Medtronic News

Medtronic expands AiBLE™ spine surgery ecosystem with new technologies and Siemens Healthineers partnership

GALWAY, Ireland and CHICAGO, Sept. 25, 2024 /PRNewswire/ -- Medtronic plc (NYSE: MDT), a global leader in healthcare technology, announced today at the North American Spine Society (NASS) 39th Annual Meeting in Chicago the commercial launch of several software, hardware, and imaging innovations. These enhancements are designed to advance AiBLE™, the Medtronic smart ecosystem of innovative navigation, robotics, data and AI, imaging, software and implants that enable more predictable outcomes in spine and cranial procedures. In line with its commitment to increasing the quality of care for patients with spinal conditions, Medtronic also announced a partnership with Siemens Healthineers to explore opportunities to further expand access to advanced pre- and post-operative imaging technologies for spine care.

New advancements in the AiBLE™ ecosystem build upon the company's commitment to procedural innovation and execution, and include the following:

- **O-arm™ 4.3 software**, which introduces advanced navigation volumes, dose reduction, and enhanced image confirmation. With this release, Medtronic now offers the industry's longest 3D scan length for cone-beam CT images, which allows surgeons to capture additional spine levels in one scan and streamline their workflow. O-arm™ is the first and only intraoperative imager that uses AI, with 70% less radiation dose compared to the standard protocol, while maintaining image quality[1]. Medtronic Implant Resolution (MIR) further enhances decision-making by reducing metal artifacts around select screws, enabling confident final screw placement.

- **UNiD™ Adaptive Spine Intelligence (ASI),** a Medtronic integrated service and software platform that leverages AI and predictive models to help surgeons deliver patient-specific surgical plans and implants, now includes MRI Vision, which integrates with CoLumbo from Smart Soft Healthcare into the UNiD™ workflow. This new tool employs computer vision technology to automatically analyze lumbar MRIs to segment, label, and measure key aspects related to common pathologies. MRI Vision will allow spine surgeons using UNiD™ ASI to access automated PDF reports and annotated DICOMs (Digital Imaging and Communications in Medicine) in the UNiD™ Hub to identify and quantitatively measure areas of interest such as muscle area with fat infiltration, key spinal alignment angles, key characteristic related to stenosis, and more. UNiD™ is powered by more than 28,000 patient procedures and continues to grow in adoption worldwide.

- **Mazor™ robotic guidance system** with 5.1 software is the first and only spinal robotic system that integrates AI, bone cutting, and graft delivery. Mazor enables comprehensive preoperative and intraoperative planning that goes beyond screw placement to include complete construct design with screws, rods, interbodies, and bone removal. The newest version of 5.1 software introduces Maximum Intensity Projection (MIP), which supports improved image quality.

- **New implant innovation with ModuLeX™ Spinal System,** which offers increased visualization of the surgical area while allowing the operative flexibility to create an optimized construct for the patient. ModuLeX™ is the next generation of the Medtronic CD Horizon™ product family, a 40-year leader in spinal fixation.

Global corporate partnership to complement Medtronic imaging offerings

Medtronic also unveiled a global partnership with Siemens Healthineers during the meeting. The two companies anticipate comarketing the Siemens Healthineers Multitom Rax™ imaging system and integrating the platform into the Medtronic AiBLE™ ecosystem for spine surgery. The companies also anticipate collaborating across technology development, marketing, and commercial activities to advance clinical outcomes.

The Multitom Rax™ offers a unique combination of imaging technologies that can be used across musculoskeletal conditions, including spinal patients. With standing, weight-bearing imaging, cone-beam CT, and supine X-ray capabilities, the Multitom Rax™ supports the commitment Medtronic has to advancing the standard of care across the care continuum.

"Partnering with Siemens Healthineers advances our commitment to reduce variability and improve outcomes for spinal patients," said Skip Kiil, president of Medtronic Cranial & Spinal Technologies, which is part of the Medtronic Neuroscience

Portfolio. "We are thrilled with the prospect of working with the industry leader in imaging and to leverage the depth of imaging experience and expertise, commercial footprint, and shared commitment to data science to advance our AiBLE strategy and shared pursuit of better patient outcomes."

The envisioned partnership will be an evolution of the AiBLE™ ecosystem which integrates connected care and predictive technology to advance surgery.

"We are excited about the prospect of partnering with Medtronic to bring our solution to spine centers and empower spine surgeons and neurosurgeons to be more precise in the operating room," said Verena Schoen, Executive Vice President X-ray Products at Siemens Healthineers. "Multitom Rax™ delivers geometrically accurate images which allows precise measurements of the patient's vertebrae. Especially optimized for spine imaging, it not only contributes to faster diagnosis and treatment planning, but also to surgical execution and post-surgical control."

About the Cranial & Spinal Technologies Business at Medtronic

As the market leader, Medtronic is transforming the standard of care in spine and cranial surgery worldwide by putting patients first and solving complex conditions for spine and neurosurgeons. With 150 products covering more than 20 pathologies, we serve over 4 million patients annually. Continuing our legacy of innovation, the AiBLE™ ecosystem is the culmination of everything Medtronic has built in Cranial & Spinal Technologies over the past two decades. By integrating advanced technologies and a patient-centric approach, we provide a customizable health solution for the primary challenges in cranial and spine surgery: the need for increased predictability and precision, more efficient workflows, and better surgical outcomes. For more information, visit www.Medtronic.com/AiBLE and follow CST on LinkedIn.

About Medtronic

Bold thinking. Bolder actions. We are Medtronic. Medtronic plc, headquartered in Galway,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 95,000+ 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 www.Medtronic.com and follow Medtronic on LinkedIn.

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.

[1] Image comparison study data included in Medtronic 510(k) clearance.

Multitom Rax™ is a trademark of Siemens Healthcare GmbH.

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