Despite Rapid Adoption of Transcatheter-Based Interventions to Treat Structural Heart Disease, Severe Complications Still Exist. What If...

CE-Marked TAVI-guide™ Provides Clinicians with First-Ever Insights into Device-and-Host Interaction, Preoperatively

FEops is the undisputed leader in the field of physics-based simulations of transcatheter-based structural heart interventions. FEops is the first and only company to be cleared to market a patient-based simulation model for structural heart interventions that allows prediction of the interaction between a prosthetic heart valve implant and a patient’s unique anatomy, in order to provide essential information about valve morphology and function, post-TAVI.

Rapid adoption of transcatheter-based interventions to treat structural heart disease notwithstanding, severe complications still exist. In TAVI, the main complications are ParaValvular Leakage (PVL) and Permanent PaceMaker placement (PPM), occurring in 20%+ of procedures for some of the commercially available TAVI devices. The FEops simulation platform is designed to assist clinicians in preoperatively assessing the effect of device-and-host interaction, with the ultimate goal of predicting and preventing complications of transcatheter-based structural heart interventions.

Preclinical data from large retrospective cohorts published in peer-reviewed medical journals demonstrate the predictive power of the FEops simulations relating to frame deformation, native leaflet calcium displacement, and paravalvular leakage.

The FEops cloud-based simulation platform will host a pipeline of products. Structural heart disease manifests itself in several etiologies affecting different regions of the heart. FEops’ focus is on the four distinct emerging transcatheter-based interventions: TAVI, MITRAL, LAAC, and TRICUSPID.

What the Experts Are Saying about the Disruptive Simulation and Planning Technology for TAVI from FEops

Peter De Jaegere, MD
Interventional Cardiology
Erasmus Medical Center
Rotterdam, Netherlands

“I believe this technology will have an important clinical implication. It will allow for the selection of both the size and the position of the valve for a particular patient (‘personalized medicine’), which will increase the safety and efficacy of TAVI.”

Ronak Rajani, MD
Interventional Cardiology
Guy’s and St. Thomas’ Hospital
London, England

“FEOPS is leading the way in image segmentation and computer modeling. With an emphasis on structural intervention, new solutions are being developed to enable clinicians to better plan for their procedures and to predict outcomes more robustly than historical geometric data alone.”

Carlos Ruiz, MD
Interventional Cardiology
Hackensack Medical Center
New York, USA

“Preoperatively simulating different scenarios of the intervention will undoubtedly play a key role in further reducing complications for structural heart interventions.”

NOTE: The TAVIguide™ technology is currently available for clinical use in the European Union.