TEMPUS | RADIOLOGY

Tempus Pixel Cardio

AI-enabled solution to analyze and quantify cardiac MR images[1]

Tempus Pixel provides advanced viewing and automated reporting of cardiac MR images to help improve efficiency and accuracy in flow visualization and quantification, functional analysis, and tissue characterization.

BENEFITS

AI-enabled 4D flow

Visualize and quantify blood flow precisely anywhere in the heart and its major vessels based on 4D flow datasets, enabling reductions in scan time of up to 30%[2]

Functional analysis

Automatically quantify cardiac chambers volumetry and ventricular function data from short axis datasets, enabling a reduction in segmentation time of up to 93% per study[3,4]

Tissue characterization

Automatically quantify delayed enhancement, perfusion, and parametric mapping images (T1, T2 and T2*), with graphs and 17-segment models for faster and more informed decisions[5]

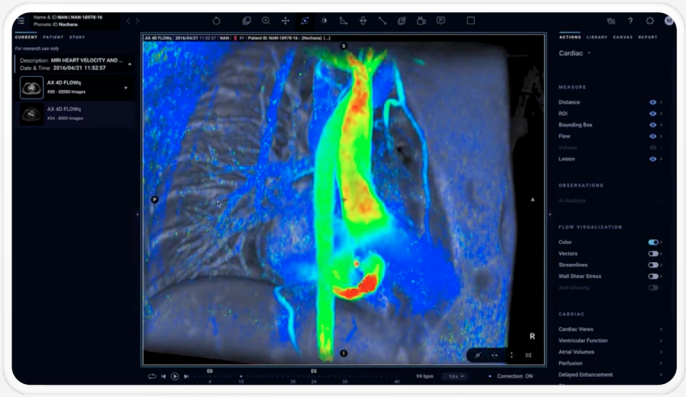
AI-based myocardial strain

Calculates strain, strain rate, and myocardial velocity that are reliable, quantitative, visually confirmable, and that separates normal from disease myocardial tissue[6]

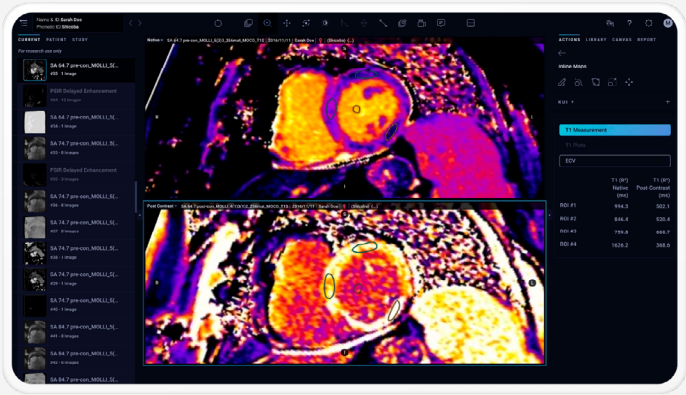
Seamless integration

Easily integrates AI-enabled tools with existing PACS, EHR, worklist, notification, and dictation systems to optimize radiology workflows

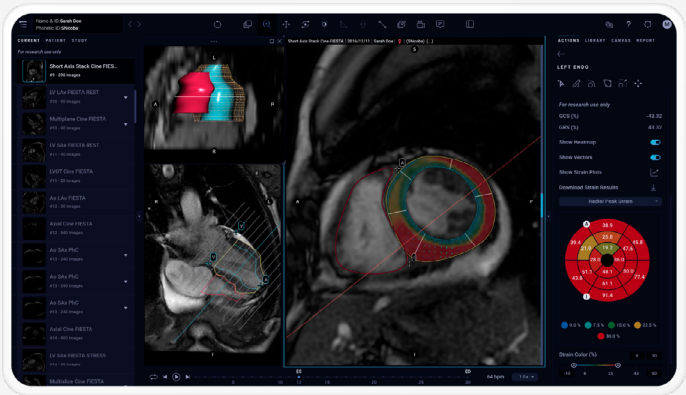
AI-ENABLED 4D FLOW



TISSUE CHARACTERIZATION



AI-BASED MYOCARDIAL STRAIN



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OUR RESEARCH

Radiology: Cardiothoracic Imaging

4D Flow MRI Quantification of Congenital Shunts: Comparison to Invasive Catheterization

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JACC: Cardiovascular

AI Based CMR Assessment of Biventricular Function: Clinical Significance of Intervendor Variability and Measurement Errors

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Radiology: Cardiothoracic Imaging

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"Pixel Cardio has been an invaluable tool in our practice to allow us faster processing of complex cardiac MR examinations with automated contouring not only for function but also tissue characterization, saving us minutes of processing time on every single exam. Rapid processing of 4D Flow affords us the ability to evaluate complex congenital heart disease nearly real-time."

MELANY ATKINS, MD

Radiologist and Director of Cardiac Imaging, Fairfax Radiology Consultants - Fairfax, VA

1 Tempus Pixel Cardio is FDA-cleared (K203744). Arterys Inc is the manufacturer of Tempus Pixel Cardio.

2 Atkins MB. Integration of 4D-Flow into routine clinical practice of congenital and non-congenital cardiac MRI-18 months experience demonstrating decreased scan times, physician monitoring, and patient breath hold times. [366897]. CMR 2018; pp. 789-790.

3 Narang A, Miller T, Ameyaw K, et al. A machine learning algorithm for determination of left ventricle volumes and function: comparison to manual quantification. J Am Coll Cardiol. 2019;73(9):1638. https://www.researchgate.net/publication/331516422_A_MACHINE_LEARNING_ALGORITHM_FOR_DETERMINATION_OF_LEFT_VENTRICLE_VOLUMES_AND_FUNCTION_COMPARISON_TO_MANUAL_QUANTIFICATION

4 Retson T, Masutani E, Chen C, et al. Real-world clinical performance of deep learning for quantification and segmentation of biventricular cardiac size and function [4785], Proc Intl Soc Mag Reson Med. 2018;26 4785. https://cds.ismrm.org/protected/18MProceedings/PDFfiles/4785.html

5 T1 and T2 parametric mapping are not CE marked and are for Research Use Only in EU. T2 parametric mapping is only supported for GE and Philips scanners. T2* Parametric mapping is only supported for GE and Siemens scanners.

6 Strain is for Research Use Only in the EU and US.