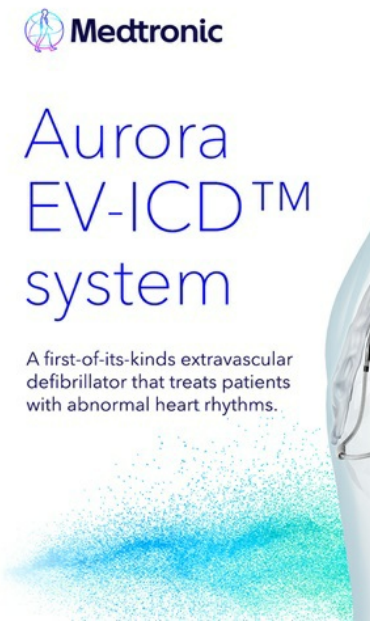
Medtronic Canada Newsroom

Medtronic completes fifth program in Canada with first-of-its-kind extravascular defibrillator that treats patients with abnormal heart rhythms

Medtronic plc, a global leader in healthcare technology, has now activated its fifth implant program of the year in major health centres across Canada. Physicians at University Hospital- London Health Sciences, Foothills Medical Centre in Calgary, Alberta, Montreal Heart Institute, McGill, and most recently Southlake Regional Health Center in Ontario, have now successfully implanted more than 20 patients with a novel extravascular defibrillator that treats patients with dangerously fast heart rhythms, a condition that can lead to sudden cardiac arrest (SCA). The Medtronic Extravascular Implantable Cardioverter-Defibrillator (EV-ICD™) system, which is composed of the Aurora EV-ICD™ MRI SureScan™, the Epsila EV™ MRI SureScan™ defibrillation lead, and proprietary implant tools, received a Health Canada license last year.



The Aurora EV-ICD system is a first-of-its-kind defibrillator with the lead placed under the breastbone, outside of the heart and veins. It delivers lifesaving defibrillation and anti-tachycardia pacing (ATP) therapy all in one system via a single implanted device that is similar in size, shape, and projected longevity to traditional, transvenous ICDs.

“The Aurora EV-ICD system allows us to offer patients the benefits of traditional ICDs, while reducing certain risks that come with placing leads in the heart or veins,” said Dr. Jaimie Manlucu, Cardiac Electrophysiologist, London Health Sciences Centre. Dr. Manlucu was the first implanter of the Aurora EV-ICD system, last February, and has now successfully treated 9 patients with the system. “We strive to deliver high-quality patient care, and this technology is another step forward in providing our patients with the latest clinical advancements to manage their cardiac condition.”

The Aurora EV-ICD system includes features available in Medtronic transvenous ICDs, and offers additional advantages that are not available with the competitive subcutaneous ICD including:

- Anti-tachycardia Pacing (ATP), to terminate ventricular arrhythmias (rapid and/or chaotic activity of the heart that can lead to SCA) using low-energy pacing pulses, potentially avoiding a defibrillation shock.
- Pause Prevention Pacing, to provide back-up pacing for brief, intermittent, heartbeat pauses.
- Up to 40 Joules Defibrillation Energy, to deliver life-saving shocks, in a device the size of transvenous ICDs (33 cc)
- Medtronic exclusive PhysioCurve™ design, to increase patient comfort and implant acceptance.
- 11.7-year projected longevity, to potentially reduce device replacement procedures during a patient's lifetime.

Patients who receive the commercially available Aurora device also will benefit from the addition of Smart Sense, a proprietary algorithm designed to reduce the potential for inappropriate shocks.

"We're thrilled to see this program expand across more centers in Canada, bringing the benefits of this cutting-edge technology to even more patients. It's an exciting step forward in making advanced care more accessible and help to improve lives on a broader scale," adds Rob Clifton, President, Medtronic Canada.

The Aurora EV-ICD is implanted below the left armpit, and the Epsila EV defibrillation lead is placed under the breastbone using a minimally invasive approach. Placing the leads outside the heart and veins is designed to help avoid long-term complications that may be associated with transvenous leads, such as vessel occlusion (narrowing, blockage or compression of a vein) and risks for blood infections.

About the EV ICD Pivotal Study

The Medtronic EV ICD system recently was evaluated in a worldwide pivotal study, involving 356 patients at 46 hospitals in Europe, North America, the Middle East, Asia, Australia and New Zealand. In the study, the EV ICD System achieved a defibrillation success rate of 98.7% and met its safety endpoints of freedom from major system and/or procedural complications through (3) years of follow-up. Long term Pivotal Study results were published in Circulation, a Journal of the American Heart Association[1].

About Medtronic

Bold thinking. Bolder actions. We are Medtronic. Medtronic plc, headquartered in Dublin, Ireland, is the leading global healthcare technology company that boldly attacks the most challenging health problems facing humanity by searching out and finding solutions. Our Mission — to alleviate pain, restore health, and extend life — unites a global team of 90,000+ passionate people across more than 150 countries. Our technologies and therapies treat 70 health conditions and include cardiac devices, surgical robotics, insulin pumps, surgical tools, patient monitoring systems, and more. Powered by our diverse knowledge, insatiable curiosity, and desire to help all those who need it, we deliver innovative technologies that transform the lives of two people every second, every hour, every day. Expect more from us as we empower insight-driven care, experiences that put people first, and better outcomes for our world. In everything we do, we are engineering the extraordinary. For more information on Medtronic, visit Medtronic.ca and LinkedIn.

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[1] Friedman P, Murgatroyd F, Boersma LVA, et al. Performance and Safety of the Extravascular Implantable Cardioverter-Defibrillator Through Long-Term Follow-Up: Final Results from the Pivotal Study. Circulation 2024 Sep 26. doi: 10.1161/CIRCULATIONAHA.124.071795. Epub ahead of print. PMID: 39327797.

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