CVi42®

INNOVATION TO STREAMLINE
CARDIOVASCULAR IMAGING

For more information, contact us at **sales@circlecvi.com**
or scan the QR code.

At the **Heart** of
IMAGING

circle
CARDIOVASCULAR
IMAGING

4 Clinical Areas and Multiple Modules

CVi42®

CVi42® PLATFORM

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

Computed Tomography (CT)
- Coronaries
- Plaque
- Ca Scoring
- Function
- Strain

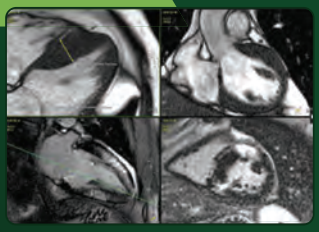
Interventional Planning (IP)
- Mitral Valve
- Aortic Valve
- Left Atrial Appendage

Electrophysiology (EP)
- ADAS 3D LV
- ADAS 3D LA

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

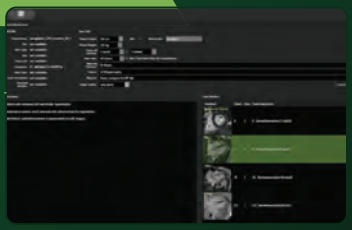
Powerful and fully HIS-enabled to streamline cardiovascular reading and reporting.

VIEWER



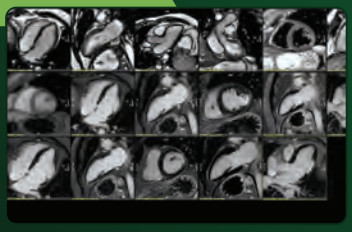
- Multiple image synchronization options
- Full complement measurement tools
- Compare baseline and follow-up scans

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
- DICOM SR support
- HL7 compatible*

† New license required.

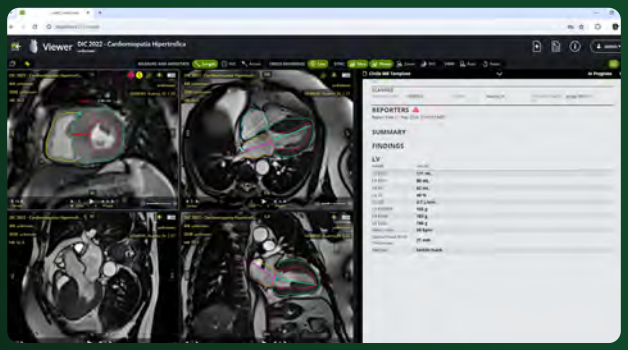
MR CT Web Viewer

cvi42®

A new web-based, easy-to-use viewing platform for improved collaboration across your health care team.

VIEW IMAGES & PRE-POPULATED REPORT

- Access pre-processed MR SAX function results
- Check 2D Flow, Tissue, and LGE contours from pre-analyzed workspaces
- Apply study tags to organize your cases
- Smart CMR viewing with series classification and automated view settings
- View MR and CT reports, including pre-populated Calcium Scoring results
- Review processed LAA pre-planning results
- Smart layout to review original images and secondary captures created using TruPlan
- Edit and finalize reports on the go



ADD / EDIT MEASUREMENTS

- Modify function SAX contours and update corresponding results directly within the report, all from your web browser
- Add basic measurements (Line, ROI, Arrow) within the Web Viewer interface and transfer measurement data to the report
- Re-assign calcium scoring labels and promptly update results within the report

REVIEW REPORT

- Review finalized report and images from your web browser with colleagues or referring physicians
- Show patients their images in the exam room

MR **Magnetic** Resonance

CVi42®

Comprehensive, fast, accurate reading and reporting for cardiac MR

Function

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

SHORT AXIS

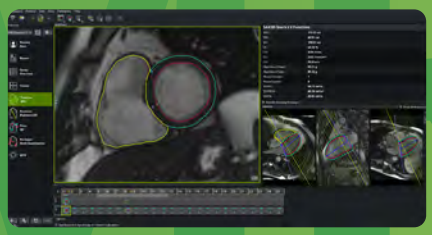
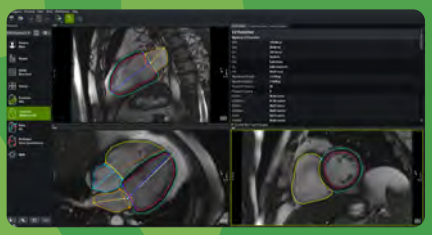
- Full ventricular with server-side processing
- Automated AI-based ventricular contour detection
- Polar map display for LV wall thickening and motion

MULTIPLE LONG AXIS

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

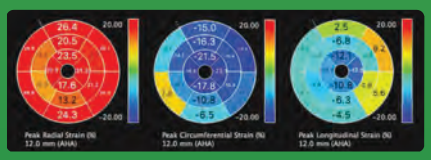
LONG AXIS

- Fully automated AI-based LV and LA/RA assessment
- Automated ventricular contour detection
- Automatically calculated long axis strain values

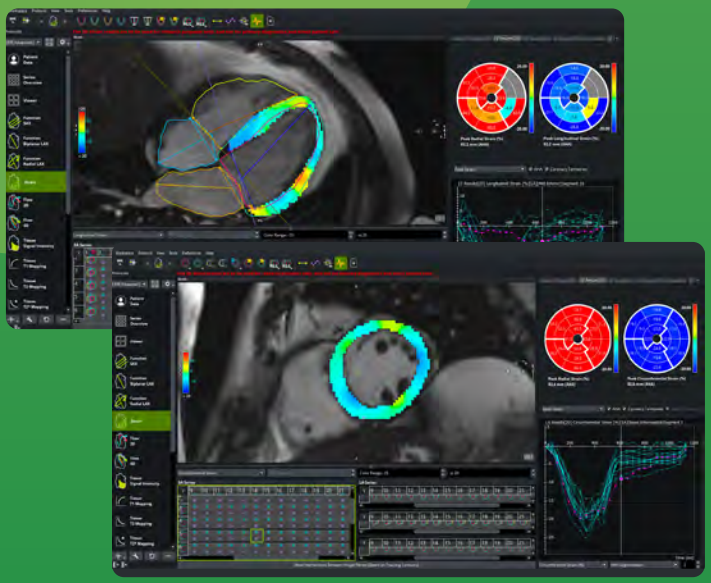




MYOCARDIAL STRAIN†

- AI-based ventricular contour detection
- Global and regional radial, circumferential and longitudinal strain
- Strain rate, displacement, velocity torsion and torsion rate





† New license required.

Flow

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

2D FLOW

- Full flow analysis for volumes with server-side processing.
- Automated AI-based aortic and pulmonary contour detection.
- Offset correction and antialiasing.
- Flow comparisons and Qp:Qs.

4D FLOW†

Pre-Processing:

- AI-automated workflows to visualize and quantify flow patterns anywhere in a 3D structure.
- Auto-loading and auto-contouring, AI-based segmentation of aorta, pulmonary artery and heart chambers.
- Automatically detected peak-velocity planes in the aorta and pulmonary artery for automated Qp/Qs measurement.
- Faster loading times for large studies.
- Crop large data sets to a ROI
- 4D offset correction and antialiasing.
- Comprehensive 4D viewer for flow dynamics.

Analysis

- Diverse flow visualization
- Automated vessel lumen detection and planar flow measurement
- Automated Qp:Qs calculation
- Pulse Wave Velocity

Segmentation

- PCMRA optimization for small or big sized vessels
- Advanced vessel segmentation, centerline correction, and extraction for multiple structures
- Export volume as STL file

Advanced Research Tools††

- Kinetic energy
- Relative pressure
- 3D Wall Shear Stress
- Energy loss
- Ventricular flow assessment including direct, residual, delayed, and retained flow components and associated kinetic energy
- 2D circumferential and axial Wall Shear Stress

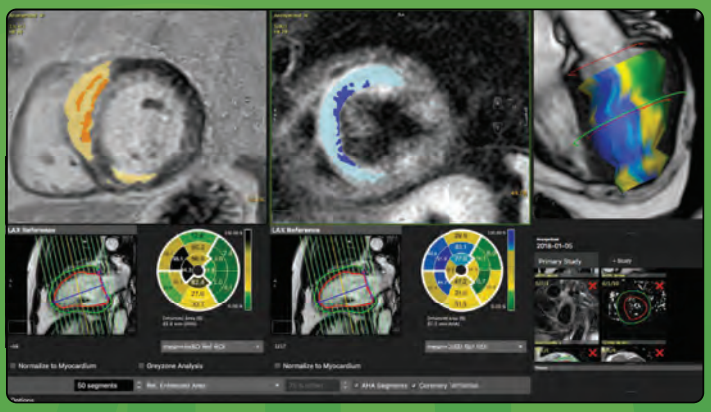
† New license required.
†† Not for clinical use.

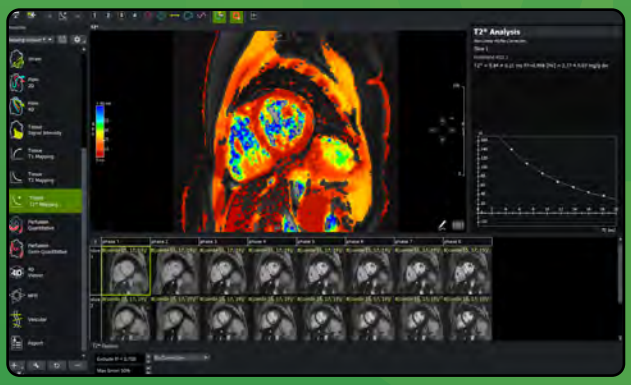
Tissue

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

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
- Multiple algorithm options for quantifying scar pattern presentations



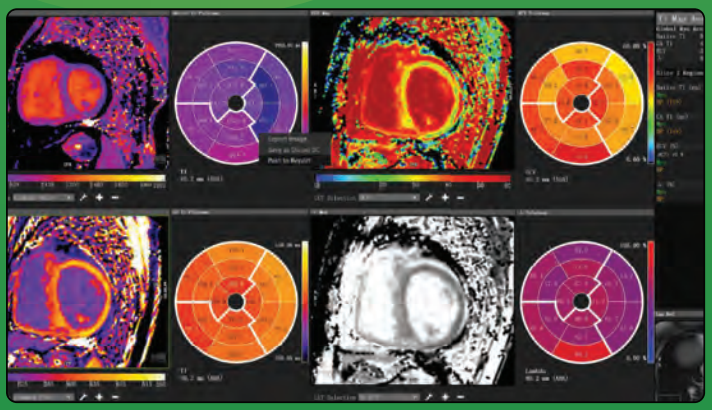


T2* MAPPING

- Global and regional T2* analysis
- T2* color overlay
- Global and regional iron quantification for 1.5T sequences

T1†& T2 MAPPING

- Global and regional T1 & T2 analysis
- Automated image loading and AI-based contour detection in T1 and T2 maps
- Motion correction
- T1, T2 and ECV map generation with customizable color charts



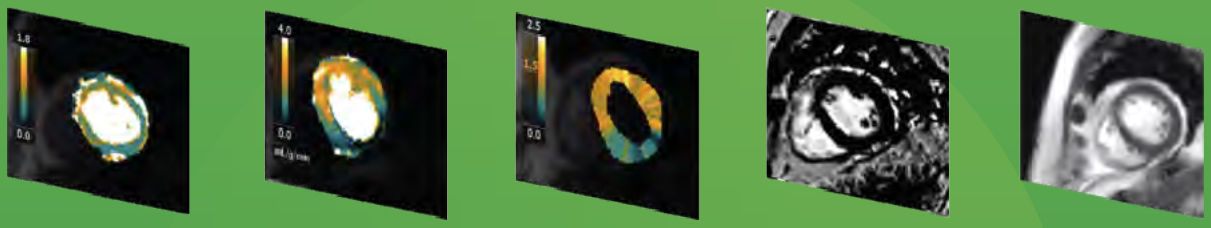
†T1 Mapping and Signal Intensity analysis involving images acquired with contrast agents is only available for non-clinical use in USA.

MR **Magnetic** Resonance

CVi42®

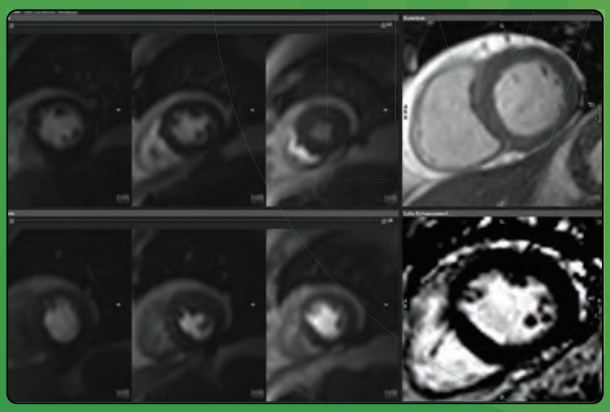
Perfusion†

Detect myocardial blood flow perfusion defects to assess ischemic Heart Disease.



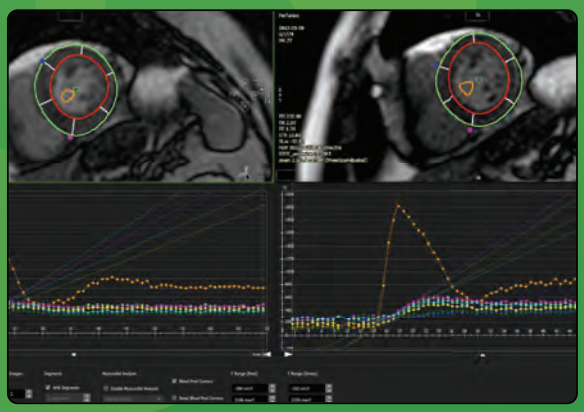
QUALITATIVE ANALYSIS

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



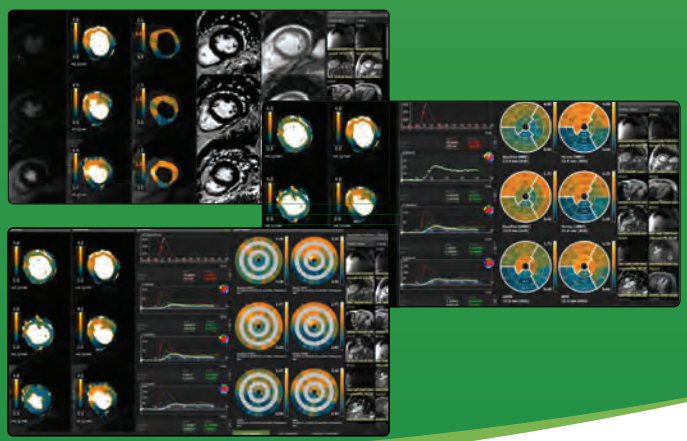
SEMI-QUANTITATIVE PERFUSION

- Polar map and curve display of perfusion parameter including MPR



QUANTITATIVE PERFUSION ††,†††

- Vendor neutral
- 1-click workflow for rest and stress myocardial blood quantification
- Free breathing acquisition (cvi42 Moco)
- Pixel maps display of absolute and relative MBF values
- Multi-sequence support



† Perfusion involving images acquired with contrast agents is only available for non-clinical use in USA.
†† New license required.
††† Not for clinical use.

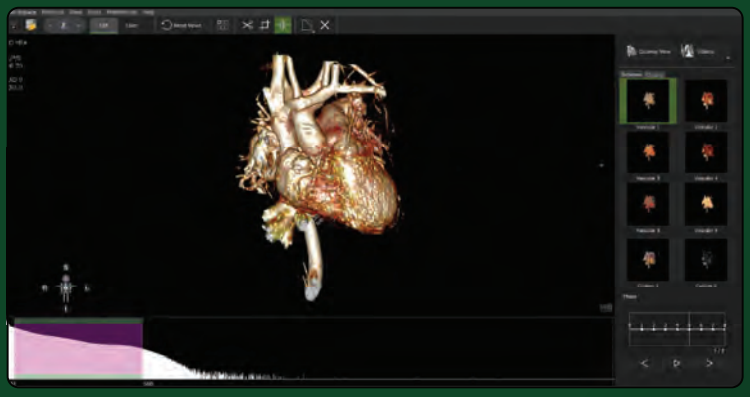
MR CT Anatomy

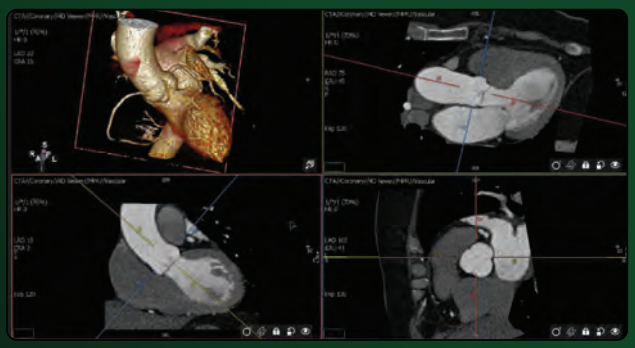
CVi42®

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

4D VIEWER

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



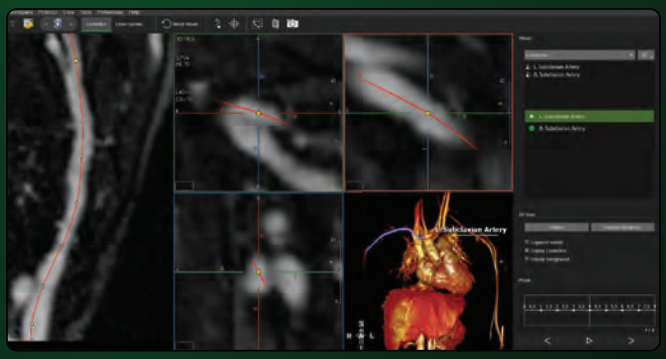


MPR

- 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



CT

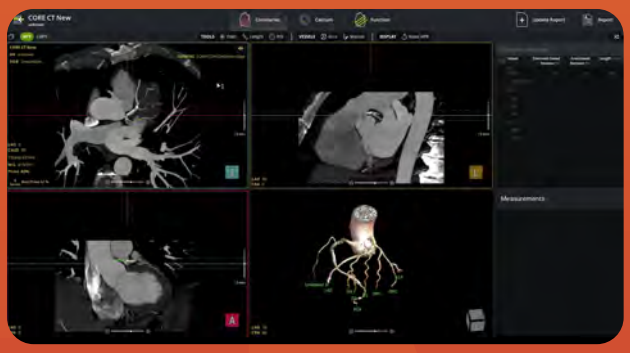
Computed Tomography

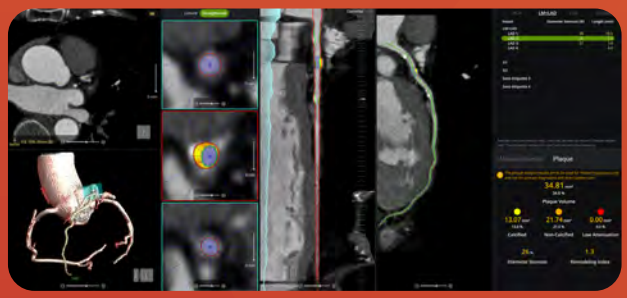
CVi42®

Read and report cardiac CT† using server-side processing for assessment of coronary artery, plaque, calcium scoring, function and tissue deformation.

CT CORONARIES

- Zero-click segmentation and labeling of primary and secondary coronary arteries
- 2-click stenosis assessment with a simple interface, quick editing, and measurement tools
- Automatic 3D heart view generation for editing and quality assessment
- Lesion-level total occlusion marking
- Single- and dual-reference marker for stenosis calculation



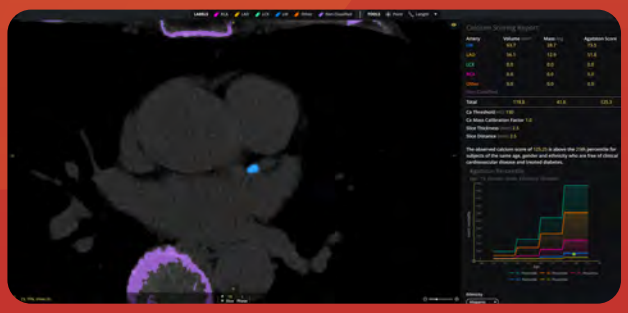


CT PLAQUE †

- AI-automated coronary lumen and wall segmentation
- Detailed assessment of calcified, non-calcified, and low-attenuation plaques
- Per-lesion and per-vessel plaque analysis
- Remodeling index assessment helps identify high-risk plaques beyond stenosis severity
- Enhanced coronary reporting

CT CALCIUM

- Automatically generate Agatston score for additional cardiac event risk stratification information††
- Automated quantification and categorization of calcified plaque in major coronary arteries in non-contrast enhanced CT images
- Zero-click calcium scoring segmentation via server-side pre-processing



† New license required.
†† Stratification is for informational purposes only.

CT Computed Tomography

cvi42®

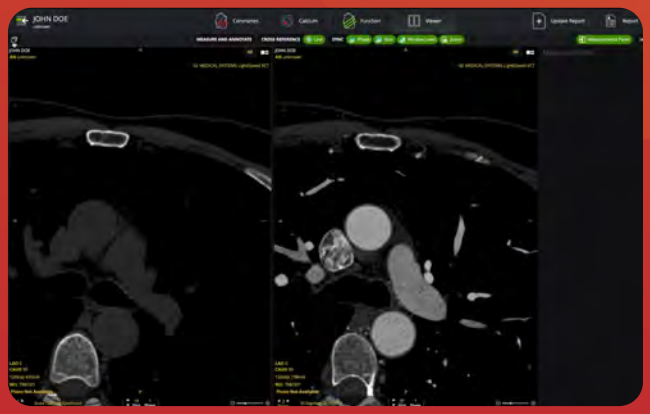
Read and report cardiac CT† using server-side processing for assessment of coronary artery, calcium scoring, function and tissue deformation.

CT FUNCTION

- Server-side pre-processing and 3D-based, AI-driven cardiac function analysis
- User-friendly tools for manual editing, such as AutoFOV viewport alignment
- Endoluminal view and overlay hiding capabilities, enabling a clearer understanding of underlying anatomy

CT STRAIN†,††

- AI–based re-slicing of multi-phase volumetric CT studies to create short-axis and long-axis series for strain assessment.
- AI-based contouring of reformatted series.
- Automated calculation of radial, circumferential and longitudinal peak strain, strain rate, displacement, velocity, torsion and torsion rate.
- Easy to deploy and integrate smoothly into your existing clinical environment.



CT VIEWER

- Viewing of 2D images, secondary captures, and reformatted series in cvi**42** | CORE CT

† New license required.
†† Not for clinical use.

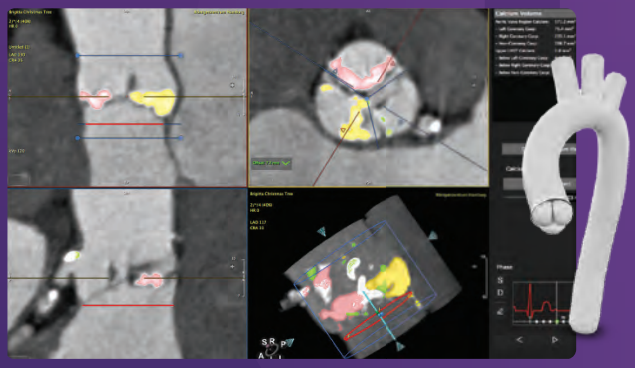
IP Interventional Planning

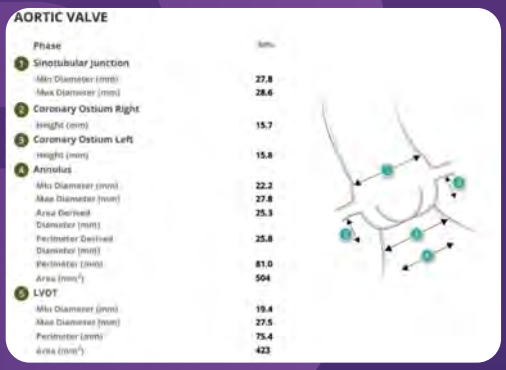
CVi42®

Fast and efficient Structural Heart interventional planning.
Better understanding of anatomy to predict, plan and visualize aortic procedures.

AORTIC VALVE†

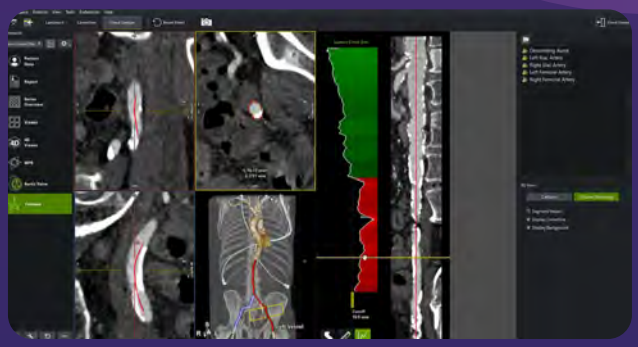
- Automated detection of aortic valve annulus cusp points
- Possibility to edit the cusp points manually
- Automated Aortic annulus contour detection, measurement of its area, perimeter, max and min diameters
- Automatic calculation of Ostia heights, ST Junction, Sinus of Valsalva, Aortic Annulus
- Worklist measurements, labeled with the tags provided, will automatically be entered into an infographic in the report module
- Extensive Aortic Valve infographics
- Aorta Fluoro page & automated C-arm perpendicularity position
- Leaflet calcium volume with automatic detection based on calcium threshold, calcium volume report per cusp in aorta and LVOT
- Virtual device visualization with different shapes available, including the possibility of importing vendor specific image files
- Apical access planning

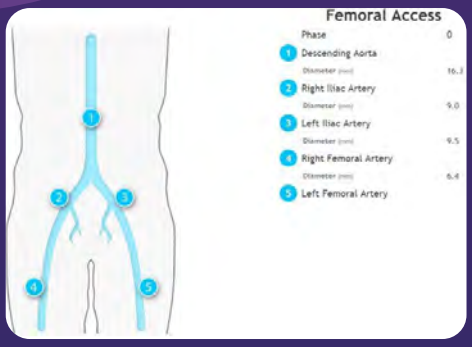




VASCULAR ACCESS

- Semi-automated femoral centerline segmentation and reporting schematic
- Smart control points
- Centerline correction
- Centerline-based cross-sectional views





† New license required.

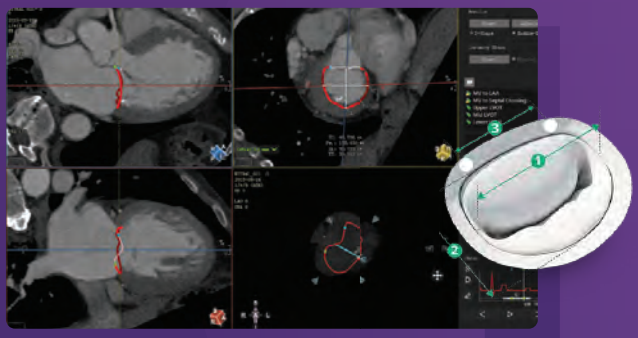
IP Interventional Planning

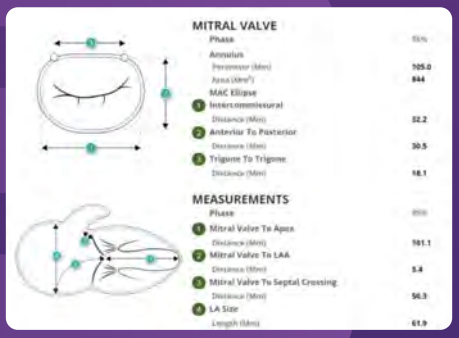
CVi42®

Fast and efficient Structural Heart interventional planning.
Better understanding of anatomy to predict, plan and visualize mitral procedures.

MITRAL VALVE†

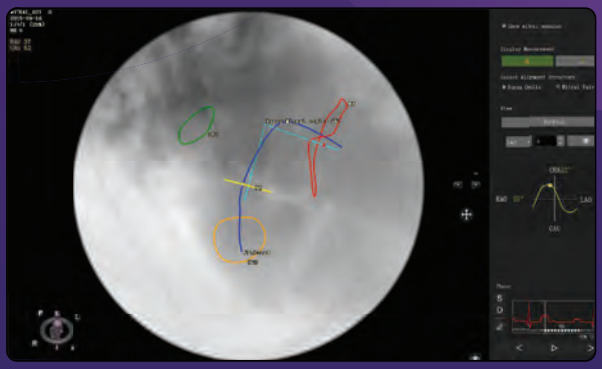
- Automated landmark detection for mitral valve center and LV apex ensures consistent reference points for accurate and reproducible cardiac measurements.
- Automated mitral annulus contouring enables fast, precise assessment of mitral valve geometry to support functional evaluation and disease detection.
- Mitral annular calcification assessment
- Coronary Sinus definition and guide wire simulation
- Automated detection of calcium based on calcium threshold, calcium volume reported per leaflet
- Assessment of LVOT and virtual device visualization
- Fluoroscopy page
- Extensive mitral infographics
- Apical access planning





TRANS SEPTAL

- Trans-septal access planning with distance and angle measurements
- Ability to define different structures such as fossa ovalis, superior and inferior vena cava
- Visualize structures in fluoroscopic simulation
- View access route from IVC to mitral valve



† New license required.

IP

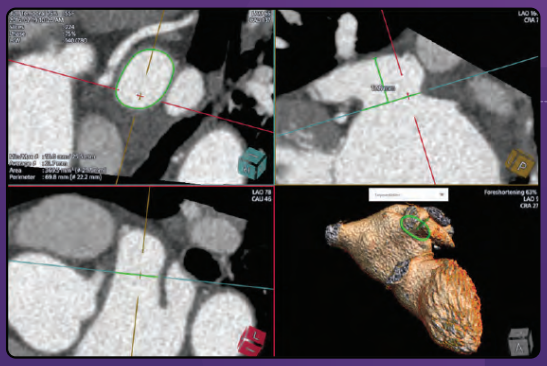
Interventional Planning

WATCHMAN™ TruPlan™
CT IMAGING SOFTWARE

Comprehensive visualization and planning for interventions in the left atrial appendage! Fast and intuitive techniques for the pre-procedural planning and post-procedural follow up.

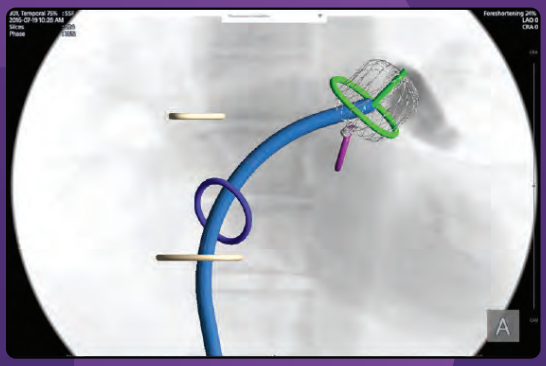
LAA Assessment

- Automated LAA landing zone definition
- Multiphase selection of desired phase
- Size and location of landing zone
- 3D anatomical assessment (segmentation, sculpting)
- Endoluminal view to LAA and LA



Fluoro

- Simple, intuitive definition of Fossa Ovalis, IVC, SVC and LUPV
- Fluoro simulation of LAA and structures
- Sizing tables for WATCHMAN™ devices
- Interactive overlay of WATCHMAN™ device and access sheaths



TEE

- Full functional TEE simulation
- Prepopulated TEE 0-45-90-135, bicaval and Ao short axis views
- TEE-views simulation simultaneously with fluoro and 3D
- Probe depth, probe rotation, left-right flex and anterior-posterior flex

ICE

- Structures and measurements visible on the echo views
- ICE view simulation
- Rotation, moving and flexing of probe

EP Electrophysiology

CVi42®

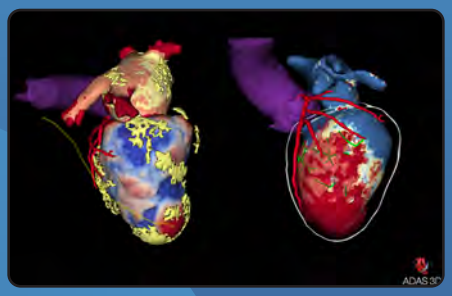
Automated non-invasive pre-procedural planning for the EP Lab
Utilize MR/CT imaging to quantify LV/LA fibrosis and LV wall thickness.

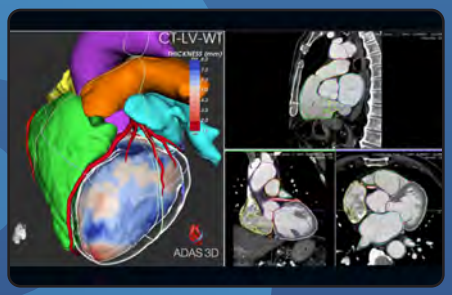
ADAS 3D LV†,††

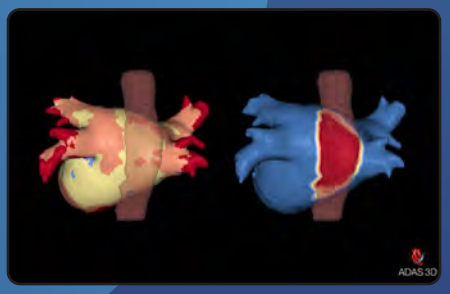
- Visualize the fibrosis (LGE-MRI) in 3D colored images
- Quantify Core scar and Border Zone (BZ) volumes
- Navigate 9 layers from endo to epicardium
- Quantify LV wall thickness (CT)
- Display corridor location and best approach to reach them (endocardium, epicardium, or combined)
- Obtain AI-based initial segmentation of the left chamber anatomy
- Assess surrounding anatomical structures, including coronary arteries, right chambers, and phrenic nerve
- Analyze intra-myocardial and epicardial fat, among other structures
- Compute isodistances maps to neighboring structures for safer procedures

ADAS 3D LA†,††

- Visualize the distribution and quantify the amount of enhanced fibrosis
- Compute LA wall thickness maps
- Visualize and navigate around the LA in 3D
- Display adjacent structures including the esophagus, aorta, etc.
- Compute isodistances map between the LA and any neighboring structures
- Analyze intra-myocardial and epicardial fat, among other structures







Pre-Procedure Planning
before any electroanatomical mapping

Peri-Procedure Use
with EAM systems

Local Image Processing

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

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

Continuous innovation for efficient, accurate and optimized workflows based on user experience

www.circlecvi.com Circle Cardiovascular Imaging @circlecvi

Brief Summary: Indications, contraindications warnings and precautions can be found in the product labelling

Disclaimer: Not all modules or features are available in every region. Contact your local Circle representative for all regional availability.

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.

circle CARDIOVASCULAR IMAGING

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