The Medtronic Claria MRI™ Quad CRT-D SureScan®, Amplia MRI™ Quad CRT-D SureScan® and Complia MRI™ Quad CRT-D SureScan® systems help treat heart failure and reduce the risk of sudden cardiac arrest in patients. The SureScan portfolio of cardiac resynchronization therapy defibrillators (CRT-Ds) is approved for scanning in both 1.5 and 3 Tesla (T) magnetic resonance imaging (MRI) machines, providing CRT-D patients with access to the most advanced imaging procedures available.

**CRT-Ds and MRI**

Cardiac Resynchronization Therapy (CRT) devices are a cost-effective and beneficial therapy for indicated heart failure patients, reducing the risk of death and offering improvements in quality of life, cardiac structure and function for heart failure patients. Medtronic was the first company to receive U.S. Food and Drug Administration (FDA) approval for MR-conditional CRT-Ds, in 2016. Patients with CRT-Ds had previously been contraindicated to undergo MRI scans because of the potential interaction between the MRI and the device, resulting in risk to patients. However, as many as 40 percent of CRT patients will need an MRI within four years after receiving a device. As a result, thousands of heart failure patients implanted with CRT-Ds have not had access to MRI scans, which are used to diagnose conditions such as stroke, cancer, Alzheimer’s disease, and muscle, bone and joint pain.

**Device Features**

The Claria MRI, Amplia MRI and Complia MRI CRT-Ds with quadripolar technology offer physicians multiple options to help treat heart failure by optimizing CRT delivery, which may improve patient outcomes.

- **EffectivCRT™ Diagnostic and the EffectivCRT™ during AF Algorithm**: The Claria MRI device features the EffectivCRT Diagnostic, which automatically determines the effectiveness of each left ventricular pace, and the EffectivCRT during AF algorithm, which automatically adjusts pacing rates during AF, without adversely affecting the average heart rate. Previously, CRT devices have shown only whether the pacing pulse was sent, but did not report the effectiveness of each pacing stimulus.

- **AdaptivCRT® Algorithm**: The Claria MRI and Amplia MRI devices feature the AdaptivCRT algorithm, which has been shown to reduce a patient’s odds of a 30-day heart failure hospital readmission by 59 percent, and has demonstrated a 46 percent reduction in AF risk compared to echo-optimized biventricular pacing.

- **VectorExpress™**: An automated in-office test that reduces lead programing to two minutes, and reveals clinically actionable information to help physicians select optimal pacing configurations for each patient.

- **Attain™ Perfoma™ MRI SureScan Quadripolar Leads**: Attain Perfoma left ventricular leads include short bipolar spacing to reduce phrenic nerve stimulation occurrence; steroid on all electrodes to improve thresholds and longevity; and are available in three lead shapes for varying patient anatomies.

- **SureScan™ MR-conditional labeling**: Medtronic now offers MR-conditional pacemakers, implantable cardioverter defibrillators (ICDs), insertable cardiac monitors (ICMs) and CRT-Ds. Additionally, patients with certain existing defibrillation leads will be eligible for an MR-conditional ICD or CRT-D, and thus able to access this important imaging technology for full-body scans without positioning restrictions.
Gold MR, et al. Reduced 30-Day Hospital Readmissions in Systolic Heart Failure Patients with Cardiac Resynchronization Therapy: Evidence from 5 Randomized Controlled Trials. Poster session – November 16, 2014 at AHA 2014.


Medtronic data on file 2015: Data from MarketScan® 2012 Commercial and Medicare Database. Truven Health Analytics.


