

AI supported quantitative assessment of aortic valve calcification



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SUMMARY

Aortic stenosis (AS) is the most common valvular heart disease in the Western world. In the management of patients with AS, it is essential to accurately diagnose the disease severity and determine the proper timing of a surgical intervention. Echocardiography is the current standard modality for evaluating AS severity, but it is not always sufficient to confirm the diagnosis of severe AS. In certain cases computed tomography (CT) is necessary to quantify aortic valve calcium load and to identify patients with true severe AS. Nevertheless, CT does not qualify as a routine examination. Hence, the aim of the project is to create and validate a prototype machine learning solution for the quantitative assessment of aortic valve calcification.

PROJECT GOALS

- Train machine learning algorithms on annotated data of patients with AS
- Optimize and validate AI solution

LONG-TERM GOALS

- CE certification as a medical device
- Implementation of the solution in the clinical workflow
- licensing to MedTech company or startup foundation