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Medtronic and DASI Simulations partner to advance the future of TAVR through predictive modeling and personalized planning

Partnership launches AI solution to enhance predictive heart valve visualization and personalize valve treatment planning decisions enabling the future of TAVR for structural heart patients

Medtronic plc, a global leader in healthcare technology, and DASI Simulations, a leader in AI-driven predictive modeling and digital-twin technology, today announced a strategic partnership to enhance access to DASI technology to optimize outcomes for patients undergoing transcatheter aortic valve replacement (TAVR) in the United States.

This program marks a significant step forward in both Medtronic's and DASI's mission to deliver innovative, patient-specific care. By integrating DASI Simulations' advanced AI-based predictive modeling and digital twin technology into the TAVR workflow, clinicians will gain access to independent and device-agnostic actionable insights that support more precise, individualized treatment decisions for patients living with aortic stenosis.

"Effective pre-case planning is essential to achieving optimal outcomes in TAVR," said Matthew Summers, MD, interventional cardiologist at Sentara Heart Hospital. "Integrating DASI's predictive modeling into our workflow has allowed us to better visualize anatomy, anticipate risks, and tailor valve decisions to each patient. It's helped us focus on individual factors like annular rupture, coronary occlusion, and paravalvular leak, while also planning for future reinterventions. As TAVR complexity grows, it becomes increasingly important to have tools that support truly personalized decision-making. This includes making informed choices between surgical aortic valve replacement and TAVR, as well as which TAVR valve, to ensure the best possible care."

"Partnering with Medtronic accelerates our mission to bring scalable, AI-powered planning tools to structural heart programs nationwide," said Teri Sirset, MS, founder, president, and chief executive officer of DASI Simulations. "Together, we're demonstrating how predictive modeling can drive operational efficiency, support clinical decision-making, and elevate the standard of care. This collaboration reflects the growing demand for data-driven solutions that empower heart teams to deliver more confident, personalized treatment decisions."

DASI's FDA-cleared platform leverages real patient computerized tomography (CT) anatomies and retrospective outcomes to simulate multiple transcatheter heart valve (THV) deployment scenarios. Using these data-driven

reports – rooted in independent device-agnostic, patient-specific predictive modeling – will help mitigate human error, predict complications, and optimize long-term management for structural heart patients.

“The future of TAVR lies in delivering patient-specific, data-driven care that spans the full patient journey, from therapy awareness and innovation to procedural excellence and options for future intervention,” said Jorie Soskin, vice president and general manager of the Structural Heart business within the Cardiovascular portfolio at Medtronic. “Our partnership highlights our commitment to lead this future, allowing heart teams to utilize AI driven pre-procedural planning to enhance patient outcomes, streamline workflow, and support patient-specific valve selection."

Participating sites will receive full support from both Medtronic Structural Heart and DASI Simulations teams. The program is designed to demonstrate the clinical and operational value of integrating simulation-based planning to enable device agnostic, patient-specific TAVR care.

“We are entering a new era in structural heart care, guided by predictive AI models that help the physician determine the best treatment personalized for each patient, rather than relying on statistical norms. This shift to precision medicine will transform how we treat structural heart diseases,” said Lakshmi Dasi, PhD, founder and chief technology officer at DASI Simulations. “DASI is the pioneer for AI-based predictive modeling for TAVR, and our platform is designed to support unbiased and device agnostic decision-making with the patient at the center that will ultimately support more confident, personalized interventions.”

About DASI

Founded in 2020, DASI Simulations, based in Dublin, Ohio, performs advanced individualized computational predictive modeling for heart surgery candidates. The modeling is powered by artificial intelligence and computer vision to help cardiologists and heart surgeons better plan for the structural heart procedures and any potential complications, which leads to improved patient outcomes and reduced costs associated with structural heart disease surgeries. The company currently has two FDA-cleared products – PrecisionTAVI™ and DASI Dimensions™. DASI’s pioneering predictive modeling reports are reimbursed by CMS. For more information, visit www.dasisim.com or email news@dasisim.com.

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.

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