

For Immediate Release

Biosense Webster Launches CARTO[®] 3 System Version 7 and the CARTO PRIME[®] Mapping Module to Advance Treatment of Complex Arrhythmias

CARTO PRIME[®] Mapping Module offers a suite of tools that may help to shorten ablation time¹

IRVINE, CA – August 27, 2020 – Johnson & Johnson Medical Devices Companies* today announced the launch of Biosense Webster, Inc.'s CARTO[®] 3 System Version 7 and the CARTO PRIME[®] Mapping Module. This represents the most advanced version of the CARTO 3 System, the company's three-dimensional (3D) heart mapping system. The CARTO PRIME Mapping Module adds valuable tools to the CARTO 3 platform for further addressing all major complex arrhythmias, with significant improvements in mapping capabilities that help to significantly reduce ablation times, compared to standard mapping algorithms.¹

Cardiac arrhythmias are a group of conditions in which the heart beats too fast, too slow or with an irregular rhythm. Arrhythmias are the cause of death for approximately 300,000 people worldwide each year, and may increase a person's risk of stroke and heart failure.^{2,3,4} Some patients with serious arrhythmias are not successful with drug therapy, so catheter ablation may be recommended and has been shown to reduce symptoms and improve patients' quality of life.⁵

The features within the CARTO PRIME Mapping Module greatly enhance mapping capabilities for electrophysiologists and can significantly reduce ablation time compared with standard mapping algorithms.¹ Shorter ablation times can result in safer, and more efficient and economical procedures, providing value to both patients and physicians. For patients, a shorter ablation time may require less anesthesia, and may result in less nursing and facility time.^{6,7,8,9,10,11} Additionally, shorter ablation times can benefit healthcare facilities due to lower per procedure overhead costs.^{11,12}

"This technology has a full package of EP mapping solutions to help get clear and accurate visualizations of almost every type of complex arrhythmia," said Dr. Vias Markides, Consultant Cardiologist and Heart Division Director at Royal Brompton Hospital in London. "Features like CARTOFINDER, LAT Hybrid and Parallel Mapping are significant improvements in mapping capabilities and make this a transformative step in technology."

The CARTO PRIME Mapping Module is a fully integrated solution that incorporates these powerful tools:

- **COHERENT Mapping** may simplify the diagnosis of scar-related complex atrial arrhythmia by applying physiological constraints on local activation times (LAT) information. In a multi-center study (n=60), Coherent Mapping significantly reduced the ablation time required for arrhythmia termination in comparison with ablation guided by standard mapping algorithm.¹
- **CARTOFINDER[™]** expands the CARTO 3 System mapping capabilities to irregular atrial arrhythmia, identifying repetitive focal and rotational activations.¹³
- **Parallel Mapping** allows for simultaneous mapping of different arrhythmia using the same catheter locations.

- **LAT Hybrid** provides increased location accuracy compared with standard premature ventricular complex (PVC) mapping by associating the PVC map LAT information to its corresponding Normal Sinus Rhythm location.¹⁴

“CARTO PRIME is the most important software release since the introduction of CARTO 3,” said Dr. Elad Anter**, Associate Section Head, Electrophysiology at Cleveland Clinic. “COHERENT Mapping helps to overcome many of the challenges in electro-anatomical mapping of complex arrhythmias, and with Parallel Mapping, we’re able to map different rhythms simultaneously.”

“The launch of CARTO 3 System Version 7 and the CARTO PRIME Mapping Module reflects our collaborative efforts with physicians to identify pressing clinical needs and then integrate innovative technologies into our platform to address them,” said Uri Yaron, Worldwide President of Biosense Webster, Inc. “This release benefits patients and the EP community by helping make the complex – simple. Together with physicians, we’re transforming treatment for cardiac arrhythmias.”

About Johnson & Johnson Medical Devices Companies

As the world’s most comprehensive medical devices business, we are building on a century of experience, merging science and technology, to shape the future of health and benefit even more people around the world. With our unparalleled breadth, depth and reach across surgery, orthopedics, vision and interventional solutions, we’re working to profoundly change the way care is delivered. We are in this for life. For more information, visit www.jnjmedicaldevices.com.

About Biosense Webster, Inc.

Biosense Webster, Inc., is the global market leader in the science and technology behind the diagnosis and treatment of cardiac arrhythmias. Part of the Johnson & Johnson Family of Companies, the specialized medical-technology company is headquartered in Irvine, Ca., and works across the world to advance the tools and solutions that help electrophysiologists identify, treat, and deliver care. Learn more at www.biosensewebster.com and connect on [LinkedIn](#) and [Twitter](#).

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***Dr. Anter is a paid consultant to Biosense Webster, Inc.*

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¹ Anter et al. Activation Mapping With Integration of Vector and Velocity Information Improves the Ability to Identify the Mechanism and Location of Complex Scar-Related Atrial Tachycardias. *Circ Arrhythm Electrophysiol*. 2018 Aug;11(8):e006536. doi: 10.1161/CIRCEP.118.006536.

² GBD 2017 Causes of Death Collaborators. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. 2018;392:10159:1736-1788.

³ Lin CY, Chang SL, Chung FP, et al. Long-Term Outcome of Non-Sustained Ventricular Tachycardia in Structurally Normal Hearts. *PLoS One*. 2016;11(8):e0160181.

⁴ Kamel H, Elkind MSV, Bhave PD, et al. Paroxysmal Supraventricular Tachycardia and the Risk of Ischemic Stroke. *Stroke*. 2013;44:1550-1554.

⁵ Hugh Calkins, Gerhard Hindricks, Ricardo Cappato, et al. 2017 HRS/EHRA/ECAS/APHS/SOLAECE expert consensus statement on catheter ablation and surgical ablation of atrial fibrillation. 2017.

⁶ Leshem E, Zilberman I, Tschabrunn CM, Barkagan M, Contreras-Valdes FM et al. (2018) High-power and short-duration ablation for pulmonary vein isolation: biophysical characterization. 4 (4): 467-479.

⁷ Barkagan M, Contreras-Valdes FM, Leshem E, Buxton AE, Nakagawa H et al. (2018) High-power and short-duration ablation for pulmonary vein isolation: Safety, efficacy, and long-term durability. *Journal of Cardiovascular Electrophysiology* 29 (9): 1287-1296.

⁸ Leshem E, Tschabrunn CM, Contreras-Valdes FM, Zilberman I, Anter E (2017) Evaluation of ablation catheter technology: comparison between thigh preparation model and an in vivo beating heart. *Heart Rhythm* 14 (8): 1234-1240.

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- ⁹ Haines DE (1993) The biophysics of radiofrequency catheter ablation in the heart: the importance of temperature monitoring. *Pacing and Clinical Electrophysiology* 16 (3): 586-591.
- ¹⁰ Yildiz M, Yilmaz Ak H, Oksen D, Oral S. Anesthetic Management In Electrophysiology Laboratory: A Multidisciplinary Review. *J Atr Fibrillation*. 2018;10(5):1775. Published 2018 Feb 28. doi:10.4022/jafib.1775
- ¹¹ Klein G, Lickfett L, Schreieck J, Deneke T, Wieczorek M et al. (2015) Comparison of 'anatomically designed' and 'point-by-point' catheter ablations for human atrial fibrillation in terms of procedure timing and costs in German hospitals. *Europace* 17 (7): 1030-1037.
- ¹² Medicare Standard Analytic File, Hospital Cost Report Information System, 2016.
- ¹³ Bench testing performed by Biosense Webster, Inc. CARTO® 3 V7 CARTOFINDER Algorithm POD Report February 2019.
- ¹⁴ Steyers III CM et al. Ablation using 3D maps adjusted for spatial displacement of premature ventricular complexes relative to sinus beats: Improving precision by correcting for the shift. *J Cardiovasc Electrophysiol*. 2019;1-7.
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