Scaling new heights in the fight against heart disease

November 2024

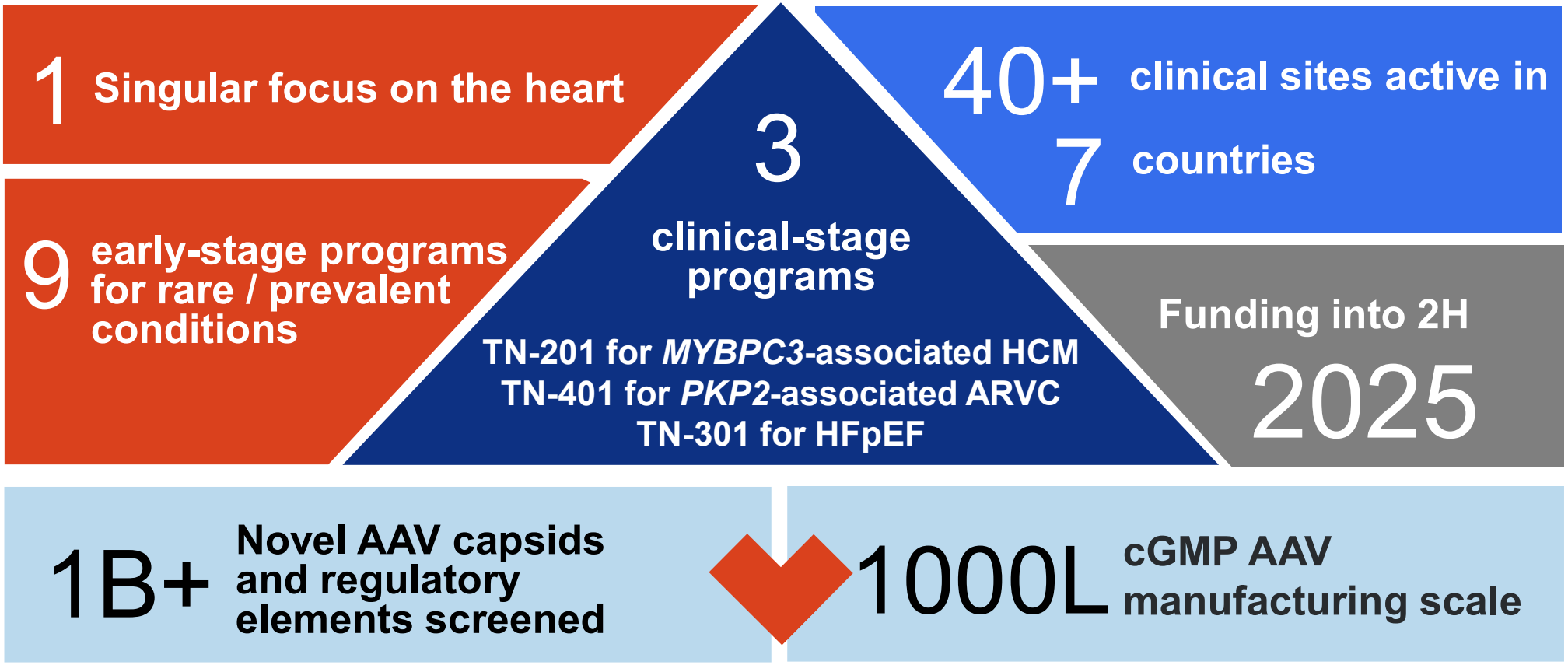
Forward-looking statement

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 2024 strategic priorities; the clinical, therapeutic and market potential of and expectations regarding our product candidates, platforms and proprietary capabilities; clinical development plans for TN-201, TN-401 and TN-301; preclinical efforts and timelines; availability and content of data from MyPEAK™-1; the timing of initial dosing for RIDGE™-1; targeted populations for clinical trials and treatments; the sufficiency of Tenaya's cash runway to fund operations, 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," "believe," "expected," "plan," "potential," "may," "future," "objective," 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 a number of risks, uncertainties and assumptions described in our filings with the SEC, including, but not limited to the section titled "Risk Factors" in our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2024, and other documents we have, or will file with the SEC. These filings, filed, are 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; 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 a number of 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.

Our purpose: To transform and extend lives through
the discovery, development and delivery of potentially curative therapies
that target the underlying causes of heart disease.

Tenaya is well-positioned to lead innovation in precision medicines for heart disease



MYBPC3 = Myosin-binding protein C3 | HCM = Hypertrophic cardiomyopathy | PKP2 = Plakophilin-2 | ARVC = Arrhythmogenic right ventricular cardiomyopathy
HFpEF = Heart failure with preserved ejection fraction | AAV = Adeno-associated virus | cGMP = certified Good Manufacturing Practice

Genetic medicines for heart disease are on the cusp of a revolution

Increasing clinical and regulatory validation across the sector for precision heart medicines and for AAV gene therapies

2 recent approvals for precision heart medications

CAMZYOS™ Vyndamax

FDA Guidance supports **smaller pivotal studies "feel & function" endpoints** in heart failure (1)

Clinical guidelines recommend genetic testing in the U.S. and Europe

ESC

> 100 genes associated with cardiomyopathies

7 approvals for potentially curative AAV gene therapies for diseases of the eye, brain, liver, & muscle (3)

> 5500 of patients in > 50 countries have received AAV gene therapies (4)

Gene therapies for rare disease have **2x-3.5x higher likelihood of approval** (1, 2)

Early proof-of-concept data reported for AAV gene therapies aimed at cardiomyopathies

rocket pharma, 4DMT, LEXEO therapeutics

TENAYA THERAPEUTICS

1. FDA Draft Guidance for heart failure; for cell and gene therapies
2. Alliance for Regenerative Medicine
3. FDA; EMA
4. Novartis; Kuzmin et al., Nat Rev Drug Discov 2021

Modality-agnostic drug discovery that aims to address the underlying problem







	HCM	ARVC	HFpEF	DCM	MI	HFrEF	DCM
Underlying problem	*MYBPC3* mutation	*PKP2* mutation	Multi-factorial	*PLN*^{R14del} mutation	Loss of heart cells	Decrease in SERCA2a	Unknown mutation(s)
Tenaya approach	Gene transfer	Gene transfer	Small molecule	Gene editing	Cellular regeneration	DWORF addition	Target ID via AI-enabled screens of heart cells
Tenaya programs	TN-201	TN-401	TN-301	← Preclinical efforts →			

MI = myocardial infarction | PLN delR14 = phosolambam deletion of arginine at amino acid residue 14 | SERCA2a = sarcoplasmic reticulum (SR) calcium-ATPase
DWORF= dwarf open reading frame | DCM = dilated cardiomyopathy | MI = myocardial infarction | AI = artificial intelligence

Deep and diverse pipeline
addressing rare and prevalent indications

Program	Modality	U.S. Prevalence	Preclinical	Phase 1/2	Pivotal
Clinical-Stage Programs					
TN-201 for *MYBPC3*+ HCM	AAV9 gene therapy	> 120K[1]			
TN-401 for *PKP2*+ ARVC	AAV9 gene therapy	> 70K[2]			
TN-301 for HFpEF	Small molecule	> 3M[3]			
Research-Stage Programs					
DWORF for DCM & HFrEF	AAV gene therapy	Prevalent			
Post-MI Heart Failure	Cellular regeneration	Prevalent			
PLN^{R14del} DCM	Cas9 gene editing	Rare			
Undisclosed targets	Gene therapy Gene editing Gene silencing	Rare and Prevalent			

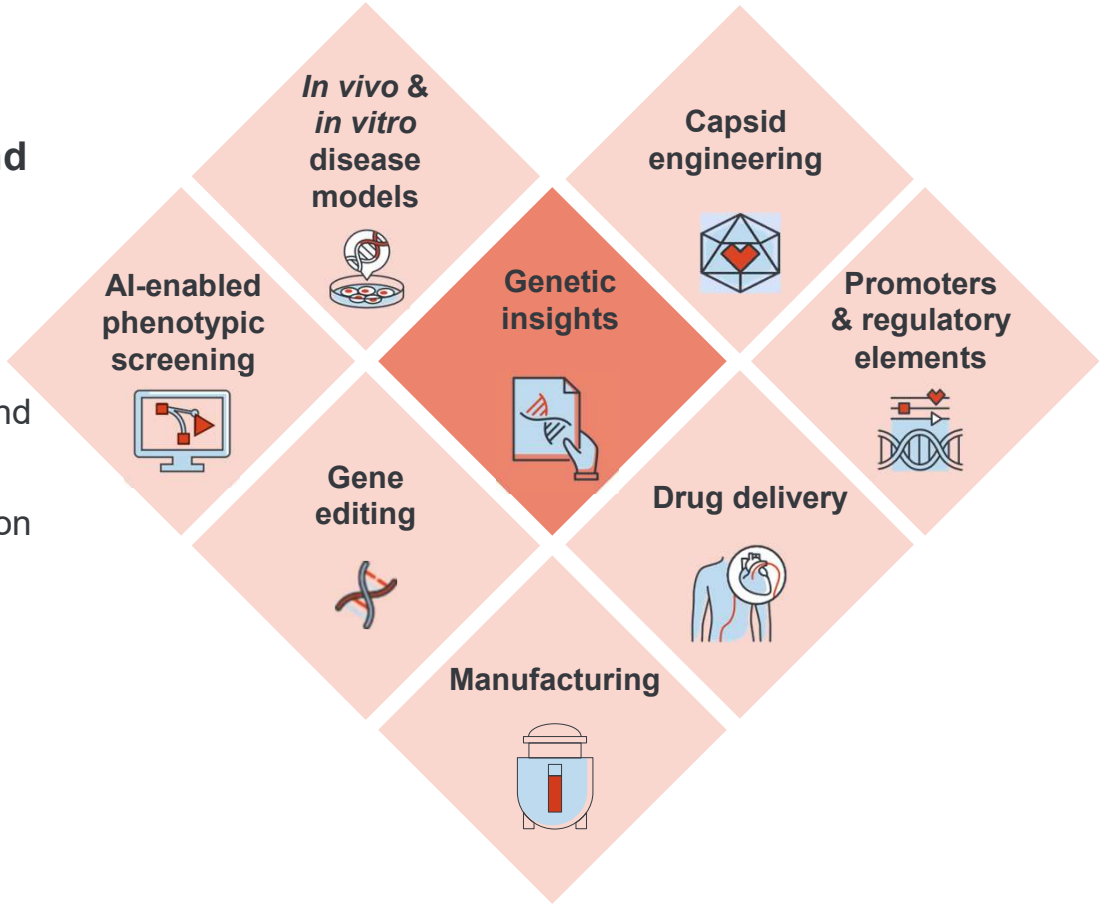
1. Sedaghat-Hemedani, et al., Clin Res Cardiol 2018
2. Groeneweg, et al, Circ Cardiovasc Gen 2015 & McKenna, et al, Nature Rev Cardio 2021
3. Abovich, et al, Am J Prev Cardio 2023

DWORF = Dwarf open reading frame
DCM = Dilated cardiomyopathy
PLNR14del= phosolambam pathogenic variant R14del
HFrEF = Heart failure with reduced ejection fraction
MI = Myocardial infarction
Cas9 = CRISPR associated protein 9

Integrated internal capabilities power modality-agnostic drug discovery engine

Target Discovery and Validation

- ✓ Deep insight
- ✓ Rapid design iterations
- ✓ Encouraging efficacy and safety signals
- ✓ Human genetic validation



Design, production, and delivery of genetic medicines

- ✓ Targeted delivery
- ✓ Robust expression
- ✓ Better product profiles
- ✓ Growing IP portfolio

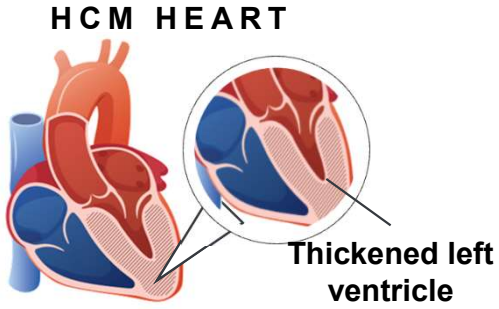
TENAYA THERAPEUTICS

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

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

~57% of identified genetic variants underlying familial HCM are *MYBPC3* mutations (1)

>30% of genetic variants underlying childhood-onset HCM are *MYBPC3* mutations (2)

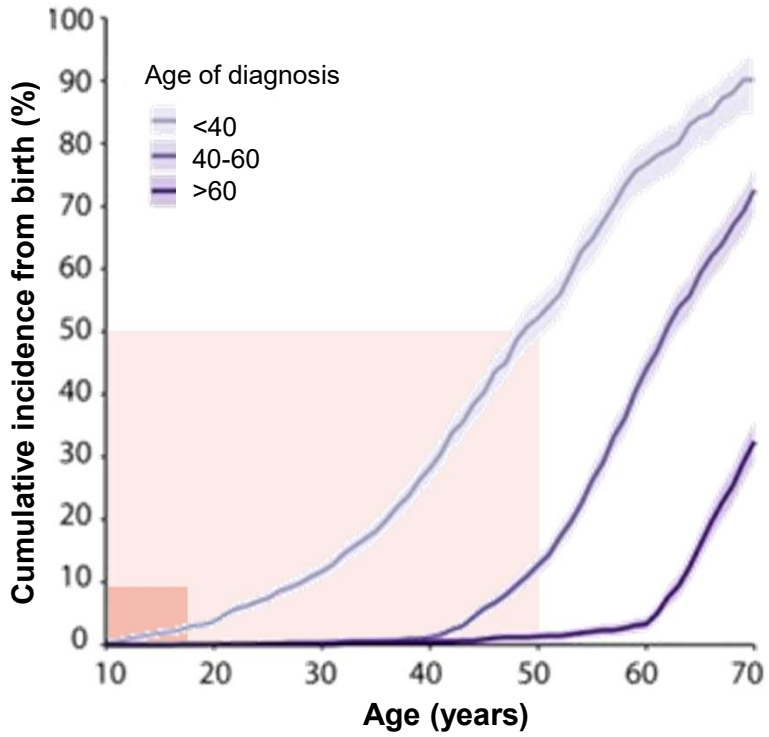


- Significant functional impairment
- Social and psychological impacts
- Symptoms include shortness of breath, fainting, chest pain, fatigue, palpitations, arrhythmias
- Elevated risk of sudden cardiac death and heart failure

1. Ho, et al, *Circulation* 2018
2. Marston, et al, *Eur Heart Jrnl* 2021

Patients with genetic forms of HCM are at higher risk for serious cardiac events(1)

Younger onset correlates with higher risk of morbidity and mortality



Median age of diagnosis is …

39 years for genetic forms of HCM vs.

51 years for non-genetic forms (1)

2x **Greater risk of adverse outcomes** with sarcomeric mutations such as *MYBPC3* (1)

50% of patients with genetic forms of HCM diagnosed **before the age of 50** are likely to experience a **life-threatening** cardiac event(1)

Serious cardiac events/adverse outcomes = e.g., cardiac arrest, heart failure, ventricular arrhythmias atrial fibrillation, transplant, sudden cardiac death and stroke

TENAYA THERAPEUTICS

1. Ho, et al, *Circulation* 2018

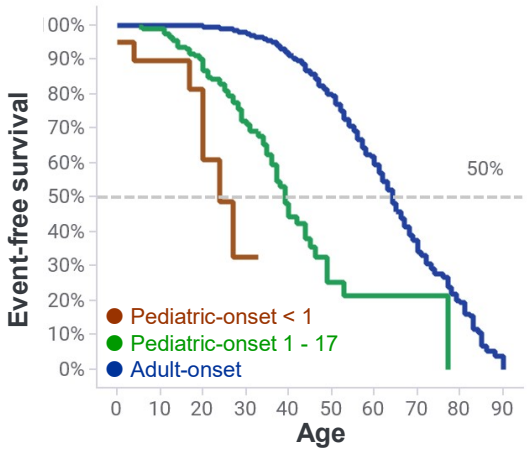
MYBPC3-associated pediatric patients represents sizable severe population lacking therapeutic options

Infants and children experience a markedly greater cumulative disease burden vs. adults (2)

36% more likely to develop life-threatening ventricular arrhythmias(1)

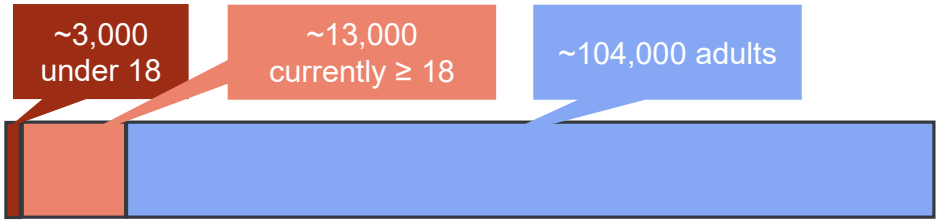
2x more likely to require transplant or ventricular assist device (1)

Time to event* since birth



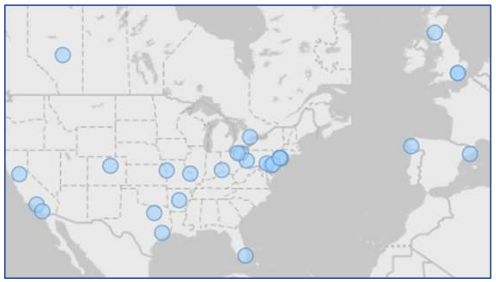
** Event-free survival composite endpoint includes NYHA class III/IV, transplant, sudden cardiac arrest, atrial fibrillation, ICD firing, heart failure, stroke, death*

Epidemiology at age of onset



Tenaya is planning ahead to address the unmet need in those >18 and at increased risk

TN-201 has received **Rare Pediatric Disease Designation** for pediatric-onset *MYBPC3*-associated HCM



MyClimb Natural History Study

29 sites have enrolled

>220 subjects

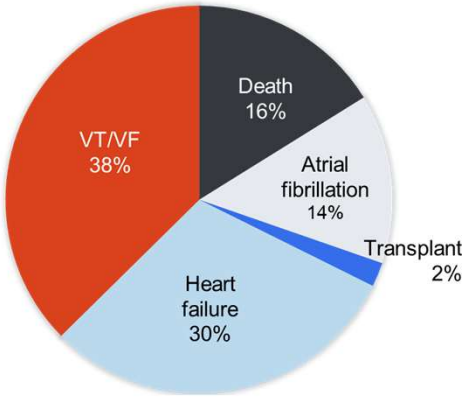
1. Marston, et al, *Eur Heart Journal* 2021
2. Meisner, et al, HCMS 2024

Nonobstructive HCM is the dominant form of *MYBPC3* disease accounting for 70% of adults

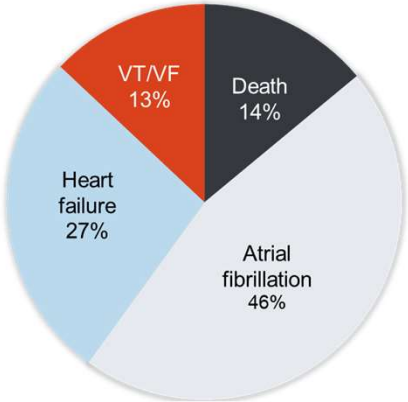
40% of all nonobstructive HCM patients – **88,000** in the U.S. – carry the *MYBPC3* mutation[1]

Nonobstructive HCM disease severity is high [2]

Nonobstructive Disease Burden



Obstructive Disease Burden



35% of nonobstructive HCM patients are NYHA Class II & III[3]

Nonobstructive HCM treatment options are more limited

- Surgical methods (e.g., myectomy, septal ablation) not relevant options
- Typical treatment – beta blockers, anti-arrhythmics, blood thinners – utilized off-label to manage symptoms
- Cardiac myosin inhibitors (CMIs) have not yet demonstrated clinically meaningful benefits or been approved for use in nonobstructive HCM[4]

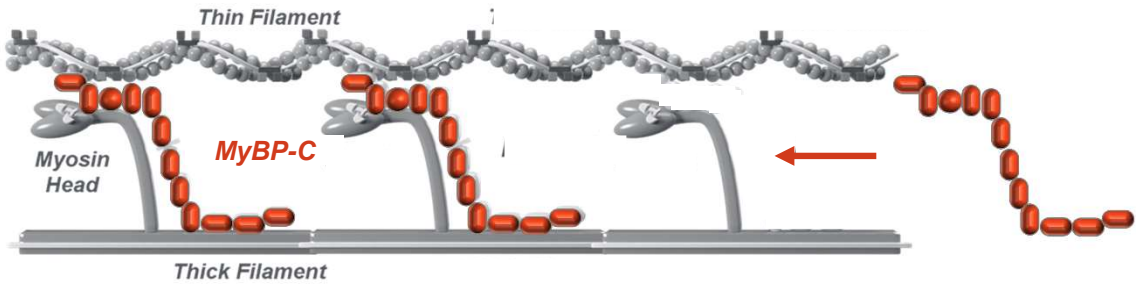
1. AHA; Sedaghat-Hemedani, et al., Clin Res Cardiol 2018
2. Lu, et al, *JAHA* 2018
3. Maron, et al, ACC 2024
4. Ho, et al, JACC 2020

VT/VF = ventricular tachycardia/ventricular fibrillation

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

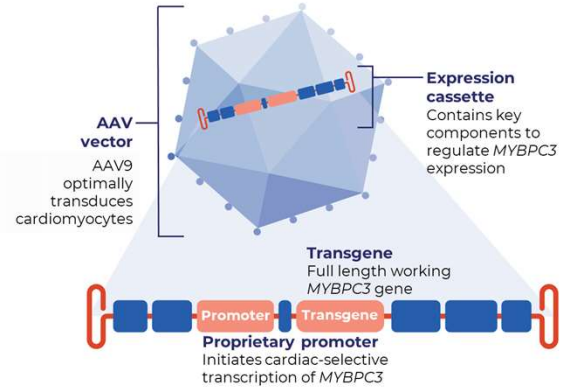
Underlying Problem

- Mutations of the MYBPC3 gene lead to lower levels of myosin-binding protein C (MyBP-C)
- MyBP-C is an essential structural protein required to regulate the binding of myosin and actin in sarcomere
- Lower MyBP-C protein results in increased cardiac contractility (hypertrophy), thickening of left ventricle and impaired diastolic relaxation



Tenaya Approach

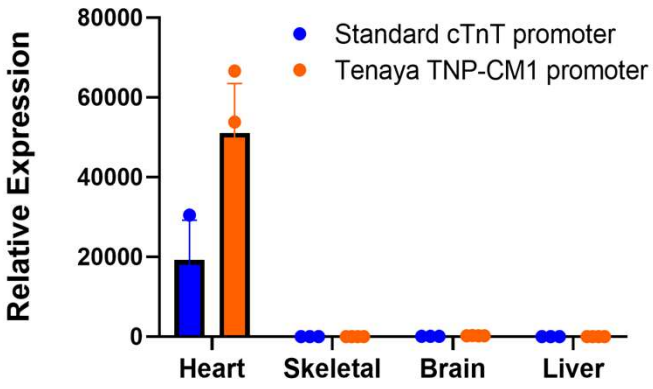
- Target the underlying genetic cause of disease
- Deliver a working *MYBPC3* gene utilizing AAV9 capsid
- Produce functional protein to increase MyBP-C levels
- Potential to halt disease progression, reverse symptoms and improve patient quality of life



TN-201 gene therapy construct has been designed to maximize safety and efficacy

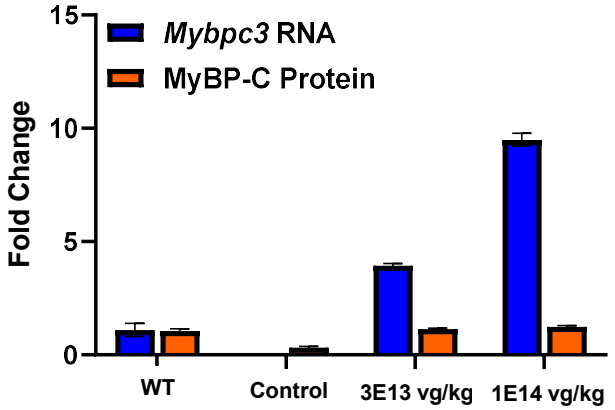
TN-201 proprietary promoter and cassette design enables selective and robust gene expression in relevant heart cells

***In vivo* comparison with standard promoter (in WT mice)**



100% WT levels of MYBPC3 protein achieved in severe disease model with no protein overexpression

***In vivo* comparison (WT vs. *Mybpc3* KO mice)**



WT = wild type | cTnT = cardiac troponin (measure of cardiac injury) | RNA = ribonucleic acid
KO = knock out | vg/kg = vector genome per kilogram

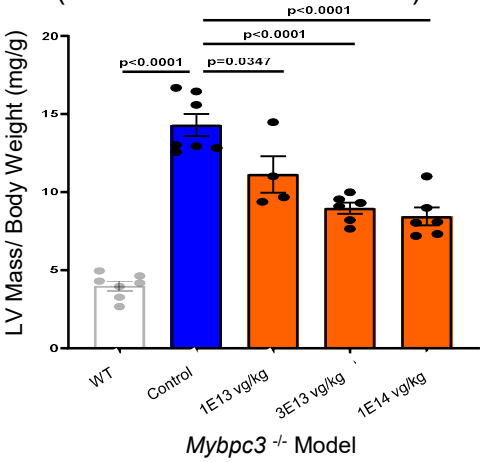
Unpublished; Tenaya Data on File

TN-201 preclinical evidence for disease reversal, improved heart function, increased survival

Single 3E13 vg/kg dose in *MYBPC3* KO mouse model results in reduction in hypertrophy, durable improvement in cardiac function and extended survival

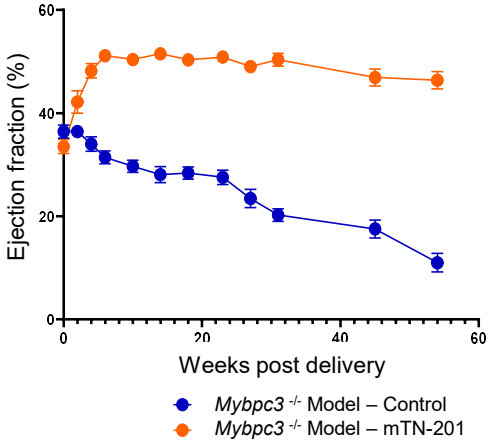
↓ Heart Mass

(8 Months Post-Treatment)



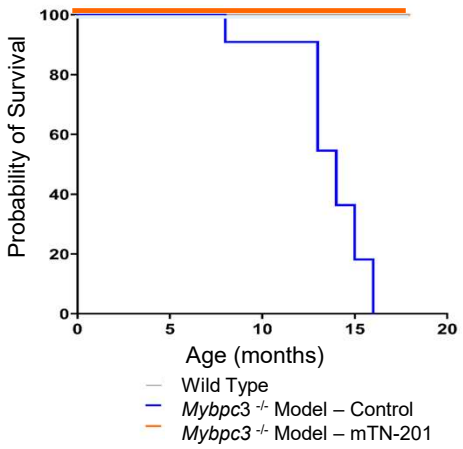
↑ Heart Function

(13 Months Post-Treatment)



↑ Survival

(18 Months Post-Treatment)



mTN-201 = mouse analog | LV = left ventricular

Lombardi, et al, ASGCT 2021

MyPEAK-1 Phase 1b/2 clinical trial

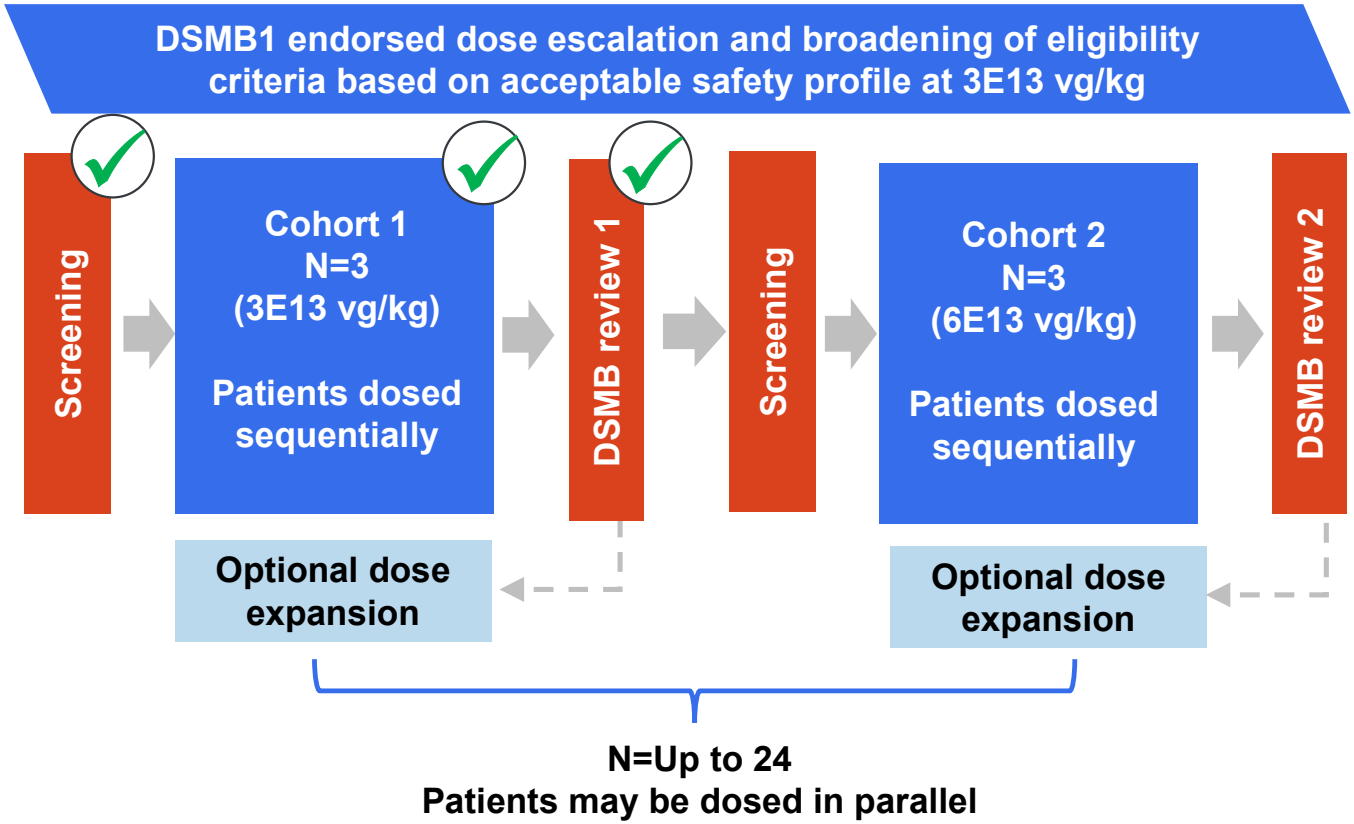
Open-label, multi-center dose escalation and expansion trial

Study Objectives

- Safety, tolerability
- Dose-finding
- Pharmacodynamics

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)

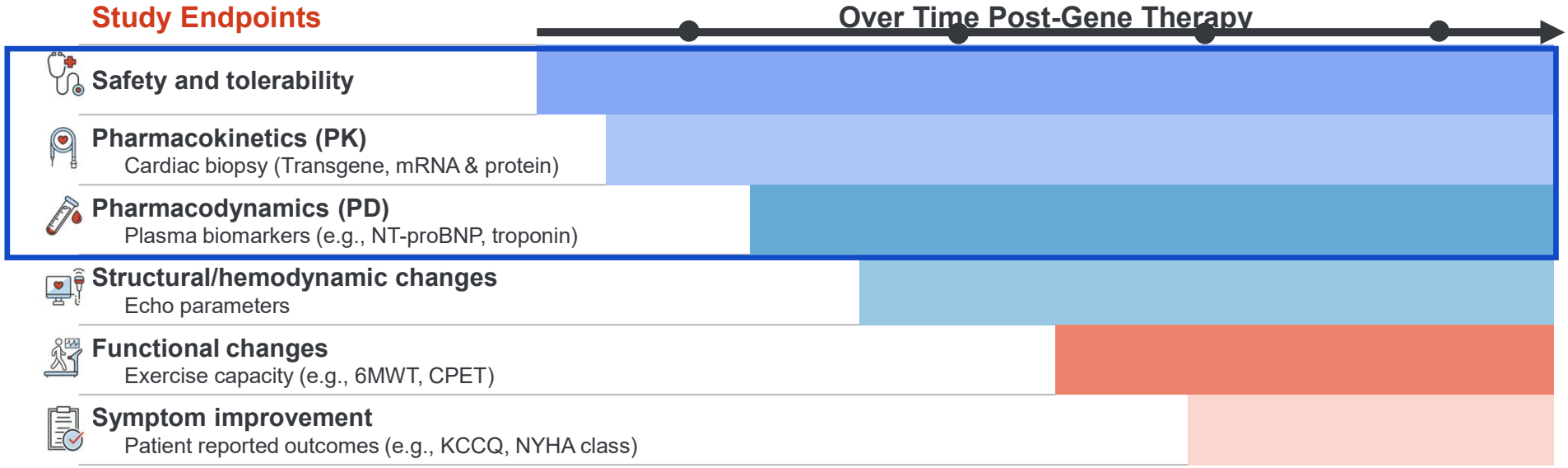


DSMB: Data Safety Monitoring Board
Vg/kg: vector genomes per kilogram

MyPEAK-1 Phase 1b/2 clinical trial

Initial data planned December 2024

First data readout expected to include (at least) safety, PK and PD
Seeking directional consistency across multiple parameters over time



mRNA = messenger ribonucleic acid | NT-proBNP = N-terminal pro–B-type natriuretic peptide
CPET = Cardiopulmonary exercise testing | 6MWT = 6-minute walk test | KCCQ = Kansas City Cardiomyopathy Questionnaire

Plan to explore TN-201 in the full spectrum of patient presentation caused by *MYBPC3* mutations

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

Heterozygotes → **Homozygotes**

Non-Obstructive Phenotype (70%)

Obstructive Phenotype (30%)

- Adults (18-65) with *MYBPC3* mutation
- Nonobstructive or obstructive HCM
- NYHA class II or III
- With or without ICD present
- NT-proBNP elevated
- Low AAV9 NAbs

Potential future expansion

MyClimb Natural History Study

MyPEAK-1 Cohort 1 enrolled nonobstructive HCM adult patients w/ ICDs. Cohort 2+ expands population to obstructive or nonobstructive adults, with or without ICD

MyClimb natural history study for pediatric-onset *MYBPC3*-HCM serves as potential run-in and/or control arm study for future expansion to patients <18

Why TN-201 is positioned for success in 2024 and beyond

Tenaya's robust TN-201 preclinical package and MyPEAK-1 clinical study design reflect safety and efficacy at doses as low as 3E13 vg/kg

Clinical cardiomyopathy experience across different modalities informs and potentially de-risks TN-201 development

Preclinical*

- ✓ Broad distribution across heart
- ✓ Cardiomyocyte-specific expression
- ✓ High RNA & protein expression
- ✓ Improvements in
  - Hypercontractility
  - LV mass and thickness
  - Fibrosis
  - ECG parameters
  - Ejection fraction
  - Diastolic dysfunction
  - Survival

Clinical

- ✓ Starting dose associated with near maximal preclinical efficacy
- ✓ Data rich study
- ✓ Strong safety guardrails
- ✓ Multiple sites activated
- ✓ High patient engagement in seroprevalence study

Regulatory Designations

- ✓ Orphan Disease
- ✓ Fast Track
- ✓ Rare Pediatric Disease

- ✓ AAV9 transduction & durable expression [4]
- ✓ Improvements in
  - Circulating biomarkers [1,2,4,6]
  - LV mass & wall thickness [1,2,4,6]
  - Contractility [1,2,5]
  - Heart function [1,2,4]
  - NYHA class [1,2,4]
  - Exercise capacity [1,2,3,5]
  - Quality of life [1,2,4,5]
- ✓ Approval using feel & functions endpoints [1]
- ✓ Potential for accelerated approval [4]

TENAYA THERAPEUTICS

* Tenaya data on file and presented

(1) Bristol Myers Squibb (2) Cytokinetics (3) Imbria (4) rocket pharma (5) 4DMT (6) LEXEO therapeutics

PKP2-associated ARVC is estimated to affect >70,000 people in the U.S.

A severe and progressive genetic heart disease lacking therapeutic treatment options

>15% of heart-related deaths in patients < 35 years old is due to ARVC (3)

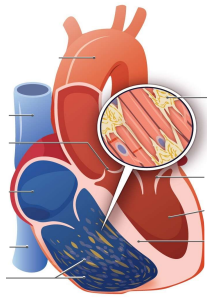
23% of ARVC patients present with sudden cardiac death

>75% of ARVC patients presenting with SCD have irreversible RV and/or LV fibro-fatty replacement

40% of ARVC patients carry pathogenic *PKP2* mutations (3)

- Early symptoms include palpitations, lightheadedness, fainting (1)
- Significant impact on quality of life due to arrhythmias, ICD shocks and restrictions on physical exertion (3)

ARVC HEART



Scar tissue leads to electrical misfiring between cells

Enlarged right ventricle with fat and scar tissue

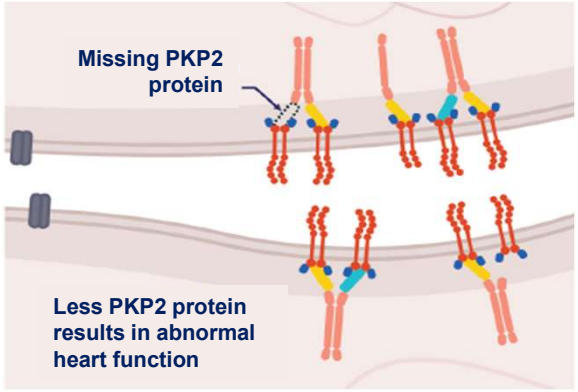
1. Dalal, et al, Circ, 2005
2. Hemida, et al, Eur J Heart Failure, 2018
3. SADS Foundation

SCD= sudden cardiac death
RV = right ventricle
LV = left ventricle
ICD = impantable cardiodefibrillator

TN-401 gene therapy for *PKP2*-associated ARVC

Underlying problem

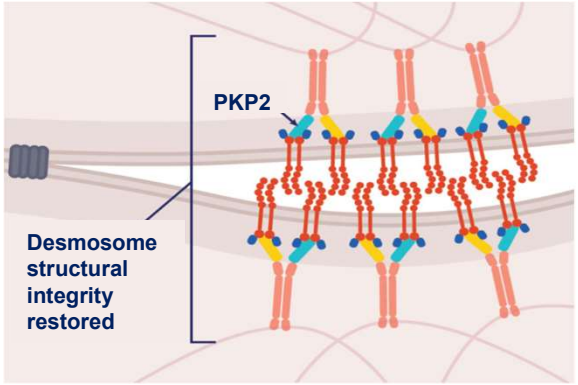
- Mutations of the *PKP2* gene lead to lower levels of Plakophilin-2 (PKP2) protein [1]
- PKP2 is an essential structural protein in the desmosomes, connecting cardiomyocytes supporting electrical and mechanical signaling and overall tissue strength



Desmosome and Gap Junctions in *PKP2*-associated HCM Heart

Tenaya Approach

- Target the underlying genetic cause of disease
- Deliver a working *PKP2* gene utilizing AAV9 capsid
- Increase PKP2 protein levels
- Potential to halt disease progression, reverse symptoms and improve patient quality of life



Treated with TN-401

1. McKenna, et al, Nature Rev Cardio 2021

TN-401 use of AAV9 capsid comes with robust validation from preclinical efficacy and clinical studies

Human

- ✓ **Most well-established safety record of any capsid.** Zolgensma is an approved product using AAV9 and has been used in >3700 patients in >51 countries, with >9 years follow-up (1)
- ✓ **Only capsid with validation from human hearts** for biodistribution, transduction, and durable gene expression (2)
- ✓ **Only capsid endemic to humans being used in *PKP2* clinical studies** as compared to AAVrh74 and AAVrh10 discovered in rhesus monkeys (8)

Non-Human Primates

- ✓ **Proven to achieve significantly higher gene expression in cardiomyocytes** vs other capsids in several preclinical studies, include head-to-head comparisons in NHPs (and mice) (3)

Mice

- ✓ **Most extensive body of preclinical evidence in *PKP2* disease models** from three independently published studies (5,6,7)
- ✓ **Outperformed AAVrh74 in a head-to-head preclinical comparison in *PKP2* models** plus in other disease models (3,4)

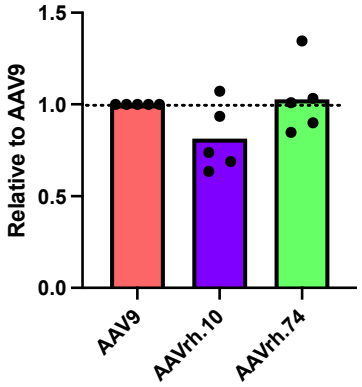
1. Novartis March 2024 PR
2. Rocket corporate presentation
3. Ze, et al. ASGCT 2023
4. Herzog, et al, US PTO US 2022/0168446 A1
5. 5 Bradford et al, Nature CV Res, 2023
6 Kyriakopoulou et al, Nature CV Res, 2023
7 (In press) Yang, et al, Communications Medicine
AAVrh = Adeno-associated virus rhesus isolate
8 Wang, Nat Rev Drug Discov. 2019

Comparing capsids: AAV9 outperforms other serotypes in preclinical models of mice and NHPs

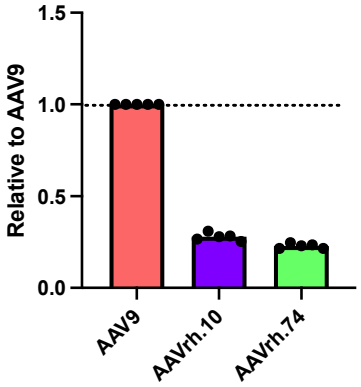
AAV9 achieved significantly higher gene expression in cardiomyocytes in a head-to-head preclinical comparisons of AAV9, AAVrh10, and AAVrh74

Mouse Model of *PKP2* ARVC

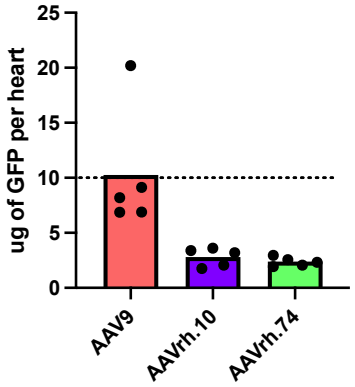
Viral DNA Transduction
All heart cells



Viral RNA Transgene Expression
Cardiomyocytes only

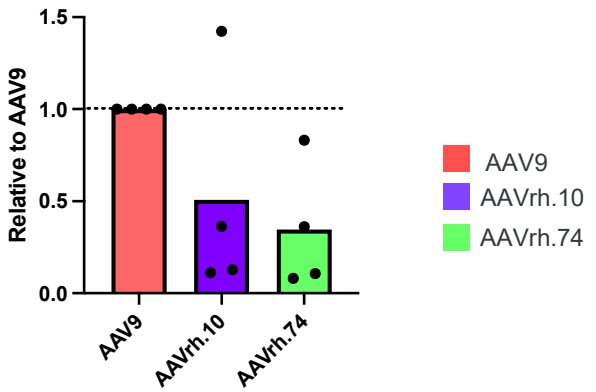


Viral Protein Transgene Expression
Cardiomyocytes only



Non-Human Primate Model

Viral RNA Transgene Expression
Cardiomyocytes only

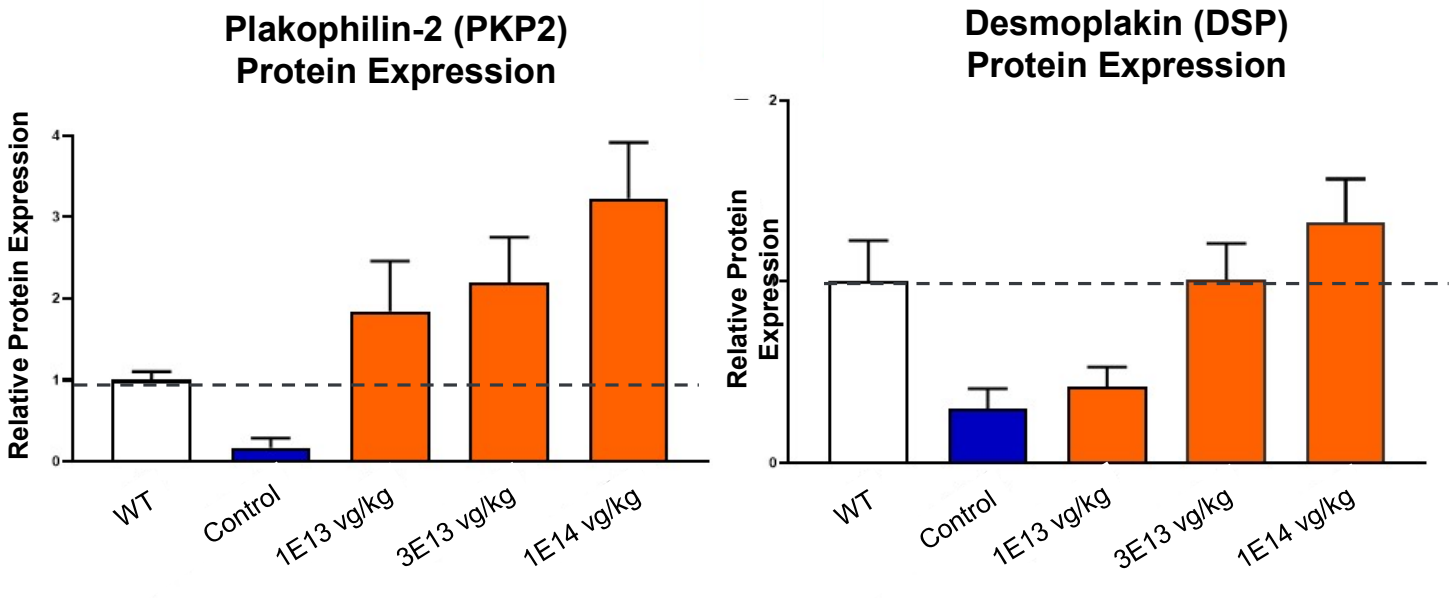


Cheng, ASGCT 2024

AAV9-based gene therapy restores PKP2 protein to normal levels at low doses in animal models

3E13 vg/kg dose is sufficient to restore normal protein levels of PKP2 and other desmosomal proteins

***Pkp2*-cKO Mice**

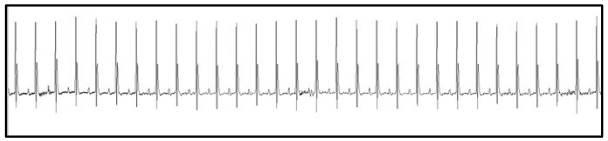


TN-401 preclinical evidence includes arrhythmia prevention, disease modification, survival benefit

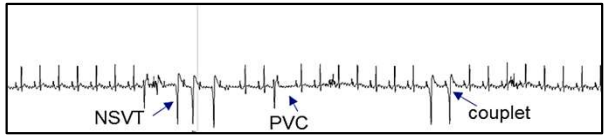
Single 3E13 vg/kg dose in PKP2 knock-out mouse model reverses hallmarks of disease including reversal of arrythmia and RV enlargement, plus extended survival

↓ Arrhythmia

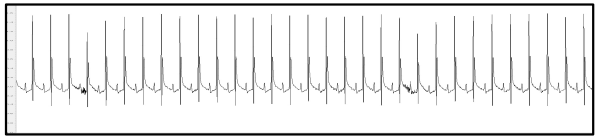
WT: Normal Sinus Rhythm



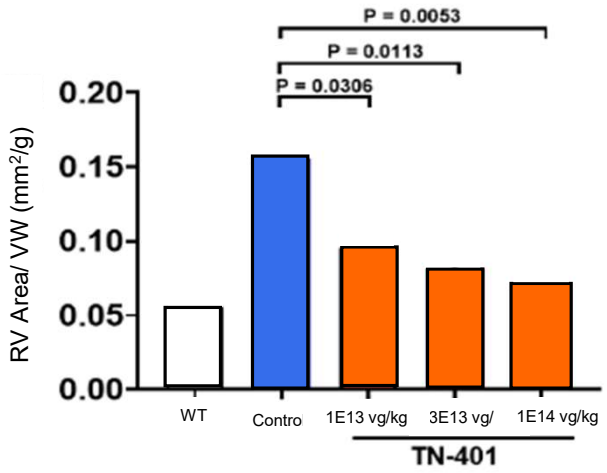
Untreated Control: Abnormal Ventricular Beats



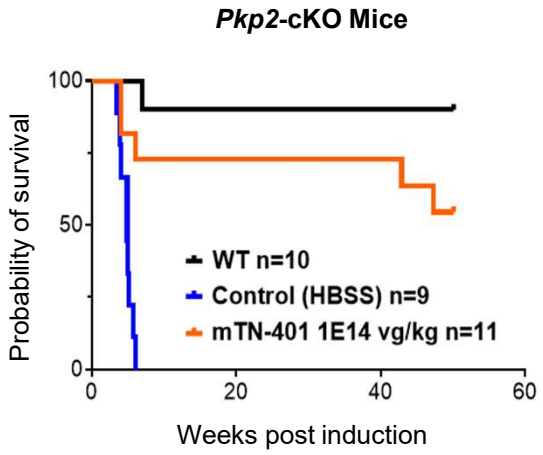
Gene Therapy: Normal Sinus Rhythm



↓ RV Enlargement



↑ Survival



Yang, et al, ASGCT 2022

RIDGE™-1 Phase 1b clinical trial for *PKP2*-associated ARVC

Now enrolling – Patient dosing commenced November 2024

Study Objectives

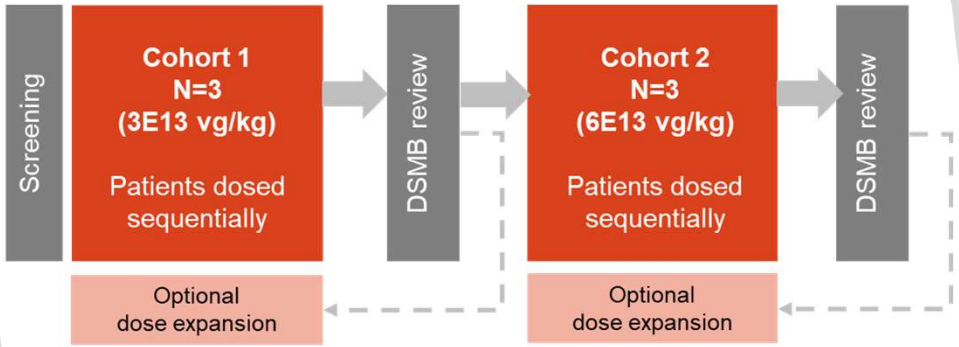
- Safety, tolerability, dose-finding and PD

Eligibility

- ARVC diagnosis
- *PKP2* mutation carriers
- Adults (age 18-65)
- ICD present
- Mean PVCs >500 per 24 hours
- LVEF > 50%
- NYHA class I-III
- Low AAV9 titer

Design

- Open-label, multi-center dose-escalation and dose-expansion study
- 52-week study period with four-year safety and efficacy follow-up



Endpoints

- **Safety and tolerability**
- **Pharmacokinetics (PK)**
  - Transgene uptake and expression
- **Pharmacodynamics (PD)**
  - Changes in PVC & NSVT
- **Exploratory efficacy endpoints**
  - Frequency of ICD shocks
  - Frequency of VTs
  - Imaging biomarkers (structural/hemodynamic changes by echo)
  - Plasma biomarkers
  - Patient reported outcomes

IND = Investigational New Drug application | LVEF = left ventricular ejection fraction
PVCs = premature ventricular contractions NSVT = non-sustained ventricular tachycardia

Clinical execution across programs focused on forging relationships with cardiology experts

MyPEAK-1 Phase 1b/2 Clinical Trial of TN-201 for *MYBPC3*-associated HCM

11 U.S.-based clinical sites activated

1st patient dosed October 2023 at the Cleveland Clinic

100 *MYBPC3*-associated HCM individuals at **13** sites participated in an AAV9 seroprevalence study

MyClimb Natural History Study of pediatric onset *MYBPC3*-associated HCM

MyClimb Natural History Study

>200 participants enrolled

29 sites activated in the U.S., Canada, Spain and U.K.

RIDGE-1 Phase 1b Clinical Trial of TN-401 for *PKP2*-associated ARVC

6 U.S.-based clinical sites activated

1st patient dosed November 2024 at UCSF

RIDGE Natural History and Seroprevalence Study of Adults and Teens with *PKP2*-associated ARVC

>100 participants enrolled

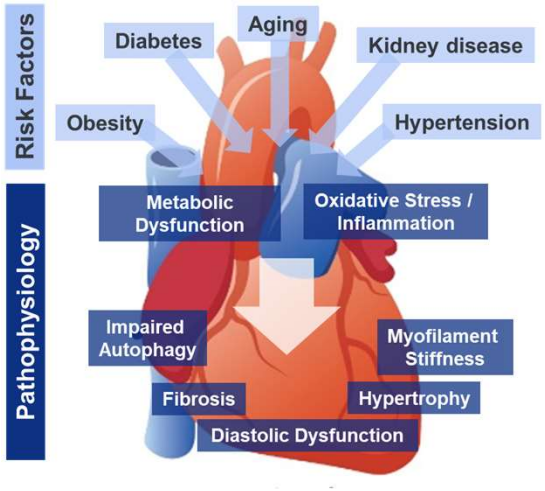
20 clinical sites in the U.S., Germany, France, Italy, Sweden and U.K.

TN-301 small molecule HDAC6 inhibitor for HFpEF

HFpEF remains the largest unmet need in heart disease estimated to affect >3M in the U.S. alone (1, 2)

- Characterized by diastolic dysfunction driven by stiffening of heart ventricles
- Initial presentation includes shortness of breath, edema, fatigue, coughing, wheezing, dizziness
- Co-morbidities include obesity, metabolic syndrome, diabetes hypertension, atrial fibrillation, pulmonary disease, and renal dysfunction (3)
- 75% of people hospitalized with HFpEF die within 5 years (4)

- Multiple contributing risk factors resulting in complex pathophysiology



HDAC6 = histone deacetylase 6

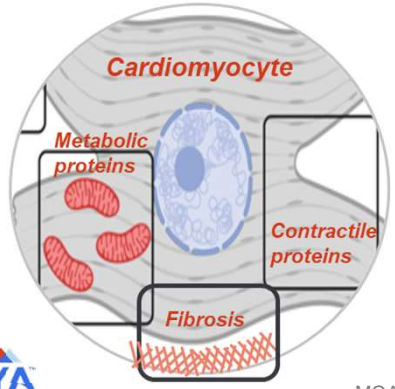
1. Cilia et al, Am J Lifestyle Med 2019
2. Tsao, et al Circulation 2023
3. Van Heerebeek, et al. Neth Heart Jour 2016
4.Shah, et al, JACC 2017

TN-301 small molecule HDAC6 inhibitor for HFpEF

Phase 1 complete; Optimally suited for development by/with a partner

About HFpEF

- Disease driven by multi-factorial processes involving many cell types and cellular structures:
  - Inside heart (cardiomyocytes, fibroblasts, mitochondria, sarcomeres, arterial walls)
  - Outside heart (systemic inflammation, oxidative stress, metabolic dysregulation)



Tenaya Approach

- Designed to specifically inhibit HDAC6 in the cytoplasm of heart cells
- Multi-modal MOA addresses diverse HFpEF pathophysiological processes
- Preclinical evidence of robust reversal of heart abnormalities (e.g., stiffness, hypertrophy) and systemic benefits (e.g., inflammation, glucose tolerance, insulin sensitivity, autophagy)

HDAC6 is a cytoplasmic enzyme that regulates diverse cellular processes in many different types of cells of the body

Key Advantages

- High selectivity (1000x fold)offers potential safety advantage vs. partially selective HDAC6 inhibitors
- Pleiotropic effect has potential to address HFpEF co-morbidities (“pipeline in a pill”)
- MOA is orthogonal to other heart medicines (e.g. SGLT2 inhibitors) and may yield additive benefits
- PD marker of target engagement conveniently measurable in human plasma
- Small molecule cost of goods appropriate for large indications

TENAYA THERAPEUTICS

MOA = mechanism of action | SGLT2 =sodium glucose cotransporter-2

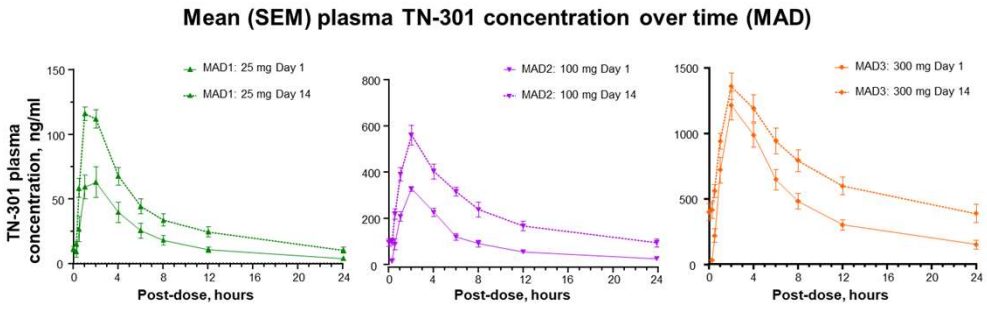
Completed Phase 1 trial of TN-301 in healthy participants

TN-301 was generally well tolerated across broad dose ranges

- Single-ascending doses (SAD) of 1mg – 700mg
- Multiple ascending doses (MAD) of 25mg, 100 mg and 300 mg for 14 days
- Most AEs observed were GI related; occurred with similar frequency in placebo group and did not increase in association with dose

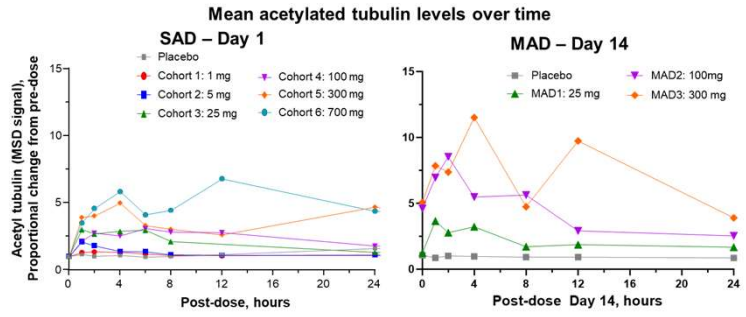
PK and half-life support once-daily dosing

Plasma exposure increased proportionally with TN-301 dose across ranges evaluated



Target engagement (as measured by tubulin acetylation) seen at low doses

Increasing TN-301 exposure correlated with PD effect



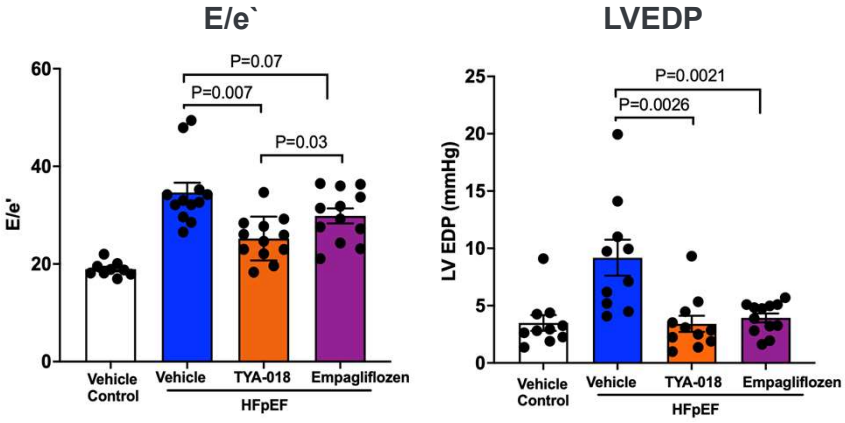
Variability (SEM) in acetylated tubulin levels ranged from 0.038 to 1.410 (SAD results); and 0.067 to 4.050 (MAD results)

AEs = Adverse events | GI = gastrointestinal

HDAC6 inhibitor demonstrates preclinical potential for use as single-agent or in combination with SGLT2 inhibitor

HDAC6 vs. SGLT2 inhibition

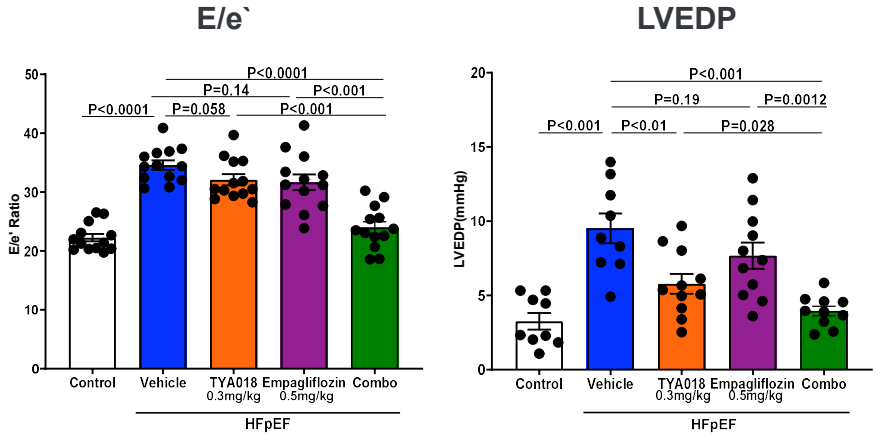
↔ Comparable efficacy as a single agent



Yang, et al; ESC-HF 2022

HDAC6 + SGLT2 inhibition

\+ Additive efficacy in combination



Farshidfar, et al; HFSA 2023

HDAC6 inhibitor demonstrates greater impact vs SGLT2 inhibitor on improving metabolism, oxidative stress and inflammation, key mechanisms involved in HFpEF pathophysiology

E/e' = measure of diastolic function LVEDP = left ventricular end diastolic pressure

TENAYA™ THERAPEUTICS

Selected Capabilities

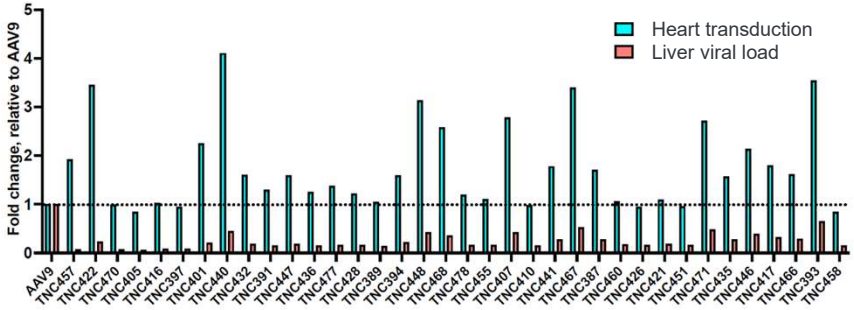
Next generation AAV capsid engineering efforts aimed at enhanced efficacy and safety

Focused AAV Screening Efforts Using Multiple Strategies

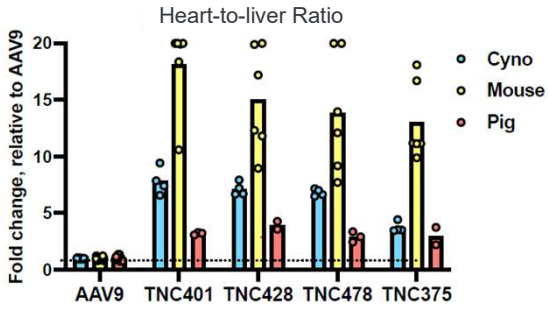
- Screened > 1B variants from ~30 diverse libraries
- Validated *in silico, in vitro* and *in vivo* (4 species)
- Multiple criteria
  - ↑ heart transduction
  - ↓ liver transduction
  - ↔ antigenicity
  - ↔ manufacturability

Novel AAV Capsids for Heart that **Outperform** Parental Vectors

2nd generation novel capsids demonstrate reduced trafficking to the liver in NHPs vs. AAV9



Top novel capsids show improved heart-to-liver ratio across 3 species



Chen, et al; ESGCT 2022

2nd Generation Capsid Characteristics

- ☑ Superior heart transduction → may lead to **more efficacious therapy**
- ☑ Superior liver de-targeting → may **improve the safety profile**
- ☑ Superior NAb evasion → may enable treatment of a **greater number of patients**

NHP = Non-Human Primate | NAb = neutralizing antibodies

End-to-end gene therapy manufacturing capabilities built to scale from early research to drug approvals

Manufacturing Technology Development Center (non-GMP)

Process Development

- Development of science to improve process and product attributes

→ IP filed on technologies to boost AAV drug product potency and yield

Analytical Development

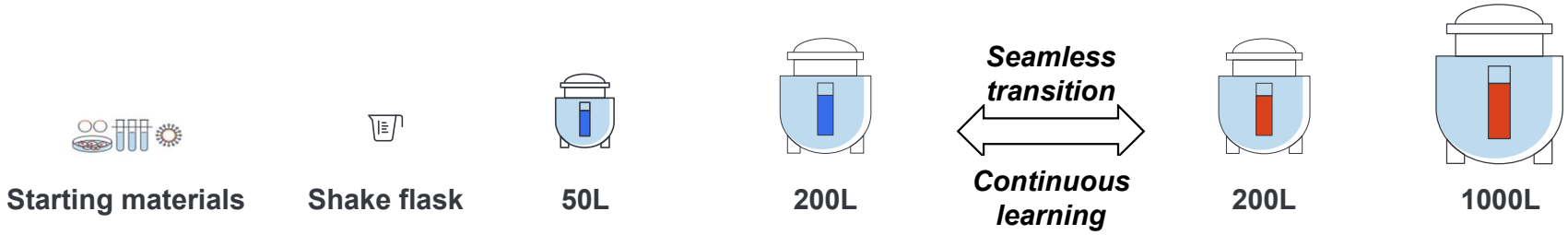
- Development of assays to support drug substance and product release

→ Potency assays accepted by FDA for both TN-201 and TN-401

Genetic Medicines Manufacturing Center (cGMP)

- Modular design enables future expansion for commercial launch

→ Sufficient Phase 1b clinical supply available for TN-201 and TN-401



TENAYA™ THERAPEUTICS

2024 Strategic Priorities

2024 strategic priorities

Drive clinical-stage gene therapy programs towards initial data readouts

TN-201

✓ FY – Enroll patients in MyPEAK-1

Dec – Release initial MyPEAK-1 data

TN-401

✓ Initiated patient dosing in RIDGE-1 November 2024

Research & Manufacturing

✓ Present data from early-stage research efforts and platform enhancement innovations

Cash and equivalents of $79.5* million as of September 30, 2024

Planned operations funded into 2H 2025

TENAYA THERAPEUTICS

* Tenaya has not drawn on the $45M credit facility put in place in Q3'24

Thank you