MyPEAK-1 Interim Data Readout

June 3, 2026

Forward-looking statements

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, that are based on our management's beliefs and assumptions and on information currently available to our management. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. All statements other than statements of historical facts contained in this presentation, including statements regarding business strategy, plans and 2026 milestones; the clinical, therapeutic and market potential of and expectations regarding our product candidates, platforms and proprietary capabilities; clinical development plans for TN-201 and TN-401, preclinical efforts and timelines; clinical outcomes, which may materially change as patient enrollment continues or more patient data become available; availability and content of data from MyPEAKTM-1 and RIDGETM-1; and plans to pursue regulatory alignment on pivotal trials plans, as well as statements regarding industry trends, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "purpose," "focus," "plan," "potential," "may," "future," "anticipated," "objective," "expected," or the negative of these terms or other similar expressions. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy and financial needs.

These forward-looking statements are subject to time, risks, uncertainties and assumptions described in our filings with the SEC, including, but not limited to the section titled "Risk Factors" in our Form 10Q for the quarter ended March 31, 2026, and other documents we have filed, or will file with the SEC. These filings, once filed, are or will be available on the SEC website at www.sec.gov. Such risks include, among other things: the availability of data at the referenced times; the timing of the initiation, progress, completion and potential results of our clinical trials and preclinical studies; our ability to advance product candidates into, and successfully complete, clinical trials and preclinical studies; the potential for clinical trials of our product candidates to differ from preclinical, preliminary, interim or expected results; the timing or likelihood of regulatory filings and approvals; the potential for the FDA or other regulatory agencies to conclude at any time that our product candidates may not have an appropriate risk/benefit profile; our estimates of the number of patients who suffer from the diseases we are targeting and the number of patients that may enroll in our clinical trials; our ability to successfully manufacture and supply our product candidates for preclinical studies, clinical trials and for commercial use, if approved; our ability to commercialize our product candidates, if approved; future strategic arrangements and/or collaborations and the potential benefits of such arrangements and/or collaborations; our estimates regarding expenses, capital requirements and needs for financing, and our ability to obtain capital; our ability to retain the continued service of our key personnel and to identify, hire and retain additional qualified professionals; our ability to obtain and maintain intellectual property protection for our platforms, programs and product candidates; our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately; the pricing, coverage and reimbursement of our product candidates, if approved; and developments relating to our competitors and our industry, including competing product candidates and therapies; general economic and market conditions; and other risks. These risks are not exhaustive. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. 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. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame or at all. The forward-looking statements made in this presentation relate only to events as of the date on which such statements are made. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this presentation. This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves several assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions, and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

This presentation discusses product candidates that are under clinical study and have not yet been approved for marketing by the U.S. Food and Drug Administration. No representation is made as to the safety or efficacy of these product candidates for the use for which such product candidates are being studied.

Today’s speakers and agenda

Faraz Ali, MBA
Chief Executive Officer

Kathy Ivey, Ph.D.,
Senior Vice President, Research

Whit Tingley, M.D., PhD
Chief Medical Officer

Today’s Agenda

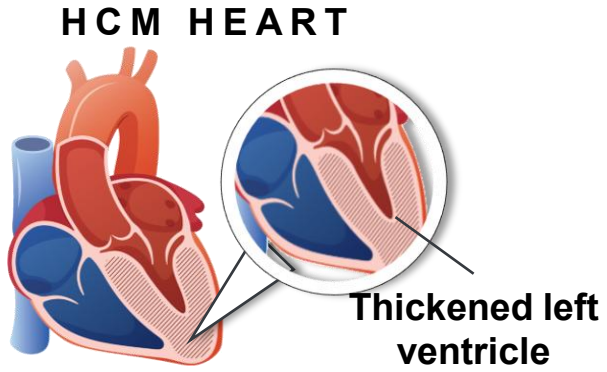
Introductory remarks	Faraz Ali
MyPEAK-1 objectives	Whit Tingley
Clinical findings	Whit Tingley
Biopsy results	Kathy Ivey
Safety findings	Whit Tingley
Closing remarks	Faraz Ali
Q&A	

MYBPC3-associated HCM is estimated to affect 120,000 people in the U.S. alone[1]

A severe and progressive autosomal dominant condition affecting adults, teens, children and infants

~57% of identified genetic variants underlying familial HCM are *MYBPC3* mutations[2]

>30% of genetic variants underlying childhood-onset HCM are *MYBPC3* mutations[3]

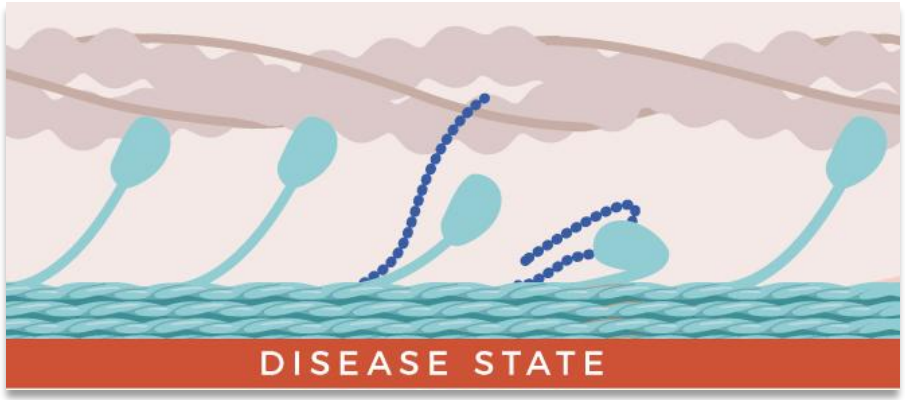


- Significant functional impairment
- Social and psychological impacts
- Symptoms include shortness of breath, fainting, chest pain, fatigue, palpitations, arrhythmias
- Elevated risk of sudden cardiac death and heart failure

1. Sedaghat-Hemedani, et al., *Clin Res Cardiol* 2018
2. Ho, et al., *Circulation* 2018
3. Marston, et al., *Eur Heart Jrnl* 2021

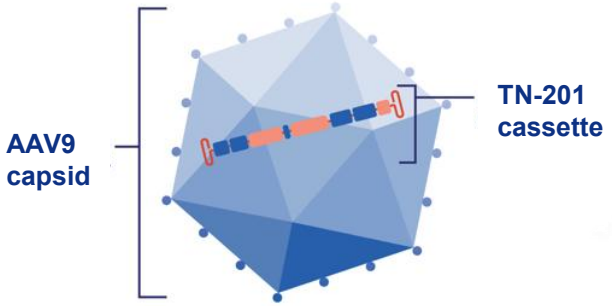
TN-201 is the first gene therapy being developed for *MYBPC3*-associated HCM[1]

MYBPC3 Pathophysiology

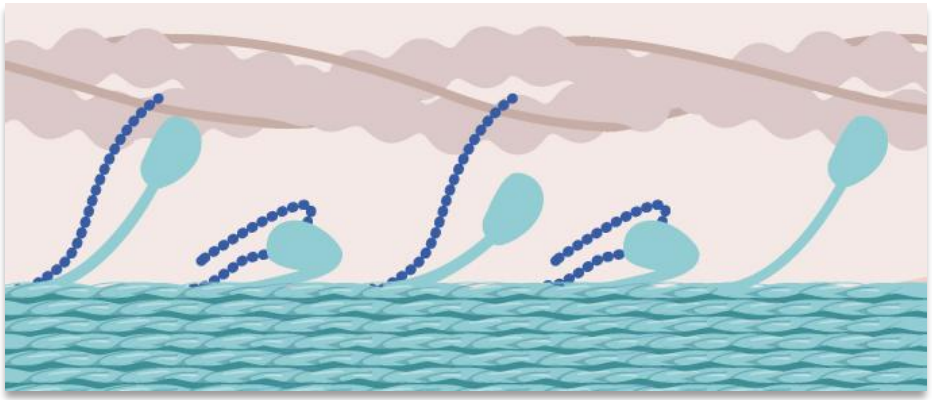


Heterozygous mutations in the *MYBPC3* gene lead to significantly **lower levels of MyBP-C protein** and dysregulated cardiac contractility[1]

TN-201 Mechanism of Action



TN-201 delivers a full-length, functional copy of the *MYBPC3* gene to cardiomyocytes using the most widely dosed capsid, AAV9[2]



Expression of the *MYBPC3* gene increases MyBP-C protein levels and is expected to restore sarcomeric function, reduce hypertrophy, and halt disease progression[3]

MyBP-C protein present in sarcomere

MyBP-C = Myosin-binding protein C

1. O'Leary, et al., *J Mol Cell Cardiol* 2019
2. Byrne, et al., *Mol Ther* 2025
3. Greer-Short, et al., *Nat Commun* 2025

HIGHLIGHTS

Interim MyPEAK-1 Cohort 1 & 2 Data

1. **CLINICAL: Multiple parameters of disease improving; All evaluable patients show signs of cardiac remodeling plus improvements in symptoms**

2. **BIOPSY: TN-201 is reaching heart cells and being expressed**

3. **SAFETY: TN-201 well tolerated at both doses**

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MyPEAK-1 Readout
Trial objectives and clinical findings

MyPEAK-1 Phase 1b/2 clinical trial design

Seeking directional consistency across multiple parameters over time with the goal of halting or even reversing disease progression

Study Objectives

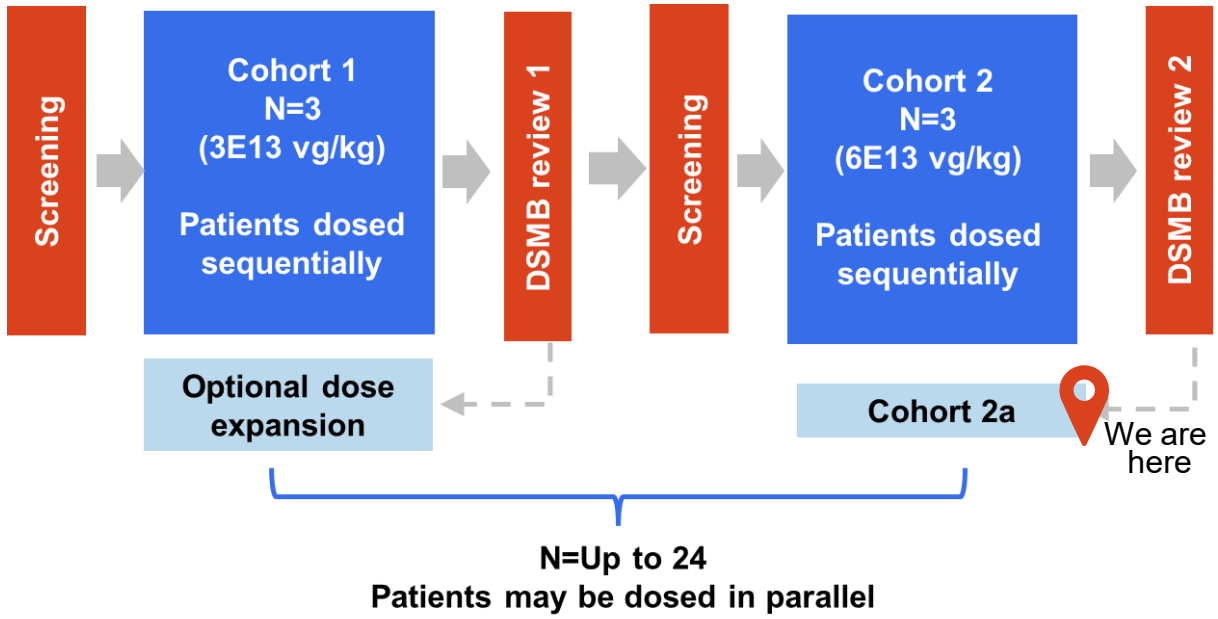
- Safety, tolerability
- Dose-finding
- Pharmacodynamics

Endpoints

- Safety and tolerability
- Transgene uptake and expression
- Plasma biomarkers
- Structural/hemodynamic changes
- Functional changes
- Symptom improvement

Design

- Open-label, multi-center, dose-escalation and dose-expansion
- 52-week trial period with four-year safety and efficacy follow-up
- Cardiac biopsies at baseline, post-dose and ~52 weeks (effective with Cohort 1, patient 3)



BASELINE CHARACTERISTICS

Patients in both cohorts have more severe disease burden vs. average HCM patients

June 2026 readout includes 178-104 follow-up for Cohort 1 and 26-52 weeks follow-up for Cohort 2 patients

		Cohort 1			Cohort 2			
	Average / % of HCM	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5*	Patient 6	Patient 7
Gender	Male (63%)[1]	Female	Female	Male	Female	Female	Female	Female
Phenotype	nHCM (72%)[1]	nHCM	nHCM	nHCM	nHCM	nHCM	nHCM	nHCM
Age at Dosing	50y[1]	27	43	47	60	48	63	40
LVMI (g/m^2)	F: 89 | M: 104[2]	174	105	178	121	181	139	117
Myectomy & Age	18%[3]| Mean = 54y[4]	24	30	39	-	35	-	-
ICD & Age	21%[1] | Mean = 38y[5]	27	37	36	58	38	49	36
NT proBNP	563 pg/ml[6]	1884	351	913	337	1013	465	158
Troponin I (ng/L)	27[7]	46	34	53	10	27	8	108
NYHA Class	50% ≥ Class II[8]	II	III	II	II	II	II	II

*Patient 5 lost to follow up after tapering off immunosuppression

More severe vs. average

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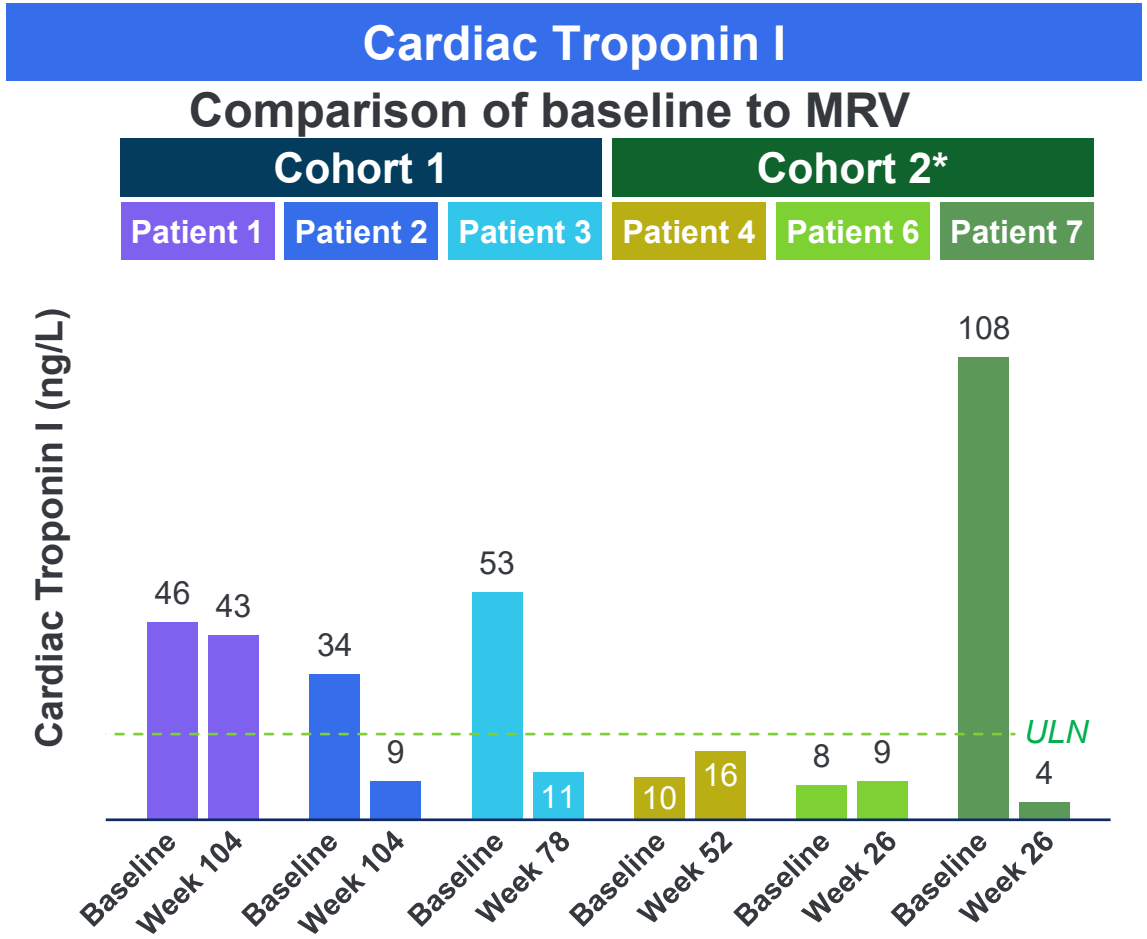
nHCM = nonobstructive HCM
LVMI = left ventricular mass index
ICD = implantable cardiac defibrillator
NT proBNP = N-terminal pro-B-type natriuretic peptide
NYHA = New York Heart Association

[1]Ho, et al; *Circulation* 2018
[2]Olivotto, et al; *JACC* 2008
[3]Maurizi, et al; *Circulation* 2024
[4]Cui, et al; *JACC* 2019
[5]Rowin, et al; *Circ Arrhytm EP* 2020
[6]Neubauer, et al; *JACC* 2019
[7]Okamoto, et al; *Int Heart J* 2013
[8]Maron, et al; *JACC Heart Fail* 2018

BIOMARKER RESULTS

Cardiac biomarkers improved or remained stable up to 104 weeks after dosing



May 2026 data cut off

**Patient 5 lost to follow up after tapering from immunosuppressives*

Cardiac troponin declined or remained stable within the normal/near normal range in five of six patients

- Cardiac troponin is a blood-based biomarker that indicates injury to heart cells; associated with increased risk of adverse events

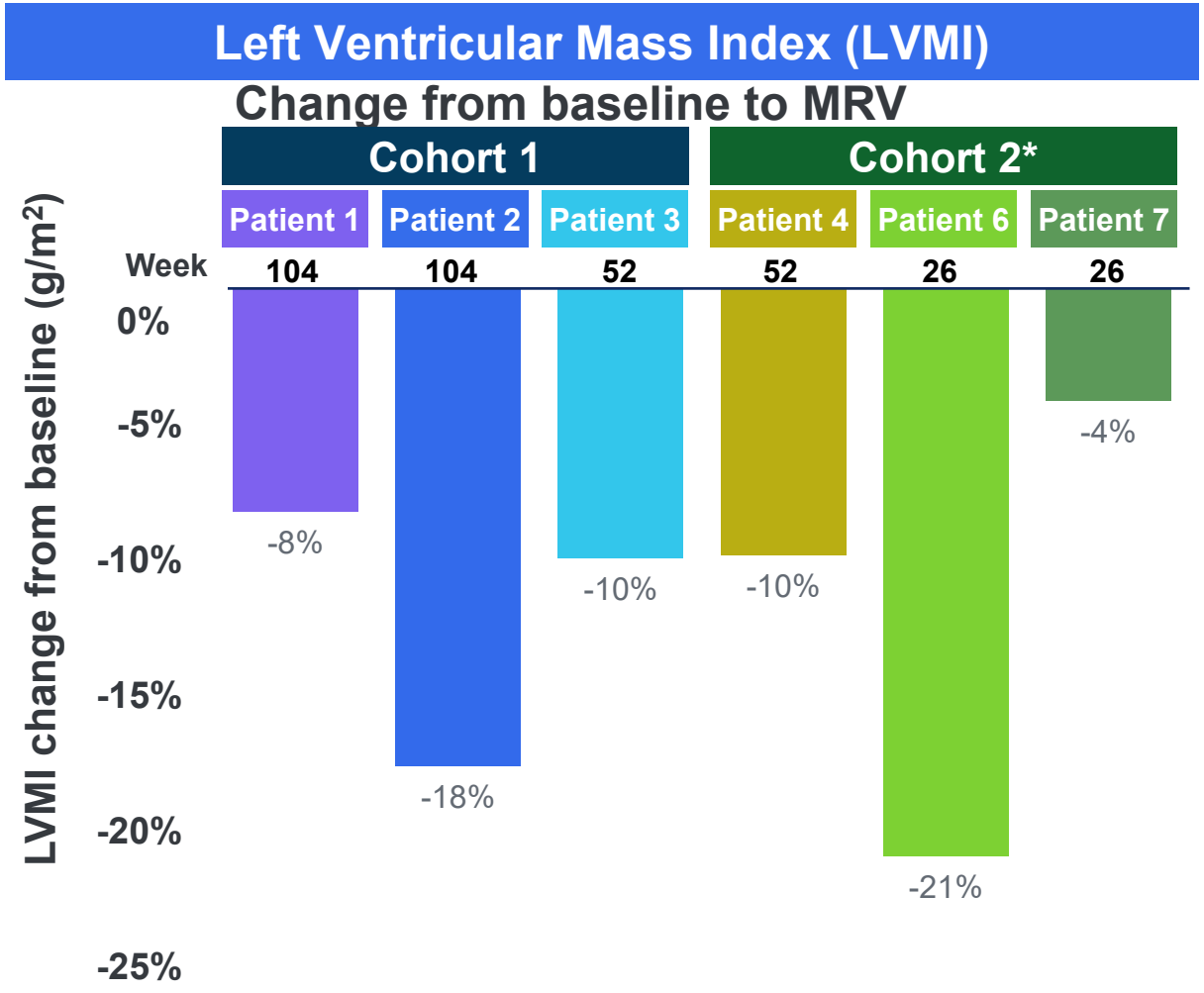
NT-proBNP (not shown) declined or remained stable from baseline after completion of IS in three of six patients

- NT-proBNP is a biomarker that indicates strain of the heart muscle

MRV = most recent visit
NT-proBNP = N-terminal pro B-type natriuretic peptide
IS = immunosuppression

HYPERTROPHY RESULTS

Decreases in multiple measures of hypertrophy suggest cardiac remodeling occurring over time



All patients achieved reductions in LVMI

- MyPEAK-1 patients all severely hypertrophied with baseline LVMI of 139g/m2
- LVMI decreases sustained through year 2 for first two Cohort 1 patients
- Similar – or greater – reductions observed as early as Week 26 week in Cohort 2 vs. Cohort 1
- LVMI reduced by ≥10% in a majority of patients

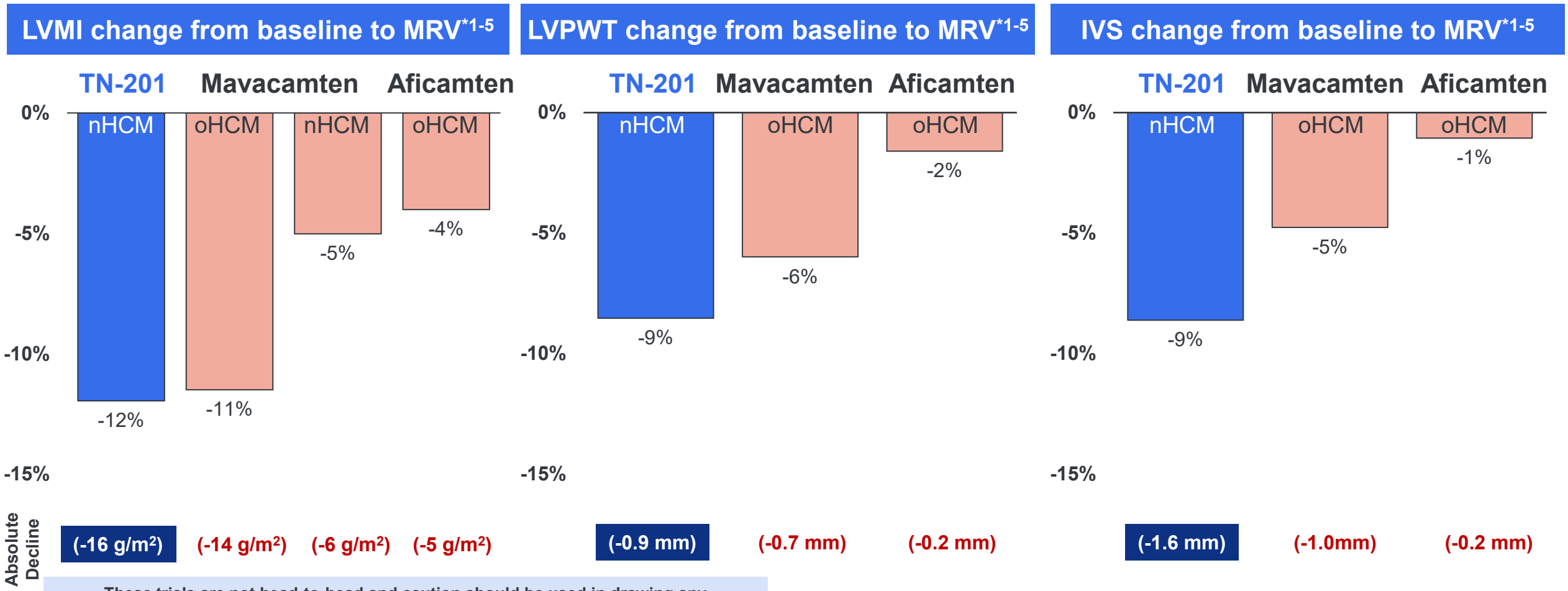
Consistent changes observed in other measures of wall thickness

- Interventricular septum thickness decreased for five of six patients
- Posterior wall thickness decreased for Cohort 1 patients and remained stable for the majority of Cohort 2

Other measures of cardiac structure and function remain largely stable

May 2026 data cut off
**Patient 5 lost to follow up after tapering from immunosuppressives*

TN-201 hypertrophy decreases compare favorably with results observed among peers



These trials are not head-to-head and caution should be used in drawing any conclusions from these comparisons. Comparisons with peer programs are not intended to indicate likelihood of TN-201 clinical benefit.

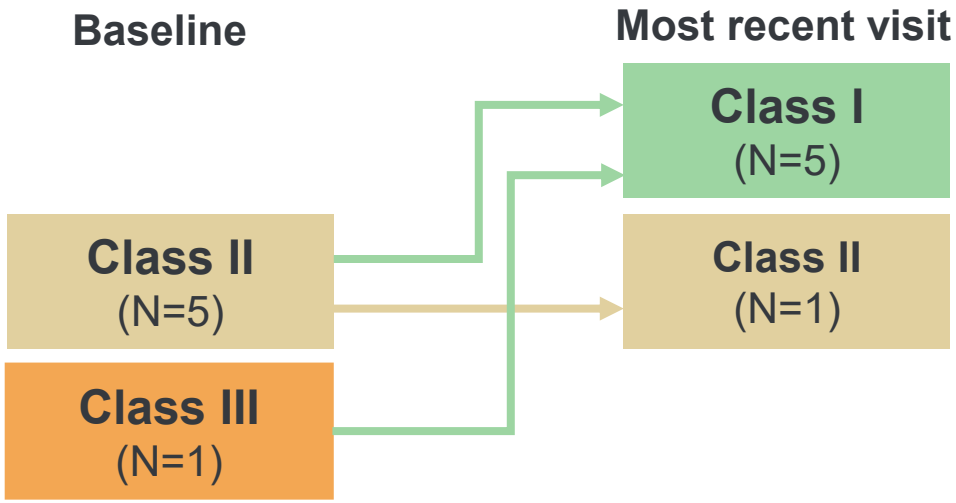
LVPWT = left ventricular posterior wall thickness
IVS = intraventricular septum

*Mavacamten oHCM & nHCM readouts at 128 and 48wk, respectively
*Aficamten oHCM readout at 24wk
Posterior and septal wall thickness not reported in nHCM

[1]Desai, et al., *Circ* 2025
[2]Hegde, et al., *JACC* 2021
[3]Desai, et al., *JACC* 2025
[4]Hegde, et al., *JACC* 2024
[5]Sun, et al., *JACC* 2022

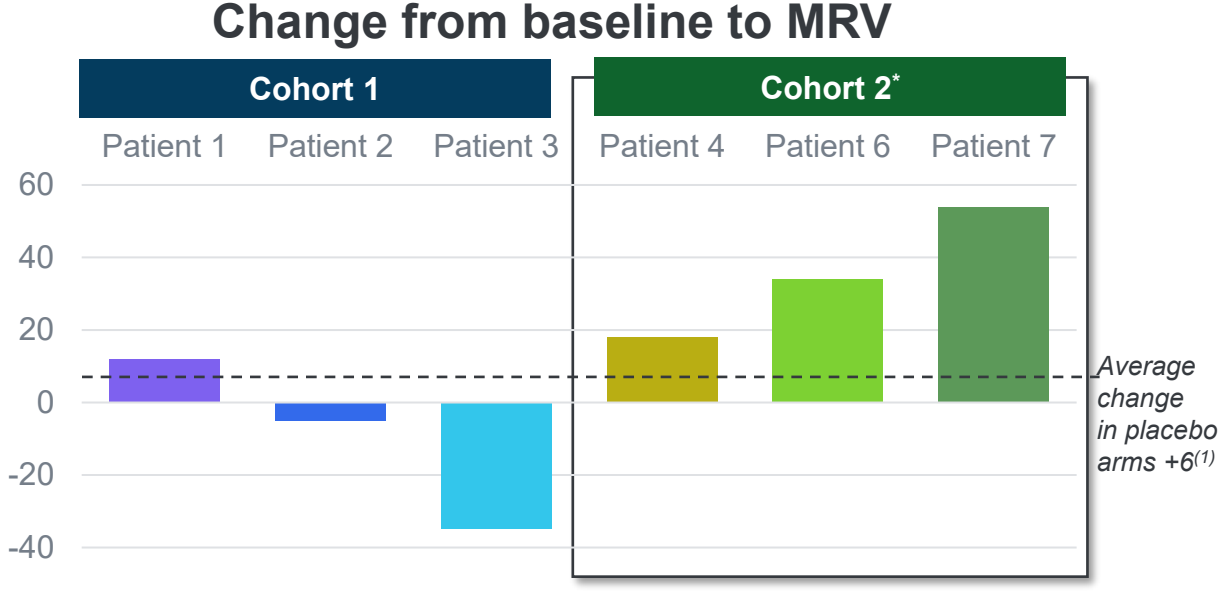
Symptom burden reduced in all patients by at least one measure following TN-201 treatment

New York Heart Assoc. Classification



- **83% achieved Class I (asymptomatic) status**
- Changes in NYHA class coincided with improvements in other parameters

Kansas City Cardiomyopathy Questionnaire



- **67% achieved meaningful improvements in KCCQ Clinical Summary Score(2)**
- Cohort 2 average change from baseline +36 points
- All Cohort 2 patients' scores are now in the "good to excellent" range (75-100 points)

May 2026 data cut off
**Patient 5 lost to follow up after tapering from immunosuppressives*

NYHA = New York Heart Association
KCCQ = Kansas City Cardiomyopathy Questionnaire

1. Averaged from mavacamten studies (MAVERICK, VALOR, EXPLORER, ODYSSEY) and aficamten studies (ACACIA, SEQUOIA published data)
2, Spertus, et al, JACC State-of-the-art review 2020

FUNCTIONAL CAPACITY

Functional improvements observed in at least one measure for a majority of Cohort 2 patients

Six-minute Walk Test

Cohort 2* change in 6MWD from baseline to MRV

	Baseline	MRV	Difference
Patient 4	500	755	+255
Patient 6	420	390	-30
Patient 7	247	297	+50

Measured in meters

Cardiopulmonary Exercise Capacity

Cohort 2* change in pVO_2 from baseline to MRV

	Baseline	MRV	Difference
Patient 4	16.0	18.4	+2.4 (15%)
Patient 6	13.3	Not yet evaluated	
Patient 7	13.8		

Measured as mL/kg/min

- Majority of Cohort 2 demonstrated increased exercise capacity in 6MWD, peak VO_2 or both at an early timepoint
- All improvements exceeded the minimal clinically important difference for both assessments[1,2]
- Cohort 1 performance may be confounded by preexisting functional limitations and/or relatively longer duration and higher dose of immunosuppression

May 2026 data cut off

**Patient 5 lost to follow up after tapering from immunosuppressives*

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6MWD = 6-minute walk distance
pVO_2 = Peak oxygen uptake

[1]MCID= >30m; Shoemaker, et al., *Cardiopulm Phys Ther J* 2013
[2] MCID=6% increase; Swank, et al., *Circ Heart Fail* 2014

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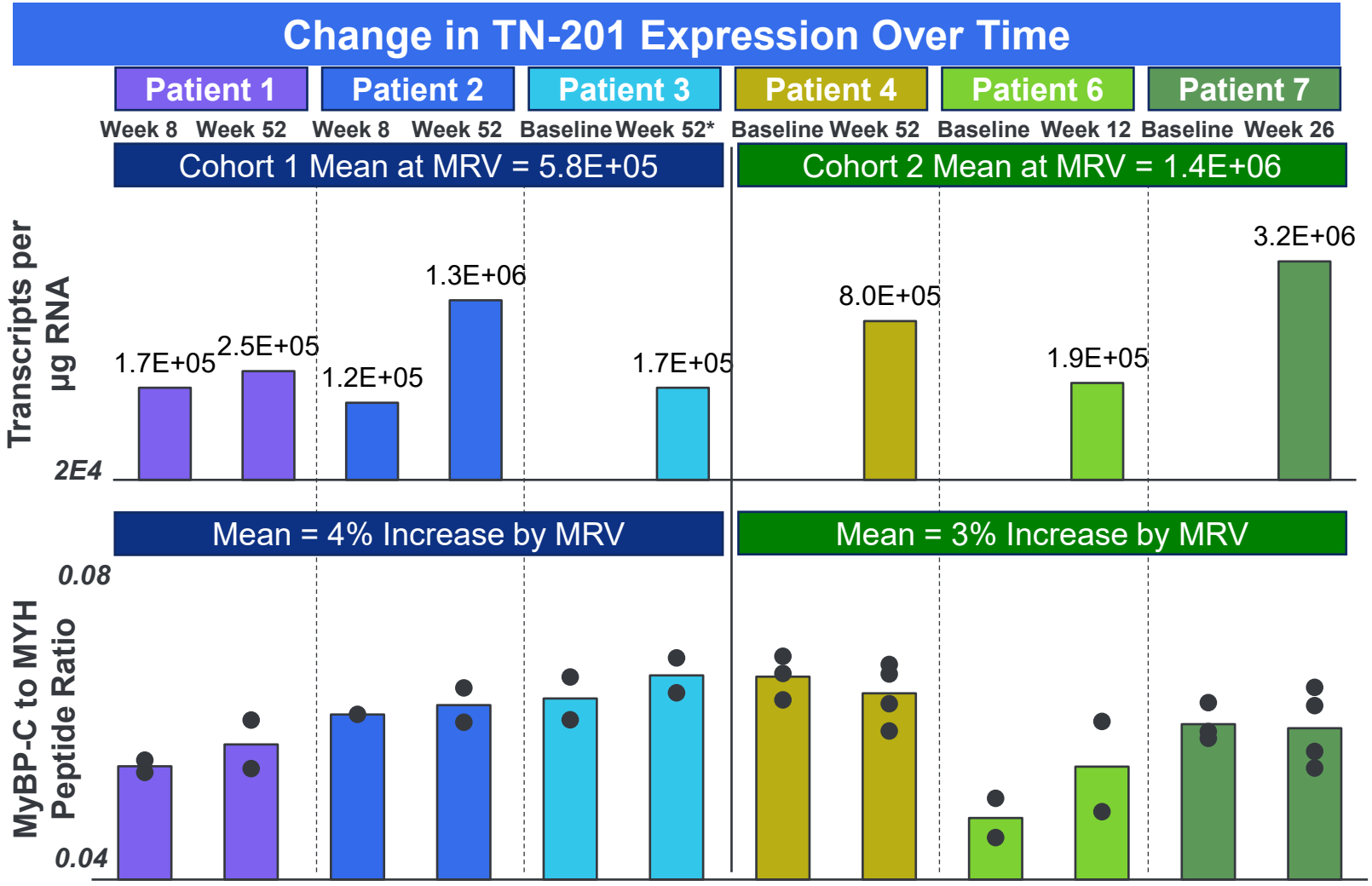
MyPeak-1 Readout
TN-201 heart biopsy findings

RNA and protein levels across cohorts suggest TN-201 expression increases with dose and over time



TN-201 mRNA

- RNA measures are specific for TN-201
- Cohort 2 mRNA levels ~2X higher compared to Cohort 1, even at earlier timepoints; consistent with DNA transduction levels (not shown)

MyBP-C Protein

- Endogenous & TN-201 protein indistinguishable
- Increase in Cohort 2 comparable to Cohort 1 even at earlier timepoint
- Variance among samples complicates interpretation

Totality of molecular & clinical data signal TN-201 effect

RNA quantified using RT-qPCR assay (reverse transcriptase-quantitative polymerase chain reaction)
Protein quantified using LC-MS (liquid chromatography mass spectrometry)
*Patient 3 mRNA is at Week 26

MYH, myosin heavy chain
May 2026 data cut off
*Patient 5 lost to follow up after tapering from immunosuppressives

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MyPEAK-1 Readout
Safety and immunosuppression

SAFETY OBSERVATIONS

TN-201 has been well tolerated at both doses with no new treatment-related safety events to report

- Adverse events (AEs) associated with TN-201 treatment were **mild, transient and/or reversible**
  - Following (previously reported) Grade 3 liver enzyme elevation in Patient 1, immune monitoring and management changes were undertaken
- **No clinical TMA**
- **No need for complement inhibitors**
- **No signs of cardiotoxicity**

The most common AE related to TN-201 were reversible, asymptomatic liver enzyme elevations

TN-201-related AEs	Cohort 1* (3E13 vg/kg; n=3)				Cohort 2* (6E13 vg/kg; n=3)			
	Gr 1	Gr 2	Gr 3	**Total**	Gr 1	Gr 2	Gr 3	**Total**
Liver enzyme elevations	1	1	1	**3**	1	-	-	**1**
Platelet reduction/ thrombocytopenia	-	-	-	**0**	2	-	-	**2**
Complement elevation	-	-	-	**0**	2	-	-	**2**

Two events were classified as serious adverse events due to in-patient treatment and monitoring:

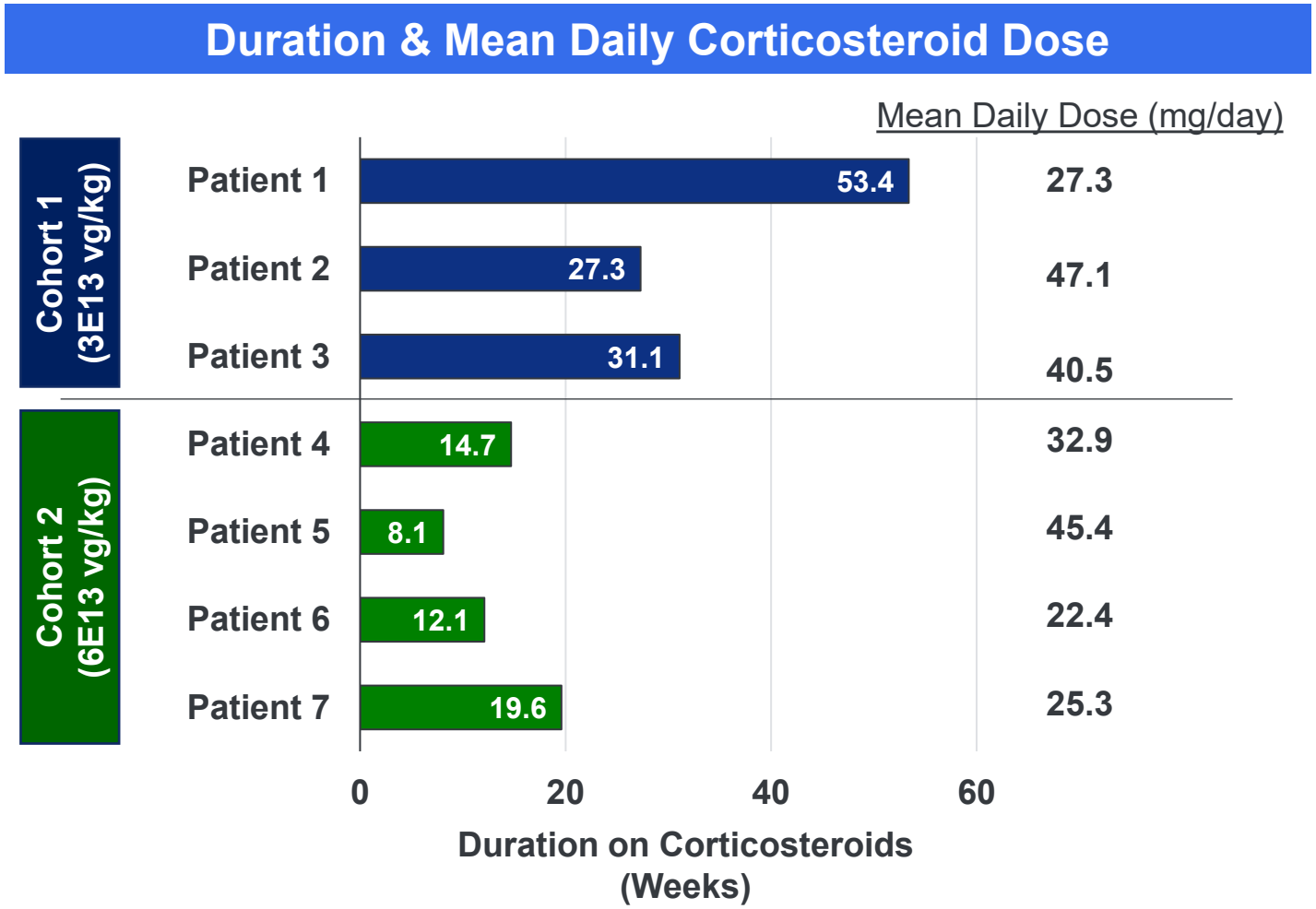
- Moderate (Grade 2) transaminase elevations, treated with IV steroids
- Mild (Grade 1) complement elevation monitored in hospital

*Previously disclosed, no new related AEs since November 2025 presentation

Data cut as of May 2026

SAFETY OBSERVATIONS

Immunosuppression regimen successfully managed immune response at both doses



IS Adjustments During Cohort 1

- Reduced maximum starting dose of prednisone dose from 80mg to 60mg
- Sirolimus initiated earlier (Day -7)
- Weekly monitoring during taper

Cohort 2 Results

- Despite higher dose of TN-201, Cohort 2 had fewer, lower elevations in AST/ALT
- Mean corticosteroid taper was shorter and daily dose lower by patient for Cohort 2 (14 weeks at 32 mg/d) vs. Cohort 1 (37 weeks at 38 mg/d)

ALT = alanine aminotransferase
AST = aspartate aminotransferase

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Conclusions and future directions

CONCLUSIONS

Multiple parameters improving with durable responses in Cohort 1 and signals of deeper/faster responses in Cohort 2

		MRV (week)	Biomarkers		Hypertrophy			Feel		Function	
			cTnI	BNP	LVMI	LVPWT	IVS	NYHA	KCCQ	6MWD	pVO_2
Cohort 1	Patient 1	104	Stable	Declined	Improved	Improved	Improved	Improved	Improved	Improved	Declined
	Patient 2	104	Improved	Improved	Improved	Improved	Improved	Improved	Declined	Declined	Declined
	Patient 3	52 & 78	Improved	Declined	Improved	Improved	Improved	Improved	Declined	Declined	Declined
Cohort 2*	Patient 4	52	Stable	Stable	Improved	Stable	Improved	Improved	Improved	Improved	Improved
	Patient 6	40	Stable	Improved	Improved	Stable	Improved	Stable	Improved	Stable	Not yet evaluated
	Patient 7	26	Improved	Improved	Improved	Declined	Declined	Improved	Improved	Improved	Not yet evaluated

Change from baseline to MRV

- Improved
- Stable
- Declined
- Not yet evaluated

- All patients show signs of cardiac remodeling and symptom improvement
  - Cohort 1 responses are durable out to 2 years
  - Cohort 2 responses suggest greater or equivalent responses within shorter post-dose timeframe
- Biopsy evidence of TN-201 transduction and expression in heart cells
- TN-201 was well tolerated at both doses

May 2026 data cut off

**Patient 5 lost to follow up after tapering from immunosuppressives*

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cTnI = cardiac troponin
BNP = N-terminal pro B-type natriuretic peptide

DEVELOPMENT OPPORTUNITY

Opportunity to explore TN-201 in the full spectrum patients with *MYBPC3-associated HCM* mutations

Adults | **Adolescents** | **Peds** | **Infants**

Heterozygotes — **Homozygotes**

Non-Obstructive Phenotype (70%)

Obstructive Phenotype (30%)

MyPEAK-1 started in nHCM patients with ICDs, now includes all symptomatic adults, with/without ICD

Potential future expansion

Pediatric *MYBPC3*-associated HCM pathway supported by MyClimb natural history study

MyClimb Natural History Study

- **> 220 patients have been enrolled across 29 sites**
- **May serve as run-in study and control arm for potential future pediatric pivotal trial**

Seeking regulatory alignment on pivotal trial plans in 2026

Recent engagements with regulators globally reflect potential future directions

Tenaya is engaging with regulators to pursue alignment on pivotal endpoints with an initial focus on the pediatric population where there is significant need

EMA
EUROPEAN MEDICINES AGENCY

PRIME designation received

- Recognizes potential of TN-201 to address significant unmet medical needs
- Enables the EMA support to optimize data generation and accelerate assessment of medicines applications

FDA U.S. FOOD & DRUG ADMINISTRATION

Rare Disease Evidence Principles acceptance for biallelic pediatric patients

- New FDA initiative to support development of therapies for ultra-rare genetic diseases (<1,000 patients)
- Enables early and ongoing collaboration to align on regulatory strategy, trial design, and innovative approaches to generating evidence needed to support potential approval

MyCLIMB FINDINGS

Children with *MYBPC3*+ disease are at heightened risk for heart failure, arrhythmias, hospitalizations and death(1)

The unmet need in pediatric patients

~3000 diagnosed patients currently under age 18 in the U.S.(2)

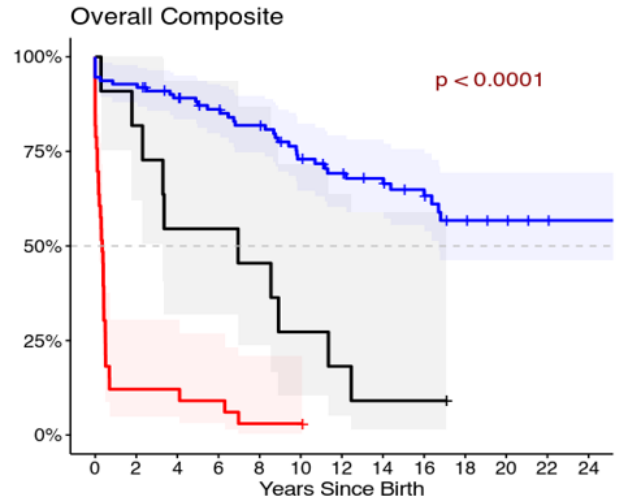
>90% of patients in MyClimb have non-obstructive HCM(1)

36% more likely to develop life-threatening ventricular arrhythmias(3)

0 treatment options targeting the underlying cause of disease or capable of slowing progression

TN-201 granted FDA **Rare Pediatric Disease Designation** for the treatment of *MYBPC3*-associated HCM in children, adolescents, and young adults

Genotype status impacts outcomes(1)



MyClimb Natural History Study

HOMOZYGOUS: 85% die or require transplant before age 1

COMPOUND HETEROZYGOUS: 64% experienced heart-failure related hospitalizations before age 10; 27% required transplant or died

HETEROZYGOUS: Median age of diagnosis was 6.5 years. Significant burden of cardiomyopathy including potentially fatal arrhythmias and hospitalization

1. Brugada, et al, ESC 2025
2. SHaRe registry; Data on file
3. Marston, et al, *Eur Heart Journal* 2021

2026 anticipated program milestones

TN-201 for *MYBPC3*-associated HCM

1H

- Enroll 6E13 vg/kg expansion cohort
- MyPEAK-1 interim Cohort 2 data

2H

- MyPEAK-1 ~2-year Cohort 1 and ~52-week Cohort 2 data
- Continue MyPEAK-1 enrollment
- Pursue regulatory alignment on pivotal plans

TN-401 for *PKP2*-associated ARVC

1H

- Conduct Cohort 2 DSMB
- Enroll RIDGE-1 expansion cohort
- RIDGE-1 ~52-week Cohort 1 and initial Cohort 2 data

2H

- RIDGE-1 interim Cohort 2 data
- Continue RIDGE-1 enrollment
- Pursue regulatory alignment on pivotal plans

ACKNOWLEDGEMENTS

We extend our deepest gratitude to the dedicated clinical and research staff at all participating institutions and to the participants who volunteered their time, health information, and trust in support of advancing this research.

Thank you