



**Cadrenal Therapeutics, Inc.**  
NASDAQ: CVKD

**September 2024**



# Caution Concerning Forward-looking Statements

This document contains forward-looking statements. In addition, from time to time, we or our representatives may make forward-looking statements orally or in writing. We base these forward-looking statements on our expectations and projections about future events, which we derive from the information currently available to us. Such forward-looking statements relate to future events or our future performance, including: our financial performance and projections; our growth in revenue and earnings; and our business prospects and opportunities. You can identify forward-looking statements by those that are not historical in nature, particularly those that use terminology such as “may,” “should,” “expects,” “anticipates,” “contemplates,” “estimates,” “believes,” “plans,” “projected,” “predicts,” “potential,” or “hopes” or the negative of these or similar terms.

In evaluating these forward-looking statements, you should consider various factors, including: our ability to successfully develop and commercialize product candidates, our ability to raise capital when needed, and the competitive environment of our business. These and other factors may cause our actual results to differ materially from any forward-looking statement, including those risk factors disclosed in our Annual Report on Form 10-K for the year ended December 31, 2023 filed with the Securities and Exchange Commission on March 11, 2024. Forward-looking statements are only predictions. The forward-looking events discussed in this document and other statements made from time to time by us or our representatives may not occur, and actual events and results may differ materially and are subject to risks, uncertainties, and assumptions about us. We are not obligated to publicly update or revise any forward-looking statement, whether as a result of uncertainties and assumptions, the forward-looking events discussed in this document, and other statements made from time to time by us or our representatives might not occur.

# Cadrenal Therapeutics Overview

*Late-stage Biopharma Developing a New Anticoagulant to Improve Care for Underserved Warfarin-dependent Patients*

Our Phase 3-ready drug candidate, **tecarfarin**, is a new vitamin K antagonist (VKA) anticoagulant expected to provide **superior and safer** anticoagulation than warfarin

Striving to overcome the many challenges of warfarin and result in **improved outcomes** and **fewer major events** such as heart attacks, strokes, bleeds and deaths and lower cost of care by **avoiding costly hospitalizations**



# Three Top Potential Indications of Tecarfarin

## *Two Orphan Drug and One Fast Track Designations*

Focused on patients with implanted cardiac devices or rare cardiovascular conditions that require chronic anticoagulation



**Left Ventricular Assist Devices (LVAD) for heart failure patients**




FDA Orphan Drug Designation




**End-stage Kidney Disease (ESKD) + Atrial Fibrillation (AFib)**



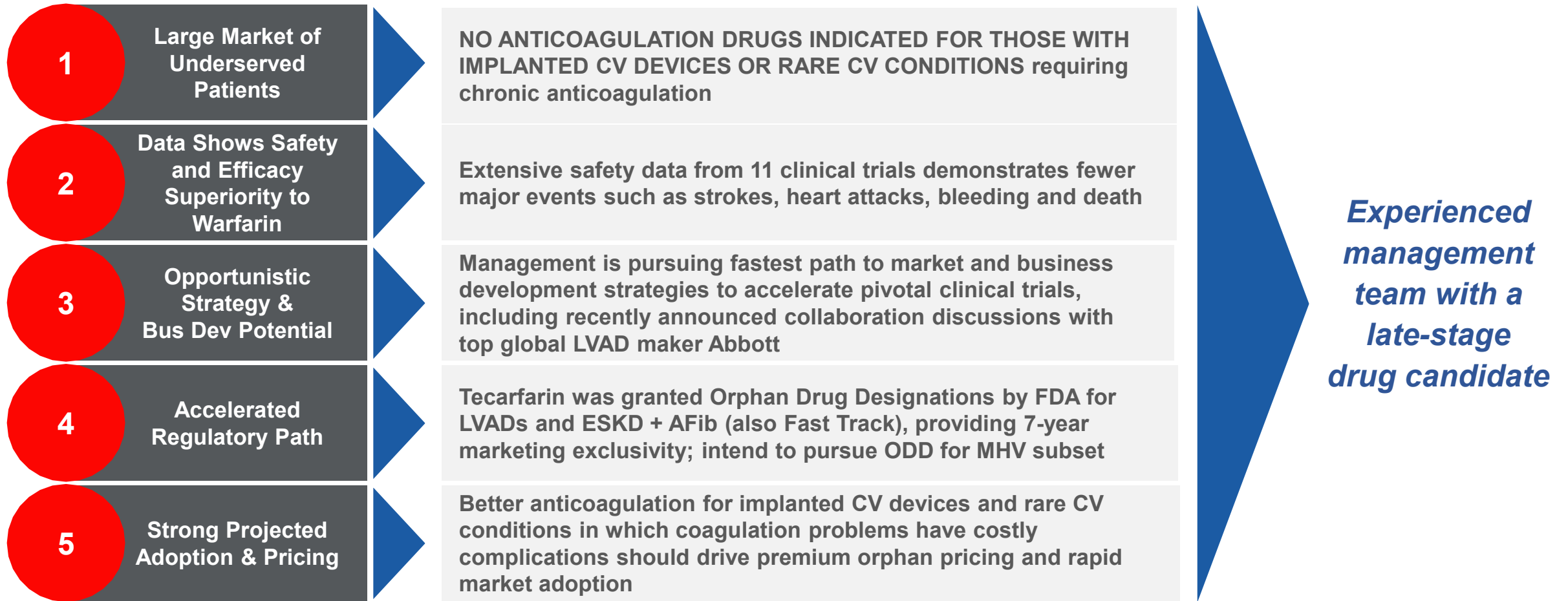
FDA Orphan Drug Designation



**Mechanical Heart Valve patients with difficult-to-control TTR\* or genetic resistance to warfarin**

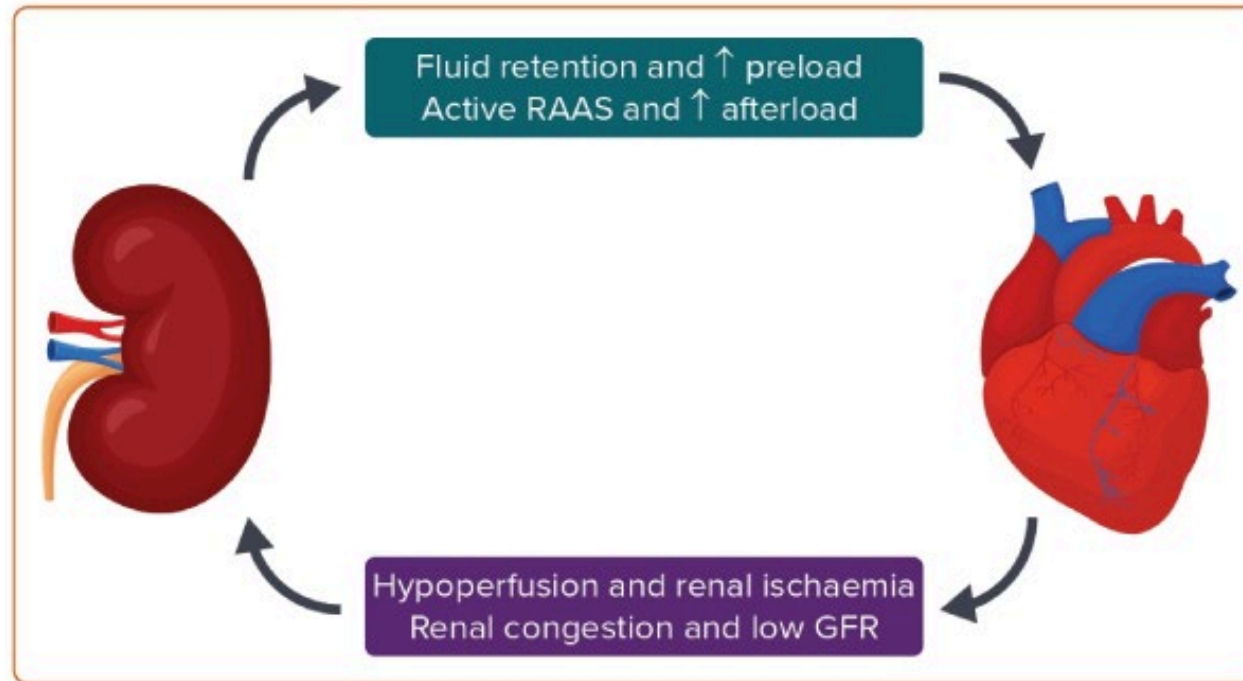


# Key Investment Highlights for Cadrenal Opportunity



# Gaps in Modern Heart Failure and Chronic Kidney Disease Research

## Interdependence of the Heart and Kidney in Chronic Kidney Disease (CKD) and Heart Failure (HF)



*GFR = glomerular filtration rate; RAAS = renin–angiotensin–aldosterone system.*

**49% of HF patients also have CKD, and an estimated 17–21% of CKD patients develop de novo HF<sup>1</sup>**

# Tecarfarin Clinical Development Pipeline

*Potential 2024 catalysts for future milestones to build enterprise value*

Program	Prioritized Target Indications	Regulatory Strategy/Status	Development Phase				
			Discovery	Preclinical	Phase I	Phase II	Phase III
Tecarfarin	Left Ventricular Assist Devices (LVADs)	FDA Orphan Drug Designation Granted Developing Trial Protocol	[Progress bar with red star at Phase III]				
	End-stage Kidney Disease with AFib	FDA Orphan Drug Designation Granted FDA Fast Track Designation Granted EMA Orphan Drug Application In Process	[Progress bar with red star at Phase III]				
	Mechanical Heart Valve (MHV) patients with difficult-to-control TTR or genetic resistance to warfarin	Developing FDA Orphan Drug Application	[Progress bar with red star at Phase III]				

*Future milestones this year may include Ph 3 trial enrollment, anticipated data readouts and progress with strategic partnerships*

# A Review of Tecarfarin

Tecarfarin is the **ONLY** anticoagulant in development for patients with LVADs or rare cardiovascular conditions

## HOW TECARFARIN COMPARES

- ➡ Tecarfarin is metabolized via a different pathway than warfarin, thus its efficacy is not affected by drug-drug interactions or kidney impairment, common in these patients
- ➡ Based on data from Phase 2/3 trials, tecarfarin proves superior to warfarin providing more stable anticoagulation with a longer TTR, less major events
- ➡ Extensive safety data (n=1000)
- ➡ Potential solution for patients with genetic variants, estimated at 18 percent of all CV patients\*
- ➡ DOACs not indicated for LVADs and many rare CV conditions, with little or negative data
- ➡ Being championed by LVAD and ESKD KOLs and clinicians



\*Source: <https://www.nature.com/articles/jhg201073>



# **The Problem:** Patients with Implanted Cardiac Devices and Rare CV Conditions Lack Effective Anticoagulation

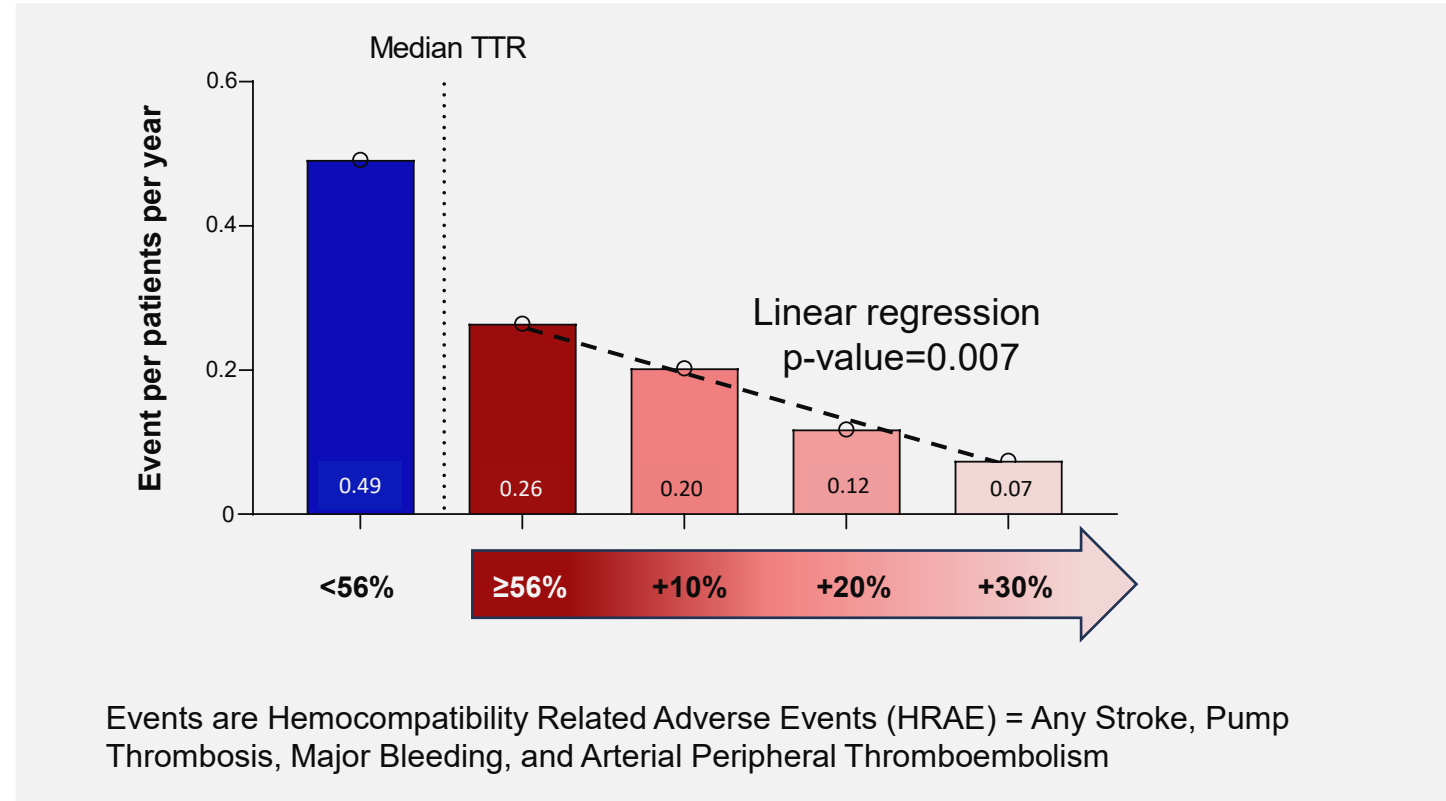
Both Warfarin and DOACs are not FDA-approved for patients with LVADs or many rare CV conditions

## SIGNIFICANT ISSUES WITH ONLY CHOICES FOR THESE PATIENTS

	Warfarin	DOACs (Pradaxa, Xarelto, Eliquis & Savaysa)
<p><b>LVAD</b></p> 	<ul style="list-style-type: none"> <li>High frequency of bleeding events, with LVAD patients being hospitalized more than twice on average within six months of implant*</li> <li>Unstable metabolism due to drug-drug interactions, genetic variability of pathway</li> <li>Late-stage heart failure and kidney dysfunction are often seen in conjunction. Chronic kidney disease (CKD) inhibits the metabolism of warfarin.</li> </ul>	<ul style="list-style-type: none"> <li>Cost and time of reversal compared to VKA is not acceptable for patients at high risk of bleeding or intervention</li> <li>LVAD patients excluded from all approval studies, leaving a data void or negative earlier clinical trials</li> <li>DOACs not in guidelines for LVAD patients</li> </ul> <p><small>*Source: Annals of Trans Medicine <a href="#">Antiplatelet and anticoagulation strategies for left ventricular assist devices - PubMed (nih.gov)</a></small></p>
<p><b>ESKD+AFib</b></p> 	<ul style="list-style-type: none"> <li>Higher risk of bleeding in dialysis patients with AFib compared to DOACs</li> <li>Multiple dose adjustments to keep patients within International Normalized Ratio (INR) range</li> <li>Drug interaction in patients with multiple comorbidities</li> </ul>	<ul style="list-style-type: none"> <li>Limited head-to-head evidence; existing data fails to demonstrate benefit in thromboembolism and reveals stroke risk</li> <li>Not included in ESKD treatment guidelines</li> <li>Ambiguity in dosing recommendations</li> </ul>

# ARIES-HM3 Study (Sponsored by Abbott) Documents the Impact of Poor Anticoagulation Quality of Adverse Events in LVAD patients

- Rate of severe bleeding significantly increased when TTR falls below 56%
- Mean TTR in LVAD patients treated with warfarin is <50% (Martinez et al 2018)



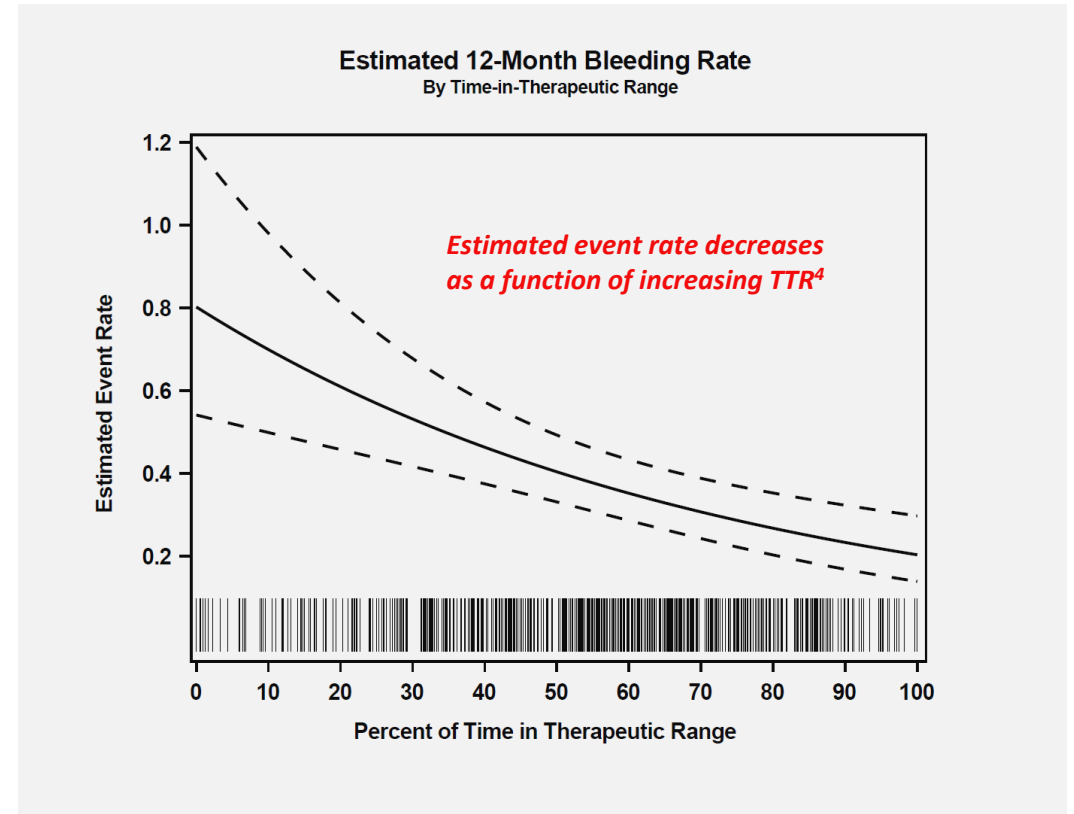
# Bleeding Rate in LVAD Patients is a Major Problem

*Poor quality anticoagulation, manifest as sub-target TTR, is the cause*

*Recent clinical evidence from the ARIES-HM3 (Abbott) study documents the consequences of suboptimal anticoagulation with warfarin in LVAD patients*

- **Time in Therapeutic Range (TTR)<sup>1,2,3</sup>**
  - Well-established marker used to evaluate anticoagulation quality (safety and efficacy)
  - Higher TTR levels correlate directly with improved clinical outcomes including rates of death, bleeding, myocardial infarction, stroke, and systemic embolism
- **TTR predictive of clinical outcomes**
  - Quality of VKA management as measured by TTR correlates strongly with the occurrence of non-surgical bleeding risk in patients with the HM3 LVAD<sup>4</sup>
  - TTR measurements correlate linearly with bleeding risk (Linear regression p-value=0.007)<sup>4</sup>

1) White et al. 2007; 2) Currie et al. 2006; 3) Jones et al. 2005



<sup>4</sup>Mehra et al; Impact Of Vitamin K Antagonist Therapy On Outcomes In a Randomized Controlled Trial of Aspirin Removal In Left Ventricular Assist Device Patients - A Pre-specified Analysis From the ARIES-HM3 Trial; Presented April 2024 at the ISHLT Annual Meeting

# Phase 2/3 Trial Shows Tecarfarin results in improved TTR, with Fewer Thrombotic and Hemorrhagic Events

**Tecarfarin** had fewer thrombotic events compared to warfarin

Randomized, double-blind clinical trial



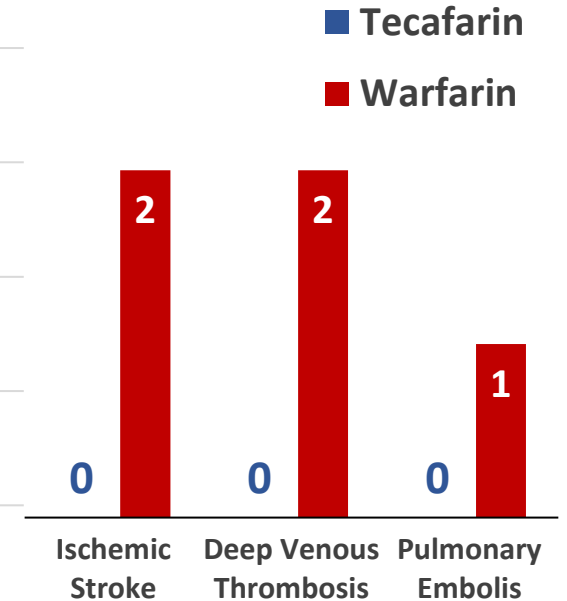
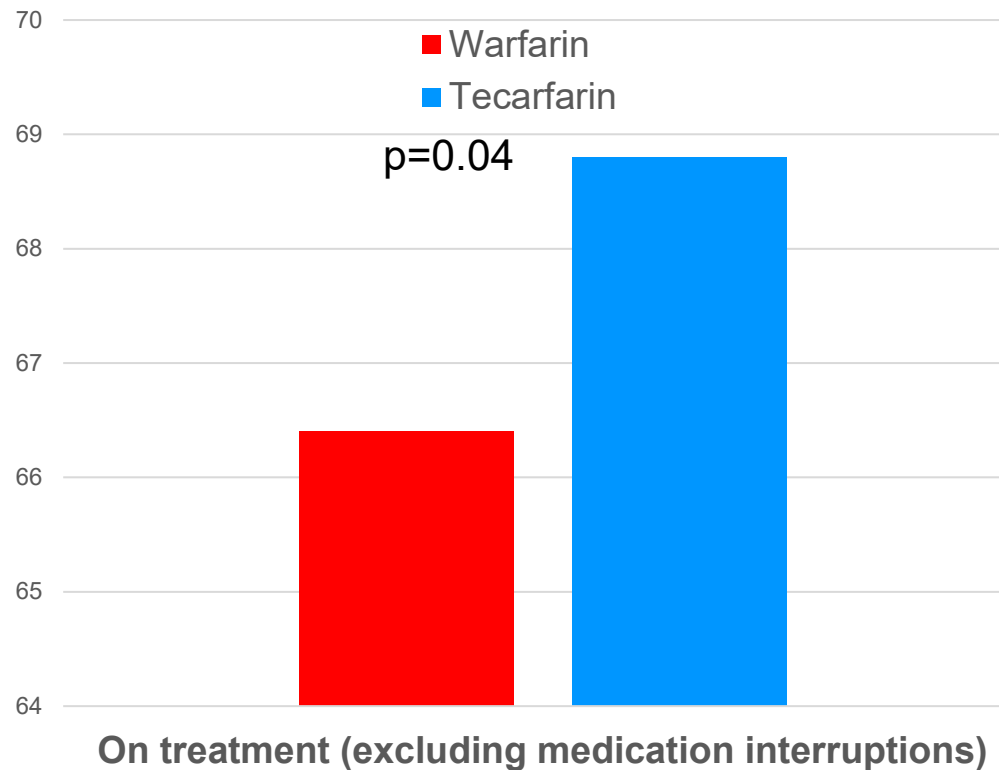
**N=607**

Patients with indications for chronic anticoagulation

**Tecarfarin** (n = 304)

**Warfarin** (n = 303)

71  
Time in Therapeutic Range (TTR) using Observed Values

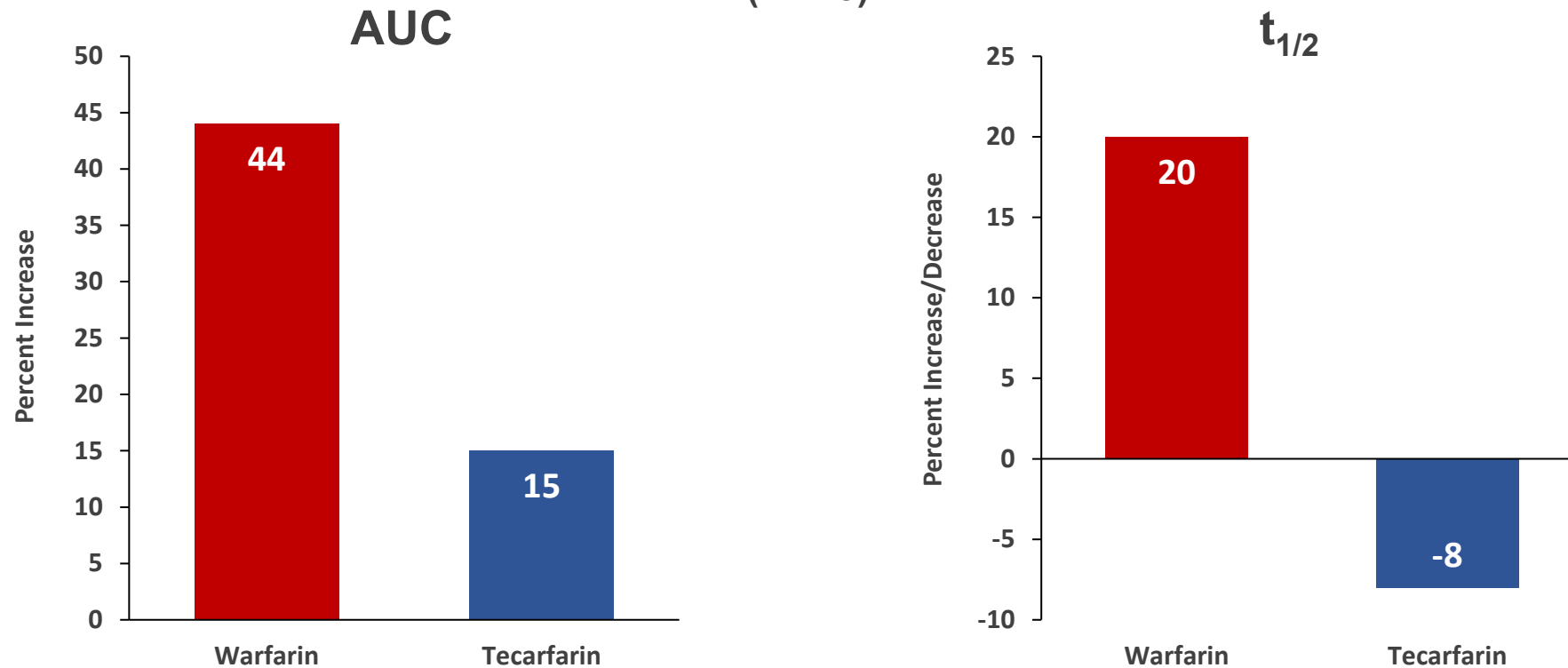


*Tecarfarin-treated subjects experienced numerically fewer major hemorrhages than the warfarin-treated patients and had numerically fewer thrombotic events*

# Tecarfarin Phase 1 PK Trial in Stage 4 CKD Patients Provides Evidence that CKD Does Not Alter Tecarfarin Exposure While Warfarin Exposure is Increased

*Tecarfarin metabolism not as impacted by kidney failure*

Percent Increase in Exposure for Chronic Kidney Disease Subjects vs Healthy subjects for Warfarin and Tecarfarin (n =23)



# The Solution: Tecarfarin Aims to Solve Warfarin's Major Problems and Be the Superior, Safer Choice

X

**Warfarin: High risk for bleeding and other major events**

**Significant variability with frequent dosing adjustments**

## **MAJOR PROBLEM**

for implanted CV devices or rare CV patients

Challenging to control

Drug-drug interactions

Variable PK profile due to genetic variants and interference from other drugs



## **SOLUTION: Tecarfarin**

solves warfarin challenges

**DECREASING MAJOR EVENTS SUCH AS STROKE & BLEEDING**

Metabolized via an alternate pathway to avoid effects of common drug interactions

Reliable, stable PK profile. **Tecarfarin is not impacted by kidney impairment.**



**STABLE ANTICOAGULATION**  
with longer TTR  
and extensive safety data

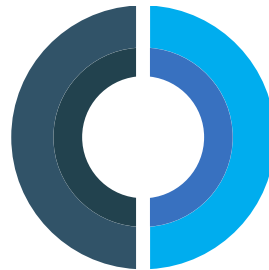
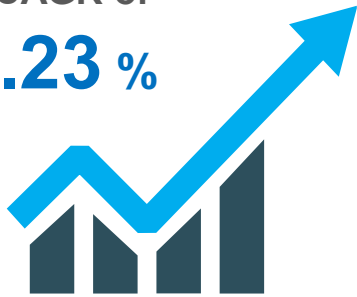
# LVADs are a Double-digit Growth Market



LVAD Market by Application and Geography – Forecast and Analysis 2021-2025

Market growth will  
**ACCELERATE**  
at a CAGR of

**12.23 %**



**46%**

of the growth will  
originate from  
**North America**

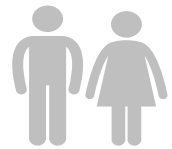
Source: [LVADS Market Size, Share, Growth, Trends Industry Analysis Forecast 2025 Technavio](#)



# Proposed Tecarfarin Pivotal Trial Design for LVAD Patients

## *Tecarfarin Anticoagulation and Hemocompatibility in LVAD Patients*

A randomized, blinded, phase 3, multicenter study to evaluate the efficacy and safety of tecarfarin compared to warfarin in patients with an approved left-ventricular assist device (LVAD)



Planned Enrollment  
N = 440

Patients newly implanted with an approved LVAD and older than 18 years of age



**Tecarfarin** (n = 220)

Treatment for 26 weeks

**Warfarin** (n = 220)

**Primary Endpoint:**  
Hierarchical composite of clinical events and assessment of anticoagulation quality

# Attractive Addressable Market Opportunities

*US market potential estimated @ \$2 billion+ for three targeted implanted CV device and rare CV conditions*



Left Ventricular Assist Devices



End-stage Kidney Disease with AFib



Mechanical Heart Valves with Difficult-to-control TTR



Approximately  
**>\$2 Billion**  
Combined Peak Annual Market Potential\*

# Financial Summary

## Cap Table (reflects August '24 reverse split)

<b>Cash</b> (as of 6/30/2024)	\$5.0 million
<b>Debt</b>	NONE
<b>Common Shares Outstanding</b>	1,182,225
<b>Warrants – Investors (avg. \$26.25)</b>	285,714
<b>Warrants - Underwriter &amp; Place Agt. Warrants (avg. \$40.20)</b>	25,938
<b>Stock Options Outstanding (avg. \$13.20)</b>	156,333

## 2024 Financial Results – 6 Months ended June 30th

<b>Operating Expenses (excluding non-cash items)</b>	\$3.7 million
<b>Cash used in operating activities</b>	\$3.4 million

## Market Capitalization

<b>As of 9/18/24</b>	\$14.2 million
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## Insider Ownership (Common Stock)

<b>Insider Ownership as Percent of Shares Outstanding</b>	42%
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# Leadership Team: Clinical to Commercial Expertise



**Quang Pham**  
CEO & Founder, Chairman



**Douglas Losordo, MD**  
Chief Medical Officer



**Matthew Szot, CPA**  
Chief Financial Officer



**Jeff Cole**  
Chief Operating Officer



**John R. Murphy**  
Board Member



**Steven Zelenkofske, DO**  
Board Member



**Glynn Wilson, PhD**  
Board Member



**Robert Lisicki**  
Board Member



# Scientific Advisors with Deep Experience in CV and Beyond



**Mandeep, Mehra MD, MSc,  
FRCP**

Medical Director of the  
**Brigham Heart and Vascular Center**,  
William Harvey Distinguished Chair in  
Advanced Cardiovascular Medicine



**Richard Whitlock, MD**

Cardiac Surgeon and Professor of Surgery,  
**McMaster**  
University Medical Center Investigator,  
**Population Health Research Institute**



**Michael Lincoff, MD**

Vice Chairman, Dept. of Cardiovascular Medicine,  
**Cleveland Clinic**  
Director of Clinical Research,  
**Lerner Research Institute**



**Elaine M. Hylek, MD, MPH**

Professor of Medicine,  
**Boston University School of Medicine**  
Director of the Thrombosis and Anticoagulation  
Service at **Boston Medical Center (BMC)**



**Wolfgang C. Winkelmayr, MD, MPH**

Chief, Section of Nephrology,  
Professor of Medicine,  
**Baylor University**  
Director,  
**Selzman Institute for Kidney Health**



**C. Michael Gibson, MD**

Professor of Medicine,  
**Harvard Medical School**  
Interventional Cardiologist,  
**Beth Israel Deaconess Medical Center**  
President & CEO,  
**Baim Institute for Clinical Research**



**Christopher Granger, MD**

Professor of Medicine in the Division of Cardiology,  
**Duke University**  
Member, Duke Clinical Research Institute (DCRI)



**Sean Pokorney, MD, MBA**

Electrophysiologist and Assistant  
Professor of Medicine,  
**Duke University**

# Why Cadrenal Now?

***CLEAR FROM RECENT DATA that tecarfarin has attractive, defined opportunity in patients where warfarin CHALLENGES ARE HUGE BURDEN and DOACs, with little or negative relevant data, are not the solution***



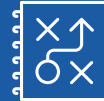
## Phase 3-ready Candidate

Tecarfarin is advancing toward pivotal trials in patients with implanted CV devices or rare CV conditions. KOLs express need and support for a new VKA that is superior, safer and saves the healthcare system hospitalization costs.



## Data Shows Superior Efficacy and Safety

Phase 1 and 2/3 clinical data shows that tecarfarin is an effective, stable and safe anticoagulant and expected to be superior to warfarin in these underserved patients.



## Bus Dev Progress and Opportunistic Approach

Pursuing business development strategies to help fund pivotal clinical trials; Multiple potential indications provides optionality.



## Orphan Regulatory Pathway

Tecarfarin has been granted two Orphan Drug Designations and a Fast-track designation by FDA providing potential seven-year marketing exclusivity post-approval.



## Attractive Market with Orphan Drug Pricing

Drugs for rare CV conditions that save money and lives command price premiums that value the tecarfarin addressable market @ \$2B+; Experienced team to deliver results.



## Contact Us



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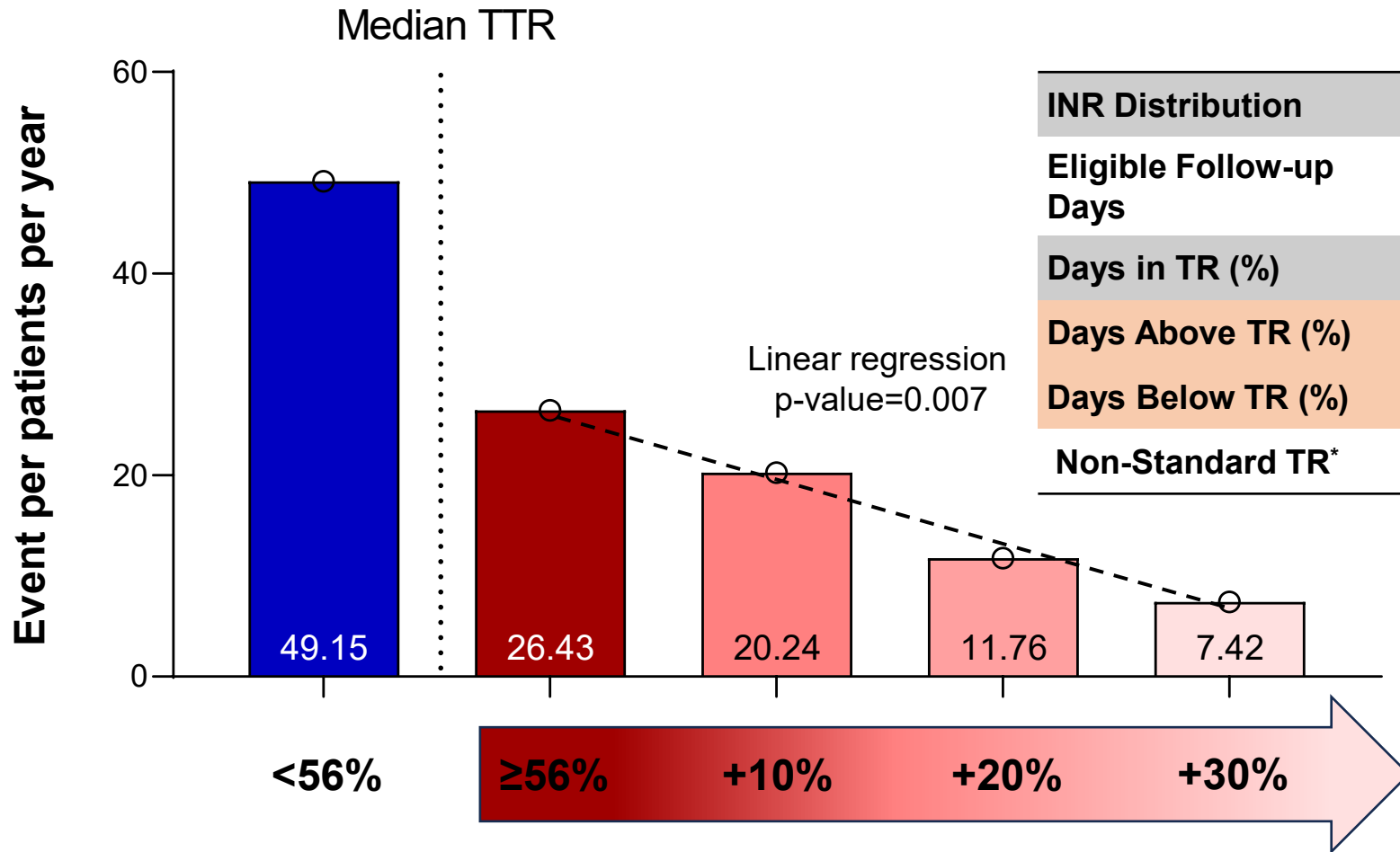


# APPENDIX



# Bleeding Rate by TTR Increments

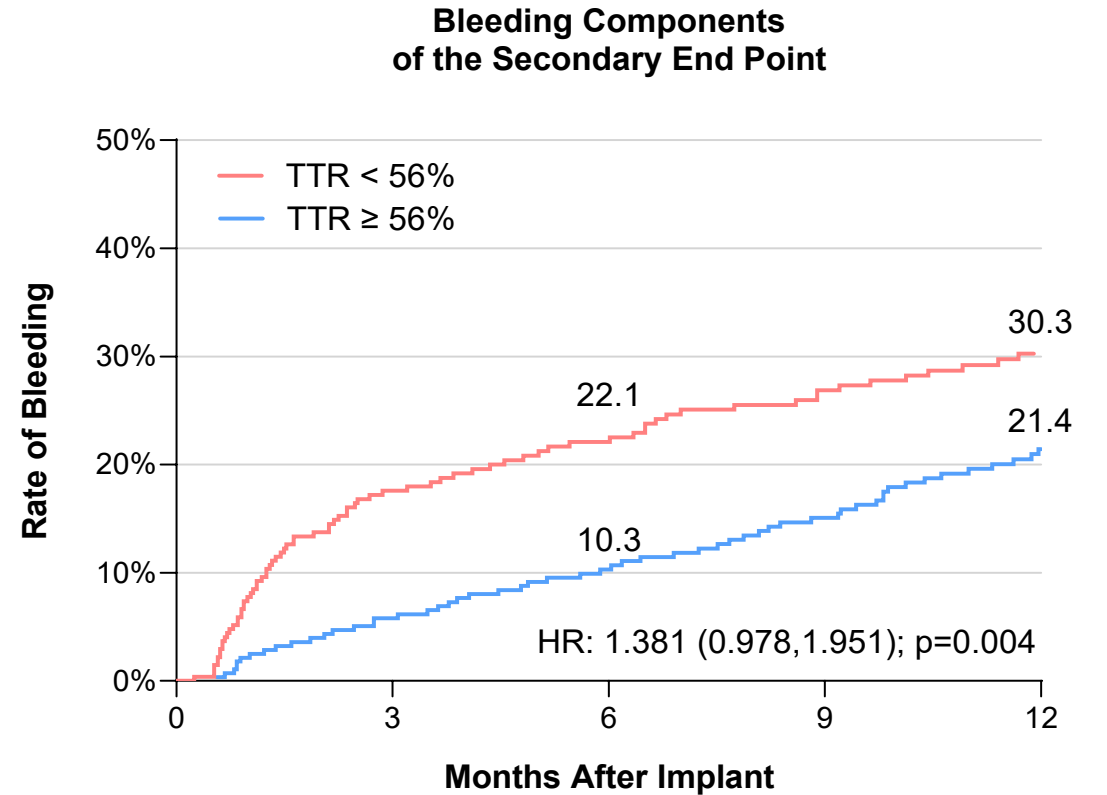
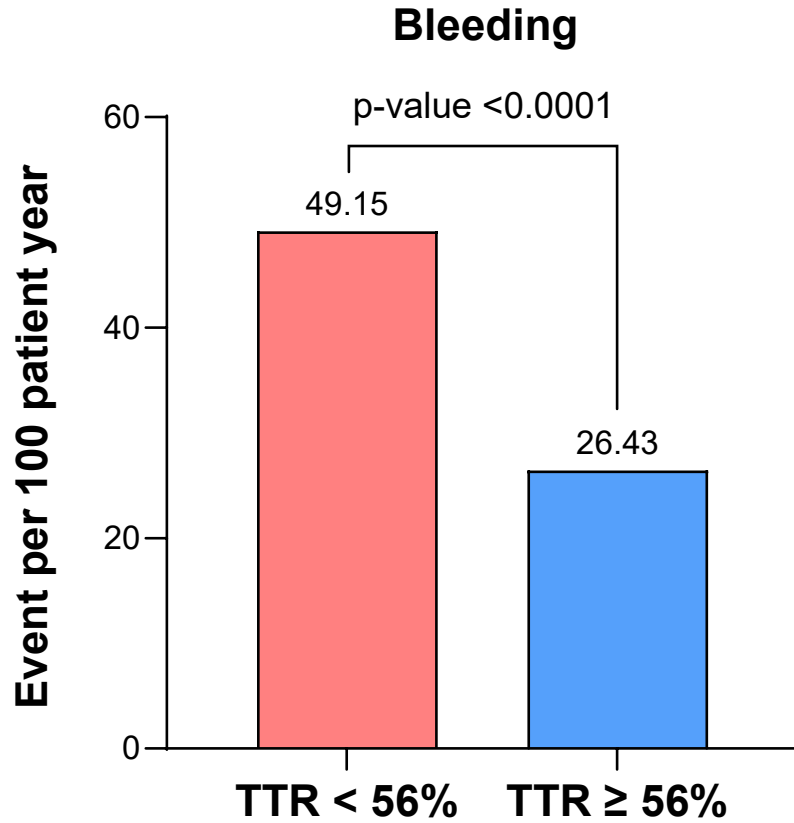
*Incremental improvement of 10% above the median of 56% trends in a significant reduction in bleeding rate*



	Placebo Median (Q1, Q3)	Aspirin Median (Q1, Q3)	P-value
INR Distribution	2.3 (2.1, 2.4)	2.3 (2.0, 2.5)	0.8227
Eligible Follow-up Days	344.0 (247.0, 364.0)	336.0 (213.0, 365.0)	0.4620
Days in TR (%)	55.8 (41.2, 73.9)	57.3 (38.3, 68.0)	0.4127
Days Above TR (%)	8.4 (0.8, 17.4)	9.5 (2.2, 19.3)	0.2206
Days Below TR (%)	26.2 (13.2, 44.5)	27.4 (14.4, 47.6)	0.3653
Non-Standard TR*	14.4% (40/277)	16.6% (46/277)	0.5576

\*TR=Therapeutic Range (INR from 2 to 3)

# The Impact of TTR on Bleeding in ARIES-HM3



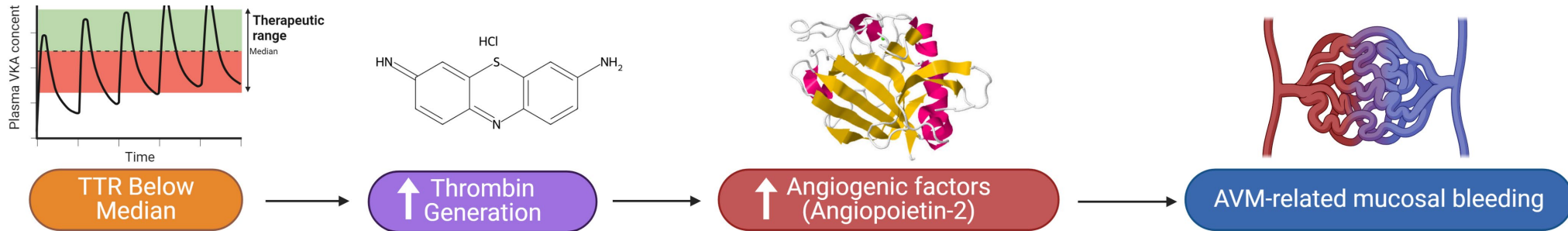
No. at Risk:

	0	3	6	9	12
TTR < 56%	272	211	184	163	133
TTR ≥ 56%	282	256	233	211	170

Analysis from ARIES-HM3 presented at ISHLT 2024 ( Mehra et al)

# Strategies to Mitigate Bleeding Complications with HM3 LVAD

## A Bleeding Paradox?




### Residual Bleeding Risk



- 30% at 2-years even after Aspirin elimination
- Related closely to a lower TTR for VKA

### POTENTIAL MITIGATION STRATEGIES

- Improve TTR**
  - Resource-intensive VKA management
  - Novel VKA without interactions (Tecarfarin) 

- Switch VKA to DOAC**
  - Requires conclusive safety studies
  - Concern with bridge to heart transplant

- Lower Target INR with VKA**
  - Requires conclusive studies
  - Practically limited
  - Uncertain effect on thrombin

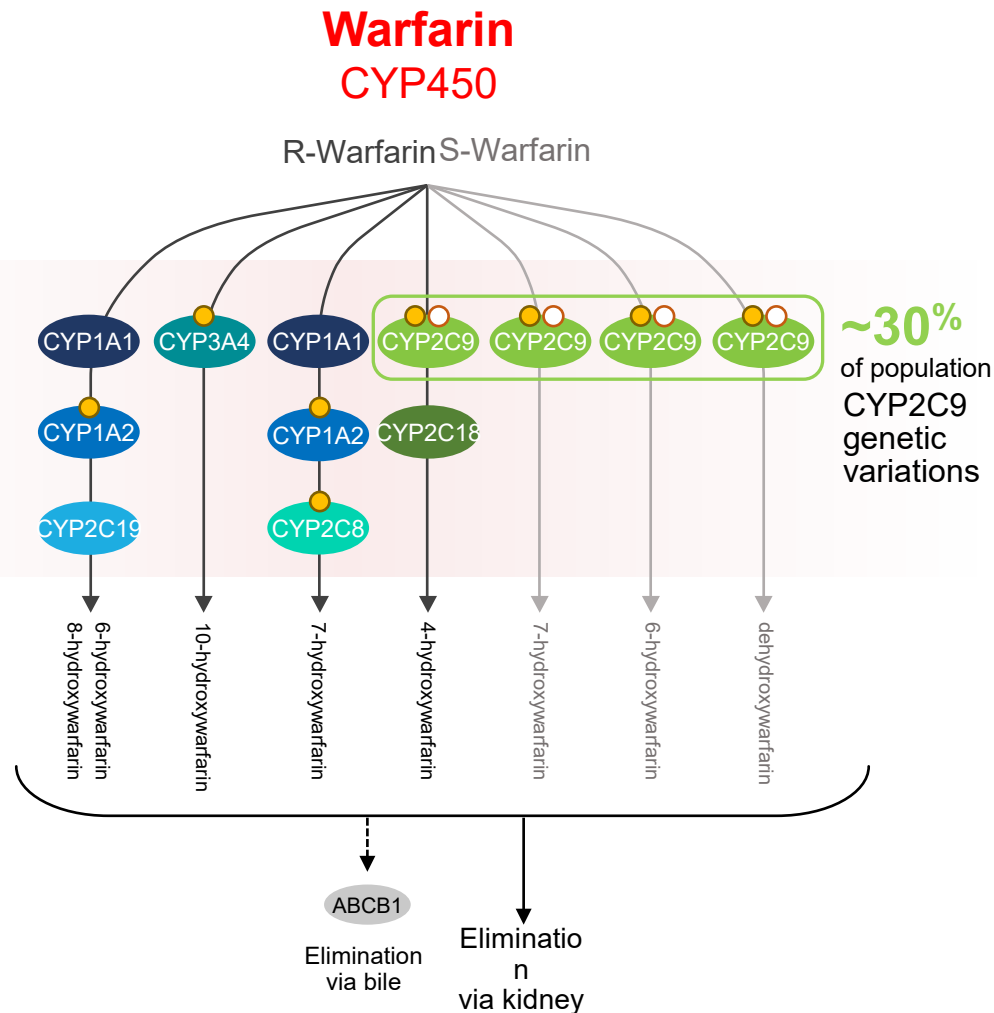
VKA, Vitamin K Antagonist; HM 3, HeartMate 3; DOAC, Direct Oral Anticoagulant; INR, International Normalized Ratio; TTR, Time in Therapeutic Range; AVM, Arteriovenous Malformation.

# Tecarfarin's Metabolic Advantage

*Tecarfarin is metabolized via an alternate pathway that is abundant and essentially insaturable, thereby avoiding the bottleneck in the CYP450 pathway where warfarin is metabolized.*

- Drug interactions
- Genetic variations

**7 Different CYP450 Isoenzymes involved in Warfarin Metabolism!**



Tecarfarin  
Human Carboxylesterase 2 (CES2)

Tecarfarin

CES2

Although genetic variation in CES2 has been identified there have been no reports of clinically significant impact

Elimination via bile

# Warfarin Metabolism via CYP450 is Complicated by Known Competitors, Inhibitors and Inducers and the Established Impact of Genetic Variants

Enzymes	Substrates	Inhibitors	Inducers
CYP 3A4	amlodipine, simvastatin, <b>warfarin</b> , amiodarone, sildenafil, midazolam, fluoxetine, haloperidol, codeine, oxycodone, methadone, fentanyl	ciprofloxacin, ketoconazole, ritonavir, methylprednisone, imatinib, tamoxifen, cimetidine, grapefruit juice	simvastatin, efavirenz, pentobarbital, carbamazepine, phenobarbital, phenytoin, valproic acid, caffeine
CYP 1A2	alosetron, caffeine, duloxetine, melatonin, ramelteon, tacrine, tizanidine	ciprofloxacin, enoxacin, fluvoxamine, oral contraceptives, phenylpropanolamine	montelukast, phenytoin, smoking components of cigarettes
CYP 2C8	repaglinide, paclitaxel, methadone	gemfibrozil, fluvoxamine, ketoconazole, trimethoprim	rifampin
CYP 2C9	celecoxib, <b>warfarin</b> , phenytoin	amiodarone, fluconazole, miconazole, oxandrolone, capecitabine, etravirine, fluvastatin, metronidazole, Sulfinpyrazone, tigecycline	carbamazepine, rifampin, aprepitant, bosentan, phenobarbital, St. John's wort
CYP 2D6	lidocaine, metoprolol, haloperidol, fluoxetine, amitriptyline, metoclopramide, codeine, oxycosone, tramadol	amiodarone, chlorpromazine, citalopram, bupropion	rifampin, dexamethasone

***Tecarfarin was specifically designed to avoid metabolism via the CYP450 Pathway, thus improving safety and efficacy over warfarin***

# Tecarfarin is Metabolized via the Human Carboxyl Esterase 2 Pathway (CES2) Provides More Effective, Safe, and More Consistent Anti-coagulation

Enzymes	Substrates	Inhibitors	Inducers
CYP 3A4	amlodipine, simvastatin, <b>warfarin</b> , amiodarone, sildenafil, midazolam, fluoxetine, haloperidol, codeine, oxycodone, methadone, fentanyl	ciprofloxacin, ketoconazole, ritonavir, methylprednisone, imatinib, tamoxifen, cimetidine, grapefruit juice	simvastatin, efavirenz, pentobarbital, carbamazepine, phenobarbital, phenytoin, valproic acid, caffeine
CYP 1A2	alosetron, caffeine, duloxetine, melatonin, ramelteon, tacrine, tizanidine	ciprofloxacin, enoxacin, fluvoxamine, oral contraceptives, phenylpropanolamine	montelukast, phenytoin, smoking components of cigarettes
CYP 2C8	repaglinide, paclitaxel, methadone	gemfibrozil, fluvoxamine, ketoconazole, trimethoprim	rifampin
CYP 2C9	celecoxib, <b>warfarin</b> , phenytoin	amiodarone, fluconazole, miconazole, oxandrolone, capecitabine, etravirine, fluvastatin, metronidazole, Sulfinpyrazone, tigecycline	carbamazepine, rifampin, aprepitant, bosentan, phenobarbital, St. John's wort
CYP 2D6	lidocaine, metoprolol, haloperidol, fluoxetine, amitriptyline, metoclopramide, codeine, oxycosone, tramadol	amiodarone, chlorpromazine, citalopram, bupropion	rifampin, dexamethasone

## CES2 Substrate Drugs

### Antiplatelet/Anticoagulants

- Acetylsalicylic acid
- Prasugrel
- Dabigatran etexilate

### Angiotensin receptor blockers

- Candesartan cilexetil
- Olmesartan medoxomil
- Azilsartan medoxomil

### Antiviral agents

- Tenofovir disoproxil
- Adefovir dipivoxil
- Valacyclovir

### CNS agents

- Cocaine
- Heroin
- 6-monoacetylmorphine

### Immunosuppressive agents

- Methylprednisolone sodium succinate
- Deflazacort

### Oncology agents

- Irinotecan
- Capecitabine

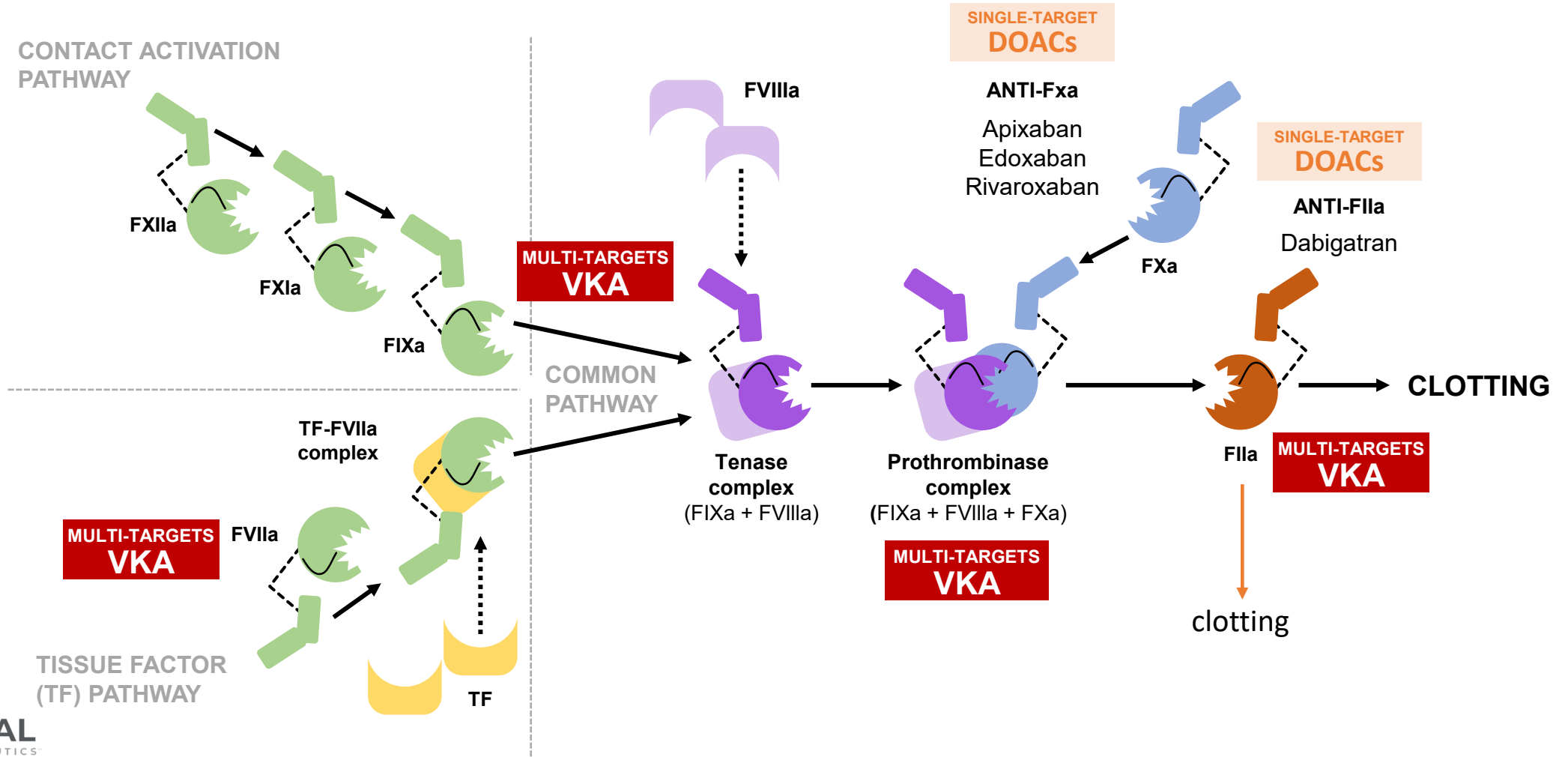
### Anesthetic drug

- Procaine

**Limited Substrates Identified**  
**Genetic variation exists, but limited evidence of clinical impact**

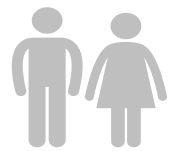
# Vitamin K Antagonism Inhibits Multiple Factors (II, VII, IX, X, Proteins C & S) in the Clotting Cascade vs. Single Targets of Newer Agents

*Proven mechanism of action resulting in clinically meaningful anticoagulation in certain conditions where DOACs have failed*



# Tecarfarin Phase 3 Trial Design for ESKD and AFib

## Tecarfarin vs. Placebo in Patients with ESKD and AFib Randomized, Double-Blind, Placebo-Controlled



**Planned Enrollment**  
N = 492

**ESKD (eGFR < 15 mL/min/1.73 mm<sup>2</sup>)**  
documented chronic paroxysmal,  
persistent or permanent AFib

**Trial Sites:**

U.S. and Canada, ROW TBD



Randomization  
stratified according  
to VKORC1 status

**Tecarfarin (n = 246)**

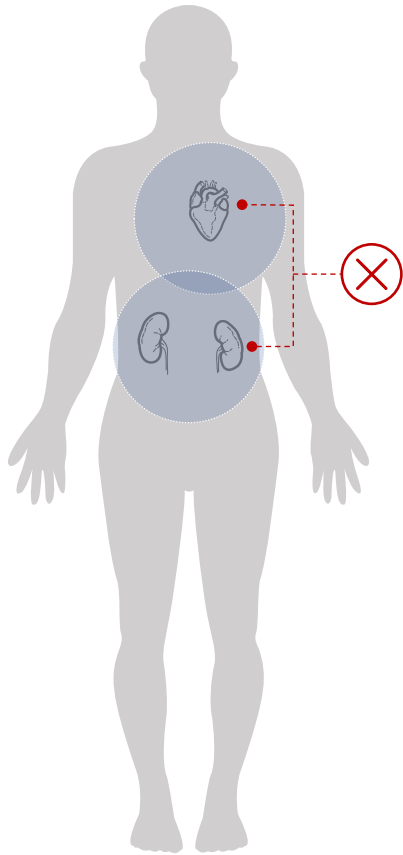
**Placebo (n = 246)**

**12-month follow-up**

for Primary Endpoint of time to  
combined endpoint of ischemic  
stroke or systemic embolism  
(80% power to detect a 25%  
treatment benefit)

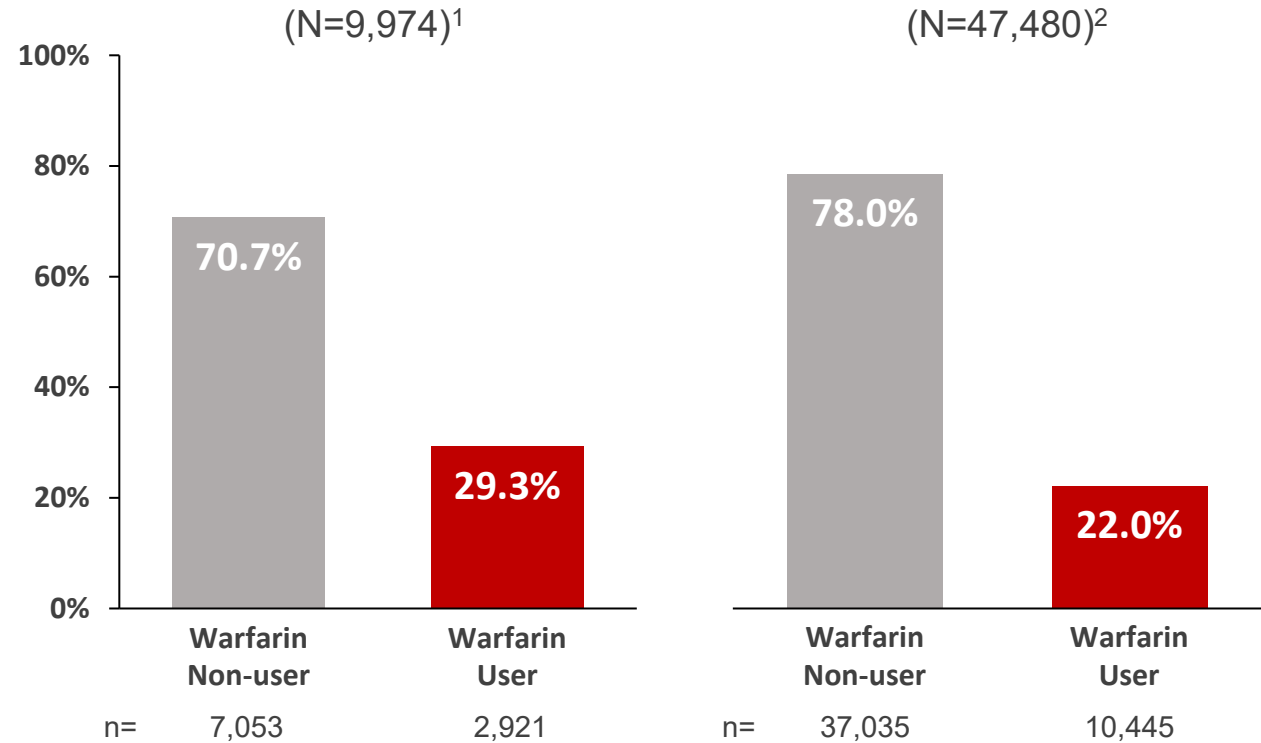
# Significant Underserved Patient Populations

*Despite the significantly increased risk of stroke in ESKD patients with AFib, most patients are not anticoagulated due to the lack of evidence of benefit*



**Most patients with ESKD + AFib are not prescribed ANY anticoagulation to reduce their risk of stroke**

## Use of warfarin in ESKD + AFib Patients<sup>1</sup>



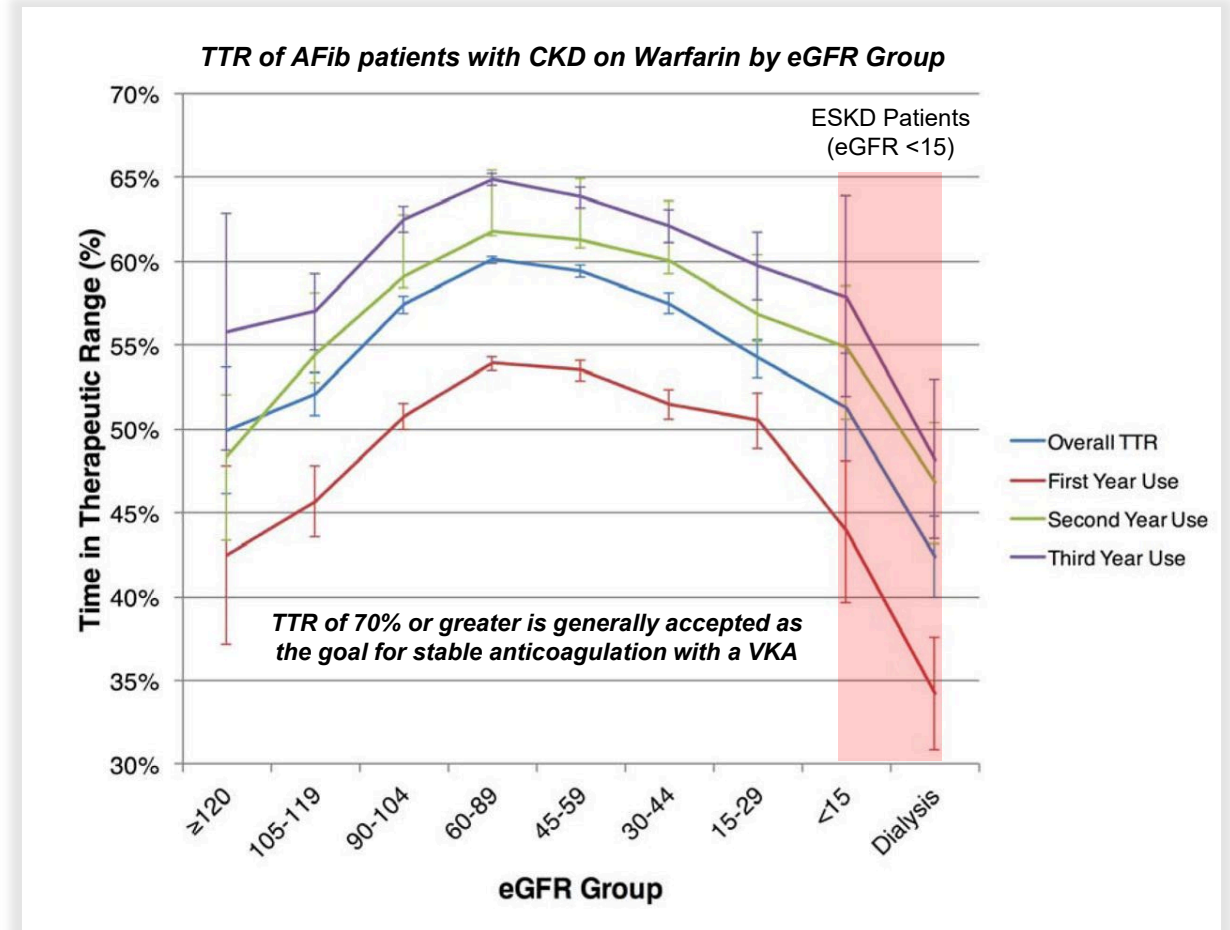
1. Yoon CY, Noh J, Jhee JH, et al. Warfarin Use in Patients With Atrial Fibrillation Undergoing Hemodialysis: A Nationwide Population-Based Study. *Stroke*. 2017;48(9):2472-2479. doi:10.1161/STROKEAHA.117.017114

2. Randhawa MS, Vishwanath R, Rai MP, et al. Association Between Use of Warfarin for Atrial Fibrillation and Outcomes Among Patients With End-Stage Renal Disease: A Systematic Review and Meta-analysis. *JAMA Netw Open*. 2020;3(4):e202175. doi:10.1001/jamanetworkopen.2020.2175

# TTR Decreases with CKD Severity for AFib Patients on Warfarin

*AFib Patients with ESKD on Warfarin are Poorly Controlled with TTR of 42-51%, compared to the TTR goal of 70% or greater*

- ❖ Time in Therapeutic Range (TTR)<sup>1,2,5</sup>
  - Well-established FDA metric used to evaluate anticoagulation control (safety and efficacy)
  - Higher TTR levels correlate directly with improved clinical outcomes including rates of death, bleeding, myocardial infarction, stroke, and systemic embolism
- ❖ TTR predictive of clinical outcomes
  - Stage 4 and 5 CKD with AFib: Similar TTR cutoffs predictive of mortality and cardiovascular outcomes<sup>3,4</sup>
- ❖ Overall TTR for AFib Patients with ESKD on warfarin is 42-51%<sup>6</sup>
- ❖ Only 21% of ESKD patients on dialysis using warfarin achieve TTR  $\geq 60\%$ <sup>6</sup>



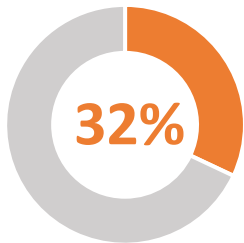
# Dabigatran Versus Warfarin in Patients with Mechanical Heart Valves

## EXCESS RISK AND NO BENEFIT



**Trial terminated prematurely**  
due to an excess of thromboembolic and bleeding events among patients in the **dabigatran group**

	Dabigatran N=168 N (%)	Warfarin N=84 n (%)
Ischemic or unspecified stroke	9 (5.4)	0
Major bleeding	7 (4.2)	2 (2%)



**32%**  
Dose adjustment or  
discontinuation of  
dabigatran  
(as-treated analysis)

