Medtronic News

Medtronic Announces European Launch of Protecta(TM) Portfolio with SmartShock(TM) Technology Shown to Significantly Reduce Inappropriate Shocks

New Data Released at Cardiostim 2010 Shows Benefits of Advanced Shock Reduction Technologies

MINNEAPOLIS & NICE, France, Jun 17, 2010 (BUSINESS WIRE) --Medtronic, Inc. (NYSE:MDT) today announced European launch of the Protecta(TM)portfolio of implantable cardioverter-defibrillators (ICDs) and cardiac resynchronization therapy-defibrillators (CRT-Ds). The implantable defibrillators feature Medtronic-exclusive SmartShock(TM) Technology, comprised of six advanced shock-reduction algorithms that can significantly reduce inappropriate shocks. Findings from the Virtual ICD study statistical model predicted 98 percent of studied patients with SmartShock Technology would be free of inappropriate shocks one year after implant and 92 percent at five years post-implant. These data were presented at Cardiostim 2010, the 17th World Congress in Cardiac Electrophysiology and Cardiac Techniques.

"Reducing inappropriate shocks is a top priority for physicians, which in turn can help improve the quality of life for implantable defibrillator patients," said Angelo Auricchio, Ph.D., professor with Cardiocentro Ticino in Lugano, Switzerland. "This advanced technology will give my patients peace of mind that their device is designed to recognize life-threatening arrhythmias and deliver life-saving shock therapy only when needed to save their life."

ICDs and CRT-Ds are designed to provide painless pacing or life-saving shock therapy to stop fast or irregular heartbeats, also known as ventricular arrhythmias, which can lead to sudden cardiac death. Sudden cardiac death kills more people each year than lung cancer, breast cancer and HIV/AIDS combined.2 3 Medtronic estimates that more than 70,000 lives have been saved worldwide by implantable defibrillators during the last five years.

While the majority of life-saving shocks are appropriate, studies estimate that approximately 20 percent of patients with implantable defibrillators may experience inappropriate shocks within about three years of implant in response to a non-lethal arrhythmia or electrical noise within the device system.4 5 New Medtronic data released at Cardiostim from the Managed Ventricular Pacing (MVP) trial show that 24 percent of patients who received painless anti-tachycardia pacing (ATP) to terminate a potentially life-threatening arrhythmia visited the hospital, clinic or emergency room at least once within three days of receiving therapy, versus 56 percent of patients who were treated with appropriate shock therapy, and 61 percent of patients who received an inappropriate shock. This shows shock therapy may correlate with greater health care utilization as compared to ATP.

Additionally, new data released on SmartShock Technology showed lead fracture and T-wave oversensing algorithms can be safely applied without delaying detection of life-threatening arrhythmias.

"By delivering ATP and only life-saving shocks, Protecta devices with SmartShock Technology are sparing patients unnecessary worry and have the potential to reduce the burden on the health care system," said Alain Coudray, M.D., Medtronic's vice president of the Cardiac Rhythm Disease Management business in Western Europe. "This portfolio of devices builds upon Medtronic's 20 years of leadership delivering shock reduction technologies and evidence."

Medtronic has supported seven major shock reduction clinical trials (Shock-Less, PREPARE, PainFree Rx I and II, WAVE, ADVANCE III and EMPIRIC). In total, these trials provide data from more than 5,500 patients worldwide--more than any other device manufacturer.

About Protecta with SmartShock Technology

The Protecta implantable defibrillators include SmartShock Technology, which features six new Medtronic-exclusive solutions

that are all pre-programmed and on when the device is implanted to address inappropriate shocks:

- Three solutions (Wavelet + PR Logic, SVT discrimination in the VF zone, and Confirmation +) in Protecta devices are designed to discriminate between different non-lethal and lethal arrhythmias to provide lifesaving shock therapy only when necessary.
- T-wave Discrimination and Lead Noise Discrimination features are designed to distinguish between deadly arrhythmias and oversensing to withhold shock therapy when appropriate.
- Lead Integrity Alert, first released in 2008, provides advanced warning of potential lead fractures so the patient can seek medical attention, and reduces the risk of receiving an inappropriate shock.

Medtronic received CE (Conformité Européenne) Mark for the Protecta portfolio in March. Within the Protecta family of devices, Protecta XT devices have OptiVol(R) Fluid Status Monitoring, a Medtronic-exclusive feature that measures changes in fluid build-up in heart failure patients to predict worsening heart failure.6 OptiVol 2.0, new on Protecta XT devices, improves the accuracy in predicting when medical attention is needed.7 Medtronic implantable defibrillators have Conexus(R) Wireless Telemetry that allows patients to transmit device data to a physician's clinic from virtually anywhere via the industry's largest remote monitoring system, the Medtronic CareLink(R) Network. CareLink serves more than 4,000 clinics and 500,000 patients enrolled in 30 countries.

Note: The Protecta portfolio of devices is not available for sale in the United States.

About Medtronic

Medtronic, Inc. (www.medtronic.com), headquartered in Minneapolis, is the global leader in medical technology - alleviating pain, restoring health, and extending life for millions of people around the world.

Any forward-looking statements are subject to risks and uncertainties such as those described in Medtronic's periodic reports on file with the Securities and Exchange Commission.

1 Volosin et. al. "Virtual ICD: A Model to Evaluate Shock Reduction Strategies." Heart Rhythm. Vol. 7, N. 5, May supplement 2010. (PO3-125).

2 American Cancer Society. Cancer Facts and Figures. 2006.

3 CIA. The World Fact Book - Rank Order - HIV/AIDS - deaths. Available at http://www.cia.gov.

4 Kadish A, Dyer A, Daubert JP, et al, for the Defibrillators in Non-Ischemic Cardiomyopathy Treatment Evaluation (DEFINITE) Investigators. Prophylactic defibrillator implantation in patients with nonischemic dilated cardiomyopathy. *N Engl J Med*. May 20, 2004;350(21):2151-2158.

5 Poole, JE, et al. Prognostic Importance of Defibrillator Shocks in Patients with Heart Failure. N Engl J Med 2008;359:1009-17.

6 Abraham WT, Compton S, Haas G, Foreman B, Canby RC, Fishel R, McRae S, Toledo GB, Sarkar S, Superior Performance of Intrathoracic Impedance-Derived fluid Index versus Daily Weight monitoring in Heart Failure Patients: Results of the Fluid Accumulation Status Trial (FAST) *J Card Fail.* Nov. 2009 Vol. 15(9): 813.

7 Hettrick DH, Sarkar S, Abraham WT, et al. Improved algorithm to detect worsening heart failure via intrathoracic impedance monitoring in patients with implantable devices. ACC Scientific Session, March 2010.

SOURCE: Medtronic, Inc.

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