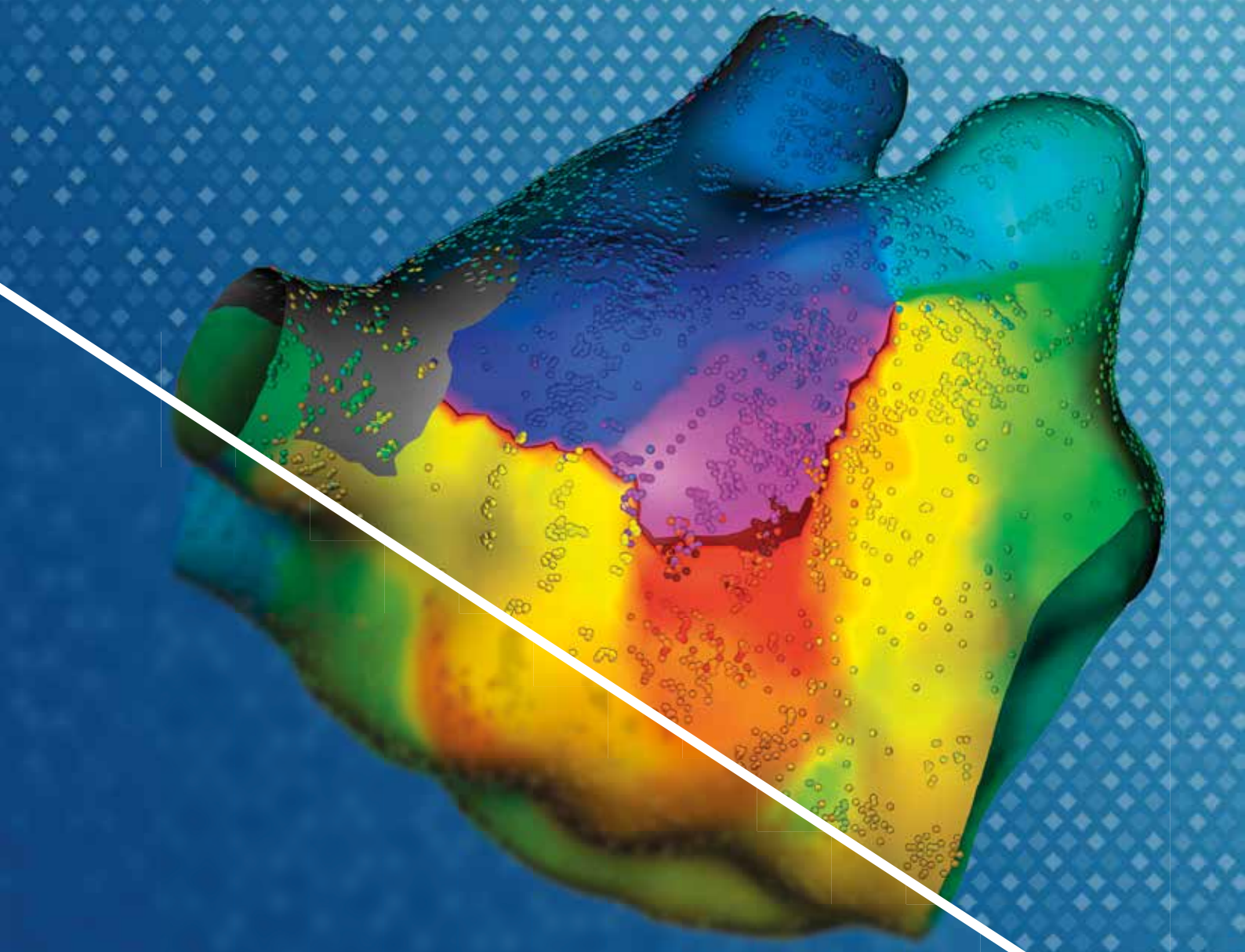
Boston Scientific
Advancing science for life™

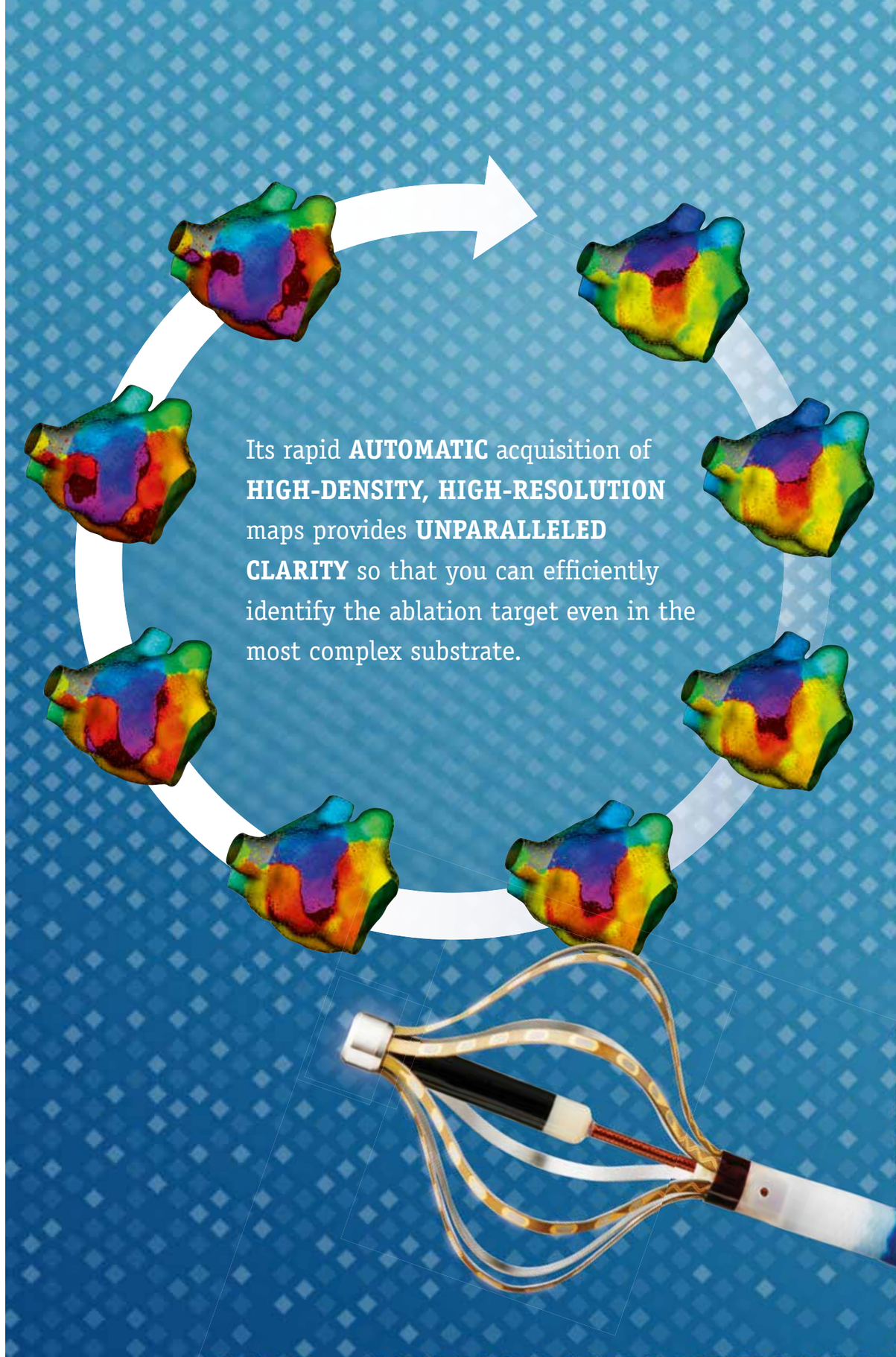
RHYTHMIA HDx™
MAPPING SYSTEM



CLARITY
for any level of complexity

THE RHYTHMIA HDx™ MAPPING SYSTEM SETS THE STANDARD OF PERFORMANCE IN HIGH-DEFINITION MAPPING.

RHYTHMIA HDx
MAPPING SYSTEM



Its rapid **AUTOMATIC** acquisition of **HIGH-DENSITY, HIGH-RESOLUTION** maps provides **UNPARALLELED CLARITY** so that you can efficiently identify the ablation target even in the most complex substrate.

THE RHYTHMIA HDx™ MAPPING SYSTEM WAS BUILT FROM THE GROUND UP FOR HIGH-DEFINITION MAPPING.

C

HD CATHETER

"THE HIGH NUMBERS OF ELECTRODES PROVIDE *comprehensive and accurate electrical information to enable insight into underlying AT mechanisms and activation patterns that have rarely been available in this detail before."*

– Schaeffer et al.,[1] 2016

H

HD HARDWARE

"THIS SYSTEM IS ABLE TO DISPLAY LOW-VOLTAGE CRITICAL ISTHMUSES, *which are far below the current scar cutoff of classically available systems."*

– Latçu et al.,[2,3] 2017

S

HD SOFTWARE

"THE COMBINATION OF INCREASED SAMPLING DENSITY, MAPPING RESOLUTION AND A NOVEL ALGORITHM *to improve the accuracy of activation timing resulted in the ability to construct activation maps with better characterisation of the circuit as compared to standard mapping technologies."*

– Anter et al.,[3,4] 2016

QUANTITY

DENSITY

OF DATA

HD CATHETER

QUALITY

RESOLUTION

OF DATA

HD HARDWARE

SPEED AND ACCURACY

AUTOMATION

OF DATA PROCESSING

HD SOFTWARE

Only the combination of a high-resolution mapping **CATHETER,** advanced noise-filtering **HARDWARE** and intelligent **SOFTWARE** working together can achieve the **DENSITY, RESOLUTION** and **AUTOMATION** required for true high-definition mapping.

The INTELLAMAP ORION™ has **64 ELECTRODES** that were shown to generate maps with 5x higher point densities[5,6] than competitive automated mapping systems.

RHYTHMIA HDx™ has **NO POINT LIMITATION.**

ORION's **0.4 mm²**, **2.5 mm** spaced, **IRIDIUM-OXIDE** coated, **FLAT** electrode design produces sharp, high-quality, high-resolution signals.

RHYTHMIA HDx™ **0.01mV NOISE FLOOR** reveals signals that cannot be visualised with standard-definition mapping systems.

Continuous mapping leverages **4 ROBUST TRIGGERS** and **7 BEAT ACCEPTANCE CRITERIA** to ensure that only beats from the rhythm of interest are accepted into the map, at **SPEEDS GREATER THAN 1,000 POINTS/MINUTE.**[7]

RHYTHMIA HDx Intelligent Annotation Algorithm was shown to deliver **99.98%** annotation **ACCURACY.**[3,8]

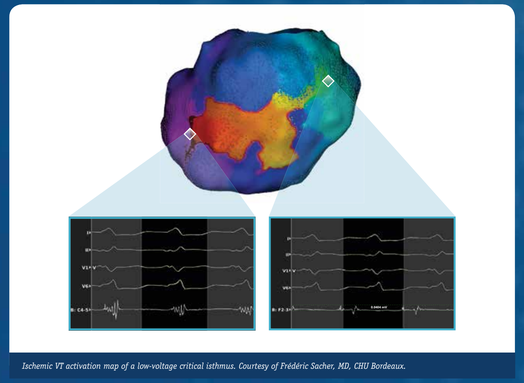
HD CATHETER

HD HARDWARE

HD SOFTWARE

1

DIAGNOSE WITH COMPLETE DATA

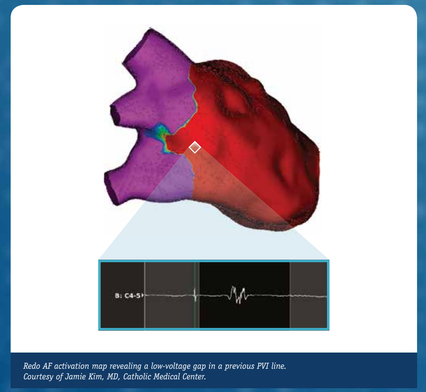


Ischemic VT activation map of a low-voltage critical isthmus. Courtesy of Frédéric Sacher, MD, CHU Bordeaux.

- Reduce the amount of interpolation between annotated points to more efficiently identify areas of interest
- Clearly visualise propagation of complex arrhythmia circuits
- Characterise complex substrates, including critical isthmuses, low-voltage regions of interest, scar and scar boundaries

2

DEVELOP A TARGETED ABLATION STRATEGY

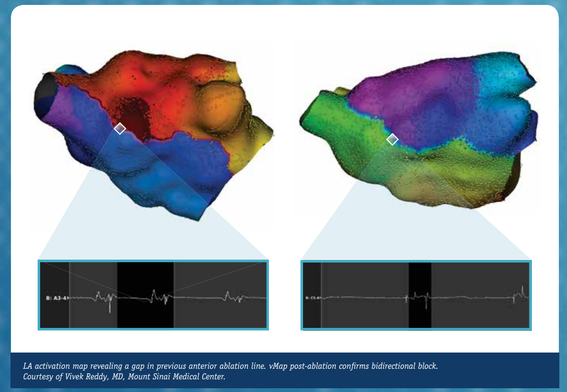


Redo AF activation map revealing a low-voltage gap in a previous PVI line. Courtesy of Jamie Kim, MD, Catholic Medical Center.

- Uncover channels and small gaps in previously ablated lesion sets
- Clearly visualise low amplitude and complex fractionated electrogrammes that are not visible with standard-definition systems
- Precisely identify the ablation target so that you can limit ablation time

3

EFFICIENTLY CONFIRM PROCEDURAL ENDPOINTS



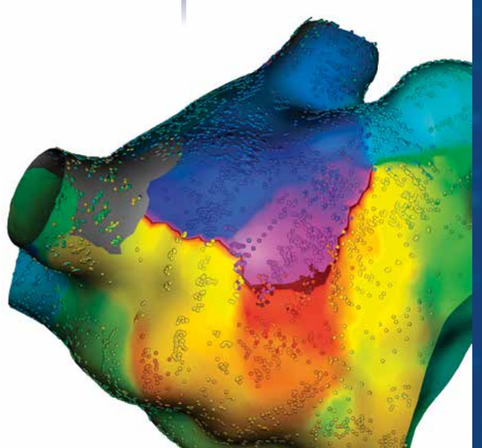
LA activation map revealing a gap in previous anterior ablation line. vMap post-ablation confirms bidirectional block. Courtesy of Vivek Reddy, MD, Mount Sinai Medical Center.

- Remap areas of interest at speeds >1,000 points/minute[7]
- Rapidly assess lesion integrity through post-ablation vMaps™

THE BETTER YOU CAN SEE IT,

the better you can treat it.

The RHYTHMIA HDx™ Mapping System provides map clarity that cannot be achieved through standard-definition mapping technologies.



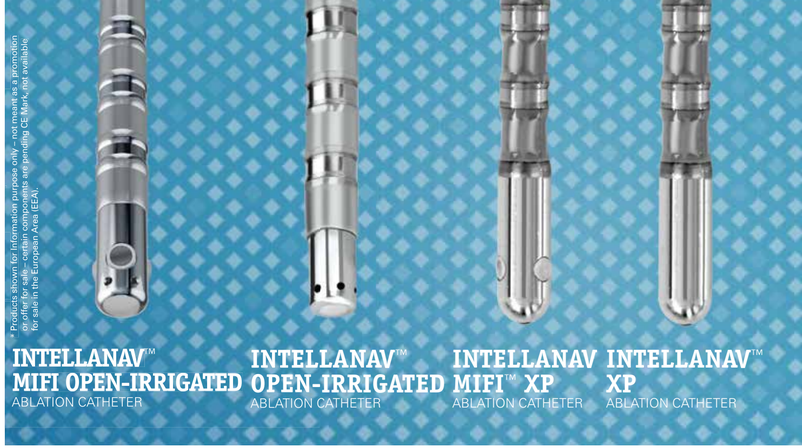
RHYTHMIA HDx™ HYBRID LOCALISATION PROVIDES YOU THE FLEXIBILITY TO WORK WITH YOUR CHOICE OF CATHETERS.

MAGNETIC NAVIGATIONAL ACCURACY OF ≤1 mm

For optimal accuracy and efficiency, magnetic tracking supports mapping with the Boston Scientific INTELLAMAP™ and INTELLANAV™ catheters

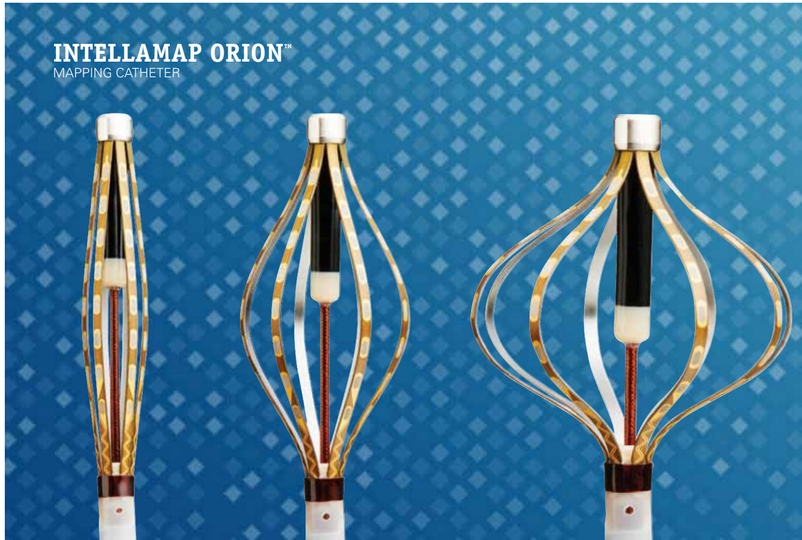
IMPEDANCE BASED NAVIGATIONAL ACCURACY OF ≤2 mm

Impedance tracking supports mapping and visualisation of non-navigation-enabled catheters for flexibility of choice[9]

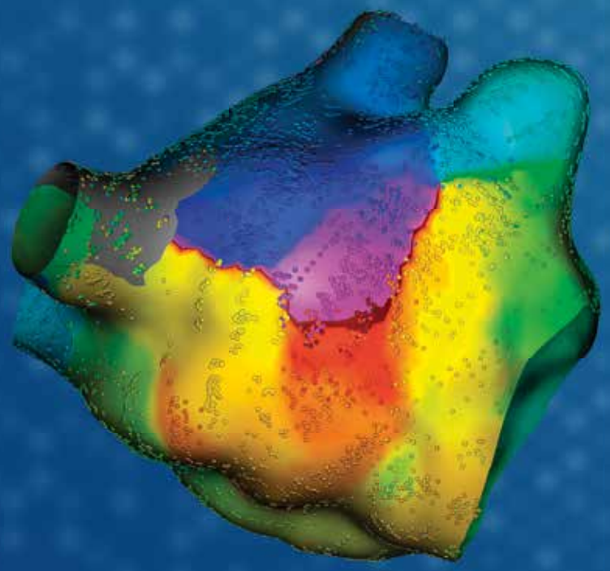


Boston Scientific offers a full portfolio of INTELLANAV™ Ablation Catheters.

FOR THE HIGHEST LEVEL OF ACCURACY, use the INTELLAMAP ORION™ Mapping Catheter plus an INTELLANAV Ablation Catheter for high-definition mapping and optimal tracking accuracy.



THE DIFFERENCE ...

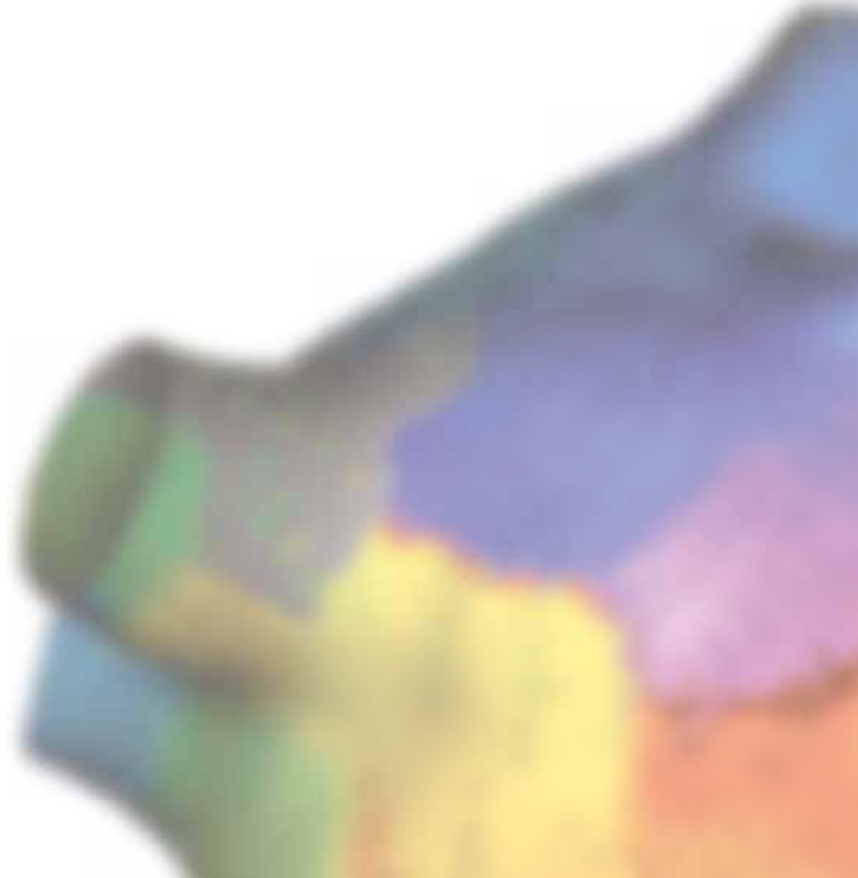


... IS IN THE DESIGN.

Left atrial activation map and cover image courtesy of Elad Anter, MD, BIDMC.

RHYTHMIA HDx™

MAPPING SYSTEM



1. Schaeffer B, Hoffmann BA, Meyer C, et al. Characterization, mapping and ablation of complex atrial tachycardia: Initial experience with a novel method of ultra high-density 3D mapping. *J Cardiovasc Electrophysiol.* 2016 Oct;27(10):1139-1150.
2. Laţcu DG, Bun SS, Viera F, et al. Selection of critical isthmus in scar-related atrial tachycardia using a new automated ultrahigh resolution mapping system. *Circ Arrhythm Electrophysiol.* 2017 Jan;10(1). pii: e004510.
3. Study performed using Rhythmia™ Mapping System. Product specifications that deliver density, resolution, and automation remain consistent with Rhythmia HDx.
4. Anter E, McElderry TH, Contreras-Valdes FM, et al. Evaluation of a novel high-resolution mapping technology for ablation of recurrent scar-related atrial tachycardias. *Heart Rhythm.* 2016 Oct;13(10):2048-55.
5. Based on approximate mapping speed of 95 pts / minute in the right atrium in 5 swine USING THE ST. JUDE MEDICAL PRECISION ENSITE MAPPING SYSTEM. Ptaszek LM, et al. Rapid High-Density Automated Electroanatomical Mapping Using Multiple Catheter Types. Poster Session PO097 APHRS 2015.
6. Based on approximate mapping speed of 491 pts / minute in the right atrium in 5 swine USING THE BOSTON SCIENTIFIC RHYTHMIA MAPPING & NAVIGATION SYSTEM. Ptaszek LM, et al. Rapid Acquisition of High-Resolution Electroanatomical Maps Using a Novel Multielectrode Mapping System. JICE. Nov 2012.
7. Based on a minimum of 5 clinical publications to date demonstrating mapping speeds > 1,000 points / minute.
8. Mantziari L, Butcher C, Kontogeorgis A, et al. Utility of a novel rapid high-resolution mapping system in the catheter ablation of arrhythmias: An initial human experience of mapping the atria and the left ventricle. *JACC: Clin Electrophysiol.* 2015 Oct;1(5):411-20.
9. Connection boxes in addition to the MAESTRO™ Ablation System are not yet cleared in the U.S. but currently available in regions outside of the U.S.

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