### INNOVATION IN SIGNAL ACQUISITION AND PROCESSING

## Unblinding PURE EP™

September 15th, 2020









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### **Medical Device Innovation Cycle**





#### **Concept Feasibility**

2011 - 2013:

• Concept developed with Texas Cardiac Arrhythmia Institute

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• Proof of concept test completed at UCLA



#### **Design Validation** and Preclinical

#### 2014 – 2017:

- Prototype test with UCLA
- First pre-clinical trials at Mayo Clinic
- Trials at Mount Sinai



#### Clinical/Market Approval

2018 - 2019:

- FDA 510(k) clearance
- First patient cases and first clinical trial

TEXAS CARDIAC ARRHYTHMIA INSTITUTE Bt. David's Medical Canter

#### **Targeted Commercial** Release

2020 & beyond:

• Coming to an EP center near you!



### **Defining the Market Opportunity**



**Global Growth in EP Devices:** 

#### \$4.5B in 2017, projected to reach \$7.4B in 2022 **10.4% growth rate**

**Global Growth** in Complex Cardiac Ablation Procedures:

440,629 in 2017 to 830,390 in 2022 **13.5% growth rate**  u.s. 1,631 hospitals averaging 2.1 rooms per lab **3,425 EP rooms**  OUS: 3,729 hospitals averaging 1.05 rooms per lab **3,915** 

EP rooms

# As Hospitals Resume Elective Procedures, Should they Prioritize Electrophysiology During COVID-19?

#### **EP procedures are clinically urgent**

• Delaying procedure increases stroke risk and worsens outcomes

#### **EP procedures are revenue generating**

• CV surgery and invasive cardiology have the highest net annual revenue compared to all other service lines

Median Revenues Per Case For Ablation and Select EP Procedures



#### **Reimbursement rates continue to increase**

PURE

SEE MORE, CLEARLY

• From 2019 to 2020 ablations and LAAO (DRG 274) had a reimbursement rate increase of 8.8%

CMS Reimbursement Changes From FY 2019 to FY 2020

Procedure	Reimbursement Rate Change	
Inpatient		
All inpatient services	2.5%	
Ablations and LAAO (DRG 274)	8.8%	
Pacemaker implant (DRG 244)	0.9%	
ICD implant (DRG 227)	0.9%	
Outpatient		
All outpatient services	2.6%	
Ablations (APC 5213)	6.3%	
Pacemaker implant (APC 5223)	3.8%	
ICD implant (APC 5232)	5.3%	



#### Unique System Architecture

#### **Seamless Lab Integration**





### The value PURE EP<sup>™</sup> brings



Click here to watch

# PUREEP Spotlight

### High Fidelity Intracardiac Signals Can Help Visualize Conduction Pathways Faster

Andrea Natale, MD





### **PURE EP™ clinical data strategy**





the PURE EP<sup>™</sup> signals

### **PURE EP™ Study – Objective and Method**



#### **OBJECTIVES:**

Phase 1 -Validate the quality of the PURE EP<sup>™</sup> signals when compared to conventional signal sources Phase 2 – Better define the clinical value of the PURE EP<sup>™</sup> signals

#### **METHOD:**

- 1. Collect matching signals of interest during each procedure
- 2. Subject the sample sets to blinded analysis by (3) leading independent EPs



#### PURE EP<sup>™</sup> System

Acquires raw cardiac signals Performs digital signal analysis Unveils the full range of cardiac signals



**Recording System** 

Monitors vital signs Stores medical records Displays cardiac signals



Mapping System Recreates the anatomy Displays cardiac signals

### PURE EP<sup>™</sup> Study Physician Investigators and Blinded Reviewers





Andrea Natale, MD (and colleagues)

Executive Medical Director Texas Cardiac Arrhythmia Institute (TCAI) Austin, TX



Bradley Knight, MD

Professor of Medicine and Director of EP Northwestern University Chicago, IL



#### Wendy Tzou, MD

Associate Director of the EP Lab University of Colorado Denver, CO



#### Pasquale Santangeli, MD

Associate Professor Hospital of the University of Pennsylvania Philadelphia, PA

### PURE EP<sup>™</sup> Study – Data assessment





### **Results from randomized, blinded analysis**





PURE EP Study results presented on August 30<sup>th</sup>, 2020

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### 36% of the time "more signal components" were seen on PURE EP<sup>TM</sup>

This represents potentially thousands of additional intracardiac signals during each procedure providing additional information for diagnosing and treating cardiac arrhythmias.

\*The PURE EP study is ongoing. Phase 2 data is being analyzed and results will be published in 2021.

### Roadmap to commercialization







### **Strategic imperatives**

- Partner with leading Key Opinion Leaders in Electrophysiology.
- Install Pure EP systems in 10 hospitals in the U.S. by end of 2020.
  - Current systems: SDMC, Mayo Jacksonville, MGH Boston
  - 4 additional centers where contracts are signed
- **Transition** from evaluation to purchase of the systems.
- Commercializing Software and Service as a reoccurring revenue stream.

### **Invest in growth**

- Expand our Field Support team
- Partner with each hospital to establish Centers of Excellence/Training Sites
- Showcase PURE EP<sup>™</sup> at major Industry Conferences VT Symposium (Oct 2020) EP Live Austin (Dec 2020) AF Symposium (Jan 2021) HRS (Jul 2021)

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Q&A

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