First Ultrasound System for Spine Surgery Receives 2019 Spine Technology Award

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Tissue Differentiation Intelligence (TDi) →
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DELRAY BEACH, Fla., Sept. 23, 2019 /PRNewswire/ -- Tissue Differentiation Intelligence, LLC (TDi™), a company specializing in real-time surgical ultrasound imaging, today announced receiving a *2019 Spine Technology Award* from *Orthopedics This Week* for the company's SonoVision™ ultrasound platform.

SonoVision applies layers of image-processing algorithms to ultrasound images to visually differentiate nerve, muscle, bone and vessels in real-time for procedure-enabling applications. The company submitted a pre-market notification 510(k) application to FDA at the end of August for SonoVision, which is currently in-process. SonoVision was developed using Machine Learning (ML), a form of Artificial Intelligence (AI), and is the first general purpose ultrasound

system to include spine applications. Collecting and processing high-quality data to drive the ML algorithms is crucial to the development of this category of technology. For SonoVision, this included data collection with numerous models, such as porcine, cadaveric and human studies under IRB approval to construct adequate data-sets to develop the algorithm. The company believes the proliferation of minimally invasive spine procedures has been hindered by a technology gap related to intuitive, real-time, soft-tissue imaging intraoperatively; SonoVision aims to address this clear clinical gap by providing visualization and evaluation of nerves, vasculature, and other anatomical structures.

Alex Lukianov, Chairman and CEO of TDi, said, "It has taken a tremendous amount of work to get to this point and I commend the engineering team along with Drs. Kevin Foley, Kern Singh and David Schwarz for creating the first spine-specific ultrasound system. There was never a question that ultrasound could be reproducibly and safely applied in spine surgery as it has been for many other disciplines, however, constructing a platform that is practical for spine surgeons to use intraoperatively was not a simple task. We are excited about the numerous robust procedural applications for our initial 2D tissue differentiation product to help accelerate the adoption of MIS procedures. Next, we plan to integrate with other technologies, such as robotics, to gain share and capture the O.R."

TDi is looking forward to navigating this much needed technology, which is applied ubiquitously in other areas of medicine, to market in 2020 for spine applications.

TDi Contact Information:
Christian Zaal
info@tissueintel.com

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