

GOLD AF Registry to Capture Real-World Insights Using Medtronic Phased RF Ablation to Treat Patients with Atrial Fibrillation

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DUBLIN - April 7, 2015 - Medtronic plc (NYSE: MDT) today announced the first patient enrollment in the GOLD AF Registry, a first-of-its-kind, prospective, observational clinical study of its Phased Radiofrequency (RF) Ablation technology for treating patients with symptomatic atrial fibrillation (AF). The multicenter registry will provide real-world insights into the procedural use and treatment outcomes of the Pulmonary Vein Ablation Catheter® (PVAC) GOLD, multi-electrode ablation catheter and other catheters that comprise Medtronic's Phased RF technology.

The Medtronic Phased RF System is an innovative generator and endocardial catheter system that delivers customized RF energy to eliminate or block abnormal electrical impulses in the left atrium that initiate or sustain AF. It has been used to treat more than 30,000 patients and is approved in areas of Europe, Asia, South Africa, Australia and Canada. The system is not approved in the United States, but is under IDE study in the VICTORY AF clinical trial.

"The GOLD AF Registry will give us the opportunity to further evaluate and uncover best practices for treating patients with Phased Radiofrequency technology," said Dr. L.V.A. Boersma, cardiologist at St. Antonius Ziekenhuis Nieuwegein, The Netherlands. "We'll be able to review data - in a very large patient cohort - on the PVAC GOLD catheter, which maps, ablates and validates pulmonary vein isolation quickly. Pulmonary vein isolation is a clinically effective therapy for treating symptomatic AF patients, and the goal of the PVAC GOLD catheter is to allow physicians to effectively isolate the veins."

About the GOLD AF Registry

The GOLD AF Registry will assess treatment by PVAC GOLD ablation of patients with paroxysmal (occasional) or persistent AF, lone AF or AF with underlying disease, and provide data on acute and mid-term success rates, as well as other procedural details and patient characteristics. It will enroll up to 1,000 patients at 50 sites in 11 countries: Belgium, France, Germany, Greece, Israel, Italy, The Netherlands, Poland, Spain, Switzerland and the United Kingdom. Patients will be observed for 12 months following a Phased RF procedure. Principal Investigators are Dr. Boersma and Dr. Mèlèze Hocini, Centre Hospitalier Univeritaire de Bordeaux, France. The first patient was enrolled at St. Johannes Hospital, Dortmund, Germany, by Dr. med. Iskandar Djajadisastra.

"AF is a growing health concern that affects millions of people worldwide. With the launch of the GOLD AF Registry, we will have access to deeper clinical insights to help us meet the needs of patients now and in the future," said Reggie Groves, vice president and general manager of the AF Solutions business, which is part of the Cardiac and Vascular Group at Medtronic.

About the PVAC GOLD Catheter

The PVAC GOLD catheter features improved thermal efficiency of gold electrodes, compared to the platinum electrodes of the first-generation system, to help physicians optimize RF ablation therapy. By delivering RF energy through nine electrodes (either all simultaneously or a subset of electrodes), the PVAC GOLD catheter helps physicians safely and efficiently create consistent lesions (intentional scar in the tissue) to effectively block the erratic AF electrical currents coming from the pulmonary veins. The gold electrodes provide four times the thermal conductivity of their platinum predecessors, offering the potential for more accurate temperature measurement and improved power delivery¹.

The catheter features an over-the-wire design and an anatomic shape to help physicians safely position and stabilize the catheter in different patient anatomies. A forward-tilted array helps physicians find optimal placement that is designed to improve uniformity of contact with the tissue. Following ablation, the catheter is capable of verifying PV isolation through its ability to pace and map.

In collaboration with leading clinicians, researchers and scientists worldwide, Medtronic offers the broadest range of innovative medical technology for the interventional and surgical treatment of cardiovascular disease and cardiac arrhythmias. The company strives to offer products and services that deliver clinical and economic value to healthcare consumers and providers around the world.

About Medtronic

Medtronic plc (www.medtronic.com), headquartered in Dublin, Ireland, 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. Actual results may differ materially from anticipated results.

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¹ Haines et al, Evaluation of Gold/Platinum Electrode Multipolar Phased RF Ablations in a Swine Model: Characteristics of Energy Delivery Performance in a Swine Thigh Muscle Preparation, ESC Abstracts 2013

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