New Data Published In EP EuroPace Journal Highlights Differences In CRT-ICD Battery Longevity Across Manufacturers

University of Pittsburgh independent study of contemporary heart failure devices highlights industry-leading Boston Scientific battery longevity

An independent and first-of-its-kind study from the University of Pittsburgh Medical Center, published online this week in EP EuroPace, shows there are significant differences in battery longevity between contemporary cardiac resynchronization therapy defibrillator (CRT-D) devices, and that the Boston Scientific Corporation (NYSE: BSX) device has the longest battery life compared to competitive brands.

The study noted that battery life can have direct implications on patient outcomes and may therefore impact clinical practice in CRT-D therapy. EP EuroPace is the official journal of the European Society of Cardiology European Heart Rhythm Association.

This retrospective, observational study focused on a cohort of 646 patients who were implanted with current models of CRT-D defibrillators between January 1, 2008 and December 31, 2010. The primary endpoints were the rate of battery depletion (reaching elective replacement indicator or ERI), as well as the time from device implantation to battery depletion as specified by device manufacturer. Overall, study data demonstrated the shortest battery longevity in contemporary Medtronic CRT-D models compared with comparable devices from other manufacturers.

During 2.7±1.5 years follow-up, only four percent of Boston Scientific device batteries had depleted, compared to seven percent from St. Jude and 25 percent from Medtronic ($p<0.001$). Moreover, the four-year battery survival rate of the Boston Scientific device was 94 percent, compared to 92 percent from St. Jude and 67 percent from Medtronic ($p<0.001$).

"This study offers critically important information for patients and physicians alike," said Kenneth Stein, M.D., chief medical officer, Cardiac Rhythm Management, Boston Scientific. "With improved therapies, the majority of today's heart failure patients will outlive their implantable device.[1, 2] A recent study showed that nine percent of patients who have a device replacement experienced a complication or device infection.[3] As patients live longer, the benefit from longer-lasting devices and fewer replacement surgeries becomes increasingly significant."

Cardiac resynchronization therapy (CRT) implantable cardioverter defibrillators (ICDs) are indicated for the management of heart failure patients with severe left ventricular (LV) systolic dysfunction and a wide QRS complex.[4,5,6] The benefit of CRT-ICDs depends upon achieving a high burden of ventricular pacing in both the right and left ventricles, with greater benefit seen at or near 100 percent biventricular pacing. The need for nearly 100 percent biventricular pacing can cause a significant battery drain and is usually the major determinant of battery longevity.

"The results of this study aren't surprising to us. In fact, performance reviews of our CRT-Ds have validated their industry-leading five-year survival probability,[7]" said Joe Fitzgerald, president, Cardiac Rhythm Management, Boston Scientific. "We offer CRT-Ds and ICDs designed to be the world's longest lasting, with nearly double the battery capacity of some other available models, and we are proud of the independent recognition our innovative products continue to receive in the medical community."

The study, Battery Longevity in Cardiac Resynchronization Therapy Implantable Cardioverter Defibrillators, was sponsored exclusively by University of Pittsburgh Medical Center. The study was conducted under the leadership of principal investigator Samir Saba, M.D., chief, cardiovascular electrophysiology, University of Pittsburgh Medical Center. The complete study is available here.

About Boston Scientific

Boston Scientific transforms lives through innovative medical solutions that improve the health of patients around the world. As a global medical technology leader for more than 30 years, we advance science for life by providing a broad range of high performance solutions that address unmet patient needs and reduce the cost of healthcare. For more information, visit www.bostonscientific.com and connect onTwitter and Facebook.

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This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements may be identified by words like "anticipate," "expect," "project," "believe," "plan," "estimate," "intend" and similar words. These forward-looking statements are based on our beliefs, assumptions and estimates using information available to us at the time and are not intended to be guarantees of future events or performance. These forward-looking statements include, among other things, statements regarding product launches and launch cadence, clinical trials and impact of data, product performance and impact, and competitive offerings. If our underlying assumptions turn out to be incorrect, or if certain risks or uncertainties materialize, actual results could vary materially from the expectations and projections expressed or implied by our forward-looking statements. These factors, in

some cases, have affected and in the future (together with other factors) could affect our ability to implement our business strategy and may cause actual results to differ materially from those contemplated by the statements expressed in this press release. As a result, readers are cautioned not to place undue reliance on any of our forward-looking statements.

Factors that may cause such differences include, among other things: future economic, competitive, reimbursement and regulatory conditions; new product introductions; demographic trends; intellectual property; litigation; financial market conditions; and, future business decisions made by us and our competitors. All of these factors are difficult or impossible to predict accurately and many of them are beyond our control. For a further list and description of these and other important risks and uncertainties that may affect our future operations, see Part I, Item 1A ? Risk Factors in our most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission, which we may update in Part II, Item 1A ? Risk Factors in Quarterly Reports on Form 10-Q we have filed or will file hereafter. We disclaim any intention or obligation to publicly update or revise any forward-looking statements to reflect any change in our expectations or in events, conditions, or circumstances on which those expectations may be based, or that may affect the likelihood that actual results will differ from those contained in the forward-looking statements. This cautionary statement is applicable to all forward-looking statements contained in this document.

1Hauser; JACC 2005; 45;2022-5
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3Gould PA, Gula LJ, Campagne, J Healey, JS, Cameron D, et al. Outcome of advisory implantable cardioverter-defibrillator replacements: One year follow-up. Heart Rhythm 2008; 5: 1675-1681.
4Bristow MR, Saxon LA, Boehmer J, Krueger S, Kass DA, De Marco T et al. Cardiac-resynchronization therapy with or without an implantable defibrillator in advanced chronic heart failure. N Engl J Med 2004;350:2140?50.
5Cleland JG, Daubert JC, Erdmann E, Freemantle N, Gras D, Kappenberger L et al. The effect of cardiac resynchronization on morbidity and mortality in heart failure. NEnglJ Med 2005;352:1539?49.
6Moss AJ, Hall WJ, Cannom DS, Klein H, Brown MW, Daubert JP et al. Cardiac-resynchronization therapy for the prevention of heart-failure events. N Engl J Med 2009;361:1329?38.
7Boston Scientific CRM Product Performance Report, Q3 2013, COGNIS CRT-D.

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