Medtronic News

Medtronic Announces FDA Approval to Enroll First U.S. Renal Denervation Clinical Study for Patients with Moderate Uncontrolled Hypertension

Thomson Reuters ONE via COMTEX) --SYMPLICITY HTN-4 Will Potentially Expand Access for Additional Patients at Risk for Cardiovascular Complications Related to Uncontrolled Hypertension

MINNEAPOLIS -- November 5, 2013 -- Medtronic, Inc. (NYSE: MDT), announced today that the U.S. Food and Drug Administration (FDA) has approved an Investigational Device Exemption (IDE) allowing the company to initiate SYMPLICITY HTN-4, the first randomized trial to investigate renal denervation for the treatment of moderate uncontrolled hypertension in U.S. patients. The study will evaluate the Symplicity(TM) renal denervation system in patients with moderate uncontrolled hypertension (systolic blood pressure greater than or equal to 140 and less than 160 mm Hg, despite treatment with three or more anti-hypertensive medications of different classes). SYMPLICITY HTN-4, which enrolled its first patient at Duke University Medical Center, is Medtronic's second randomized, controlled renal denervation clinical trial in the United States. The Symplicity renal denervation system is currently available only for investigational use in the United States.

"SYMPLICITY HTN-4 builds upon our rigorous clinical evaluation of the Symplicity renal denervation system designed to carefully and progressively develop the clinical evidence platform for the treatment of hypertension," said Nina Goodheart, Vice President, General Manager, Renal Denervation, Medtronic. "We're excited to initiate this study, even while patient follow-up continues in our pivotal U.S. clinical trial for patients with uncontrolled hypertension who have systolic blood pressure at or above 160. The SYMPLICITY HTN-4 trial will allow us to potentially extend the benefits of renal denervation to patients with more moderate uncontrolled hypertension in the United States."

Approximately 120 million people with high blood pressure worldwide are considered to have uncontrolled hypertension, with systolic blood pressures at or above 140 mm Hg, despite all efforts to control blood pressure with both lifestyle and medical management strategies.[1],[2],[3]In the United States, only approximately 60 percent of hypertension patients taking medicine have their disease under control.[4] Uncontrolled hypertension is associated with a hyperactive sympathetic nervous system and is directly linked with a high risk of heart attacks, stroke, heart failure, kidney disease and death.Error: Reference source not found Most patients living with uncontrolled hypertension are prescribed three to five classes of anti-hypertensive medications, which can equate to taking 10 or more pills each day and are subsequently subjected to numerous side effects that may negatively impact quality of life.

"Over the past several years, the Symplicity renal denervation system has successfully treated patients outside the U.S. with a more severe form of uncontrolled hypertension characterized by systolic blood pressures at or above 160 mm Hg," explained David Kandzari, M.D., Co-Principal Investigator of SYMPLICITY HTN-4 and Chief Scientific Officer and Director of Interventional Cardiology, Piedmont Heart Institute, Atlanta, Ga. "However, many patients with uncontrolled hypertension have blood pressure between 140 and 160 mmHg, making this also a very important group to study, since we know the risk for cardiovascular mortality and morbidity increases linearly for every millimeter of systolic blood pressure elevation above 140."

SYMPLICITY HTN-4 builds upon the SYMPLICITY HTN-3 study, Medtronic's pivotal U.S. clinical trial of the Symplicity renal denervation system, which is evaluating patients with uncontrolled hypertension having a systolic blood pressure greater than or equal to 160 mm Hg. SYMPLICITY HTN-4 will enroll up to 580 patients

with systolic blood pressures greater than or equal to 140 and less than 160 mm Hg at approximately 100 sites, continuing to target a patient population in line with the Joint National Committee on the Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC-7), the American Heart Association and the European Society of Hypertension's definition of uncontrolled hypertension. Similar to SYMPLICITY HTN-3, the study will be blinded and include a sham control. Efficacy will be evaluated based on the ability of subjects to either meet the goal of achieving a systolic blood pressure below 140 mm Hg or to achieve a pre-specified reduction in 24 hour ambulatory blood pressure. Safety will be assessed as it is in SYMPLICITY HTN-3 by evaluating major adverse events at one-month and renal artery stenosis at six months. For more information about SYMPLICITY HTN-4, please go to www.symplifybptrial.com.

"This highly-anticipated, robust study will serve a key role in evaluating renal denervation in these underserved patients with less severe hypertension so that we're able to understand what benefit this novel therapy may offer patients outside of the currently indicated patient population," said Michael Weber, M.D., Co-Primary Investigator of SYMPLICITY HTN-4 and Professor of Medicine, Division of Cardiovascular Medicine, at the SUNY Downstate College of Medicine in Brooklyn, N.Y.

About the Symplicity Clinical Trial Program

Medtronic continues to lead the advancement of research and development in renal denervation worldwide with more clinical studies ongoing than any other manufacturer with the longest follow-up data out to three years. Medtronic's rigorous clinical evaluation program of the Symplicity renal denervation system will involve more than 8,000 patients worldwide, including the U.S., Europe and Japan, with more than 1,200 of these patients participating in randomized clinical trials.

- SYMPLICITY HTN-1: A series of pilot studies at 19 centers in Australia, Europe and the United States with 153 patients with systolic blood pressure >=160 mm Hg enrolled. Symplicity HTN-1, the longest running clinical trial investigating the safety and efficacy of renal denervation.

- SYMPLICITY HTN-2: A randomized, controlled clinical trial of 106 patients at 24 centers in Europe, Australia and New Zealand to investigate renal denervation in patients with treatment-resistant hypertension randomly allocated in a one-to-one ratio to undergo renal denervation with previous treatment or to maintain previous treatment alone.

- SYMPLICITY HTN-3: First and only pivotal U.S. clinical trial of the Symplicity renal denervation system for uncontrolled hypertension completed enrollment of 535 patients across nearly 90 U.S. medical centers in May 2013. The results are expected to be available during the first half of 2014.

- Global SYMPLICITY Registry: Prospective, multi-center, open-label registry of 5,000 patients in 200+ centers, designed to document the long-term safety and effectiveness of renal denervation in real-world patient populations, as well as gather data for other diseases characterized by elevated sympathetic drive.

- SYMPLICITY-HF: Clinical study designed to evaluate the safety and physiologic response to renal denervation with the Symplicity system in patients with chronic heart failure and renal impairment. The study will enroll approximately 40 adult subjects with chronic heart failure and renal impairment in Europe and Australia.

- Symplicity Spyral(TM) Catheter Feasibility Study: Prospective, single-arm, non-randomized clinical study of Medtronic's multi-electrode catheter, which completed enrollment of 50 patients in Australia and New Zealand

designed to evaluate acute procedure safety.

- HTN-Japan: Open-label study being conducted in approximately 100 patients across up to 18 centers in Japan, designed to randomize subjects 1:1 to renal denervation versus no denervation with both groups receiving fully-tolerated doses of antihypertensive medications.

- SYMPLICITY HTN-India: Open-label study being conducted in approximately 40 patients across several centers in India, designed to evaluate the safety and efficacy of renal denervation in the local population.

About the Symplicity(TM) Renal Denervation System

The Symplicity renal denervation system is backed by more than five years of clinical experience in more than 5,000 patients with uncontrolled hypertension and is available in more than 80 countries throughout the world. The Symplicity system is a minimally invasive, device-based treatment option available outside of the United States to those with sympathetic over-activation. It consists of a flexible catheter and proprietary generator with which algorithms were carefully and specifically developed through years of clinical experience to enhance the safety and effectiveness of the renal denervation procedure. The Symplicity system received CE (Conformite Europeene) Mark in 2008.

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.

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. Actual results may differ materially from anticipated results.

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Source: Medtronic, Inc. via Thomson Reuters ONE

HUG#1740509

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