Medtronic News

Medtronic AccuRhythm AI technology receives 2023 MedTech Breakthrough Award as Best New Monitoring Solution

AccuRhythm AI algorithms now cleared by FDA for the Reveal LINQ ICM; enhancements made to the AF algorithm for the LINQ II ICM

DUBLIN, May 16, 2023 /PRNewswire/ -- Medtronic plc (NYSE: MDT) today announced its AccuRhythm™ AI algorithm technology is the winner of the 7th annual MedTech Breakthrough Awards program as the "Best New Monitoring Solution." AccuRhythm AI is an artificial intelligence algorithm that improves the accuracy of heart rhythm event data from the Medtronic LINQ II™ insertable cardiac monitor (ICM) so physicians can better care for people with abnormal heart rhythms. The Medtronic AI technology was a standout from a field of nearly 4,000 nominations globally.

MedTech Breakthrough, an independent market intelligence organization that recognizes the top companies, technologies and products in the global health and medical technology market, conducts the MedTech Breakthrough Awards program. The LINQ family of insertable cardiac monitors (ICMs) provide continuous, long-term monitoring for patients with increased risk of abnormal heart rhythms who experience infrequent symptoms including dizziness, palpitations, syncope (fainting) and chest pain, thereby requiring long-term monitoring or ongoing management.

"We are thrilled to win the MedTech Breakthrough Award for a technology that makes such a profound impact on patients and helps clinicians focus on cardiac events that are most relevant," said Stacey Churchwell, vice president and general manager of the Cardiovascular Diagnostics and Services business within the Cardiac Rhythm Management Operating Unit. "We look forward to building on this AI technology with future enhancements across our LINQ family of ICMs."

Medtronic introduced AccuRhythm™ AI algorithms in 2022 to patients and clinicians inAustralia, countries throughout Europe, the United States, and New Zealand to help improve the accuracy of information physicians receive so they can better treat their patients. The two AI algorithms — specific to the most common ICM false alerts, atrial fibrillation (AF) and pause (asystole) [1, 2] — have been shown to reduce the number of false alerts by as much as 84%, saving clinicians approximately 319 hours of clinic review time annually (for every 200 LINQ II patients).[3]

An enhancement to the AF algorithm for the LINQ II ICM further reduces AF false alerts, which is anticipated to further reduce clinic review time.[4]

AccuRhythm AI Expanded to Reveal LINQ ICMs

Medtronic also announced U.S. Food and Drug Administration market clearance to apply the AccuRhythm AI algorithms to the Reveal LINQ™ ICM, the predecessor to the LINQ II ICM, via cloud-based updates. Medtronic anticipates the AccuRhythm AI algorithms to reduce approximately 89.5% of AF false alerts and 80.2% of pause false alerts with Reveal LINQ, while preserving true alerts at a rate of 98.2% and 99.9%, respectively. Health care providers have used the Reveal LINQ ICM to care for more than 750,000 patients globally since 2014. The AccuRhythm AI update for the Reveal LINQ ICM will also be available in Europe.

"Adding AccuRhythm AI to the thousands of Reveal LINQ ICMs currently implanted in patients globally is important as it will help reduce the data burden on many hospitals and clinics that still regularly use this device for monitoring their patients," said Alan Cheng, M.D., vice president and chief medical officer for Cardiac Rhythm Management Operating Unit, which is part of the Cardiovascular Portfolio at Medtronic.

Medtronic developed the AccuRhythm AI platform and algorithms using its proprietary, diverse and debiased database of more than one million electrocardiogram heart rhythm episodes. Medtronic will continue to apply AccuRhythm AI in the cloud automatically to facilitate seamless care for patients. The AccuRhythm AI algorithms for the Reveal LINQ ICM and updated AF algorithm for LINQ II are anticipated to go live later this year.

To learn more about how Medtronic is harnessing the power of AI and its commitment to the ethical use of artificial intelligence in healthcare, visit: https://www.medtronic.com/us-en/our-company/ai-healthcare-technology.html.

About Medtronic

Bold thinking. Bolder actions. We are Medtronic. Medtronic plc, headquartered inDublin, 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 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 all. In everything we do, we are engineering the extraordinary. For more information on Medtronic (NYSE:MDT), visit www.Medtronic.com and follow @Medtronic on Twitter and LinkedIn.

About MedTech Breakthrough

Part of Tech Breakthrough, a leading market intelligence and recognition platform for global technology innovation and leadership, the MedTech Breakthrough Awards program is devoted to honoring excellence and innovation in medical & health technology companies, products, services and people. The MedTech Breakthrough Awards provide a platform for public recognition around the achievements of breakthrough healthcare and medical companies and products in categories that include Patient Experience & Engagement, Health & Fitness, Medical Devices, Clinical Administration, Connected Healthcare, Medical Data, Healthcare Cybersecurity and more. For more information visit MedTechBreakthrough.com.

[1] Catherine O`Shea, Melissa E. Middeldorp, Anthony G. Brooks, Jeroen M. Hendriks, Celine Gallagher, Niraj Varma, Rakesh Gopinathannair, Suzanne A. Feigofsky, Dennis H. Lau, Kevin R. Campbell, Prashanthan Sanders. Remote Monitoring of Implantable Loop Recorders: False-positive Alert Episodes. Poster presented at: HRS 2020 Science Online. May 2020. https://cslide-us.ctimeetingtech.com/hrs20/attendee/eposter/poster/71.

[2] AccuRhythm AI Clinician Manual Supplements M015316C001 and M015314C001.

[3] Ousdigian K, Cheng YJ, Koehler J, et al. Artificial Intelligence Dramatically Reduces Annual False Alerts from Insertable Cardiac Monitors. Presented at AHA Conference 2021.

[4] Radtke, Andrew; Hall, Mackenzie: AccuRhythm AI AF & Pause Algorithms White Paper.April 2023. Medtronic data on file.

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Additional assets available online: Photos (1)

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