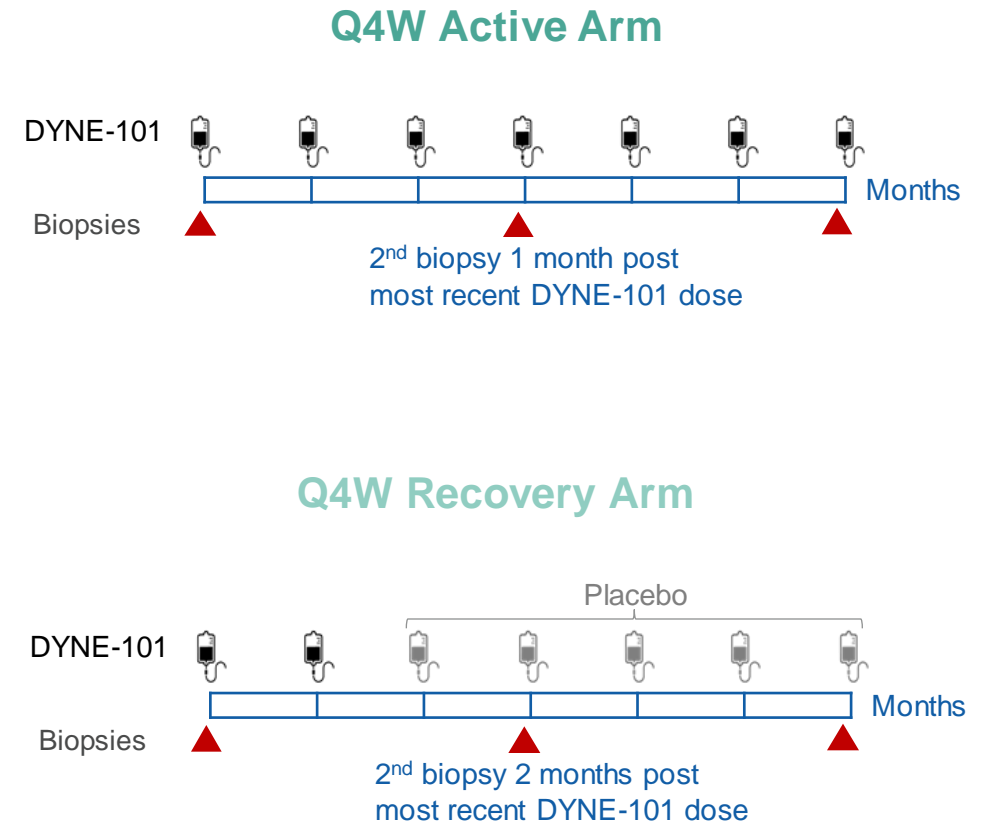
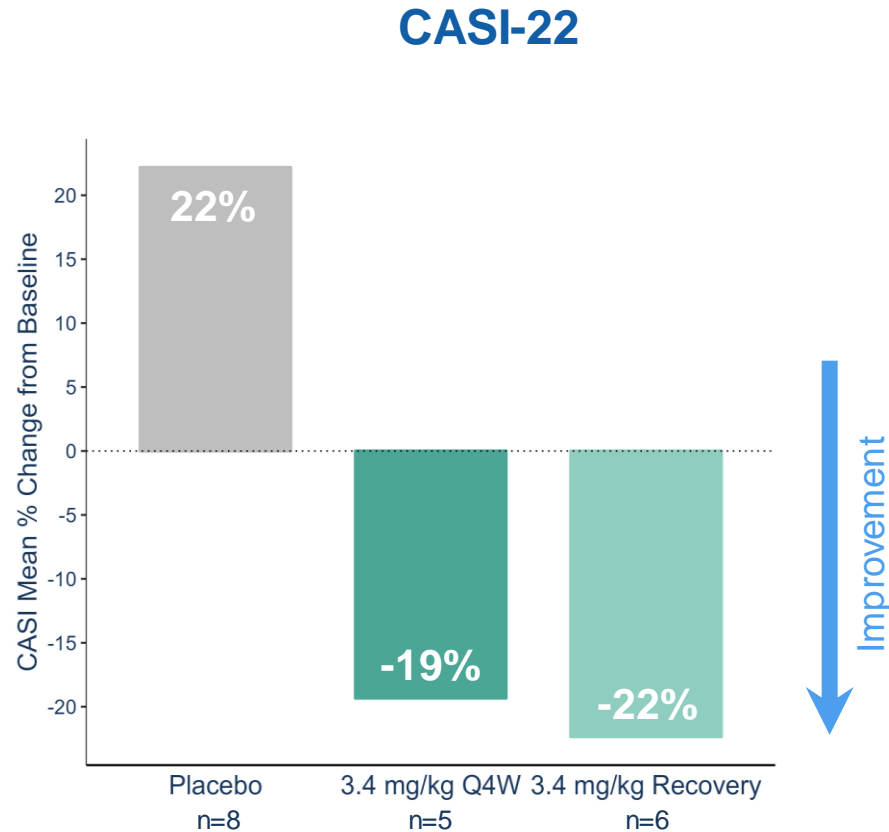
- **Consistency of response**

- All evaluable participants in 3.4 mg/kg Q4W demonstrated splicing correction across 22-gene panel

Mean % Change = mean of change from baseline / mean of baseline

1. Within the 1.8 mg/kg Q4W cohort, the same patients that demonstrated splicing correction at Day 85 continued to show splicing correction at Day 169; patients who did not show correction at Day 85, exhibited further increase in CASI between Day 85 and Day 169. 2. One baseline sample in 1.8 mg/kg Q4W treatment group and one Day 85 sample in 3.4 mg/kg Q4W treatment group not included within DMPK KD and splicing assay due to the sample did not meet QC criteria.

# Recovery Data Supports Less Frequent Dosing Regimen

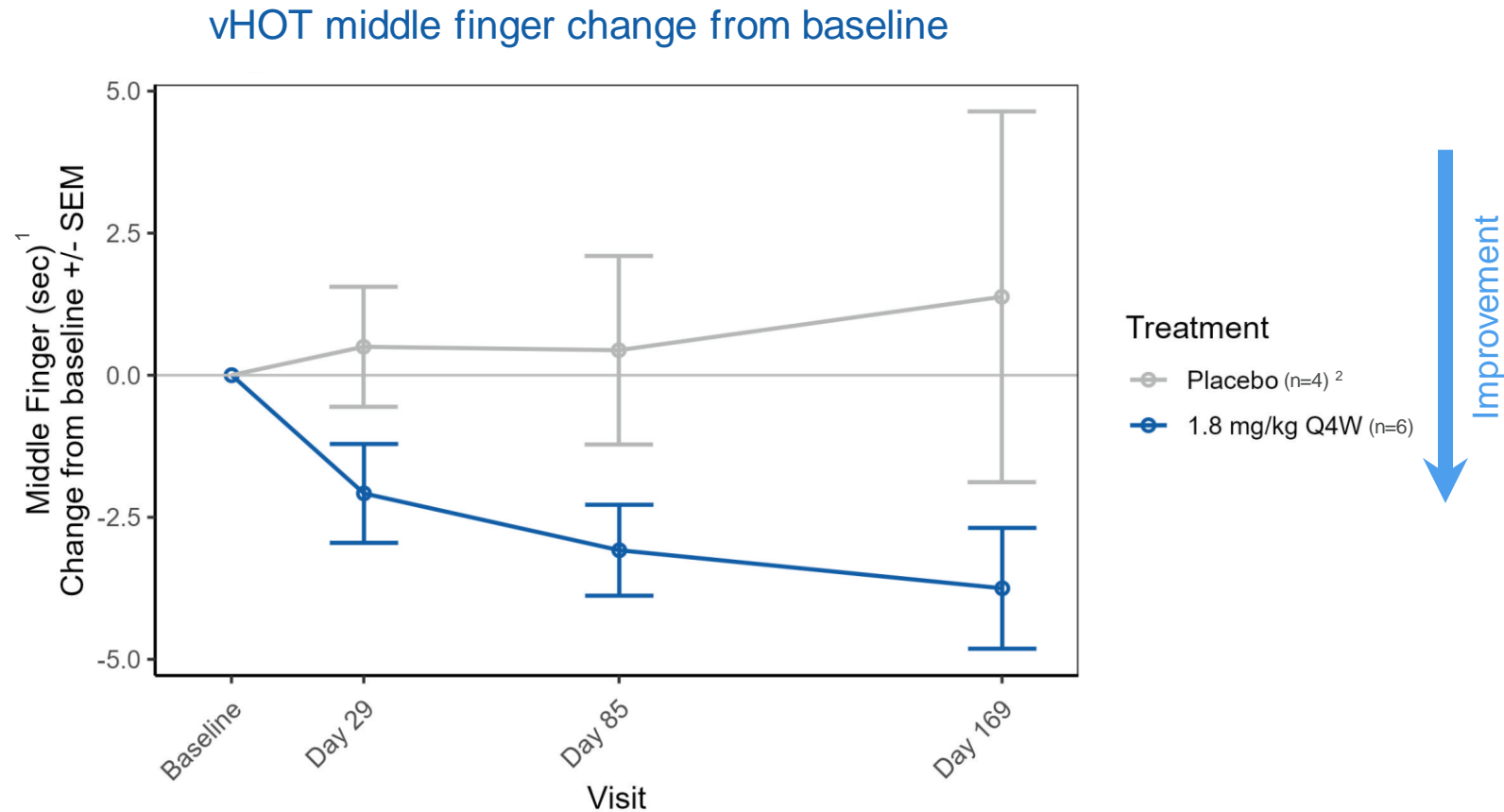


**Robust Splicing Correction in Both Active and Recovery Arm with 3.4 mg/kg Dose**



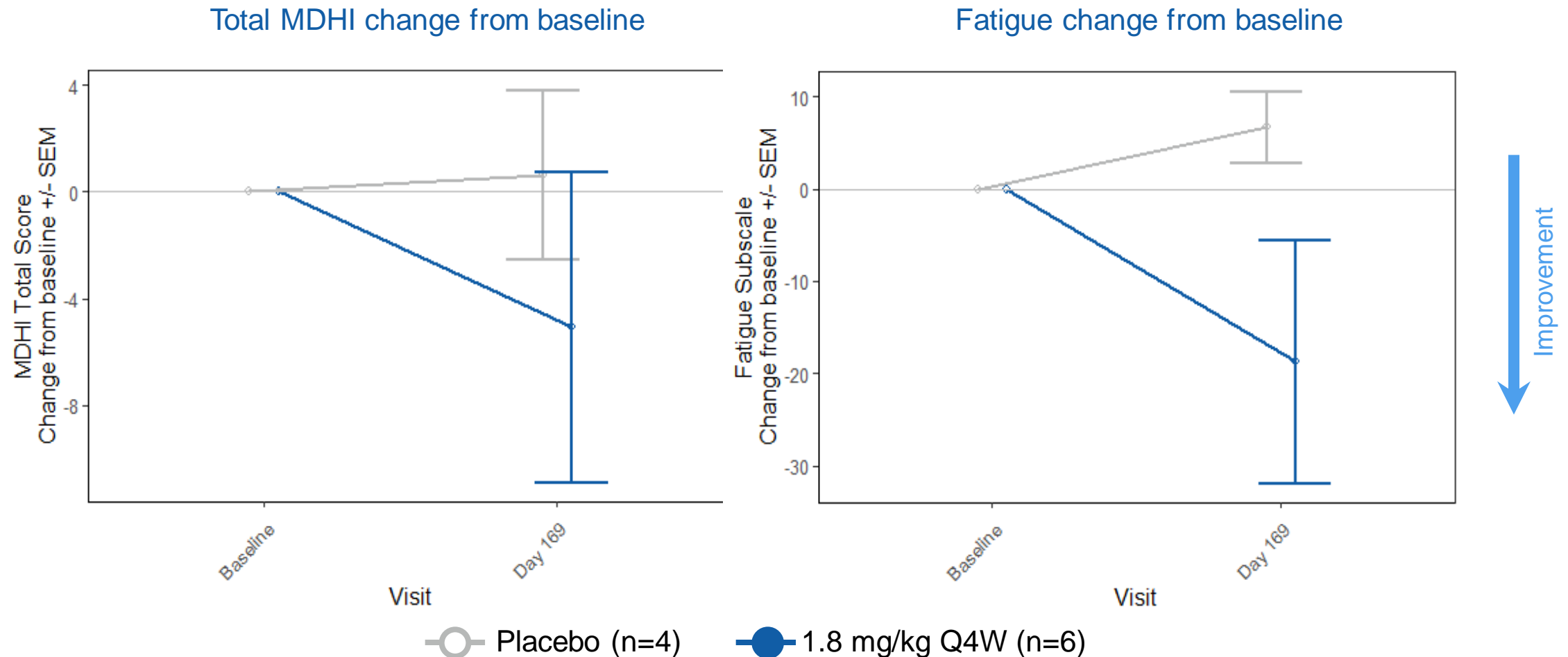
# Continued Improvement in Functional Myotonia at 6 Months

1.8 mg/kg Q4W myotonia benefit increased from 3.1 seconds at 3 Months to 3.8 seconds at 6 Months



# Patient Reported Outcomes Beginning to Show Effect at Lowest Dose in ACHIEVE

Improvement in MDHI total and fatigue subscale, suggesting potential benefit in CNS



# ACHIEVE Data Demonstrated Robust Effect in DM1 Patients

## Initial ACHIEVE Clinical Data

- ✓ Dose-dependent muscle delivery, DMPK KD, and splicing correction consistent across patients
- ✓ Meaningful functional improvement in myotonia (vHOT) at lowest 1.8 mg/kg dose
- ✓ Early indication of durable effect beyond monthly dosing supports exploration of Q8W
- ✓ Favorable safety profile to date; 5.4 mg/kg Q8W cohort fully enrolled <sup>1</sup>

✓ **DYNE-101 Proof-of-Concept Achieved**

### **DYNE-101: Next Steps**

**Optimizing dose  
and dose regimen  
in 2024**

**Next clinical update  
from ACHIEVE  
expected in H2'24**

# 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)



## OUR APPROACH

### Potential Best-in-class Targeted Exon Skipping

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

Current Approved Exon 51 Therapies Only Increased Dystrophin Production

<1%

# 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

## Key Secondary Endpoints

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

## Stages of DELIVER

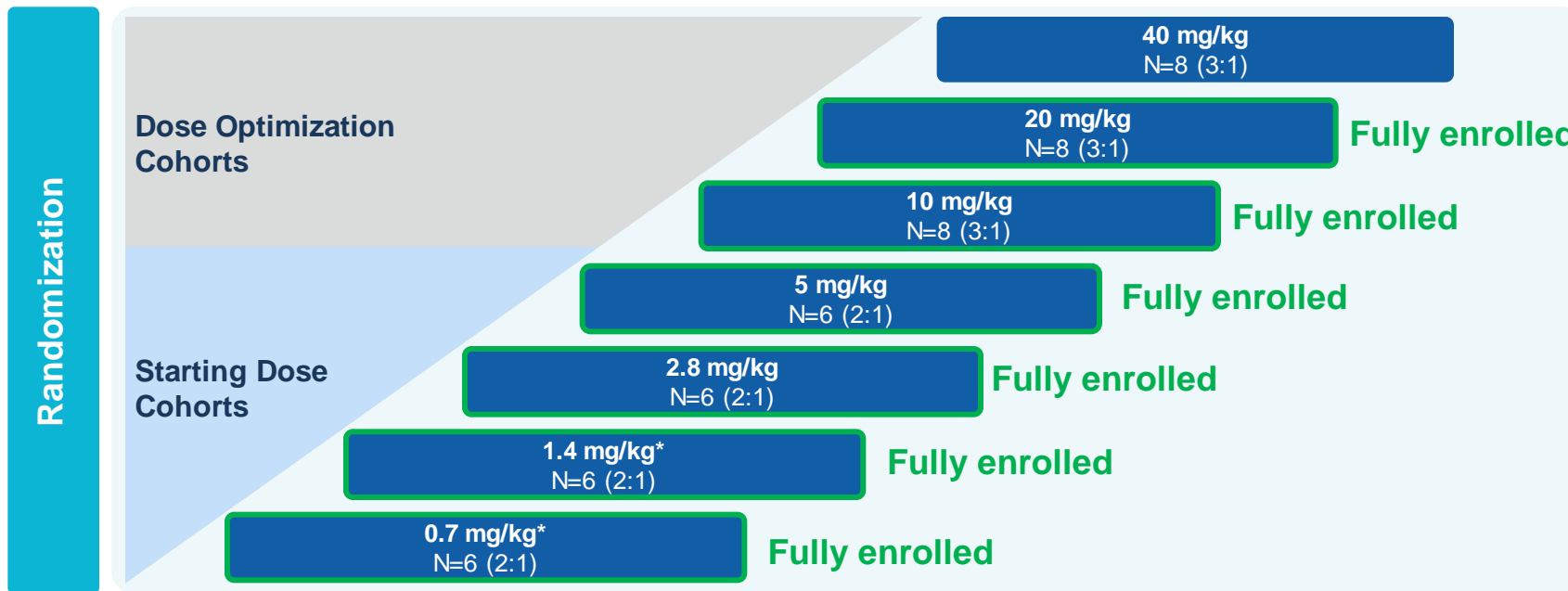
- Multiple Ascending Dose (MAD): 24 weeks
- Open-Label Extension (OLE): 24 weeks
- Long-Term Extension (LTE): 96 weeks



# DELIVER Trial Design



Global, Randomized, Placebo-Controlled Stage Evaluating Once Monthly 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
- Muscle biopsies: Baseline and 24 weeks in 2.8 mg/kg and higher cohorts
- 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



Patient cohorts will be dosed from 0.7 mg/kg to 40 mg/kg in the U.S. Outside the U.S., patient cohorts will be dosed from 5 mg/kg to 40 mg/kg. Doses provided refer to PMO component of DYNE-251.  
\* Muscle biopsies taken at baseline and 24 weeks in 2.8 mg/kg and higher cohorts; biopsies not taken in 0.7 mg/kg and 1.4 mg/kg cohorts.

# DELIVER Baseline Participant Characteristics: By Cohort

|  | Cohort 1<br>0.7 mg/kg<br>(N=6) | Cohort 2<br>1.4 mg/kg<br>(N=6) | Cohort 3<br>2.8 mg/kg<br>(N=6) | Cohort 4<br>5 mg/kg<br>(N=6) |
|--|--------------------------------|--------------------------------|--------------------------------|------------------------------|
| Age (years) (mean (SD))                            | 10.8 (2.2)                     | 7.8 (3.3)                      | 10.7 (2.9)                     | 8.3 (2.8)                    |
| BMI (kg/m <sup>2</sup> ) (mean (SD))               | 19.5 (3.4)                     | 18.6 (2.3)                     | 22.2 (6.3)                     | 20.9 (1.6)                   |
| Age of Symptom Onset (years) (mean SD))            | 3.7 (1.8)                      | 4.5 (2.1)                      | 2.8 (1.8)                      | 3.7 (3.1)                    |
| Corticosteroid dosing regimen (n (%)) <sup>1</sup> |                                |                                |                                |                              |
| Daily  | 4 (66.7%)                      | 4 (66.7%)                      | 5 (83.3%)                      | 6 (100.0%)                   |
| Other  | 2 (33.3%)                      | 3 (50.0%)                      | 1 (16.7%)                      | 0                            |
| Prior DMD Therapy (n (%))                          |                                |                                |                                |                              |
| Eteplirsen   | 4 (66.7%)                      | 2 (33.3%)                      | 5 (83.3%)                      | 1(16.7%)                     |
| Other  | 2 (33.3%)                      | 1 (16.7%)                      | 0                              | 0                            |

# Safety Profile of DYNE-251 Is Favorable to Date

## Summary of Treatment Emergent Adverse Events (TEAEs) – Placebo-Controlled Period <sup>1</sup>

| TEAE Category                                  | Participants with ≥1 TEAE – n (%) |                         |                         |                       |                       |                       | Overall*<br>N=37 |
|--|-----------------------------------|-------------------------|-------------------------|-----------------------|-----------------------|-----------------------|------------------|
|  | 0.7mg/kg<br>Q4W<br>N=6            | 1.4 mg/kg<br>Q4W<br>N=6 | 2.8 mg/kg<br>Q4W<br>N=6 | 5 mg/kg<br>Q4W<br>N=6 | 10mg/kg<br>Q4W<br>N=8 | 20mg/kg<br>Q4W<br>N=5 |                  |
| Any TEAE                                       | 4 (67%)                           | 6 (100%)                | 3 (50%)                 | 4 (67%)               | 6 (75%)               | 1 (20%)               | 24 (65%)         |
| Any related TEAE                               | 1 (17%)                           | 2 (33%)                 | 0                       | 3 (50%)               | 1 (13%)               | 0                     | 7 (19%)          |
| Any serious TEAE                               | 0                                 | 0                       | 0                       | 0                     | 0                     | 1 (20%)               | 1 (3%)           |
| Any serious related TEAE                       | 0                                 | 0                       | 0                       | 0                     | 0                     | 0                     | 0                |
| Any TEAE leading to withdrawal from study drug | 0                                 | 0                       | 0                       | 0                     | 0                     | 0                     | 0                |
| Any TEAE leading to death                      | 0                                 | 0                       | 0                       | 0                     | 0                     | 0                     | 0                |

## Most TEAEs Were Mild or Moderate in Intensity – Placebo-Controlled Period

- 1 serious TEAE unrelated to study drug
  - Dehydration due to gastroenteritis
- Most common TEAEs (≥10% participant incidence)\*
  - Headache (16%)
  - Nasopharyngitis (16%)
  - Vomiting (14%)
  - Infusion related reaction (11%)\*\*
  - Fall (11%)
  - Cough (11%)

## Additional Safety Data

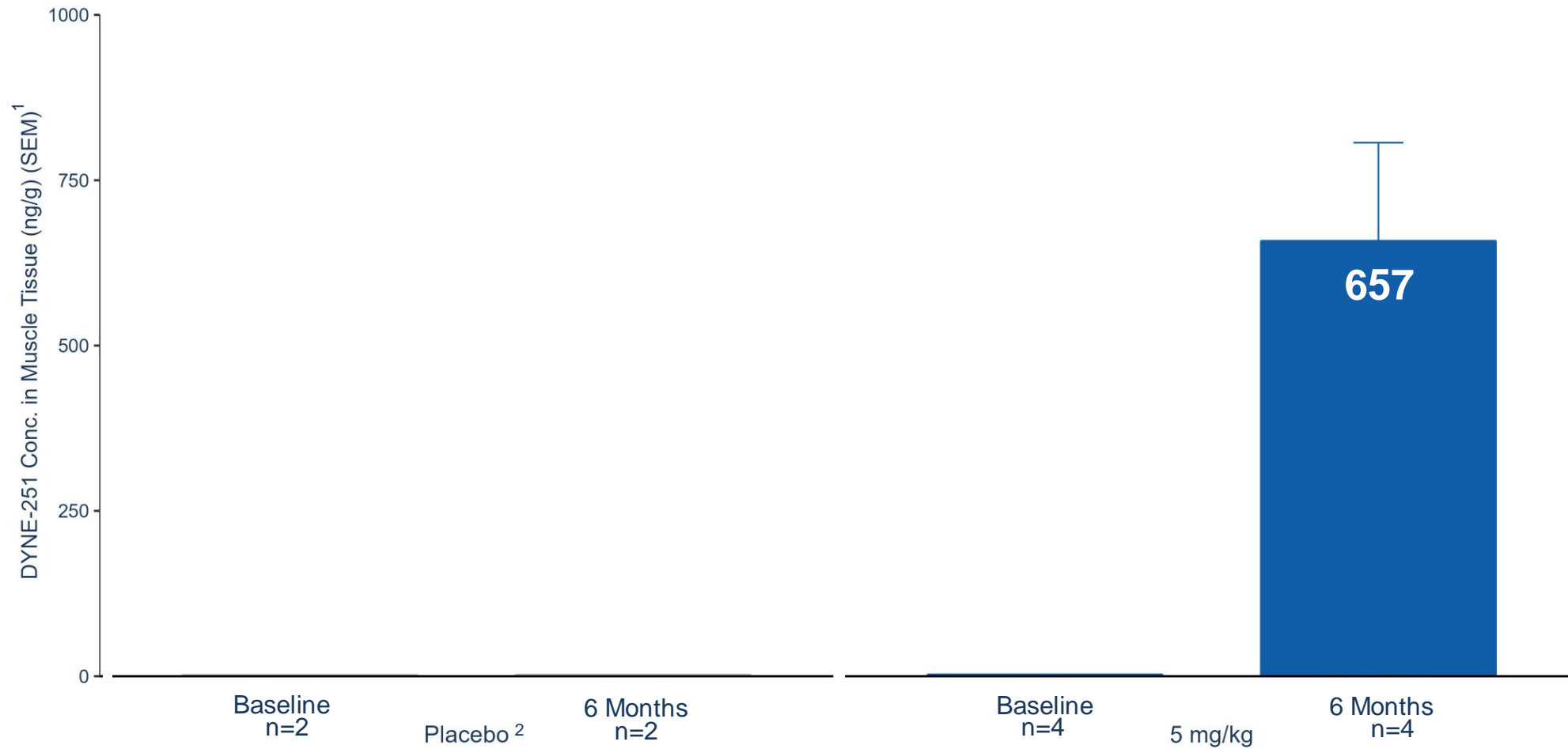
- No participants have demonstrated anemia or thrombocytopenia<sup>3</sup>
- No participants have demonstrated kidney injury<sup>4</sup>
- No participants have demonstrated clinically meaningful changes in electrolytes, including magnesium

\* All cohorts combined

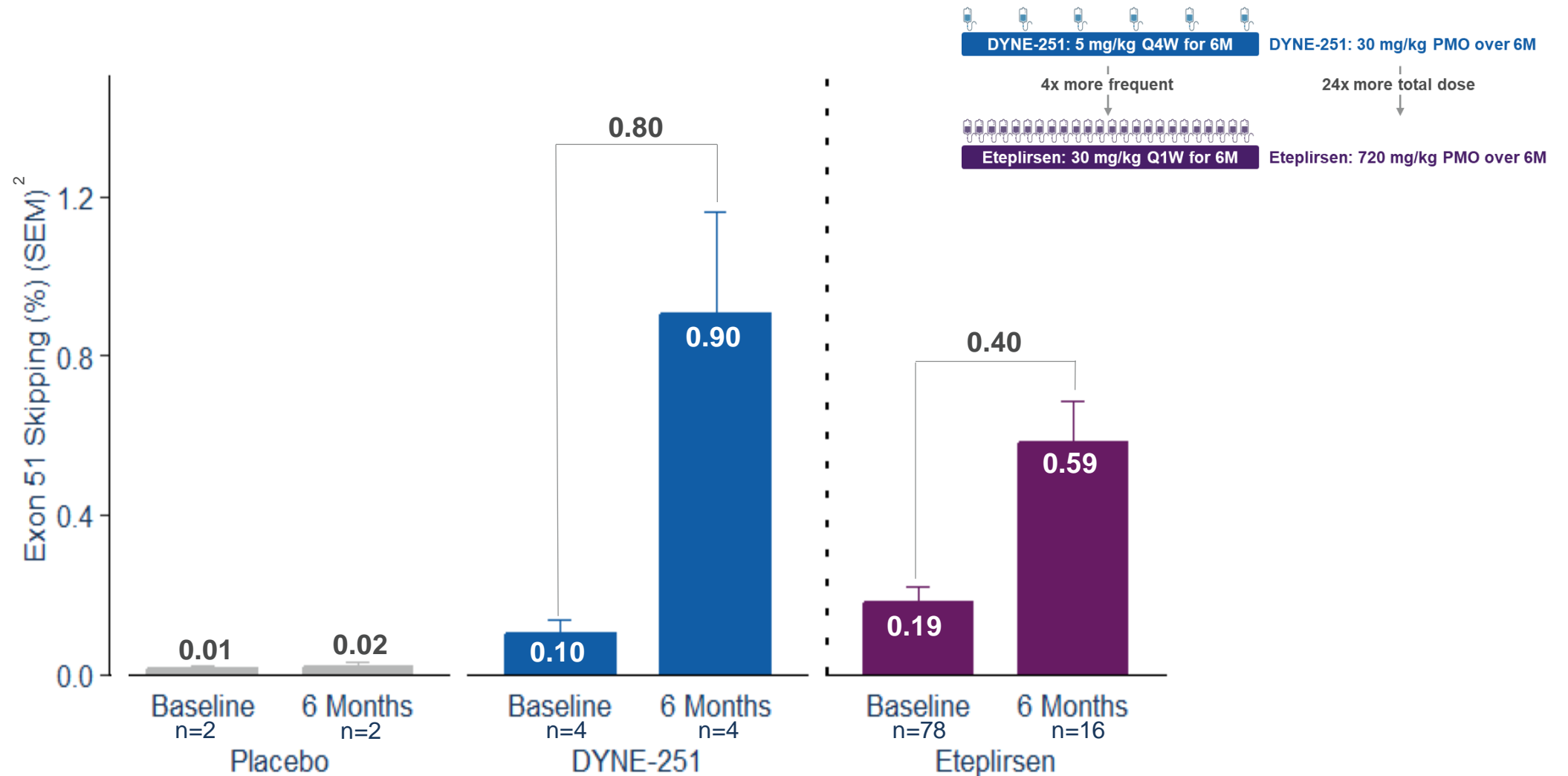
\*\* All infusion related reactions have been mild and moderate in intensity; dosing has continued in all participants

**Favorable Safety Profile, with ~275 Doses Administered To Date, Has Supported Dosing Up to 20 mg/kg <sup>2</sup>**

# DYNE-251 Drove Robust Delivery of PMO to Muscle

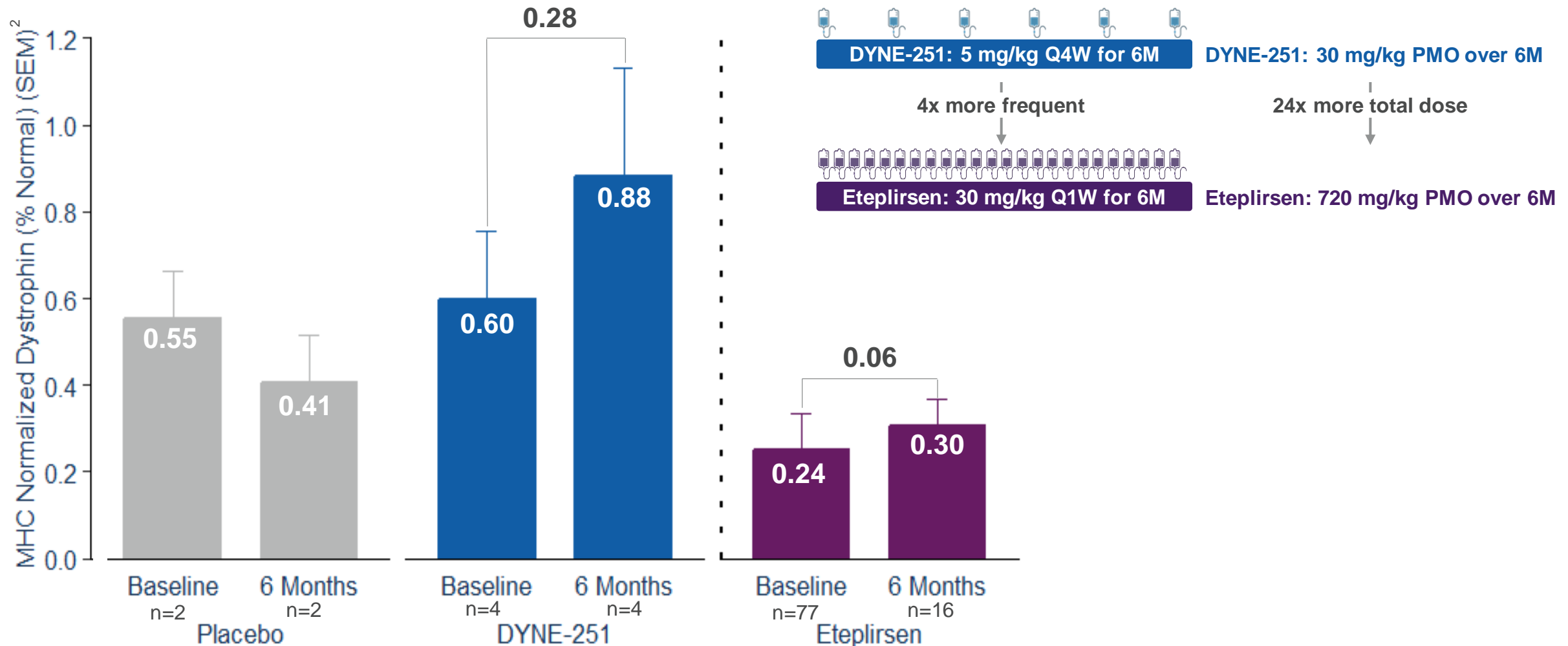


# DYNE-251 Showed 2 Fold Higher Increase in Exon Skipping at 6 Months than Reported in Eteplirsen Study <sup>1</sup>

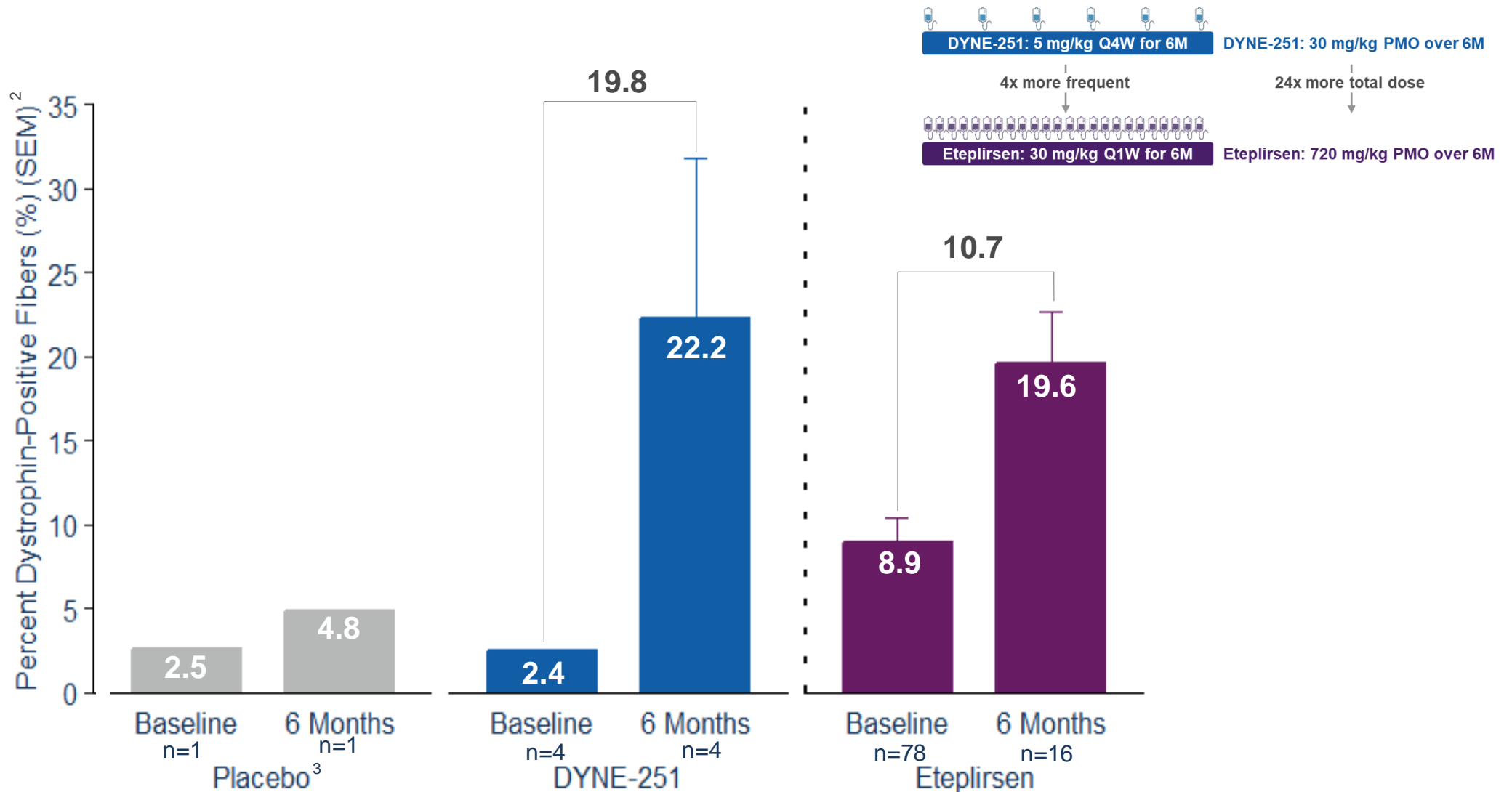




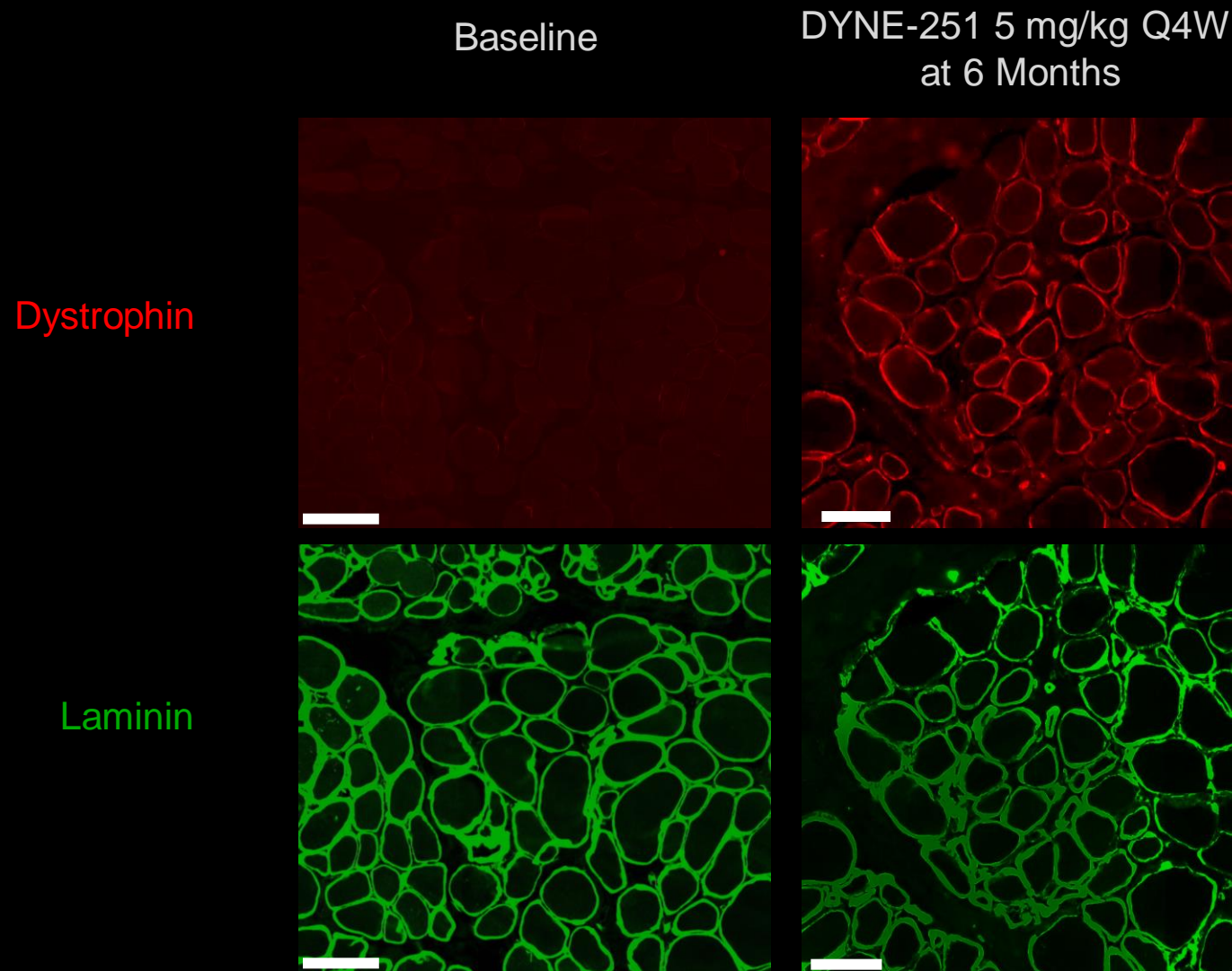
# DYNE-251 Showed >2.5 Fold Higher Dystrophin at 6 Months than Eteplirsen Study with 24 Fold Lower PMO Dose Administered 4 Times Less Frequently<sup>1</sup>



# DYNE-251 Showed ~2 Fold Higher Change from Baseline in PDPF than Reported in Eteplirsen Study <sup>1</sup>

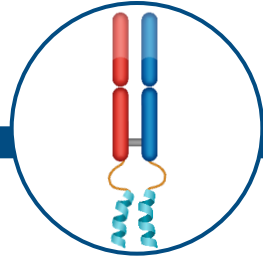


# PDPF: Clear Improvement in Dystrophin Localization to Sarcolemma



# FORCE Positions Dyne With 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
- Dyne founded to achieve targeted, receptor-mediated delivery to skeletal, cardiac and smooth muscle
  - Initial clinical data validates FORCE's targeted delivery to muscle
- Non-targeted delivery modalities face significant challenges, including an acceptable therapeutic index
  - Specifically, PPMO doses required to achieve potentially clinically meaningful exon skipping levels in NHPs may not be attainable in humans
- 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

## Initial DELIVER Clinical Data

- ✓ At initial 5.0 mg/kg Q4W dose, DYNE-251 showed compelling profile vs. eteplirsen standard-of-care reported at 6 months: <sup>1</sup>
  - >2.5x higher dystrophin expression with 24x lower PMO dose administered 4x less frequently vs. eteplirsen <sup>1</sup>
  - 2x higher increase in exon skipping vs. eteplirsen <sup>1</sup>
  - ~2x higher change from baseline PDPF vs. eteplirsen <sup>1</sup>
- ✓ Favorable safety profile to date; 20 mg/kg Q4W cohort fully enrolled <sup>2</sup>
- ✓ Supports further development of DMD global franchise

✓ **DYNE-251 Proof-of-Concept Achieved**

### DYNE-251: Next Steps

Optimizing dose and dose regimen in 2024

Next clinical update from DELIVER expected in H2'24

# Achieved Clinical Proof-of-Concept Across Both DM1 & DMD

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

**Compelling Biomarker & Functional Data from Early Dose Cohorts  
vs. Published Competitor Data in Both DM1 & DMD**

**Favorable Safety & Tolerability Supporting Dose Escalation**

**Fully Enrolled Through 5.4 mg/kg  
Next Update Expected in H2 2024**

**Fully Enrolled Through 20 mg/kg  
Next Update Expected in H2 2024**

**In 2024, Focus Turns to Optimization of Dose & Dose Regimen in Potentially Registrational Programs**