



Milestone
PHARMACEUTICALS

Corporate Overview

March 24, 2022

Joseph Oliveto
Chief Executive Officer



Disclaimers



The Presentation contains forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, as amended. Words such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “design,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “positioned,” “potential,” “project,” “seek,” “should,” “target,” “will,” “would” (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements. These forward-looking statements are based on Milestone’s expectations and assumptions as of the date of this Presentation. Each of these forward-looking statements involves risks and uncertainties. Actual results may differ materially from these forward-looking statements. Forward-looking statements contained in this Presentation include statements regarding (i) the design, progress, timing, scope and results of the etripamil clinical trials in PSVT and AFib-RVR, (ii) the possibility that data will support FDA approval, (iii) the potential market size and the rate and degree of market acceptance of etripamil and any future product candidates and the implementation of Milestone’s business model and strategic plans for its business, etripamil and any future product candidates, and (iv) the sufficiency of Milestone’s capital resources. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to, the risks inherent in biopharmaceutical product development and clinical trials, including the lengthy and uncertain regulatory approval process, uncertainties related to the timing of initiation, enrollment, completion and evaluation of clinical trials, including the RAPID and ReVeRA trials, and whether the clinical trials will validate the safety and efficacy of etripamil for PSVT, AFib-RVR, or other indications, among others, as well as risks related to pandemics and public health emergencies, including those related to COVID-19, and risks related to the sufficiency of our capital resources and our ability to raise additional capital. These and other risks are set forth in Milestone’s filings with the U.S. Securities and Exchange Commission, including in its annual report on Form 10-K for the year ended December 31, 2020, under the caption “Risk Factors.” Except as required by law, Milestone assumes no obligation to update any forward-looking statements contained herein to reflect any change in expectations, even as new information becomes available.

This Presentation contains trademarks, trade names and service marks of other companies, which are the property of their respective owners. Certain information contained in this Presentation and statements made orally during this Presentation relate to or is based on studies, publications, surveys and other data obtained from third-party sources and Milestone’s own internal estimates and research. While Milestone believes these third-party studies, publications, surveys and other data to be reliable as of the date of the Presentation, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, no independent sources has evaluated the reasonableness or accuracy of Milestone’s internal estimates or research and no reliance should be made on any information or statements made in this Presentation relating to or based on such internal estimates and research.



Phase 3 Cardiovascular Company



Targeting Large Areas of Unmet Need

- ✓ PSVT
- ✓ AFib-RVR
- ✓ Additional pipeline opportunities



Paradigm-Changing Approach

- ✓ Etripamil: novel calcium channel blocker (IP protection until 2036)
- ✓ Shift from the ED to patient self-management



Recent Events Position for Future Success

- ✓ First Phase 3 study findings and FDA guidance in PSVT
- ✓ Next Pivotal Phase 3 efficacy result in PSVT expected by 2H 2022
- ✓ Financial runway expected into 2H 2023

PSVT = Paroxysmal Supraventricular Tachycardia; AFib-RVR = Atrial Fibrillation with Rapid Ventricular Rate; ED = Emergency Department

Atrial Arrhythmias with a Common Patient Burden



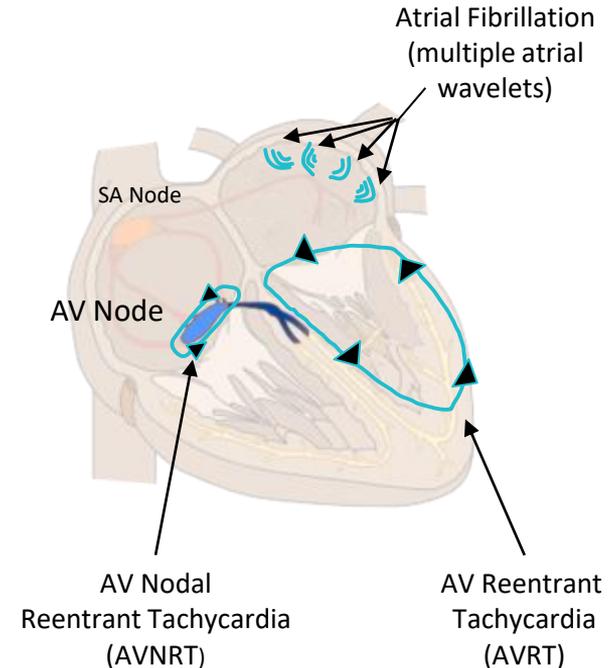
Patients with PSVT and AFib-RVR report feeling a loss of control

PSVT (AVNRT and AVRT)	AFib-RVR (a subset of AFib)
Regular rapid heart rate	Irregular rapid heart rate
Commonly 150 - 250 bpm	Commonly 100 - 175 bpm
Episode frequency and duration is highly variable	

Common Symptoms Include	Heart palpitations	Chest pressure or pain
	Shortness of breath	Fatigue
	Light-headedness	Anxiety

PSVT = Paroxysmal Supraventricular Tachycardia; AFib-RVR = Atrial Fibrillation with Rapid Ventricular Rate

Sources: adapted from https://en.ecgpedia.org/index.php?title=Supraventricular_Rhythms, accessed 2/2021

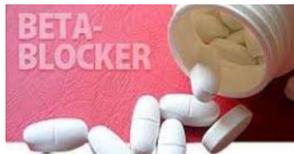




PSVT

AFib-RVR

Chronic / preventive



- Chronic oral BBs and CCBs
- Reduce number of episodes



- Catheter ablation
- ~80k/yr patients opt for ablation
- >90% reported success rate

Acute



- IV adenosine or DC cardioversion
- ~150K ED visits/hospital per year
- Many patients wait out episodes

- Chronic oral therapies (rate, rhythm, anti-coagulation)
- Break-through episodes of RVR in chronic rate/rhythm control patients
- Catheter ablation
- ~100k patients/yr opt for ablation
- ~50-80% reported success rate

- IV CCBs or DC cardioversion
- ~785K ED visits/hospital per year
- Many patients wait out episodes

PSVT = Paroxysmal Supraventricular Tachycardia; AFib-RVR = Atrial Fibrillation with Rapid Ventricular Rate; IV = Intravenous; CCBs = Calcium Channel Blockers; DC = Direct Current
Sources: Internal estimates based on market research and longitudinal analysis of Truven/Marketscan and Medicare claims data; Page RL et al, 2015 ACC/AHA/HRS guideline for the management of adult patients with supraventricular tachycardia: executive summary: a report of the ACC/AHA Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. Circulation. 2016;133:e471–e505

Potential Paradigm-Changing Treatment to Empower Patient Control of their Condition



Drawbacks with the current standard of care in the Emergency Department (ED)



- Time consuming
- Anxiety provoking
- Costly
- Often results in a hospital admission
- Experienced by patients as a loss of control

Intervention used by the patient whenever & wherever an episode occurs



- Reduces ED visits / hospital admissions
- Less need for chronic medications
- Alternative or bridge to ablation procedure

Etripamil Nasal Spray is Designed to be Fast, Convenient, and Empowering



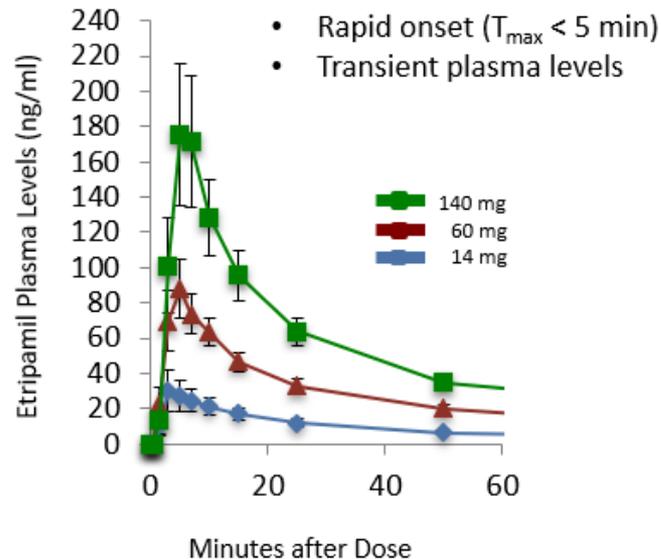
Prospectively designed to treat common tachycardias outside the Emergency Department (ED)



Etripamil	
Class	Novel CCB
Potency (IC ₅₀)	11 nM
Metabolism	Rapid: Esterase-mediated

- Clinically-validated mechanism
 - Calcium channel blockers (CCBs) prolong refractoriness and slow conduction over the AV node
- Rapid onset of action
- Convenient patient self-administered nasal spray
- Short duration of action

AV = Atrio-ventricular; nM = nanomolar



Error bars indicate standard error of the mean

Clinical Program Overview for Etripamil



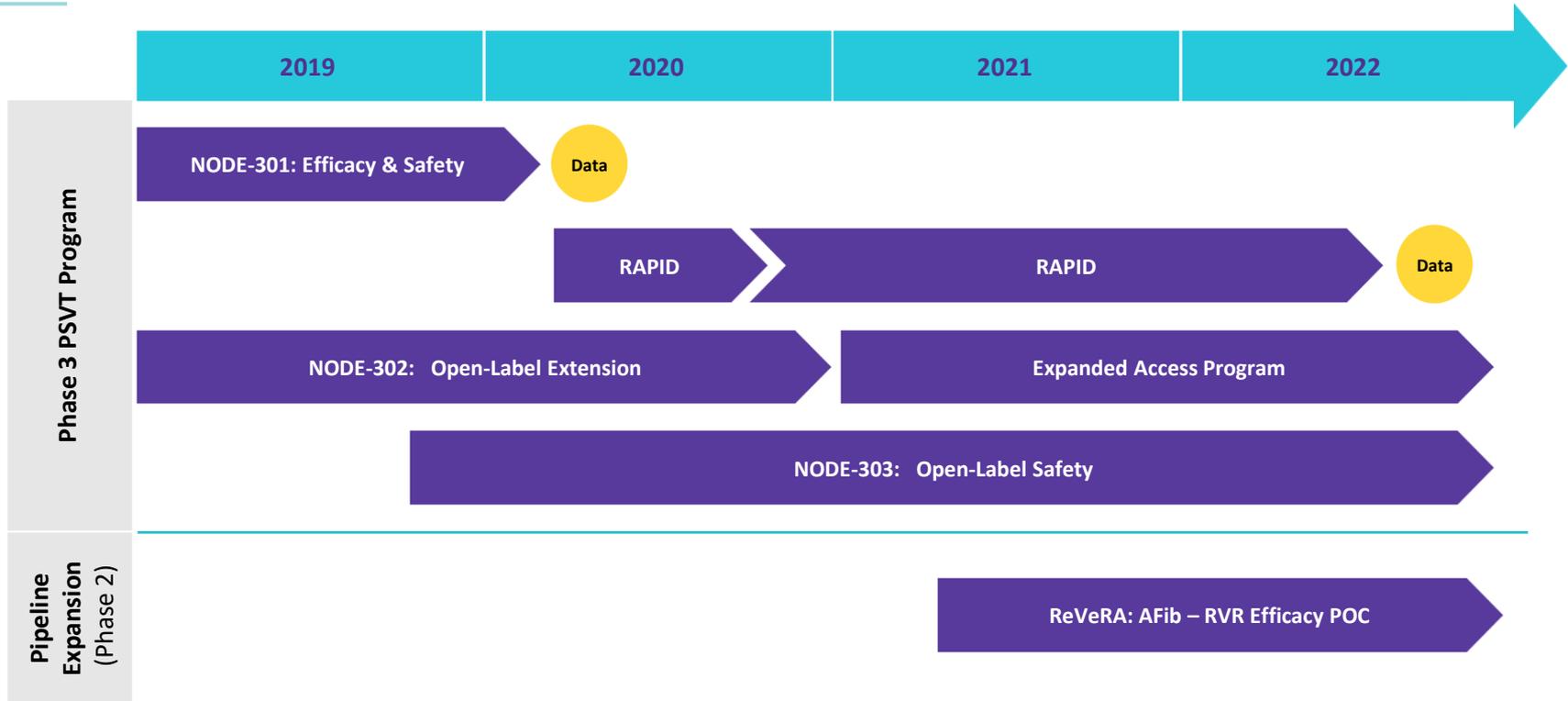
Clinical development programs designed to support NDA filing in PSVT, while concurrently building safety database and running Phase 2 ReVeRA to support AFib-RVR program

NODE-1 PSVT	ReVeRA AFib-RVR
Phase 2	Phase 2
Efficacy	Efficacy POC
Published	Enrolling
Electrophysiology Lab	Emergency Department
N= 104 1:1 randomized	N=50 1:1 randomized

NODE-301 PSVT	RAPID PSVT	NODE-303/302 PSVT
Phase 3	Phase 3	Phase 3
Efficacy	Efficacy	Safety
Complete	Enrolling	Enrolling/ Complete
At home	At Home	At Home
N=419 2:1 randomized	N~500 1:1 randomized	N ~1000 Open label

POC = Proof of Concept; AFib-RVR = Atrial Fibrillation with Rapid Ventricular Rate; PSVT = Paroxysmal Supraventricular Tachycardia

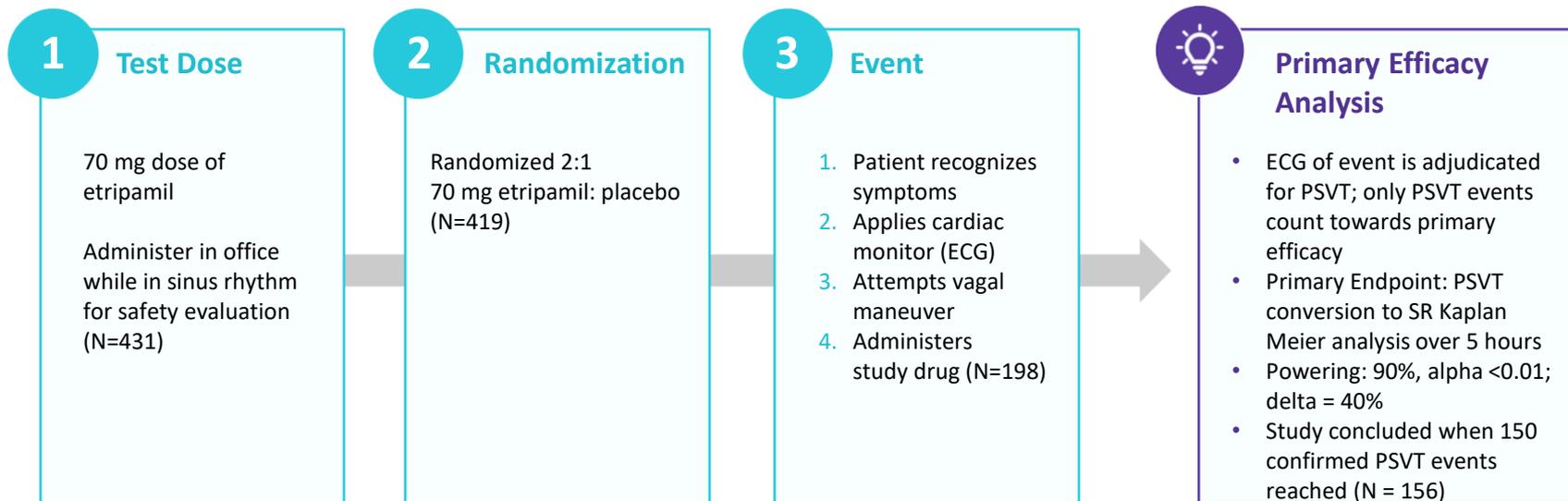
Development Plan for Etripamil



AFib-RVR = Atrial Fibrillation with Rapid Ventricular Rate; POC = Proof of Concept

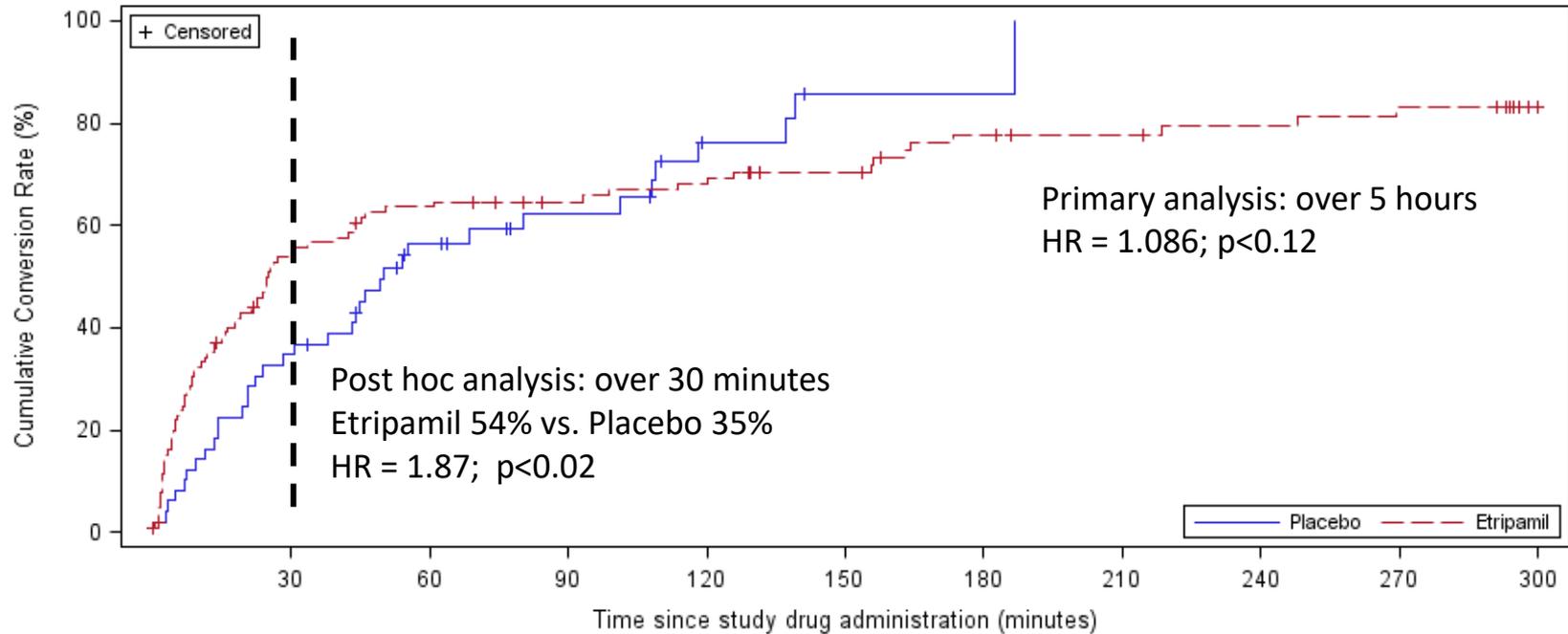


NODE-301 patients taking etripamil had no serious adverse events



SR = Sinus Rhythm; ECG = Electrocardiogram; PSVT = Paroxysmal Supraventricular Tachycardia

NODE-301 Kaplan-Meier Plot of Conversion to Sinus Rhythm



		30	60	90	120	150	180	210	240	270	300
Placebo	49	32	18	12	5	1	1	0			
Etripamil	107	47	36	31	28	22	15	13	11	9	3

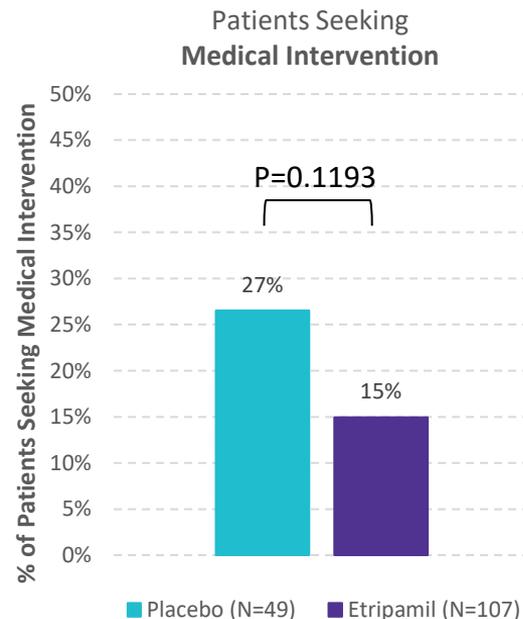
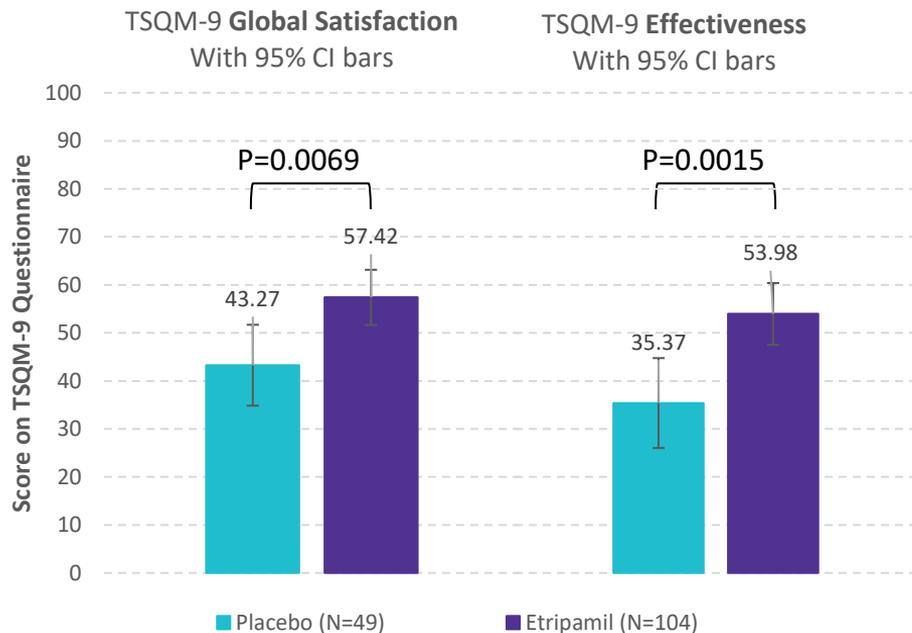
Number of subjects at risk

Source: Data on File, Milestone Pharmaceuticals Inc.

NODE-301 Key Secondary Endpoints



Key secondary endpoints from NODE-301 support benefit of etripamil to patients and payers



NODE-301 Safety Analysis



Randomized Treatment Emergent Adverse Events (RTEAE)	Etripamil N=138 (%)	Placebo N=60 (%)
Subjects with any RTEAE	53 (38.4)	12 (20.0)
Maximum severity of RTEAE		
Mild	45 (32.6)	10 (16.7)
Moderate	8 (5.8)	3 (3.3)
Severe	0 (0.0)	0 (0.0)
Most Common Adverse Events (>5%)		
Nasal discomfort	27 (19.6)	4 (6.7)
Nasal congestion	11 (8.0)	2 (3.3)
Epistaxis	9 (6.5)	0 (0.0)
Rhinorrhea	8 (5.8)	1 (1.7)
Throat irritation	7 (5.1)	1 (1.7)

RTEAE timing: up to 24 hours following double-blind study drug administration

Source: Data on File, Milestone Pharmaceuticals Inc.

FDA Guidance Following NODE-301 Data

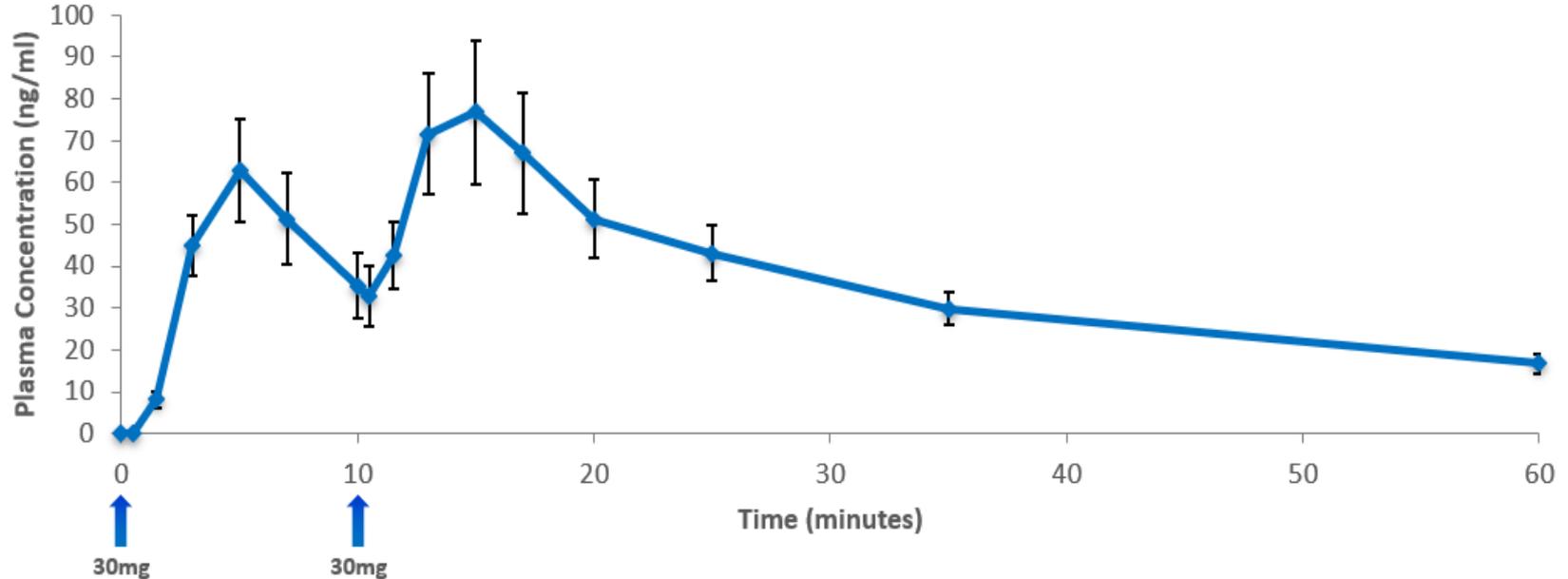


- NODE-301 post hoc analysis plus one additional study (RAPID) together can be used to potentially fulfill the efficacy requirement for an NDA filing for etripamil in PSVT
 - Primary analysis of 30-minute observation window
 - RAPID Study target p-value of $p < 0.05$
- Evaluation of higher exposures to improve efficacy and clinical meaningfulness
- RAPID to utilize a 70 mg repeat dosing regimen
 - Patients who still have symptoms 10 min after their drug administration will take a second dose of study drug
 - Pool the single dose with the repeat dose administrations to maintain power and compare etripamil to placebo

PK of Etripamil 30 mg Repeat Administration at T=10 min (Study MSP-2017-1096)

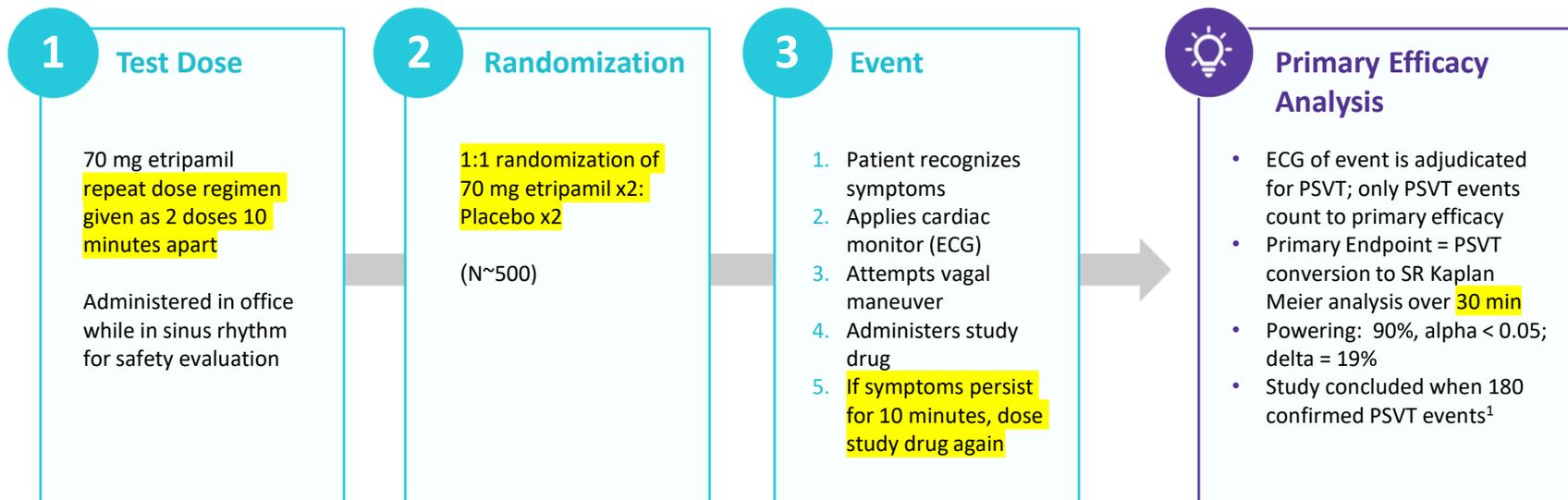


Repeat administration increases both C_{max} and AUC



N=7, Error bars are standard error

Source: Data on File, Milestone Pharmaceuticals Inc.



¹ includes ~30 events expected to be treated with the single dose double-blind study drug administration from NODE-301 patients who experienced an event prior to the RAPID study being available

ReVeRA – Proof of Concept for AFib with Rapid Ventricular Rate



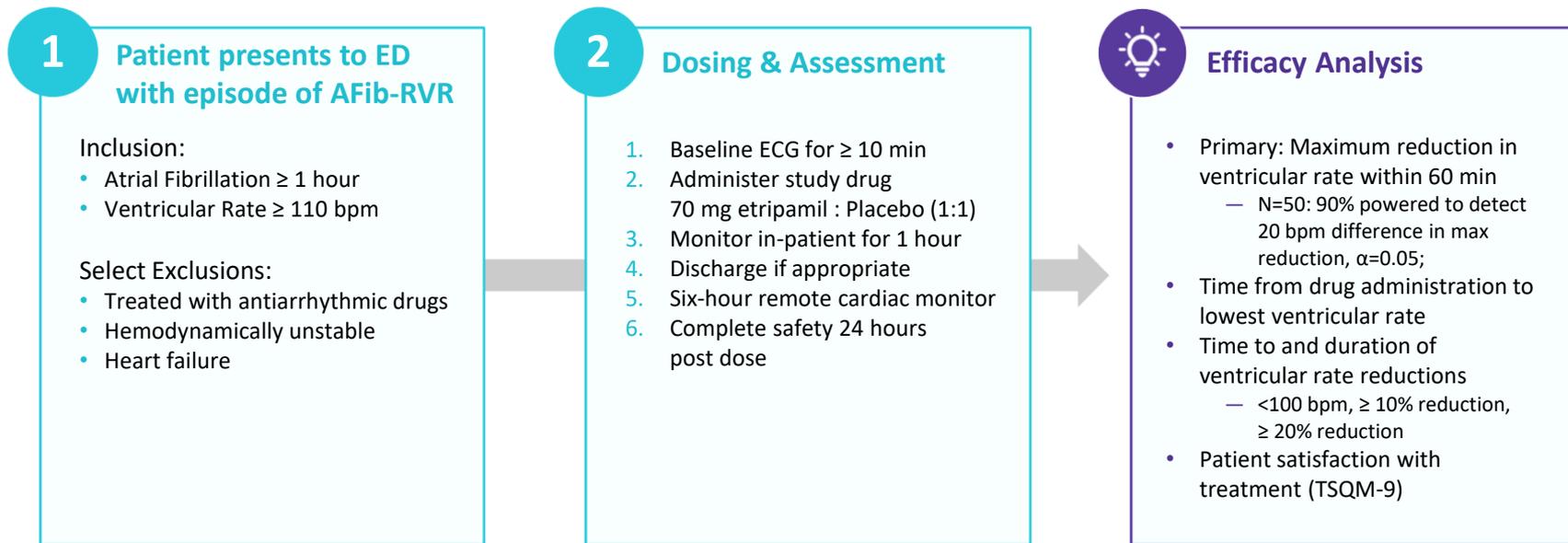
PSVT - Lead Indication in Phase 3 Registration Studies;
AFib-RVR - Second Indication in Phase 2 POC Study

NODE-1 PSVT	ReVeRA AFib-RVR	NODE-301 PSVT	RAPID PSVT	NODE-303/302 PSVT
Phase 2	Phase 2	Phase 3	Phase 3	Phase 3
Efficacy	Efficacy POC	Efficacy	Efficacy	Safety
Published	Enrolling	Complete	Enrolling	Enrolling/ Complete
Electrophysiology Lab	Emergency Department	At home	At Home	At Home
N= 104 1:1 randomized	N=50 1:1 randomized	N=419 2:1 randomized	N~500 1:1 randomized	N ~1000 Open label

SR = Sinus Rhythm; ECG = Electrocardiogram; PSVT = Paroxysmal Supraventricular Tachycardia; AFib-RVR = Atrial Fibrillation with Rapid Ventricular Rate; POC = Proof of Concept



Reduction of Ventricular Rate in Patients with Atrial Fibrillation



CHADs 0 = No Heart Failure/No Hypertension/Age $<$ 65/No Diabetes/No History of Stroke or TIA/No Coronary ischemic disease; OAC = Oral Anti-coagulant; AFib-RVR = Atrial Fibrillation with Rapid Ventricular Rate; TSQM-9, Treatment Satisfaction Questionnaire for Medication; ED = Emergency Department

Commercial Opportunity

Etripamil – Addressing Market Needs in PSVT and AFib-RVR



Potential for high receptivity to etripamil across stakeholders

Future with Etripamil – a Potentially Better Treatment Option



Patients

- Self-management of acute episodes
- Reduces ED visits/hospital admissions



Physicians (Cards, EPs, PCPs)

- Better risk/benefit profile
- Expected to have significant adoption in unblinded patients



Payers

- Reduction in ED/hospital admissions
- Improvement in patient satisfaction

Cards = Cardiologists, EPs = Electrophysiologists, PCPs = Primary Care Providers, PSVT = Paroxysmal Supraventricular Tachycardia, ED = Emergency Department

Sources: Internal market research

New Data Enhances Understanding of Burden of PSVT

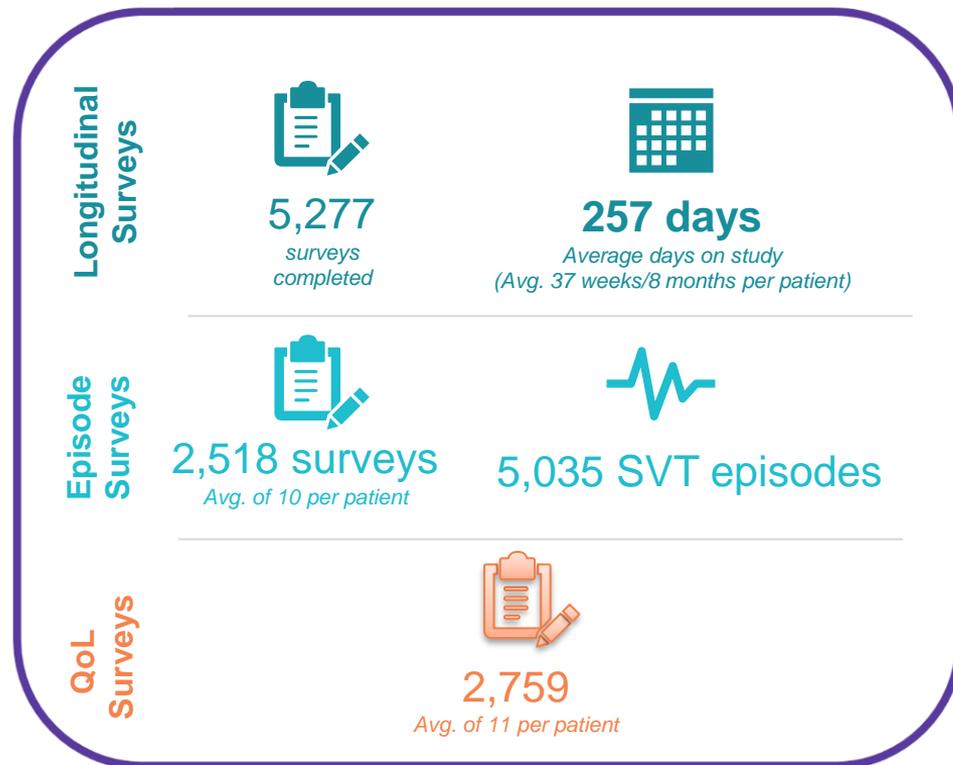


Analysis of Prospective Patient Reported Outcomes Longitudinal Data



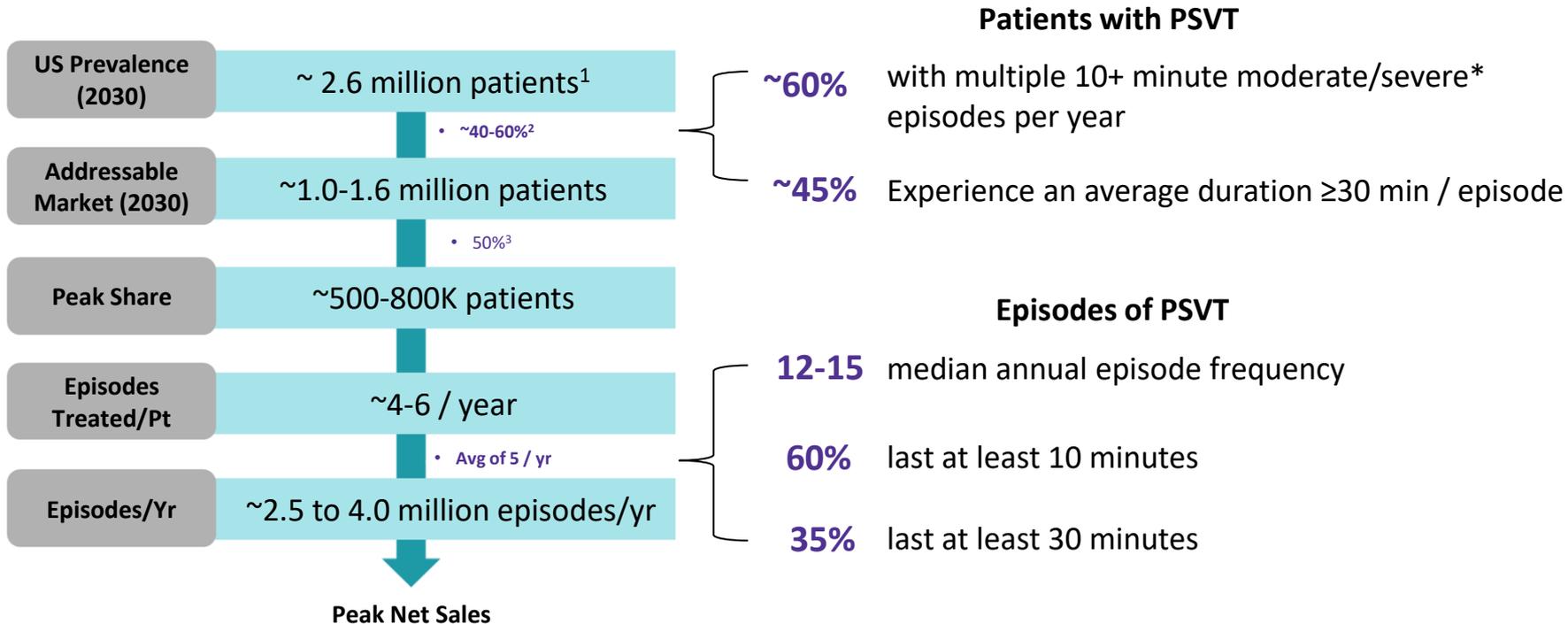
247 US & UK patients

- **Phase 1: Baseline Survey** (*medical and SVT episode history*)
- **Phase 2: Longitudinal Weekly Surveys** (*episode survey if experienced an episode, QoL survey if not*)



Source(s): PSVT patient market research, 2019 (Blueprint Research Group, n=247, n=198 US & n=49 UK)

Peak US Market Opportunity for Etripamil in PSVT



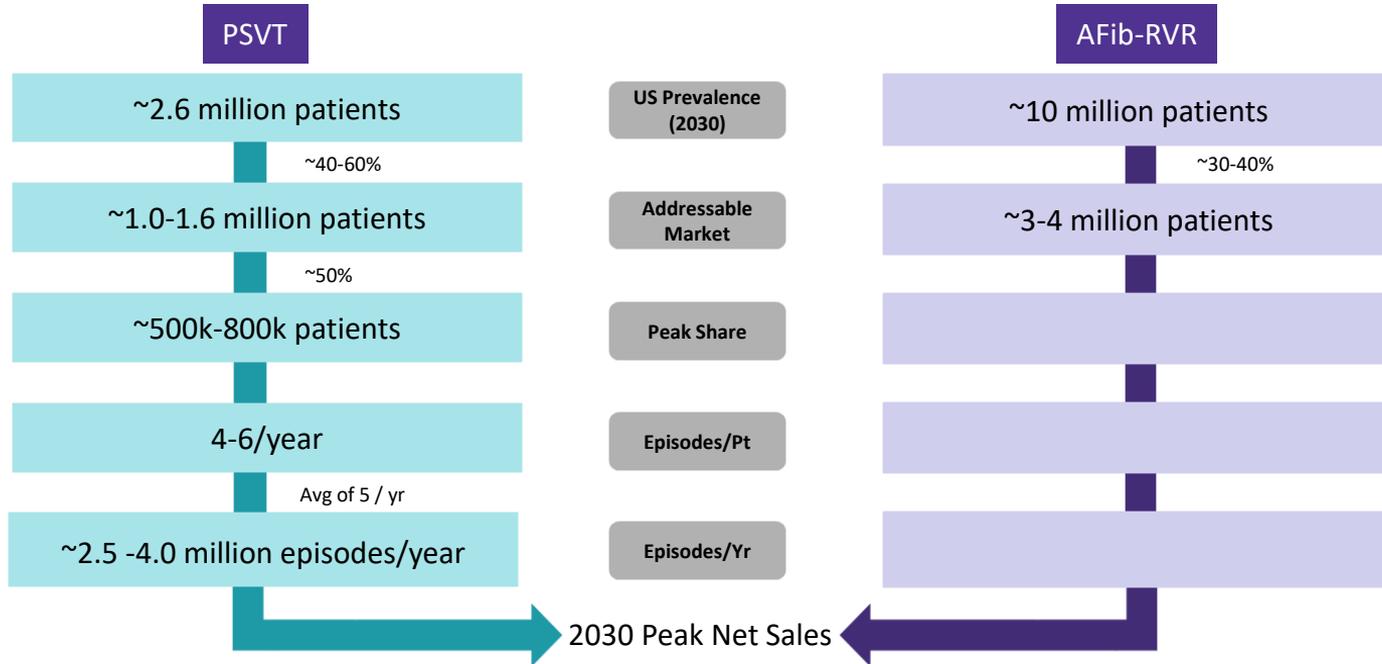
*Patient stated severity of SVT episode (mild, moderate, or severe)

Sources: Internal estimates based on market and outcomes research, Milestone Pharmaceuticals. 1. Rehorn et al. Journal of Cardiovascular Electrophysiology. 2021 Aug; 32(8): 2199-2206. doi: 10.1111/jce.15109. Epub 2021 Jun 14. 2. 2019 market research with patients conducted by Blueprint Research Group (n=247) . 3. 2020 market research with HCPs conducted by Triangle Insights Group, 2020 (n=250).

Peak US Market Opportunity for Etripamil in PSVT and AFib-RVR



Market research suggests a TAM of 4+ million patients across both PSVT and AFib-RVR indications



AF – RVR = Atrial Fibrillation with Rapid Ventricular Rate; TAM = Target Addressable Market; Internal estimates based on market and outcomes research, Milestone Pharmaceuticals

Sources: Internal estimates based on market research, Milestone Pharmaceuticals Inc.

Finances – as of December 31, 2021



Cash, cash equivalents and short-term investments of \$114.1M



Cash funds operations past guidance for top-line data and into 2nd half of 2023



Equity - 42.2M in shares and pre-funded warrants outstanding

- 29.9M common shares
- 12.3M pre-funded warrants



Thank you

Management Team



Joseph Oliveto
Chief Executive Officer



Amit Hasija
Chief Financial Officer



David Bharucha, MD, PhD
Chief Medical Officer



Francis Plat, MD
Chief Scientific Officer



Lorenz Muller
Chief Commercial Officer

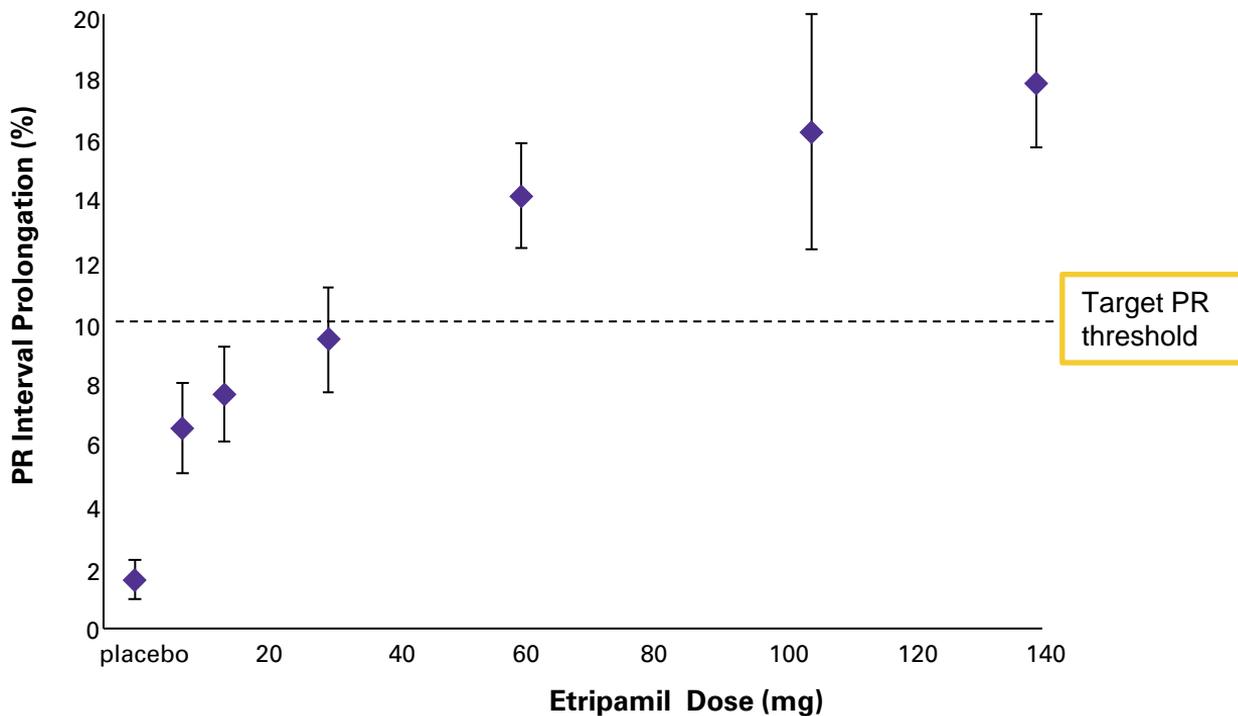


Jeff Nelson
Chief Operating Officer



Etripamil Phase 1 Pharmacology

PR Prolongation Used to Select Doses for Phase 2

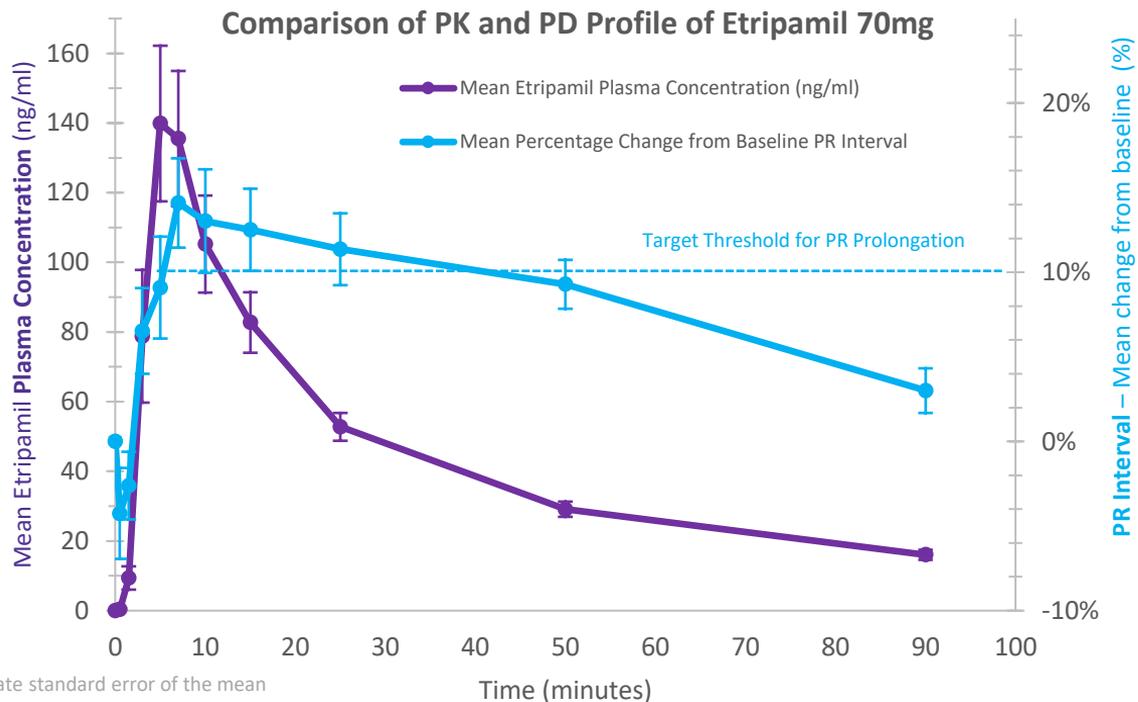


Error bars indicate standard error of the mean

Etripamil Nasal Spray Pharmacological Results (NODE-102)



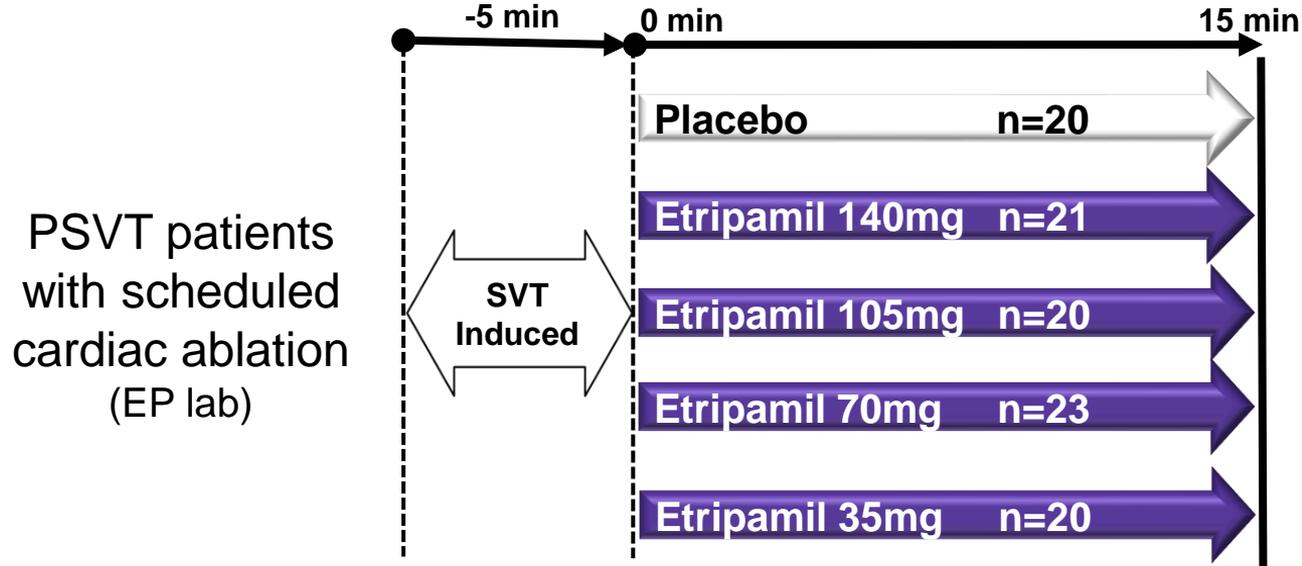
Anticipated therapeutic effect within 45 minutes; peak within 10 minutes



Phase 2a/b Study Design (NODE-1)



Objectives: Demonstrate superiority of etripamil over placebo in terminating SVT and dose ranging trend analysis



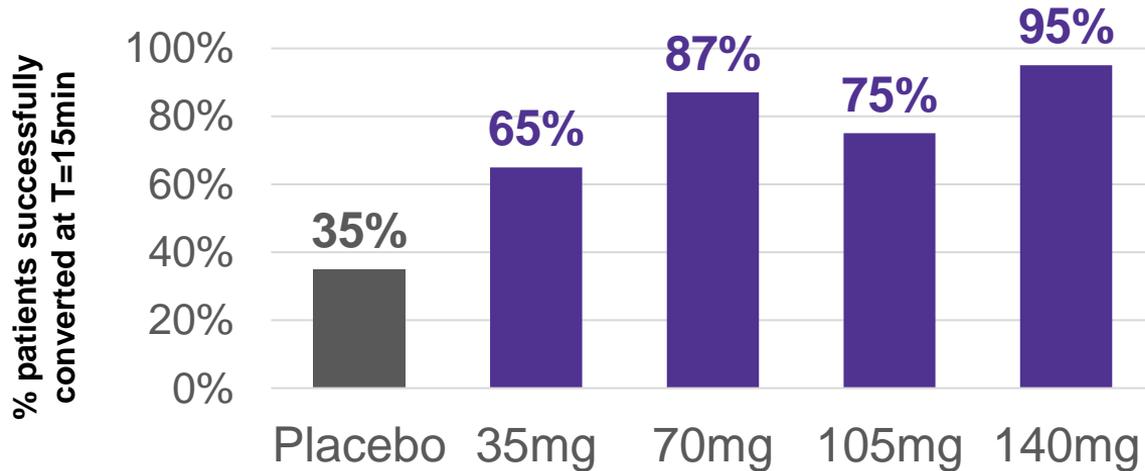
Endpoint: conversion to sinus rhythm within 15 minutes
>80% power to show a 50% absolute difference vs. placebo

EP = electrophysiology, SVT = supraventricular tachycardia, PSVT = Paroxysmal Supraventricular Tachycardia

Phase 2 Primary Endpoint



Etripamil three highest doses demonstrated 75-95% conversion rates which are statistically significant compared to placebo



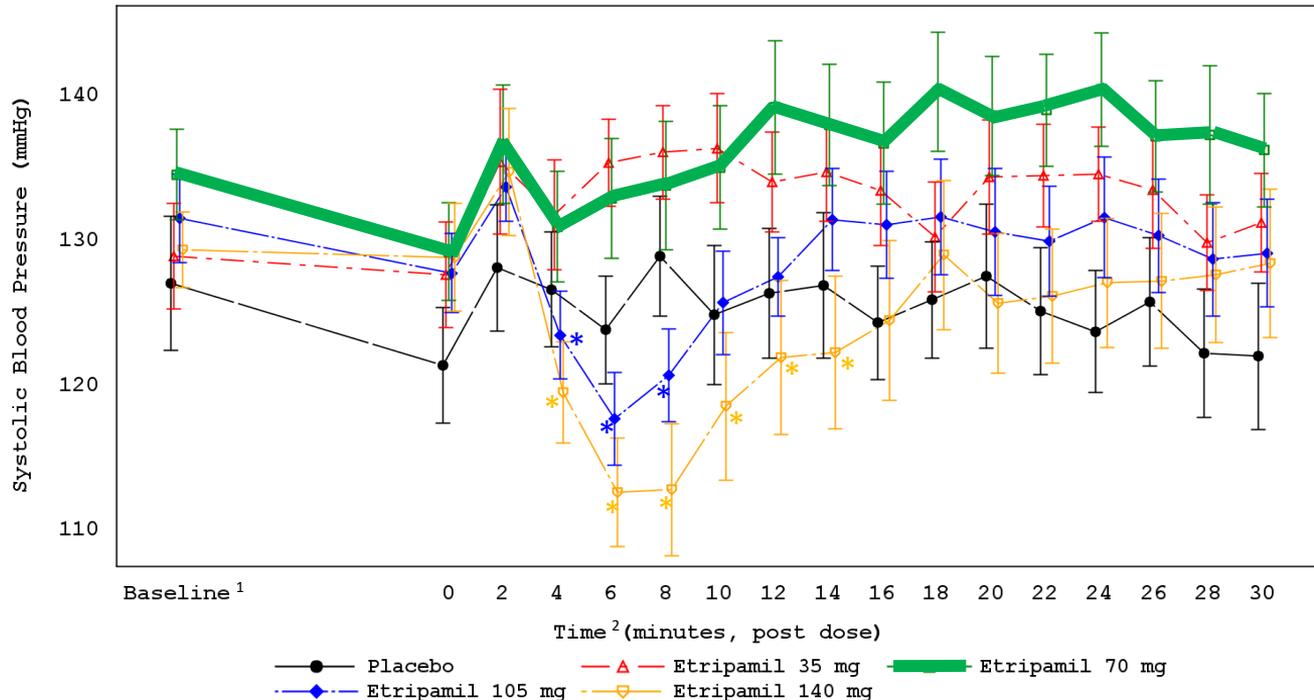
# patients converted at 15 min	7/20	13/20	20/23	15/20	20/21
p-value		0.1128	0.0006	0.0248	<.0001

Source: Stambler, B.S. et al.; Etripamil Nasal Spray for Rapid Conversion of Supraventricular Tachycardia to Sinus Rhythm; J Am Coll Cardiol. 2018;72(5):489-97

Phase 2 Mean Systolic Blood Pressure Effects



70 mg of etripamil showed no decrease in blood pressure; higher doses transient decreases



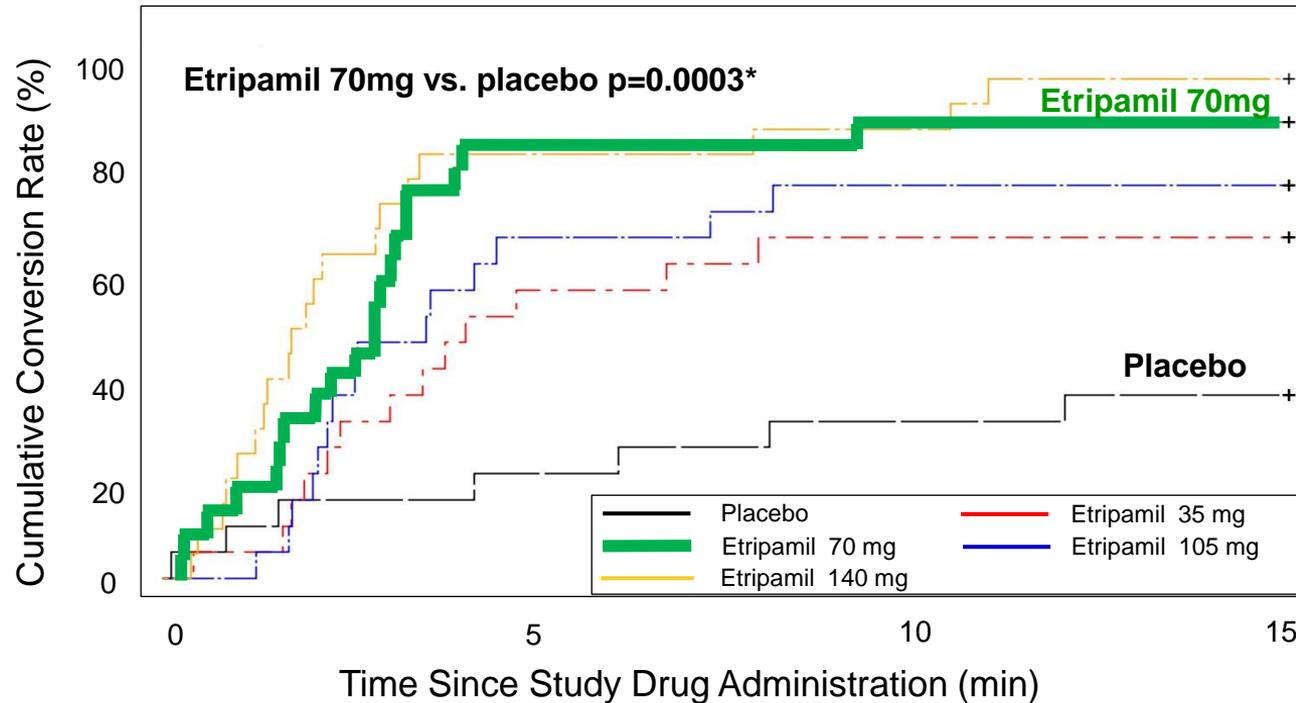
¹ Baseline is defined as the average of the 20-min and 10-min pre-dose measurements. ² Time 0 is defined as the average of the measurements during supraventricular tachycardia between 5 and 0 min before study drug administration. *p < 0.05 versus baseline.

Source: Stambler, B.S. et al.; Etripamil Nasal Spray for Rapid Conversion of Supraventricular Tachycardia to Sinus Rhythm; J Am Coll Cardiol. 2018;72(5):489-97

Phase 2 Time to Conversion



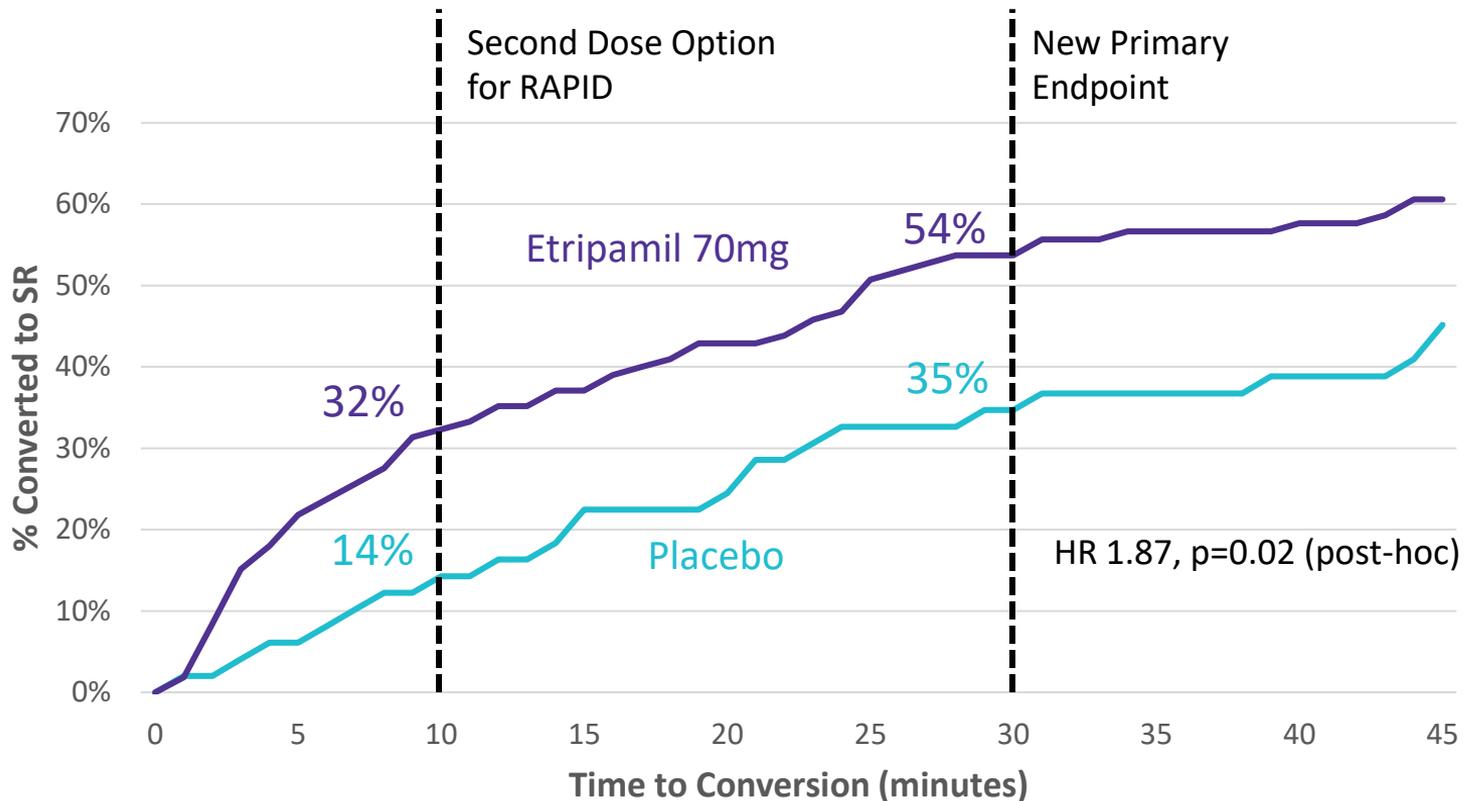
70mg etripamil dose showed rapid time to conversion (median < 3 min)



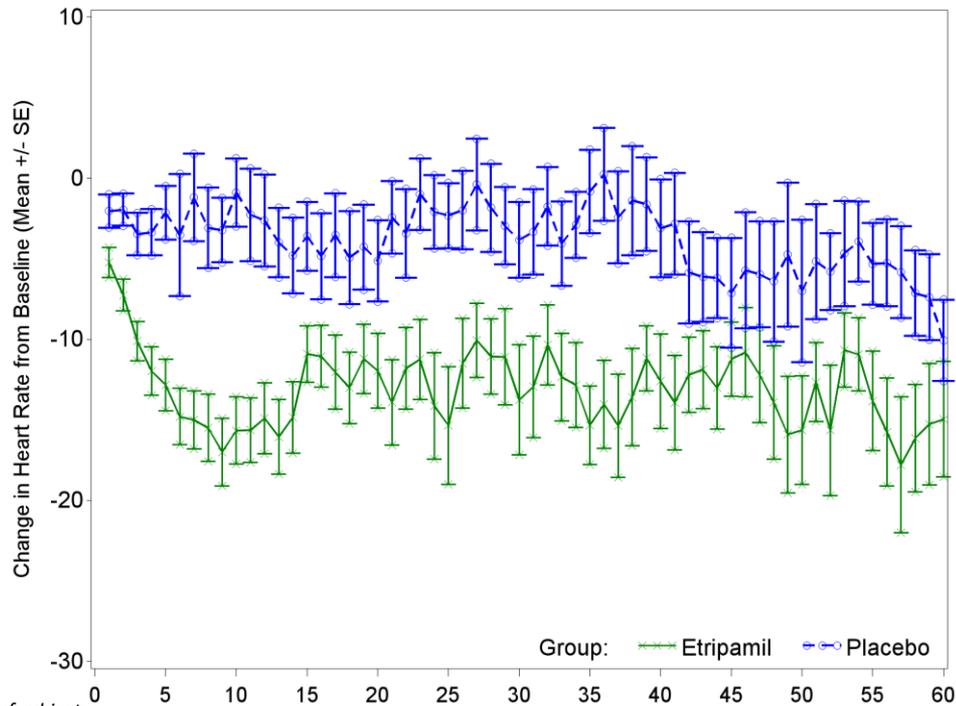
*Hazard Ratio and 95% Confidence Intervals etripamil 70mg vs. placebo; 4.99 (2.09, 11.93)

Source: Stambler, B.S. et al.; Etripamil Nasal Spray for Rapid Conversion of Supraventricular Tachycardia to Sinus Rhythm; J Am Coll Cardiol. 2018;72(5):489-97

NODE-301 Efficacy– Time to Conversion over 45 Minutes



Effect of Etripamil on Heart Rate (HR) while in SVT (NODE-301 Study)



Number of subjects	0	5	10	15	20	25	30	35	40	45	50	55	60
Placebo	48	41	41				28			20			17
Etripamil	102	69	60				41			31			30

- Improvement in HR observed within first minute, with maximum difference at 10 minutes
- Differences were statistically significant through 40 minutes
- Reduction in heart rate in etripamil group sustained for 1 hour
- Some patients reported symptom relief even though they had not converted to sinus rhythm

Source: Ip, JE et al; "Etripamil Nasal Spray Reduces Heart Rate in Patients With Paroxysmal Supraventricular Tachycardia Prior to Conversion to Sinus Rhythm"; Poster presentation at AHA Scientific Sessions, November 14, 2021.

NODE-301 Safety Analysis



Randomized Treatment Emergent Adverse Events (RTEAE)	Etripamil N=138	Placebo N=60
Subjects with any RTEAE	53 (38.4)	12 (20.0)
Maximum severity of RTEAE		
Mild	45 (32.6)	10 (16.7)
Moderate	8 (5.8)	3 (3.3)
Severe	0 (0.0)	0 (0.0)
Subjects with any Serious Adverse Event (SAE)	0 (0.0)	1 (1.7)
Subjects with any SAE related to study drug	0 (0.0)	0 (0.0)
Subjects with any AE leading to death	0 (0.0)	0 (0.0)
Subjects with AE leading to study drug discontinued	0 (0.0)	0 (0.0)

RTEAE timing – up to 24 hours following double-blind study drug administration

Source: Data on File, Milestone Pharmaceuticals Inc.

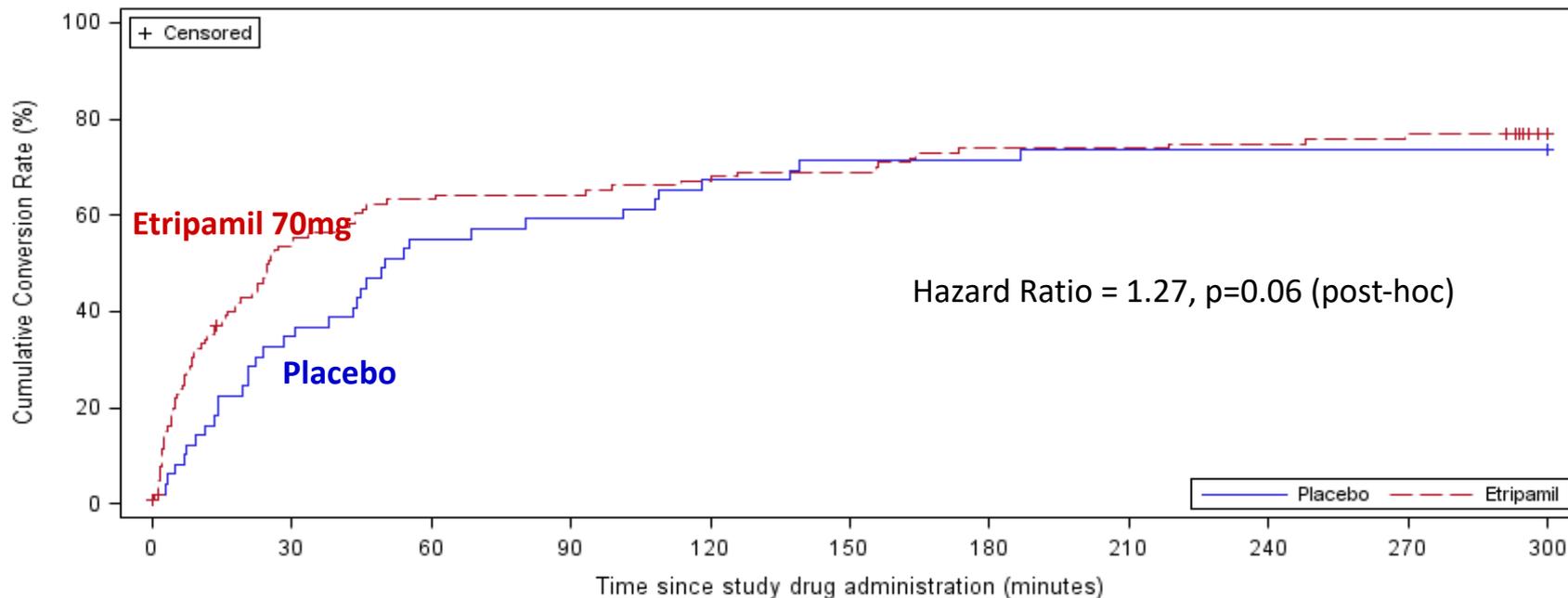
NODE-301 Safety Analysis



Randomized Treatment Emergent Adverse Events	Etripamil (N=138)	Placebo (N=60)
Nasal discomfort	27 (19.6)	4 (6.7)
Nasal congestion	11 (8.0)	2 (3.3)
Epistaxis	9 (6.5)	0 (0.0)
Rhinorrhea	8 (5.8)	1 (1.7)
Throat irritation	7 (5.1)	1 (1.7)
Headache	4 (2.9)	0 (0.0)
Sneezing	3 (2.2)	0 (0.0)
Atrioventricular (AV) block first degree	2 (1.4)	0 (0.0)
Dysgeusia	2 (1.4)	1 (1.7)
Sinus congestion	1 (0.7)	2 (3.3)
Rhinalgia	1 (0.7)	1 (1.7)
Ventricular tachycardia	1 (0.7)	1 (1.7)
Lacrimation increased	1 (0.7)	1 (1.7)
Burning sensation	1 (0.7)	0 (0.0)
Presyncope	1 (0.7)	0 (0.0)
Migraine	1 (0.7)	0 (0.0)

Stambler, BS et al; Etripamil Nasal Spray for Acute Termination of Spontaneous Episodes of PSVT (NODE-301); Heart Rhythm Society Late Breaking Clinical Trials Randomized Trials D-LBCT01; Presented Online May 8, 2020

NODE-301 Conversion up to Hour 5 with Medical Intervention Patients Analyzed as Treatment Failures at 5 hours (post-hoc)



Placebo	49	32	22	20	16	14	14	13	13	13	13
Etripamil	107	48	38	37	34	32	27	27	26	24	18

Number of subjects at risk

Subjects who convert following medical assistance are censored at 5 hours. Subjects who present missing data from time t to the end are censored at the time of last available data. Subjects who do not convert or are not censored before 5 hours are censored at 5 hours

PSVT & Atrial Fibrillation Populations in the US



	PSVT	Atrial Fibrillation
 Total Patients (2030)	2.6 Million³	10 Million¹
 Discharged ED Visits & Hospital Admissions (2016)²	145 Thousand	785 Thousand
 Target Market Addressable (2030) (Patient Population)	1.0-1.6 Million⁵	~3-4 Million⁴

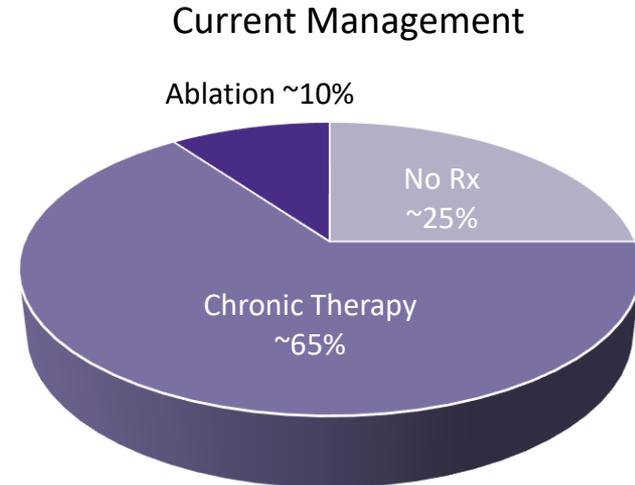
Source(s): 1. Colilla et al., Am. J. Cardiol. 2013, 112(8), 1142-1147; Miyasaka et al., Circulation, 2006, 114, 119-125. American Heart Association 2. HCUP ED & Admissions Data (2016), accessed January 2021. 3. Rehorn et al. Journal of Cardiovascular Electrophysiology. 2021 Aug; 32(8): 2199-2206. doi: 10.1111/jce.15109. Epub 2021 Jun 14. 2018 prevalence of 2M anticipated to grow at a CAGR of ~2% 4. 30%-40% of AF patients have >1 symptomatic episode per year of AF with RVR requiring treatment, Triangle Insights Group Market Research, N=25, January 2021. 5. Estimate of TAM (~40%-60% of prevalence) based on internal PSVT patient market research (Blueprint Research Group, n=247) and longitudinal analysis of claims data.

Current US PSVT Market



Total annual US healthcare expenditures of ~\$3B

- Prevalence ~2M diagnosed PSVT patients
- ~300K newly diagnosed per year
- ~600K patients treated per year
- >150K ED/hospital visits per year
- ~80K ablations per year



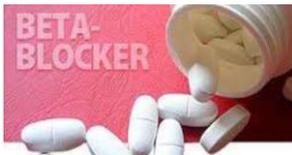
Source: Sacks, N.C. et al; Prevalence of Paroxysmal Supraventricular Tachycardia (PSVT) in the US in Patients Under 65 Years of Age; Abstract and Oral Presentation at the International Academy of Cardiology Annual Scientific Sessions 2018, 23rd World Congress on Heart Disease; Precision Xtract, Boston, MA, USA; and data-on-file from IBM MarketScan® Commercial Research Database (<65y) and the Medicare Limited Dataset (≥65y), with demographic, enrollment and claims data for commercially insured (Truven) and Medicare covered patients using PSVT code 427.0 or I47.1 for up to a 9-year interval between 2008 and 2016 inclusive.

Current Standard of Care for PSVT



Current acute treatment options are invasive, inconvenient, anxiety-provoking and/or costly

Chronic / preventive



- Chronic oral medication with modest efficacy and unpleasant side effects
- 4-7 episodes/year despite preventive medications



- Catheter ablation
- ~80K ablations/year
- Only ~10% of patients opt for ablation

Acute



- IV adenosine or DC cardioversion in the ED
- >150K ED visits/hospital admissions per year
- Many patients endure episodes when they occur

DC = Direct Current

Sources: Internal estimates based on market research and longitudinal analysis of Truven/Marketscan and Medicare claims data; Page RL et al, 2015 ACC/AHA/HRS guideline for the management of adult patients with supraventricular tachycardia: executive summary: a report of the ACC/AHA Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Circulation*. 2016;133:e471–e505

Management of Patients with PSVT and Call Point Targeting



Majority of patients with PSVT managed by CV specialists, leading to commercial efficiencies

		Clinical Cardiologists	Primary Care Physicians	Electro-physiologists
% of patients managed		~60%	~30%	~10%
Long-term Use	<i>Add to or Replace Chronic Medications</i>	Primary Target		
Medium-term Use	<i>Defer Ablation</i>			
Short-term Use	<i>Bridge to Ablation</i>	Secondary Target		

- Targeted sales force to reach majority of available opportunity
- Significant overlap with most common CV portfolio call points

Source: Internal market research

PRO Analyses Provide A Clearer Picture of Burden of PSVT than Market Research Alone



Unablated patients experience 5-6 episodes per year relevant for etripamil use

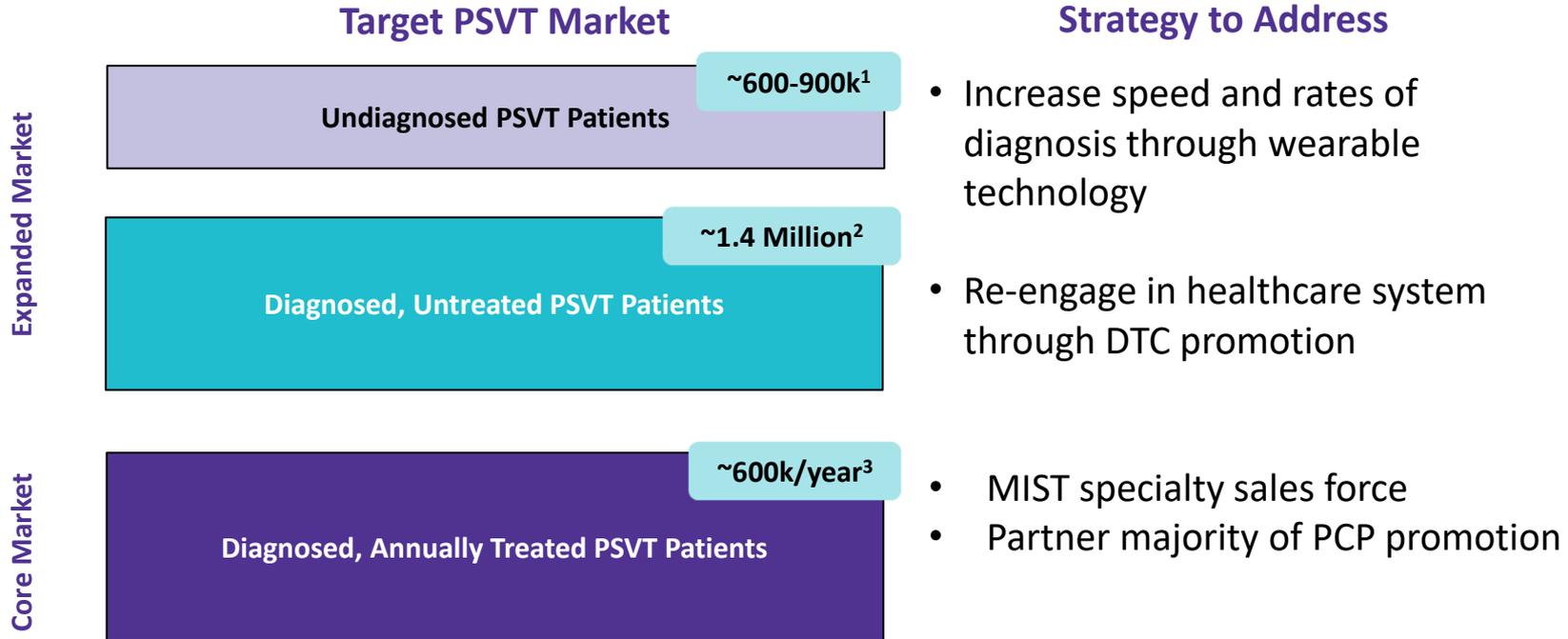
Episode Freq. for Patients <u>not</u> Receiving Catheter Ablation	Market Research¹ (annual recall, n=250)	PRO Longitudinal Data² (weekly tracking, n=247)
Annual Episode Freq	4-7 episodes / year	15 episodes/year*
% of patients with multiple 10+ min episodes / year	40%	68%
Annual Freq of Moderate-Severe 5+ min episodes	N/A	5-6 episodes / year*

Weekly tracking shows that patients are experiencing more episodes than previously thought – but that they tend to recall the moderate/severe episodes of longer duration (e.g., 5+ minutes)

*Patients on study at least 6 months were used to project annual episode frequency. Sample projections were weighted by stated episode frequency from an intake survey

Sources: Internal estimates based on market and outcomes research, Milestone Pharmaceuticals. 1. PSVT patient market research conducted by Triangle Insights Group, 2018 (n=250). 2. PSVT patient market research conducted by BluePrint Research Group, 2019 (n=247).

Core PSVT Market is Addressable Now, with Potential for Expansion



Source: 1) assumes annual incidence rate for PSVT of ~300k from longitudinal claims analysis and the average time to diagnosis (currently 2-3 years) can be reduced to <6 months 2) Calculated as the difference between PSVT prevalence of 2M and annual treatment rate of ~600k from Truven MarketScan data, 2008-2016 analyzed by Precision Xtract, 2019 3) Estimated number of unique patients with annual claims for PSVT from Truven MarketScan data, 2008-2016 analyzed by Precision Xtract, 2019.

Estimating Prevalence, Incidence, and Annually Treated Patients Using Longitudinal Claims Data



- Analyzed commercial and Medicare claims data over a 9-year period, where patients were required to have 5 years of continuous enrollment
 - ✓ 1+ PSVT code required in the ED or inpatient setting (unique patients managed acutely)
 - ✓ 2+ PSVT codes required in the outpatient setting (additional unique patients managed chronically)

Age Group	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Age < 65	271,024	196,653	169,988	155,966	145,485	939,116
Age 65+	377,493	220,596	209,358	188,925	166,286	1,162,658
All Ages	648,518	417,249	379,346	344,891	311,771	2,101,775



Source: Data on file from IBM MarketScan® Commercial Research Database (<65y) and the Medicare Limited Dataset (≥65y), with demographic, enrollment and claims data for commercially insured (Truven) and Medicare covered patients using PSVT code 427.0 or I47.1 for up to a 9-year interval between 2008 and 2016 inclusive.

Published Disease Data Likely Under-Reports Burden of PSVT



<p>150</p> <h2>MESA Study</h2> <p>Paroxysmal Supraventricular Tachycardia in the General Population</p> <p>LEONARDO A. OREJARENA, MD, HUMBERTO VIDAILLET, JR., MD, FACC, FRANK DeSTEFANO, MD, MPH, DAVID L. NORDSTROM, PhD, ROBERT PETER N. SMITH, MD, FACC, JOHN J. HAYES, MD, FACC</p> <p><i>Marshfield, Wisconsin</i></p>	<p>JACC Vol. 31, No. 1 January 1998:150-7</p> <p>ORIGINAL RESEARCH</p> <h2>PREEMPT Study</h2> <p>Contemporary Burden and Correlates of Symptomatic Paroxysmal Supraventricular Tachycardia</p> <p>Alan S. Go, MD; Mark A. Hlatky, MD; Taylor I. Liu, MD, PhD; Dongjie Fan, MSPH; Elisha A. Garcia, BS; Sue Hee Sung, MPH; Matthew D. Solomon, MD, PhD</p> <p>Background—Contemporary data about symptomatic paroxysmal supraventricular tachycardia (PSVT) epidemiology are limited. We characterized prevalence and correlates of symptomatic PSVT within a large healthcare delivery system and estimated national PSVT burden.</p>
---	--

Strengths

- Provides important demographic and clinical characteristic data on patients with PSVT
- Positive Predictive Values from PREEMPT useful
- Less than 40% of incident cases in MESA would have been detected by PSVT ICD-9 Code 427.0

Weaknesses

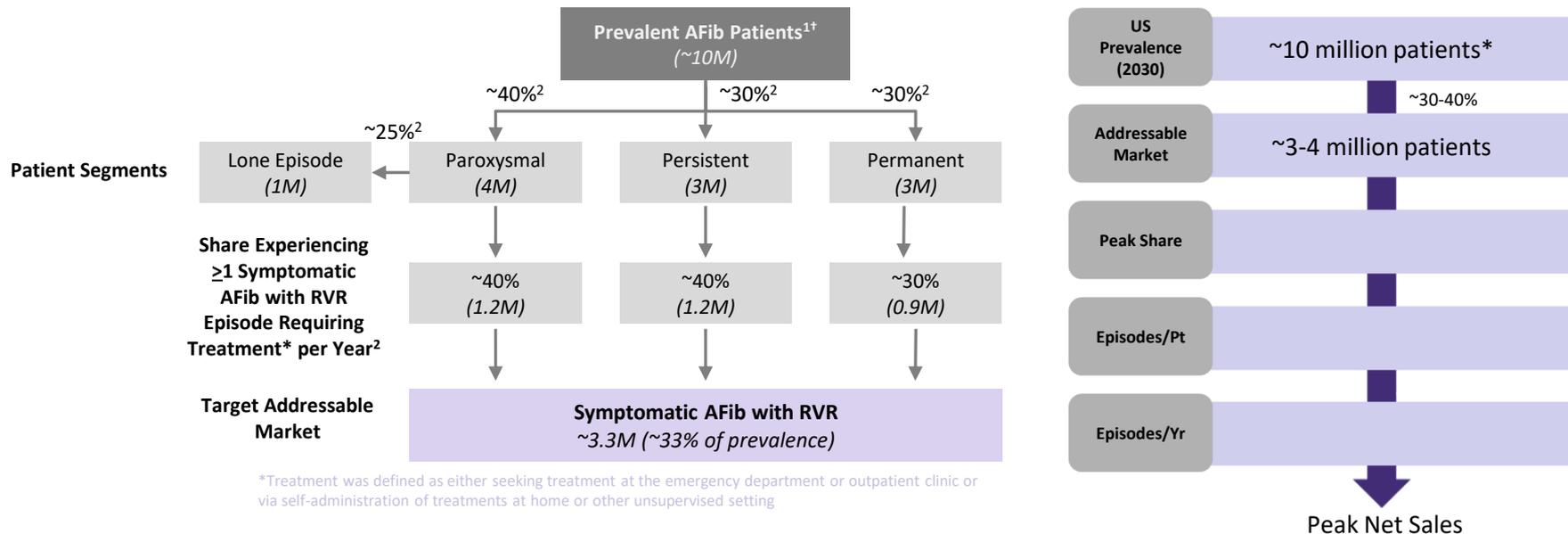
- Data only from patients presenting to healthcare settings acutely, with the episode confirmed on ECG during the encounter
- PSVT episodes were only adjudicated during the first healthcare encounter with a PSVT or PSVT-related code in PREEMPT
- Non-representative, small, and non-contemporary population (MESA)

Source: Orejarena LA, Vidaillet H Jr, DeStefano F, Nordstrom DL, Vierkant RA, Smith, PN, Hayes JJ. Paroxysmal supraventricular tachycardia in the general population. J Am Coll Cardiol. 1998;31:150-157. Alan S. Go, MD; Mark A. Hlatky, MD; Taylor I. Liu, MD, PhD; Dongjie Fan, MSPH; Elisha A. Garcia, BS; Sue Hee Sung, MPH; Matthew D. Solomon, MD, PhD. Contemporary Burden and Correlates of Symptomatic Paroxysmal Supraventricular Tachycardia. J Am Heart Assoc. 2018;7:e008759. DOI: 10.1161/JAHA.118.008759.

Peak US Market Opportunity for Etripamil in AFib-RVR



Market research suggests a target addressable market of ~3-4 million patients for AFib-RVR by 2030



AFib-RVR = Atrial Fibrillation with Rapid Ventricular Rate
*Reflects the midpoint of published estimates (~8M to ~12M by 2025 or 2030)

1. Colilla et al., Am. J. Cardiol. 2013, 112(8), 1142-1147; Miyasaka et al., Circulation, 2006, 114, 119-125; Colilla et al., Am. J. Cardiol. 2013, 112(8), 1142-1147; American Heart Association 2. HCUP ED & Admissions Data (2016), accessed January 2021. 2. Quantitative Survey conducted by Triangle Insights, May 2021, N=250 Clinical Cardiologists, Interventional Cardiologists, and Electrophysiologists

PRO Analyses Provide A Clearer Picture of Burden of PSVT than Market Research Alone



Unablated patients experience 5-6 episodes per year relevant for etripamil use

Episode Freq. for Patients <u>not</u> Receiving Catheter Ablation	Market Research¹ (annual recall, n=250)	PRO Longitudinal Data² (weekly tracking, n=247)
Annual Episode Freq	4-7 episodes / year	15 episodes/year*
% of patients with multiple 10+ min episodes / year	40%	68%
Annual Freq of Moderate-Severe 5+ min episodes	N/A	5-6 episodes / year*

Weekly tracking shows that patients are experiencing more episodes than previously thought – but that they tend to recall the moderate/severe episodes of longer duration (e.g., 5+ minutes)

*Patients on study at least 6 months were used to project annual episode frequency. Sample projections were weighted by stated episode frequency from an intake survey

Sources: Internal estimates based on market and outcomes research, Milestone Pharmaceuticals. 1. PSVT patient market research conducted by Triangle Insights Group, 2018 (n=250). 2. PSVT patient market research conducted by BluePrint Research Group, 2019 (n=247).