



# XIX INTERNATIONAL SYMPOSIUM ON AMYLOIDOSIS

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- Dr. Alexander is an advanced heart failure-trained cardiologist. He is also an Assistant Professor of Cardiovascular Medicine at Stanford University School of Medicine
- He specializes in the management of advanced heart failure and transplant cases, and sees a wide range of patients. He also has an active research laboratory, studying various forms of heart failure
- Dr. Alexander has expertise in diagnosing and treating transthyretin cardiac amyloidosis, a critical yet underdiagnosed cause of heart failure among African Americans and the elderly. He is conducting extensive research to enhance our understanding of this condition, with grant support from the National Institutes of Health and American Heart Association, among other sources





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#### ACORAMIDIS ACHIEVES EARLY REDUCTION IN CARDIOVASCULAR-RELATED DEATH OR HOSPITALIZATION IN TRANSTHYRETIN AMYLOID CARDIOMYOPATHY (ATTR-CM): RESULTS FROM THE ATTRIbute-CM CLINICAL TRIAL

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## DISCLOSURE OF RELEVANT FINANCIAL RELATIONSHIP(S) WITH INDUSTRY

#### Kevin M Alexander: Consultant, advisor, and/or speaker for Arbor, Attralus, Intellia, and Prothena.

DJ: Has contributed to research for Pfizer, Array, and Eidos; has been a consultant, advisor, and/or speaker for Alexion, Alleviant, Alnylam, Blade, Cytokinetics, Lexeo, Novo Nordisk, Pfizer, Renovacor, Tenaya, and GSK. FC: Has been a consultant, advisor, and/or speaker for Alnylam, Pfizer, AstraZeneca, BridgeBio, Amicus, and Novo Nordisk. MF: Has been a consultant, advisor, and/or speaker for Pfizer, Akcea, Ionis, Alnylam, Alexion, AstraZeneca, Eidos, Intellia, Janssen, Novo Nordisk; has received research grants from Pfizer and Eidos. PGP: Has contributed to research for Alnylam, AstraZeneca, Intellia, Novo Nordisk, and Pfizer; Has been a consultant, advisor, and/or speaker for Alnylam, AstraZeneca, Intellia, Pfizer, Novo Nordisk, Alexion, Attralus, BridgeBio, and Ionis. MG: Has contributed to research for Alnylam, Eidos, Janssen, and Pfizer; has been a consultant, advisor, and/or speaker for Janssen and Novo Nordisk. **MH**: Has been a consultant, advisor, and/or speaker for Pfizer, Alnylam, BridgeBio, Ionis, and Alexion. AM: Has contributed to research for Pfizer, Ionis, Attralus, and Cytokinetics; has been a consultant, advisor, and/or speaker for Cytokinetics, BMS, Eidos, Pfizer, Ionis, Lexicon, Attralus, Alnylam, Haya, Alexion, Akros, Prothena, BioMarin, AstraZeneca, and Tenaya. MM: Has contributed to research for NIH (NIH R01HL139671 and R01AG081582-01), Alnylam, Pfizer, Eidos, Prothena, and Ionis; has been a consultant, advisor, and/or speaker for AstraZeneca, Akcea, Intellia, Novo Nordisk, Alnylam, Pfizer, Eidos, Prothena, and Ionis. LO: Has been a consultant, advisor, and/or speaker for Alnylam, AstraZeneca, BridgeBio, Ionis, Novo Nordisk, Pfizer, and Sobi. PS: Has contributed to research for Pfizer; has been a consultant, advisor, and/or speaker for BridgeBio, Alnylam, Pfizer. XC, LK, JCF, JFT, SS: Employees and shareholders of BridgeBio. KM: Has contributed to research for AHA, Apple, Bayer, California Institute for Regenerative Medicine, CSL Behring, Eidos, Ferring, Gilead, Google (Verily), Idorsia, Johnson & Johnson, Luitpold, Novartis, PAC-12, Precordior, and Sanifit; has been a consultant, advisor, and/or speaker for Applied Therapeutics, Bayer, BMS, BridgeBio, CSL Behring, Elsevier, Fosun, Human, Johnson & Johnson, Moderna, Myokardia, Novartis, Novo Nordisk, Otsuka, Phasebio, Portola, Quidel, and Theravance: individually publicly traded stocks and stock options in Human, Medeloop, Precordior, and Regencor. JG: Has been a consultant, advisor, and/or speaker for Alnylam, AstraZeneca, Attralus, BridgeBio, Ionis, Intellia, and Pfizer.

# **REFERENCES TO OFF-LABEL USAGE(S) OF PHARMACEUTICALS OR INSTRUMENTS**

• Acoramidis is an investigational agent being studied in patients with ATTR-CM

# LEARNING OBJECTIVE

 Understand the treatment effect of acoramidis on time to CV-related mortality or first CV-related hospitalization in patients with ATTR-CM

# INTRODUCTION

- ATTR-CM is a progressive cardiomyopathy resulting in substantial cardiovascular morbidity and mortality and caused by the destabilization of the TTR tetramer<sup>1,2</sup>
- Acoramidis is a next-generation, investigational, near-complete TTR stabilizer (>90%) for the treatment of patients with ATTR-CM<sup>3-5</sup>
- Acoramidis demonstrated a significant improvement in a 4-step primary hierarchical endpoint of mortality, morbidity, and function in the phase 3 ATTRibute-CM<sup>a</sup> study<sup>6</sup>
- Acoramidis also demonstrated a 50% relative risk reduction in the cumulative frequency of CVH compared with placebo over 30 months<sup>3,6</sup>



#### OBJECTIVE

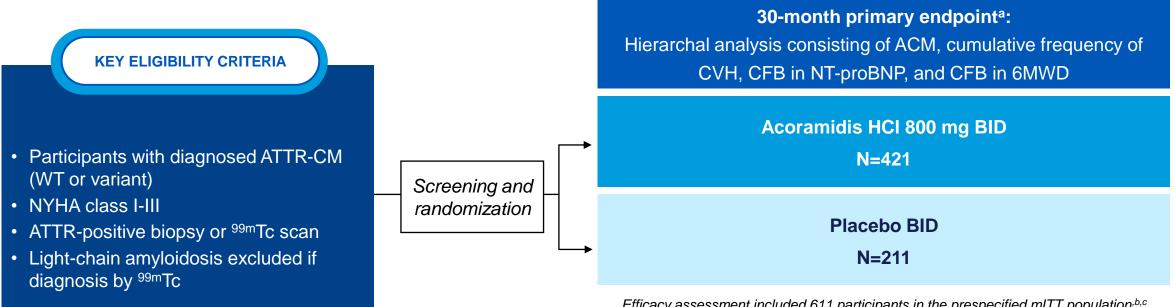
To report the prespecified time-to-first-event (TTE) analysis for the composite of CVM or CVH based on adjudicated data using the Cox proportional hazards model

<sup>a</sup>ATTRibute-CM (NCT03860935)

ATTR-CM, transthyretin amyloid cardiomyopathy; CVH, cardiovascular-related hospitalization; CVM, cardiovascular-related mortality; TTR, transthyretin.

1. Rapezzi C, et al. Nat Rev Cardiol. 2010;7(7):398-408. 2. Ruberg FL, et al. JAMA. 2024;331(9):778-791. 3. Judge DP, et al. J Am Coll Cardiol. 2019;74(3):285-295. 4. Penchala SC, et al. PNAS. 2013;110(24):9992-9997. 5. Miller M, et al. Med Chem. 2018;61(17):7862-7876. 6. Gillmore JD, et al. N Engl J Med. 2024;390(2):132-142.

# METHODS: ATTRIBUTE-CM STUDY DESIGN



Efficacy assessment included 611 participants in the prespecified mITT population, b,c

<sup>a</sup>Primary analysis assessed using the Finkelstein-Schoenfeld method. <sup>b</sup>Participants with baseline eGFR of  $\geq$ 30 mL/min/1.73 m<sup>2</sup>. <sup>c</sup>14.9% and 22.8% of patients receiving acoramidis or placebo, respectively, used tafamidis after Month 12 (median duration: ~11 months).

6MWD, 6-minute walk distance; <sup>99m</sup>Tc, technetium-labeled pyrophosphate or bisphosphonate; ACM, all-cause mortality; ATTR-CM, transthyretin amyloid cardiomyopathy; BID, twice daily; CVH, cardiovascular-related hospitalization; CVM, cardiovascular-related mortality; eGFR, estimated glomerular filtration rate; mITT, modified intent-to-treat; NT-proBNP, N-terminal pro-B-type natriuretic peptide; NYHA, New York Heart Association; WT, wild-type.

Gillmore JD, et al. N Engl J Med. 2024;390(2):132-142.

## **METHODS: OUTCOMES**

Time to Event Composite Endpoint



#### CVM

Any death due to a cardiovascular or undetermined cause as determined by the CEC up to the 30month duration

Receiving a heart transplant or a CMAD was treated as CVM

#### CVH<sup>a</sup> Adjudicated as CV-related and non-elective by the CEC, including EOCI<sup>b</sup>

- Kaplan-Meier curves by treatment groups were plotted for time to CVM or first CVH
- Analyses were performed using stratified Cox proportional hazards model

<sup>a</sup>CVH was defined as a non-elective admission to an acute care setting for CV-related morbidity that resulted in a ≥24-hour stay. <sup>b</sup>An unscheduled medical visit of <24 hours due to heart failure. ACM, all-cause mortality; CEC, clinical events committee; CMAD, cardiac mechanical assist device; CV, cardiovascular; CVH, cardiovascular-related hospitalization; CVM, cardiovascular-related mortality; EOCI, event of clinical interest.

Gillmore JD, et al. N Engl J Med. 2024;390(2):132-142.

## **BASELINE CHARACTERISTICS WERE COMPARABLE BETWEEN TREATMENT GROUPS**

	mITT Population N=611		
	Acoramidis n=409	Placebo n=202	
Mean age, years (SD)	77 (6.5)	77 (6.7)	
<b>Sex, n (%)</b> Male	374 (91.4)	181 (89.6)	
NYHA class, n (%)			
I	51 (12.5)	17 (8.4)	
II	288 (70.4)	156 (77.2)	
III	70 (17.1)	29 (14.4)	
eGFR, mL/min/1.73 m <sup>2</sup>			
Mean (SD)	62 (17.4)	63 (17.5)	
Median (IQR)	62 (49, 74)	61 (48, 74)	
NT-proBNP, pg/mL			
Mean (SD)	2865 (2149.6)	2650 (1899.5)	
Median (IQR)	2273 (1315, 3872)	2274 (1128, 3590)	
Genetic status <sup>a</sup> , n (%)			
Wild-type	370 (90.5)	182 (90.1)	
Variant	39 (9.5)	20 (9.9)	

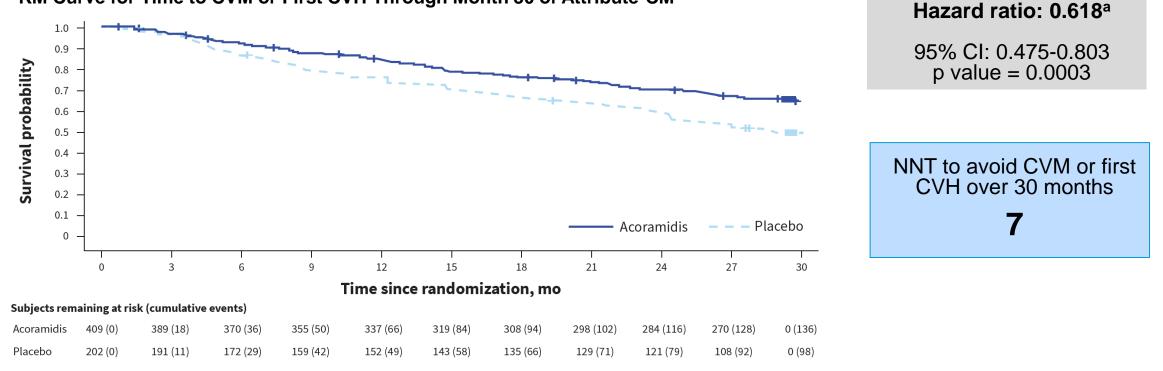
<sup>a</sup> From IXRS stratification factors

eGFR, estimated glomerular filtration rate; IXRS, interactive voice/web response system; IQR, interquartile range; mITT, modified intent-to-treat; NT-proBNP, N-terminal pro-B-type natriuretic peptide; NYHA, New York Heart Association; SD, standard deviation.

## ACORAMIDIS SIGNIFICANTLY IMPROVED CV OUTCOMES COMPARED WITH PLACEBO

#### KM curves separate early, at Month 3, and steadily diverge through Month 30

KM Curve for Time to CVM or First CVH Through Month 30 of Attribute-CM



#### 15.2% absolute risk reduction and a 38.2% hazard reduction (p=0.0003)

<sup>a</sup>Stratified Cox proportional hazards model includes treatment as an explanatory factor and baseline 6MWT as a covariate and is stratified by randomization stratification factors of genotype NT-proBNP level and eGFR level.

CV, cardiovascular; CVH, cardiovascular-related hospitalization; CVM, cardiovascular-related mortality; KM, Kaplan-Meier;

NNT, number of patients needed to treat.

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# NO SAFETY SIGNALS OF POTENTIAL CLINICAL CONCERN WERE IDENTIFIED

Participants with ≥1 event	Acoramidis n=421	Placebo n=211
Any TEAEs, n (%)	413 (98.1)	206 (97.6)
TEAE with fatal outcome	60 (14.3)	36 (17.1)
TEAE leading to hospitalization	212 (50.4)	128 (60.7)
TEAE leading to study drug discontinuation	39 (9.3)	18 (8.5)
Any TESAEs, n (%)	230 (54.6)	137 (64.9)
TESAEs leading to study drug discontinuation	21 (5.0)	15 (7.1)
Severe TEAEs, n (%)ª	157(37.3)	96 (45.5)

<sup>a</sup>As assessed by the investigator. TEAE, treatment-emergent adverse event; TESAE, treatment-emergent severe adverse event. Gillmore JD, et al. *N Engl J Med.* 2024;390(2):132-142.

## CONCLUSIONS



Acoramidis treatment resulted in an early and significant reduction in the composite endpoint of CVM or first CVH in patients with ATTR-CM

To our knowledge, early separation of KM curves at 3 months represents the most rapid clinical benefit on the composite endpoint of CVM and CVH outcomes

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Please visit the poster titled "Acoramidis Achieves Early Reduction in Cardiovascular Death or Hospitalization in Transthyretin Amyloid Cardiomyopathy (ATTR-CM): Results from the ATTRibute-CM Clinical Trial" [Poster # B-261]

ATTR-CM, transthyretin amyloid cardiomyopathy; CVH, cardiovascular-related hospitalization; CVM, cardiovascular-related mortality; KM, Kaplan-Meier.

# ACKNOWLEDGEMENTS

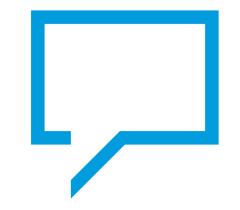
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# QUESTIONS & ANSWERS





# THANK YOU FOR JOINING US IN THIS COURSE



Rochester, Minnesota

Phoenix, Arizona

Jacksonville, Florida