CVi42®

INNOVATION TO STREAMLINE

CARDIOVASCULAR IMAGING

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CARDIOVASCULAR
IMAGING

4 Clinical Areas and Multiple Modules

CVi42®

CVi42® PLATFORM

CVi42® REPORT

Magnetic Resonance MR
- Cardiac MR
- 4D Flow
- Strain
- Quantitative Perfusion

Computed Tomograph CT
- Cardiac CT
- Auto-Plaque

Interventional IP
- Mitral Valve
- Aortic Valve

Electrophysiology EP
- ADAS 3D LV††
- ADAS 3D LA††

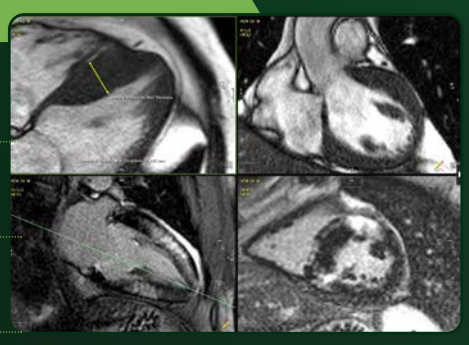
Automated with AI for an Integrated, Best-in-Class Solution

CVi42® PLATFORM

Powerful and fully HIS-enabled to streamline cardiovascular reading and reporting

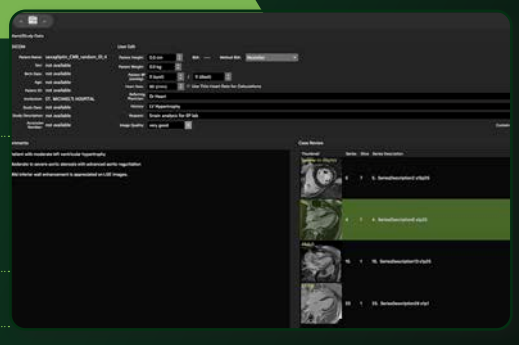
VIEWER

- Multiple image synchronization options
- Full complement measurement tools
- Compare baseline and follow-up scans



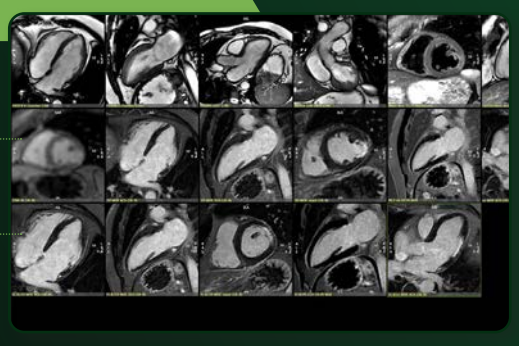
PATIENT DATA

- Review and edit study data
- Create and share comments for case review
- Fully embedded in HIS



SERIES OVERVIEW

- Quick overview of complete study
- Filter series based on contours or orientations
- Series composer to combine or rearrange series



REPORT

- Auto-populating report
- Automated reference values
- Drag and drop images
- Multiple export formats
- HL7 compatible†

† New license required.

††ADAS 3D is licensed and manufactured by Adas3D Medical and distributed by Circle CVI.

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MR **Magnetic** Resonance

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Comprehensive, fast, accurate reading and reporting for cardiac MR

Function

Detect wall motion abnormalities, stroke volume, ejection fraction, volumes and masses

SHORT AXIS

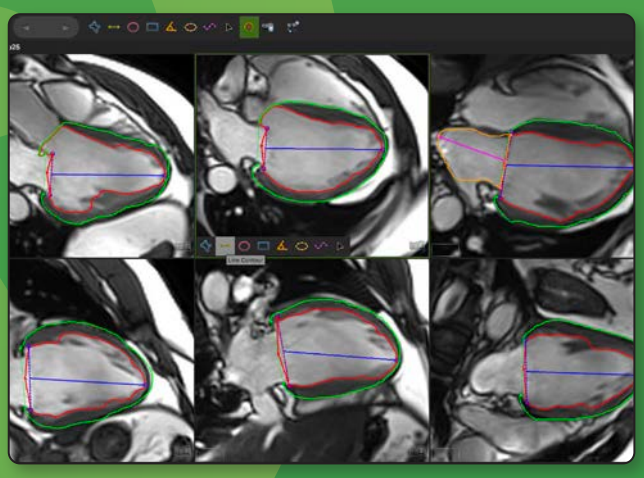
- Full ventricular and atrial assessment
- Automated AI-based ventricular contour detection
- Circle's thresholding tool

MULTIPLE LONG AXIS

- Quick and highly reproducible LV assessment
- Semi-automated contour detection
- Dynamic assessment of atrioventricular junction

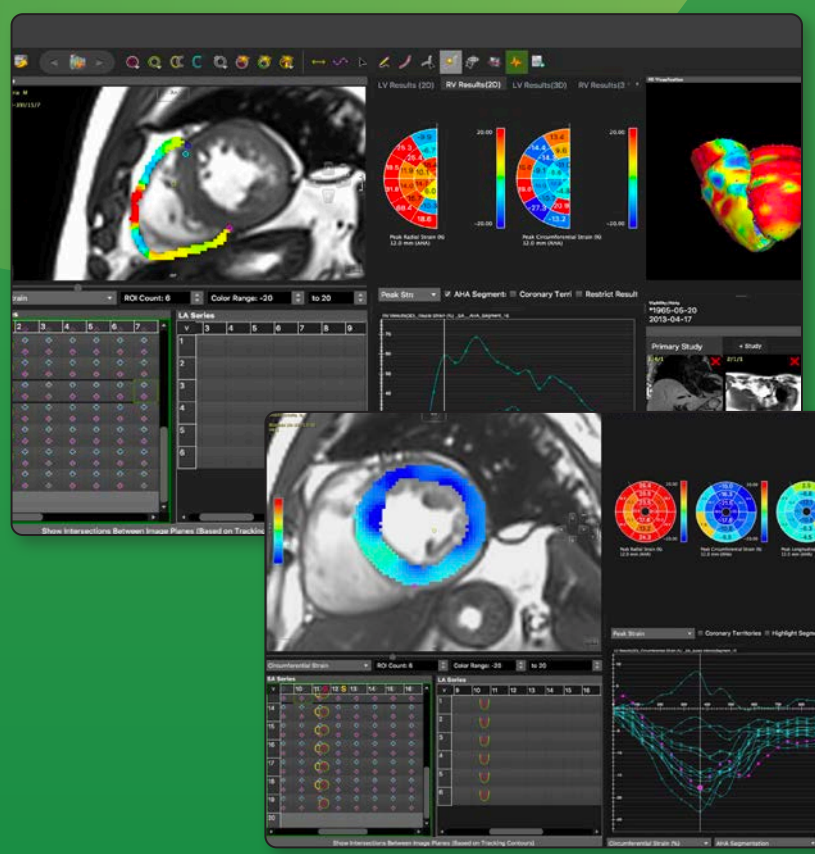
LONG AXIS

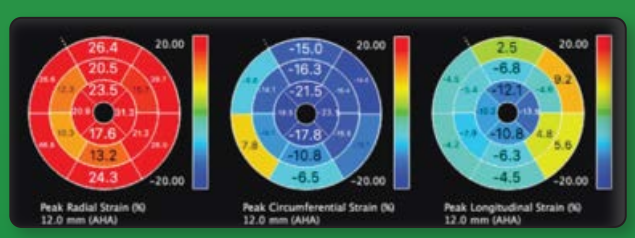
- Fully automated AI-based LV and LA/RA assessment
- Automated ventricular contour detection



MYOCARDIAL STRAIN†

- Fully automated AI-based LV assessment
- Radial, circumferential and longitudinal strain
- Strain rate, displacement, velocity and torsion and torsion rate





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MR **Magnetic** Resonance

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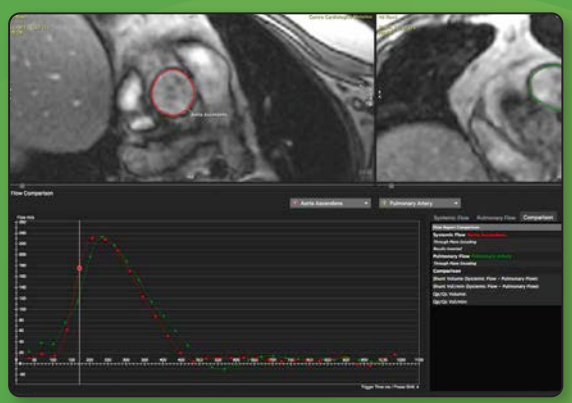
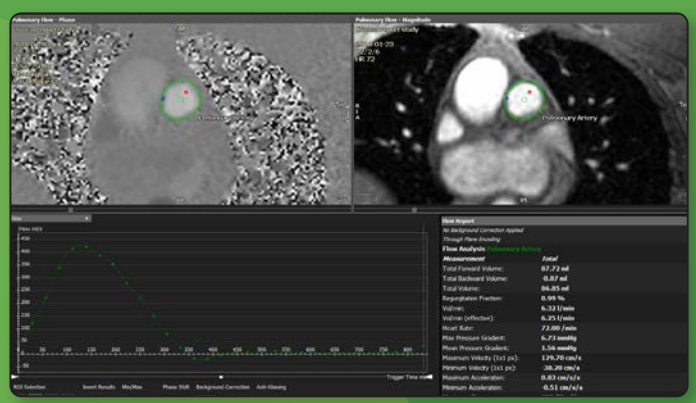
Flow

Quantify flow, automatically calculate Qp:Qs and correct for aliasing





2D FLOW

- ○ Full flow analysis for volumes, fraction, velocities and gradients
- ○ Semi-automated contour detection
- ○ Offset correction and antialiasing
- ○ Flow comparisons and Qp:Qs

4D FLOW†

Pre-Processing

- ○ Crop large data sets to a ROI
- ○ 4D offset correction and antialiasing
- ○ Comprehensive 4D viewer for flow dynamics

Segmentation

- ○ PCMRA optimization for small or big sized vessels

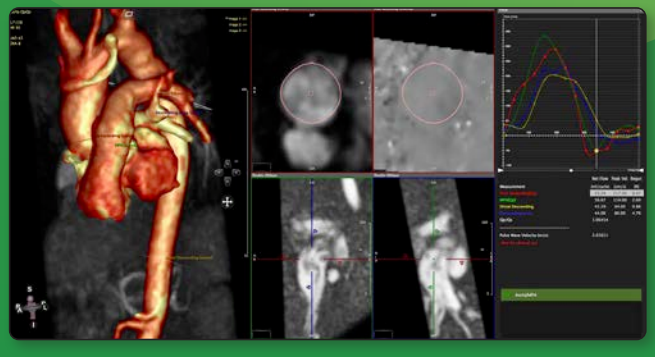
  Advanced vessel segmentation, centerline correction and extraction for multiple structures
- ○ Export volume as STL file

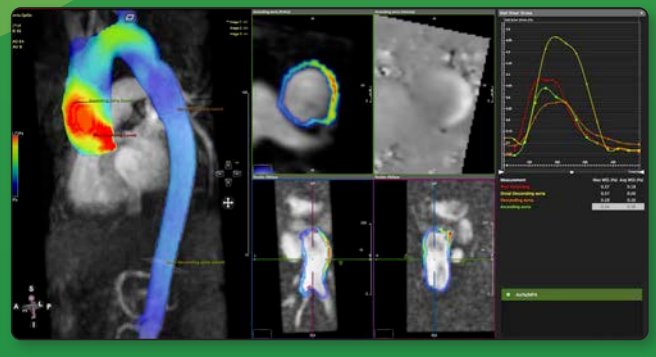
Analysis

- ○ Diverse flow visualization
- ○ Automated vessel lumen detection and planar flow measurement
- ○ Semi-automated Qp:Qs calculation:
  - Pulse Wave Velocity
  - Circumferential and axial
- ○ Wall Shear Stress

Advanced Research Tools

- ○ Calculation and visualization in 3D including direct, residual, delayed and retained flow components, relative pressure, Wall Shear
- ○ Stress and energy loss





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MR

Magnetic Resonance

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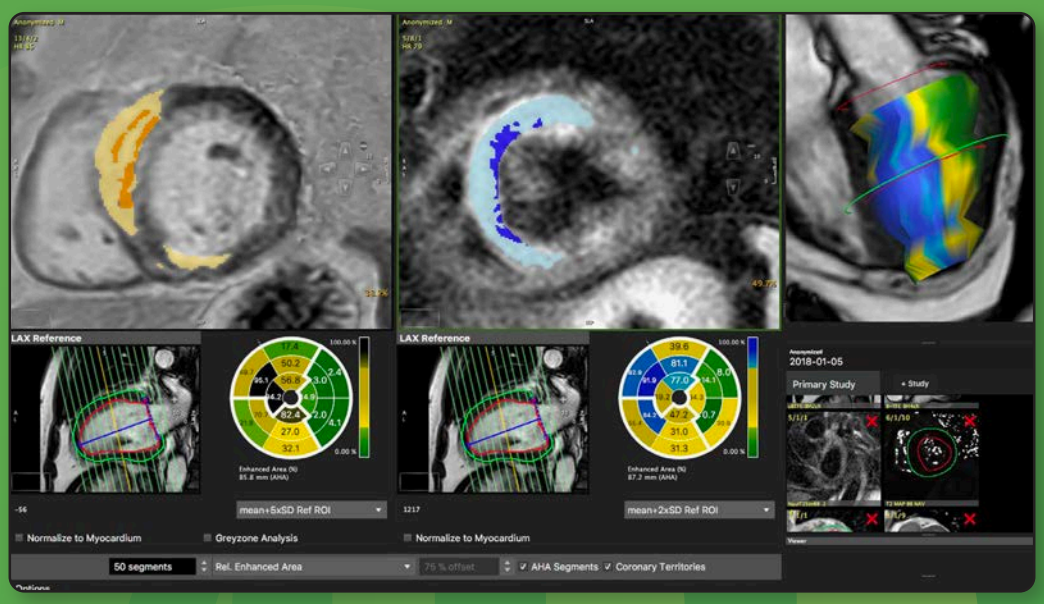
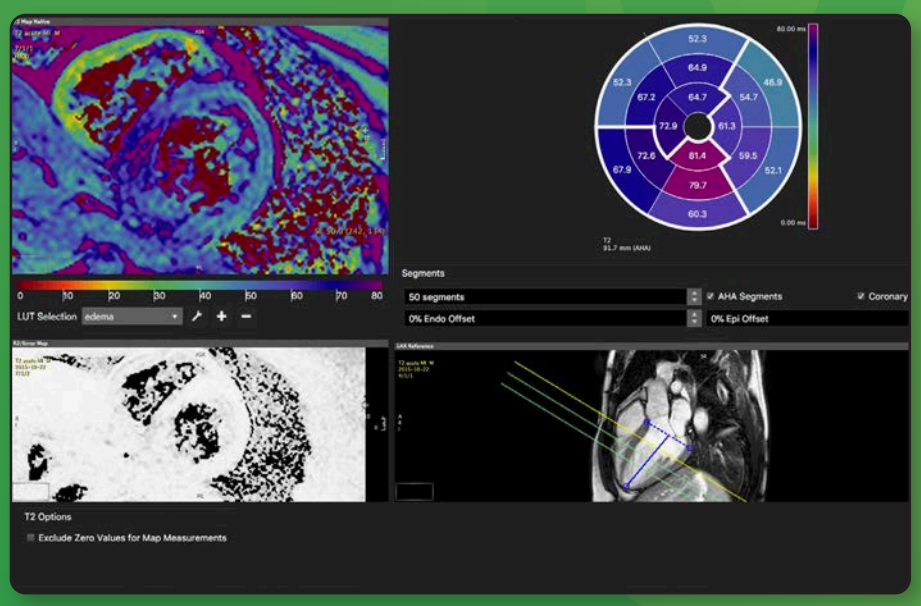
Tissue

Assessment of myocardial scar, edema, MVO, ECV and iron concentration

T1 & T2 SIGNAL INTENSITY

- Analysis of early and late enhancement and T2 weighted images
- AI-based contour detection
- Semi-automated regional scar, global scar, edema and MVO analysis
- Derive and synchronize contours between series



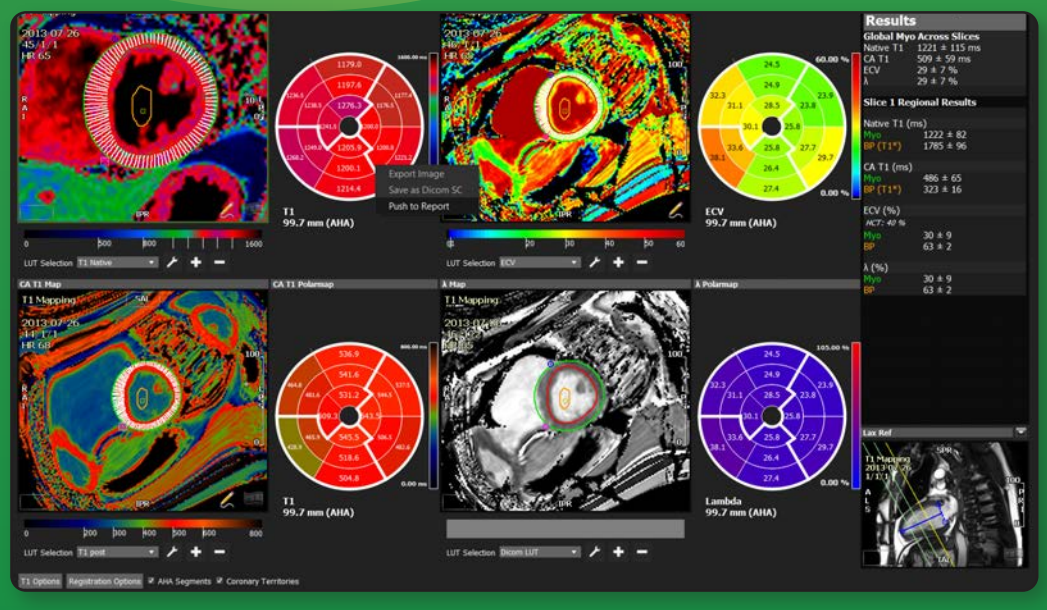


T2* MAPPING

- Global and regional T2* analysis
- T2* color overlay
- Reporting of iron content

T1 & T2 MAPPING

- Global and regional T1 &T2 analysis
- Motion correction
- T1, T2 and ECV map generation with customizable color charts



MR **Magnetic** Resonance

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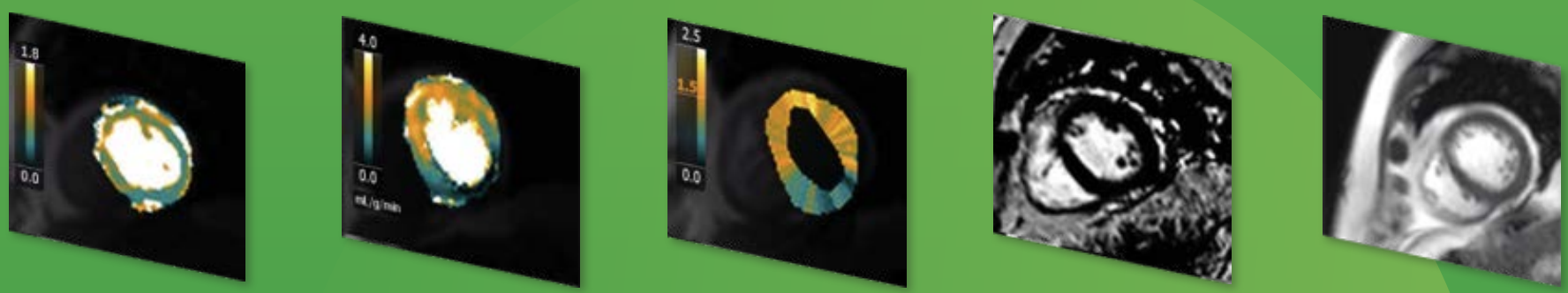
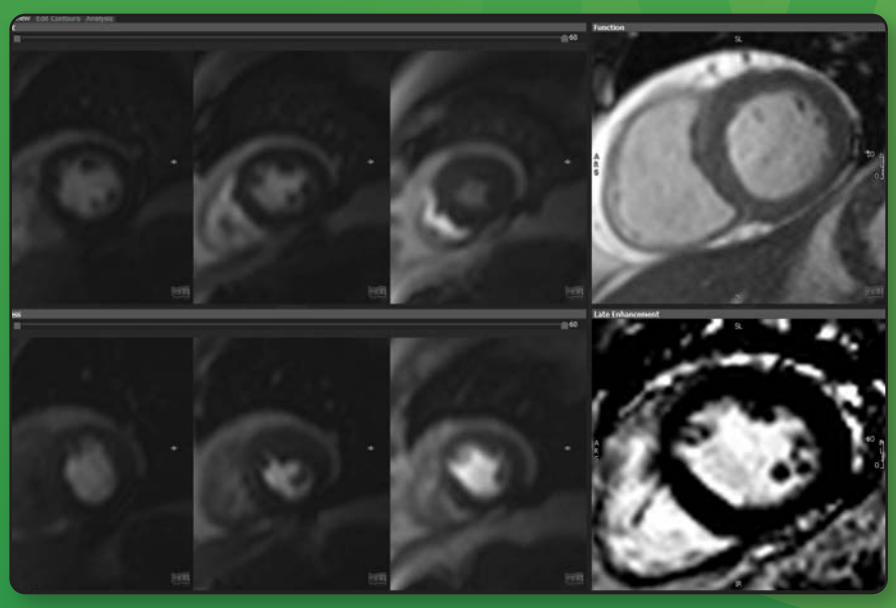
Perfusion

Detect myocardial blood flow perfusion defects to assess Ischemic Heart Disease



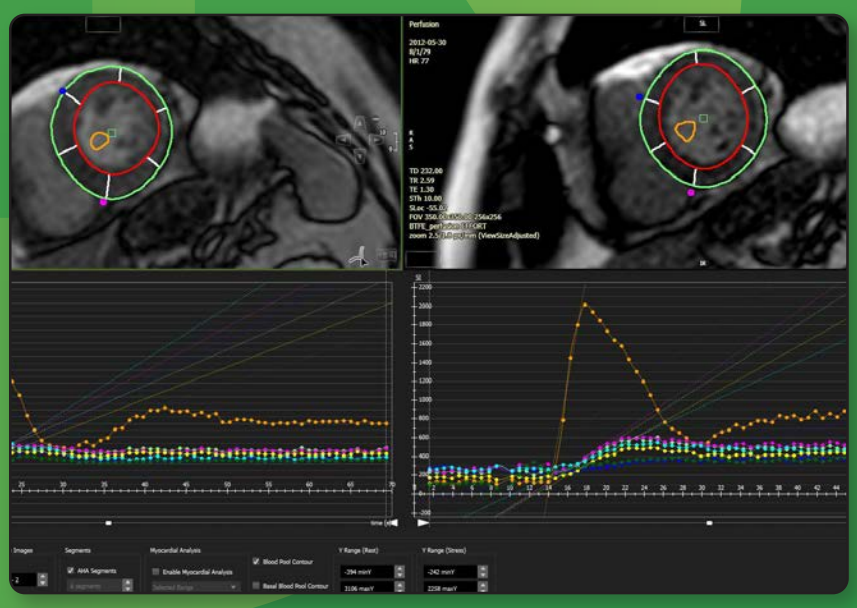
QUALITATIVE ANALYSIS

- Simple viewing for visual analysis of rest and stress perfusion images next to scar and wall motion series



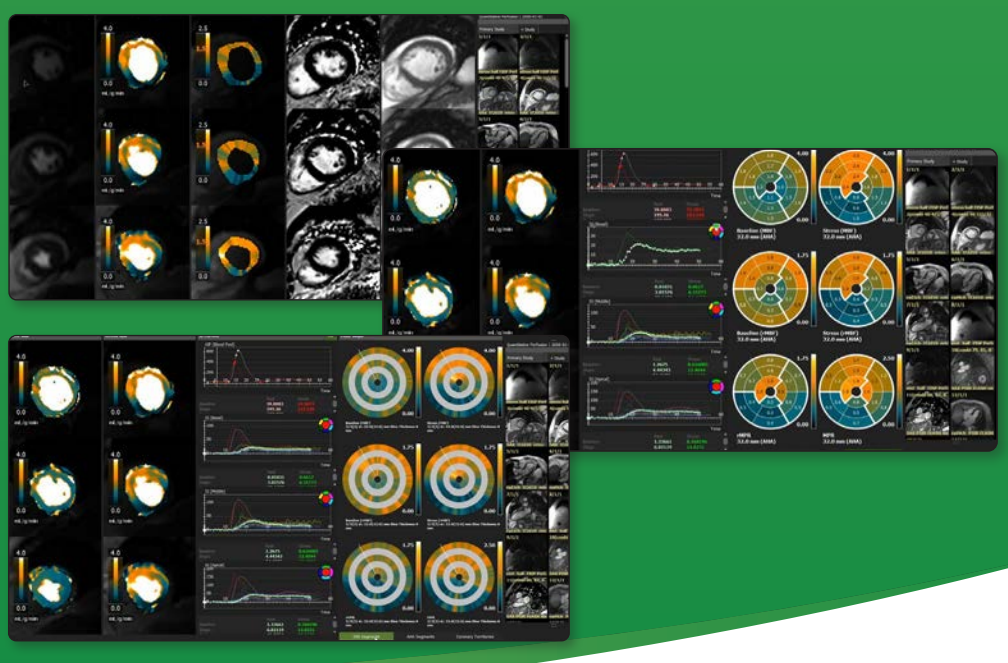
SEMI-QUANTITATIVE PERFUSION

- Polar map and curve display of perfusion parameter including MPR



FULLY AUTOMATED QUANTITATIVE PERFUSION†

- Vendor neutral
- Absolute ml/g/min
- Pixel maps and polar map display of perfusion parameters including MPR
- Free breathing acquisition (cvi42 MoCo)
- Dual bolus, pre-bolus, and single bolus support
- Multi stress and multi agent contrast support



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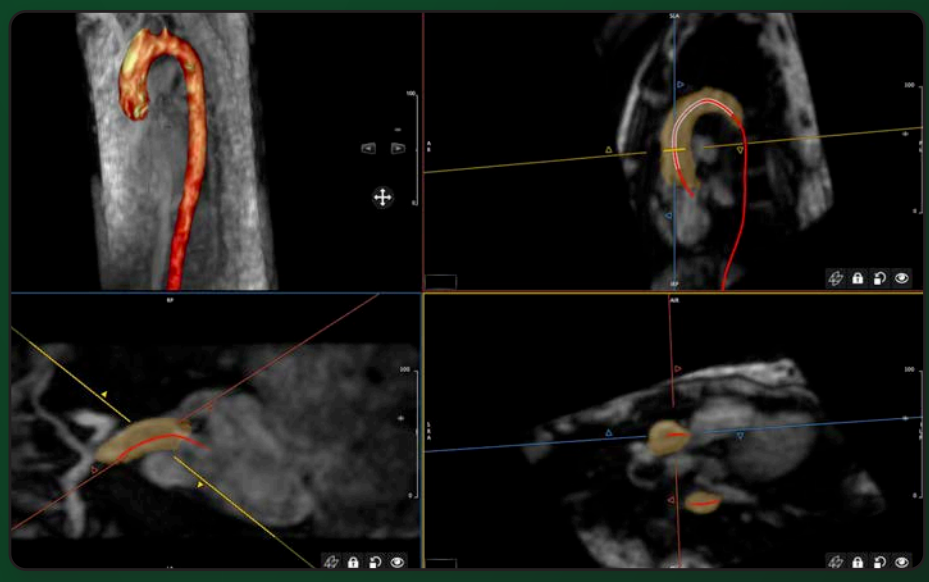
MR | CT Anatomy

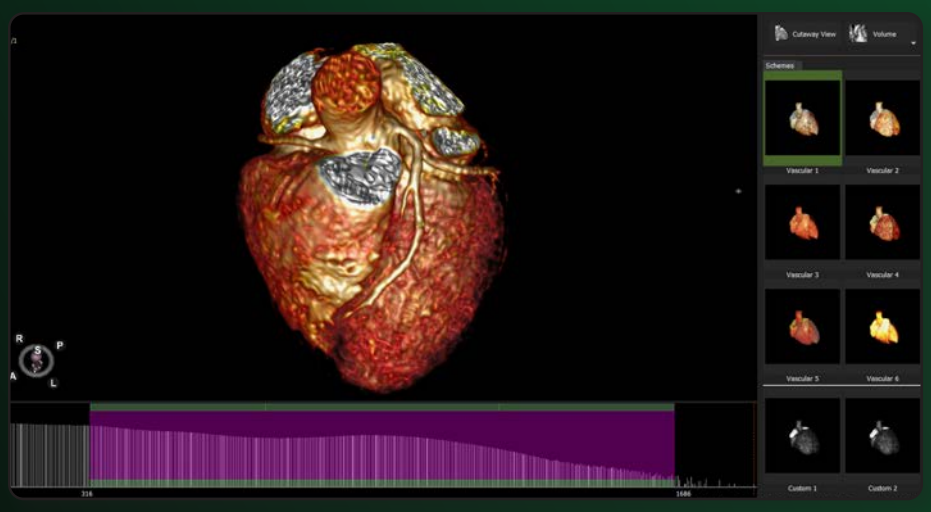
CVi42®

Assess complex cardiovascular morphology in 2D/3D with diverse measurement tools

4D VIEWER

- 3D/4D data display
- DVR, Angio and MIP renderings
- Full and semi-automated segmentation and calculations



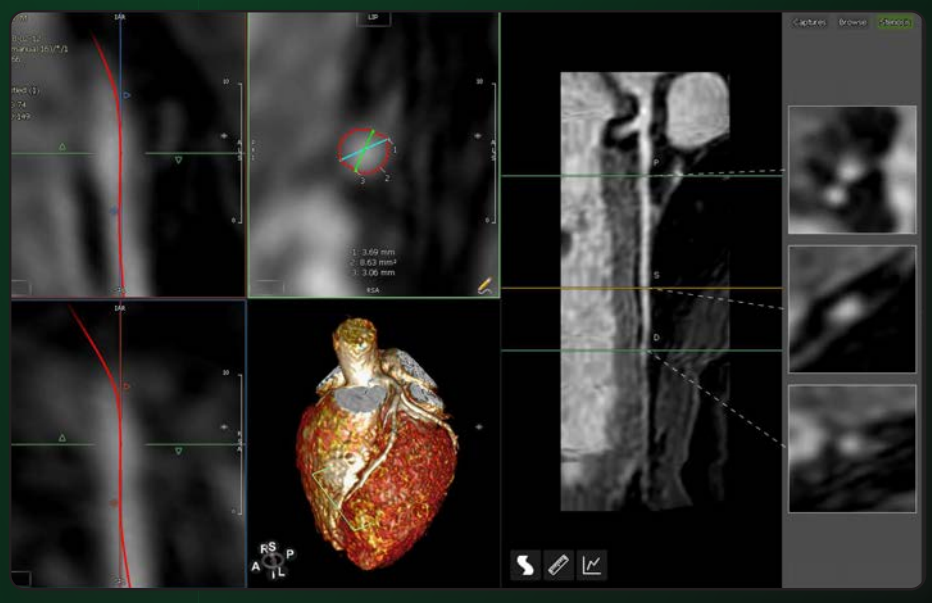


MPR

- Full complement measurement tools
- Predefined, customizable worklists
- 3D/4D volume rendering
- Vessel surfing

VASCULAR

- Vessel lumen and stenosis measurements
- Semi-automated vessel segmentation and centerline extraction
- Volume and MIP renderings



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EP

Electrophysiology

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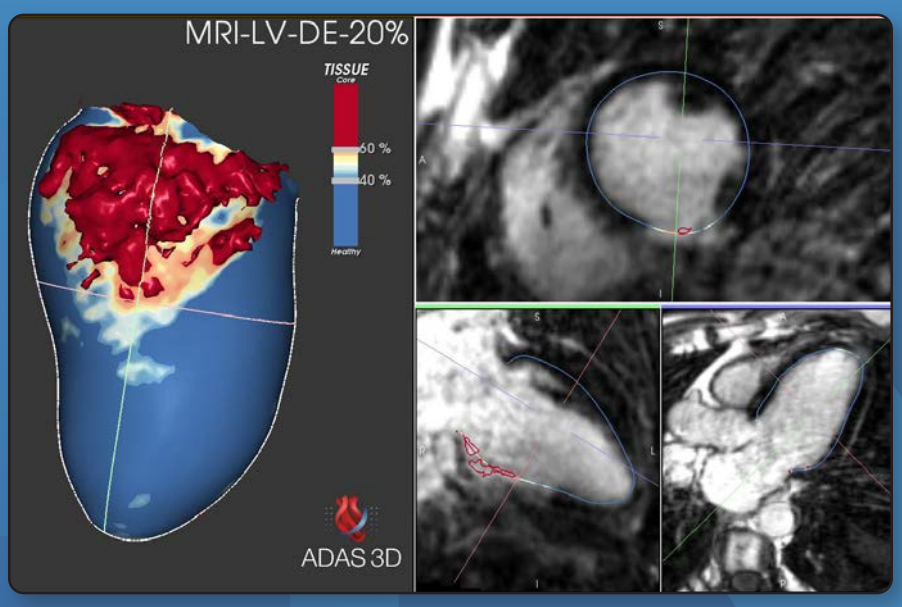
Automated non-invasive pre-procedural planning for the EP Lab

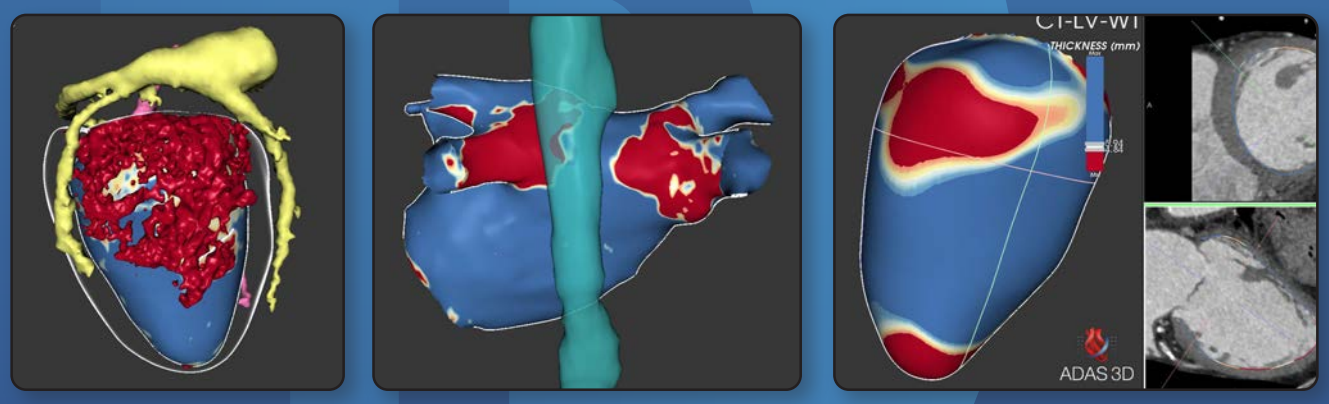
ADAS 3D LV†,††

- Visualize the fibrosis (LGE-MRI) in 3D colored images
- Quantify Core scar and Border Zone (BZ) volumes
- Navigate 9 layers from endo to epicardium
- Visualize automated detected corridors of BZ tissue
- Quantify LV wall thickness (CT)



ADAS 3D LA†,††

- Visualize the distribution and quantify the amount of enhanced fibrosis
- Visualize and navigate around the LA in 3D
- Display adjacent structures including the esophagus



A new partnership between EP and Cardiac Imaging

Pre-Procedure Planning
before any electronanatomical mapping

Local Image Processing

Peri-Procedure Use
with EAM systems

Acquire
DE MRI and/or CT images and import into ADAS 3D

Analyze
ADAS 3D images to plan to procedure

Identify
Areas that may be challenging to find only using EAM

Utilize MR/CT imaging to quantify LV/LA fibrosis and LV wall thickness

† New license required.
†† ADAS 3D is licensed and manufactured by Adas3D Medical and distributed by Circle CVI.

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IP Interventional

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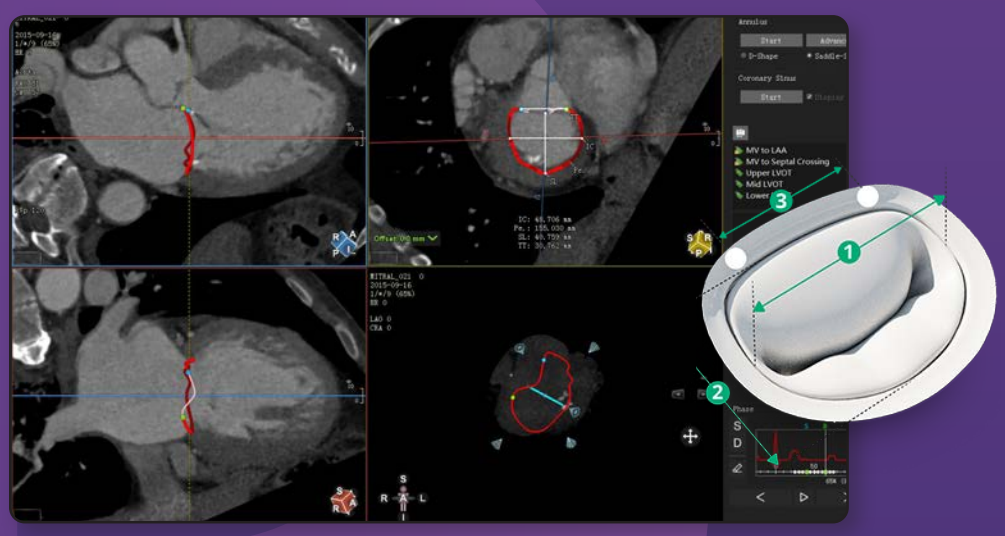
Fast and efficient Structural Heart interventional planning

AORTIC VALVE†

- Assisted annulus detection based on anatomical landmarks
- Measurements of aortic annulus, LVOT, sinus of Valsalva, sinotubular junction
- Automated C-Arm perpendicularity position

MITRAL VALVE†

- Placing detection of mitral, aortic and apex landmarks
- Simple annulus definition and Mitral calcification
- Extensive mitral infographics

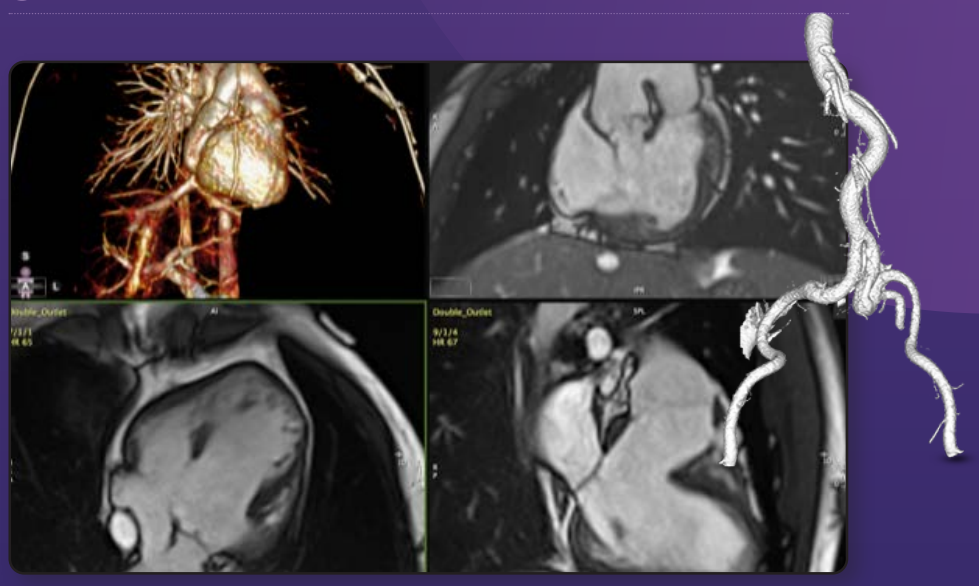


VASCULAR ACCESS

- Automated segmentation
- Smart control points
- Centerline correction
- Centerline-based cross sectional views

TRANS SEPTAL

- Ability to define different structures
- Visualize structures in fluoroscopic Simulation
- View access route from IVC to Mitral Valve



Better understanding of anatomy to predict, plan and visualize aortic and mitral procedures

CT Computed Tomography

CVi42®

Specialized tools for Coronary Artery Disease Assessment using Cardiac CT

CORONARY ARTERIES

- Vessel and valve anatomy in CTA
- Segment and extract centerlines for stenosis measurements
- Vessel displays including projected, stretched, straightened CPR and multi cross-sectional

PLAQUE ASSESSMENT†

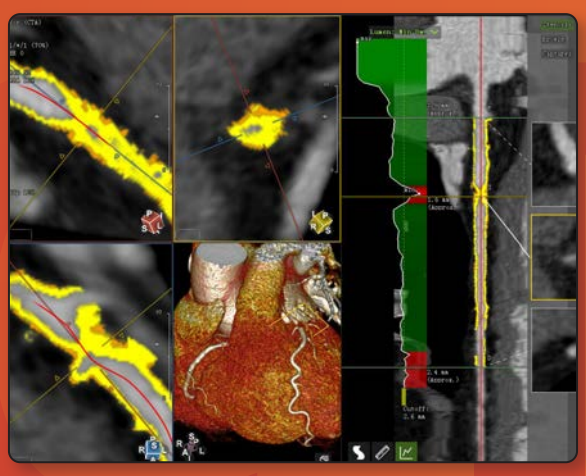
- Automated quantification for calcified, non-calcified, and low-density non-calcified coronary plaque

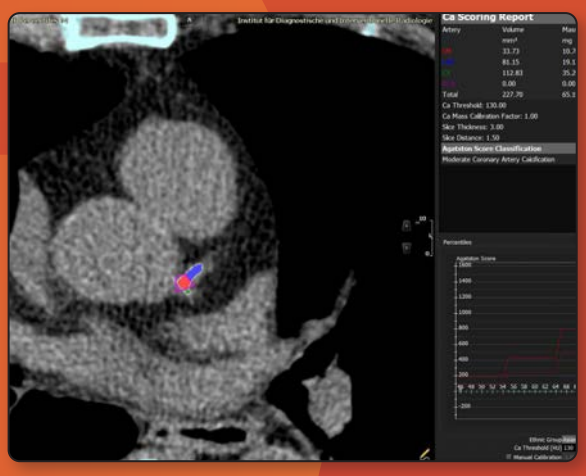
CALCIUM SCORING

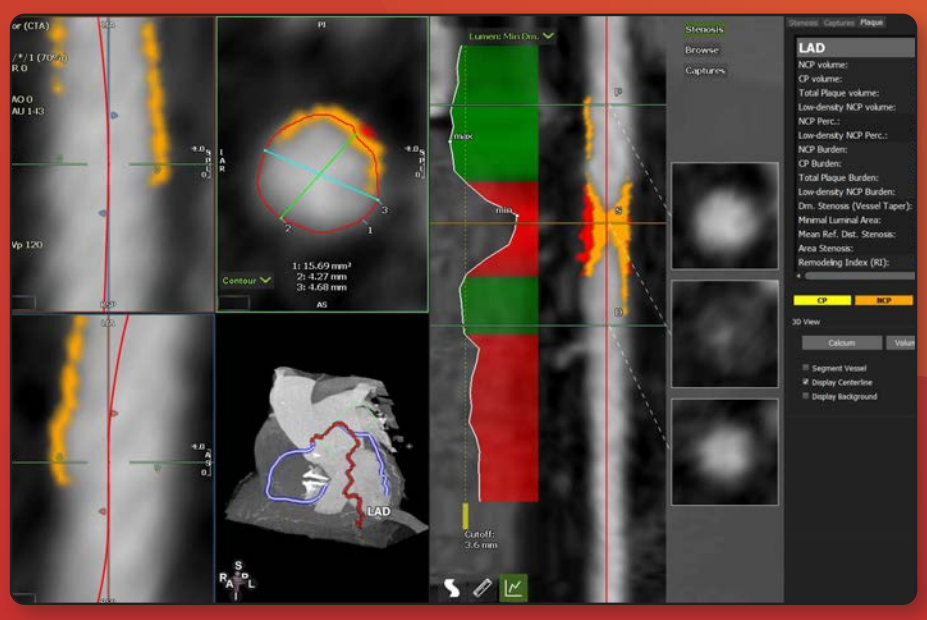
- Quantification of plaque load in coronary arteries

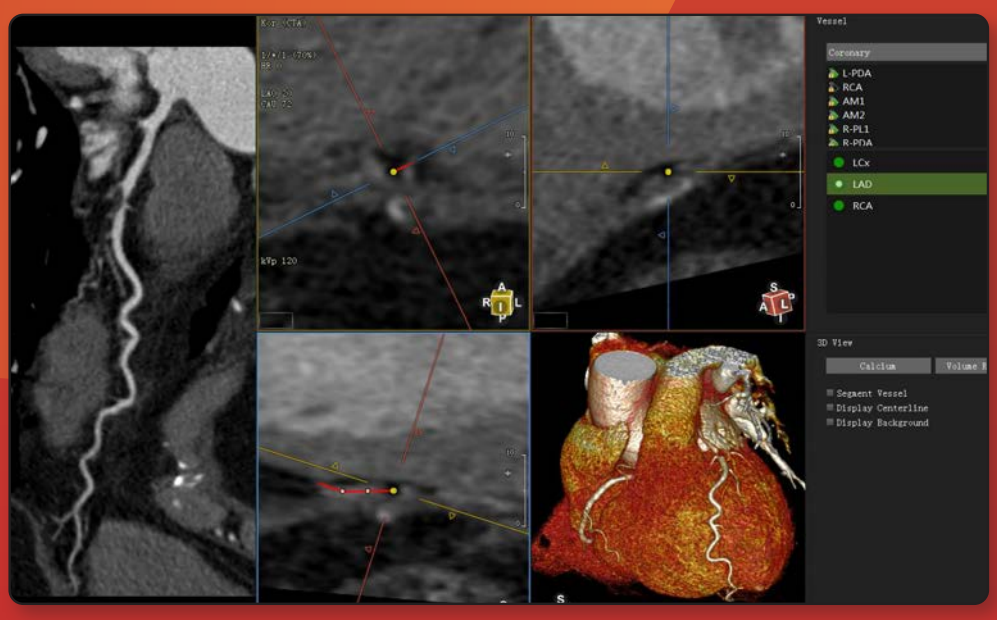
Automated Agatston classification and percentile demographic ranking

Customizable threshold and calibration factor









Automated and powerful integration for Auto-Plaque quantification

† New license required.

Continuous Innovation for Efficient, Accurate and Optimized workflow

Based on User Experience

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Brief Summary: Indications, contraindications, warnings and precautions can be found in the product labelling.
CAUTION: Federal law (USA) restricts these devices for sale by, or on the order of a physician.
The system is intended for use only by trained Healthcare Professionals.

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