

FDA approves Medtronic's Artificial Intelligence Algorithms for Cardiac Monitoring

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AI Algorithms enhance LINQ II™ Insertable Cardiac Monitor diagnostic accuracy for improved management of patients



Medtronic, (headquartered in Dublin, Ireland), the global leader in medical technology, announced U.S. Food and Drug Administration (FDA) clearance for two AccuRhythm[™] AI algorithms for use with the LINQ II[™] insertable cardiac monitor (ICM).

AccuRhythm AI applies artificial intelligence (AI) to heart rhythm event data collected by LINQ II, improving the accuracy of information physicians receive so they can better diagnose and treat abnormal heart rhythms. AccuRhythm AI validation data will be presented this week at Heart Rhythm 2021, the Heart Rhythm Society's annual Heart Rhythm meeting.

The small, wireless LINQ II ICM is the world's most accurate ICM, and the new cloud-based AccuRhythm AI algorithms further enhance LINQ II ICM's delivery of accurate heart rhythm alerts.

The algorithms address the two most common ICM false alerts – atrial fibrillation (AF), an irregular or rapid rhythm in the upper chambers of the heart; and asystole, a long pause between heartbeats. Medtronic developed the AccuRhythm AI platform and initial algorithms using its proprietary, diverse and debiased database of more than 1 million electrocardiogram heart rhythm episodes.

AccuRhythm AI validation results to be presented at Heart Rhythm 2021 include:

- The AF algorithm reduced LINQ II ICM false AF alerts by 74.1% and preserved 99.3% of true AF alerts.
- The Pause algorithm reduced LINQ II false pause alerts by 97.4% and preserved 100% of true pause alerts.

"Applying AccuRhythm AI to LINQ II data is a significant ICM innovation, enabling us to reduce clinical inefficiencies resulting from false alerts, and help physicians better identify and focus on the actionable data they need to treat their patients," said

Rob Kowal, M.D., Ph.D., chief medical officer of the Cardiovascular Diagnostics and Services business, which is part of the Cardiovascular Portfolio at Medtronic.

The AccuRhythm AI algorithms will be released on the CareLink[™] Network later this year for use by all implanted LINQ II devices in the United States.