HOSMARTAI
AI for the smart hospital of the future

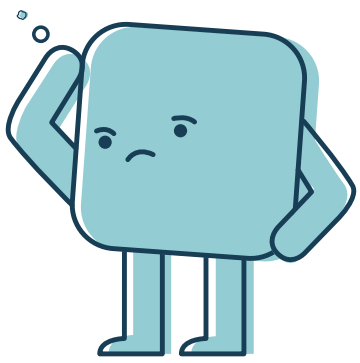
FACTSHEET

ECHO CARDIO TOOL

PILOT 1

Misdiagnosis or delayed diagnosis are two of the most common types of medical malpractice. They often result in patients not receiving proper and timely care, potentially followed by a serious deterioration of their health or even death.

PROBLEMS



In clinical practice, if no agreement about the cardiac condition of a patient can be reached, additional examinations will be required and – subsequently - more resources are consumed. The sources of this problem are:

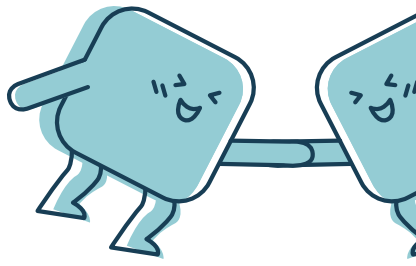
-Inter-observer variability: different outcomes are produced by different observers depending on their knowledge, experience and specific perspective. Additionally, there is variability in drawing/indicating points/regions in ultrasound images due to the low-contrast nature of these images.

-Intra-observer variability: different outcomes are produced by the same observer depending on their mental state, e.g. stress, anxiety, tiredness; this also affects how accurate the drawing is

-Inter-vendor variability: different ultrasound systems (device/software) produce different results.

OBJECTIVES

Guarantee a proper assessment of left ventricular function



THE SOLUTION

A friendly, interpretable AI tool, which focuses on one chamber of the heart, and that supports physicians performing diagnosis by automatically estimating Left Ventricular Ejection Fraction and Left Ventricular global longitudinal strain LV-GLS from ECHO scans.
It is a more generalized solution which, thanks to AI, reduces inter- and intra-observer variability while, at the same time, it has the ability to work with images coming from different sources.

VALUE PROPOSITION

The approach used in the clinical trial to test the solution is designed to examine if the combination of physicians and modern AI techniques performs better thus increasing trustworthiness in the innovative assessment method.

MARKET

Private healthcare professionals (Primarily: Cardiologists; Secondarily: General Practitioners)
Public and private healthcare facilities: Hospitals; Cardiac clinics; Imaging and radiology centres
Companies producing ultra-sound devices and medical imaging software

BENEFICIARIES

Cardiologists, General Practitioners, Nursing assistants

SOLUTION PROVIDERS

Main solution provider:

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Hosting facility:

Hippokrateion Hospital, Thessaloniki, Greece

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