

Exactech Launches Predict+™, First Machine Learning-Based Software that Informs Surgeons with Patient-Specific Outcomes Predictions After Shoulder Replacement Surgery

Exactech Expands Active Intelligence® Portfolio of Smart Solutions

GAINESVILLE, FLA. (Nov. 30, 2020) – [Exactech](#), a developer and producer of innovative implants, instrumentation and the [Active Intelligence](#)® platform of technologies for joint replacement surgery, announced today the launch of Predict+™, a data-driven, clinical decision support tool that uses machine learning to predict individual patient outcomes after shoulder replacement surgery to assist surgeon decision making.

The software is designed to better inform surgeons regarding the expected outcomes that can be achieved after shoulder arthroplasty, based on the clinical experience documented within the world’s largest single-shoulder prosthesis outcomes database, consisting of more than 10,000 patients.

“Predict+ is a new application of clinical research that represents a significant advancement in the patient consultation process,” said Chris Roche, Exactech’s Vice President of Extremities. “Using machine learning analyses, Predict+ delivers personalized, evidence-based predictions that objectively quantify the risk and benefit that an individual patient may experience after anatomic and reverse shoulder replacement and aligns patient and surgeon expectations in order to improve patient satisfaction.”

With Predict+, the surgeon inputs as few as 19 data points about a patient and within minutes, the software predicts the patient’s potential outcomes, including pain and range of motion, based on the results reported by patients with similar age, gender and prosthesis type. In addition, it compares predictive results for anatomic and reverse shoulder arthroplasty at multiple post-operative timepoints. This guidance can help the surgeon better personalize patient treatment by identifying factors that drive the outcome predictions, including modifiable factors such as the patient losing weight, quitting smoking, and completing pre-habilitation. Finally, Predict+ aggregates the outcomes and complications within the database so that

surgeons and patients can compare their personalized predictions with the clinical experience of patients of similar age and gender after anatomic and reverse shoulder replacement.

Developed in partnership with [KenSci](#), Predict+ is a first-of-its-kind work that showcases the predictive power of machine learning to transform healthcare. The resultant software builds on previously published, peer-reviewed research in the field.

“Machine learning models used within Predict+ have been applied and accelerated by KenSci’s AI Platform for Digital Health,” said Vikas Kumar, Ph.D., Principal Data Science Lead for Innovation and Devices at KenSci. “We are witnessing an unprecedented development in computer science to assist hundreds of surgeons globally in improving post-surgical outcomes. This is just the beginning.”

Predict+ is the latest in a fast-growing line-up of technologies that power Exactech’s [Active Intelligence](#) platform. The company continues to aggressively expand its portfolio of uniquely accessible innovations to help surgeons engage with patients and peers, solve challenges with predictive tools and optimize the way they perform surgery.

Predict+ supports Exactech’s [Equinox](#)[®] shoulder, the industry’s fastest growing and most studied shoulder system and the ExactechGPS[®] guided personalized surgery system. Predict+ is available to surgeons globally on a limited basis. Please contact your Exactech representative for additional information. Surgeons may also register to learn more about Predict+ during an educational webinar on Dec. 3 by visiting www.exac.com/ActiveIntelligenceWebinar.

About Exactech

Exactech is a global medical device company that develops and markets orthopaedic implant devices, related surgical instruments and the Active Intelligence[®] platform of smart technologies to hospitals and physicians. Headquartered in Gainesville, Fla., Exactech markets its products in the United States, in addition to more than 30 markets in Europe, Latin America, Asia and the Pacific. Visit www.exac.com for more information and connect with us on [LinkedIn](#), [YouTube](#) and [Instagram](#).

About KenSci

Based in Seattle, WA, KenSci is a healthcare AI platform, built to enable development and production of machine learning for healthcare across the continuum of care. By making AI use within healthcare systems more explainable, interpretable, and assistive, KenSci is helping healthcare become more efficient and accountable.

KenSci was incubated at University of Washington Tacoma's Center for Data Science and designed on the cloud with help from Microsoft Research Azure4Research grant program. KenSci is headquartered in Seattle, with offices in Singapore and Hyderabad. For more information, visit www.kensci.com

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