KenSci
A Tegria Company

Using machine learning to predict internal rotation after anatomic and reverse total shoulder arthroplasty

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Organization
exactech

Contact
Chris Roche, VP, Extremities

Primary Use Case
Surgical success prediction

Customer

Exactech develops and produces innovative implants, instruments and technologies for joint replacement that help surgeons worldwide make patients more mobile.

Opportunity

Active Intelligence®: Exactech is envisioning a platform of technologies that helps engage with surgeons, patients, and peers to optimize the way a surgery is performed. They have a vision of software and planning applications that can help apply the power of machine learning to visualize individual patient outcomes for each implant type and map personalized surgical plan.

Solution

Predict+®: A machine learning tool developed on KenSci platform that provides personalized outcomes for each patient and each shoulder procedure to enable surgeons make effective decisions throughout the entire journey of care.

Benefits & Key Metrics

- Predict+ Launched in November 2020
- Pain, function, and motion predictions (54 models)
- Used by more than 200 active shoulder surgeons
- Study by KenSci won first place for the top orthopaedic implant research podium/paper presentation at the 2022 annual meeting
- About 500 cases predicted
- New ML derived PROM for public use: https://smartshoulderscore.com/