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Medis Suite MR

Cardiac diagnostics made simple.

Product Specification Sheet

M-MSP: Medis Suite Platform

- Support for Cardiac MR studies of all major MR vendors
- Access to Cardiac MR studies across the network
- Import of cardiac MR studies from local storage media (hard disk, USB, and CD/DVD)
- DICOM connectivity, receiving cases, query and retrieve, pushing results to PACS
- Centralized database, thick client solution possible with multiple clients
- JPEG2000 and enhanced MR support
- AutoQ for preprocessing data
- Review series side by side, drag 'n drop series into the viewer, cross referencing tools, fast paging through series, simple caliper measurements
- Enhanced workflow, run multiple apps in parallel
- Loading of prior exams in parallel
- Enhanced clinical report, combining all measurements in a single report, snapshots, add comments, save as PDF, view in text format. Clinical XML and JSON output.
- User log in
- Role Based Access Control
- DICOM SR output for results of Clinical applications
- User interface and User manual available in multiple language for the clinical applications

M-MGM: QMASS Global Function Module (MR)

- Guided workflow
- LV and RV function analysis
- Global function analysis (Simpson's method) on short axis or transversal stack of cines
- Quantification of custom volumes, such as atrial volumes
- Area-length and Bi-plane volumetric analysis methods for long axis cines
- Enhanced: Deep learning contour detection for LV & RV in SAX
- Deep learning contour detection for LV in LAX
- Semi-automatic contour detection for RV endocardium
- "LiveContour" algorithm to quickly detect endocardial contours
- "Time-Continuous" contour detection
- Auto-detection of papillary muscles and trabeculae with "MassK mode"
- Quantification of EDV, ESV, SV, %EF, CO, CI, indexed values (BSA and height), (time to) peak filling and ejection rate
- Various BSA calculation methods for indexed results
- Latest normal ranges embedded and calculations of z-scores

M-MRM: QMass regional function module (MR)

- Analysis of regional parameters, such as wall motion, wall thickness, wall thickening and wall thickness changes over time
- Regional results are part of the XML and JSON report output

M-DCE: QMass Delayed Signal Intensity (DSI) module (infarct size, T2W analysis, combined DSI-T2W analysis)

- Guided workflow for automatic infarct tissue quantification
- Transfer contours from short axis cine stack
- Various automated threshold calculation methods
- Automatic infarct detection
- Quantification of infarct size (% and mass), infarct transmurality
- Quantifying regions of hyper-, intermediate and hypo-intense signal intensities
- Threshold per slice or per sequence of slices
- T2-weighted analysis, combined DSI-T2-weighted analysis
- T2-ratio

M-MSU: QMass Time Signal Intensity (TSI) module

- Enhanced Contour registration to correct for breathing motion
- Baseline correction methods
- Automatic calculation of relative upslope
- Upslope curves per myocardial segment and user defined ROI's
- Set transmural range for measurement of subendocardial and subepicardial perfusion curves
- AHA 16 results are generated and are part of the XML and JSON report output

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Medis Medical Imaging Systems BV
Schuttersveld 9, 2316 XG Leiden
P.O. Box 384, 2300 AJ Leiden, The Netherlands
P +31 71 522 32 44 **F** +31 71 521 56 17 **E** sales@medisimaging.com

www.medisimaging.com
@MedisImaging
@Medis Medical Imaging
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M-TTM: QMass T2/T2* analysis module

- Fast quantification of T2* decay time and decay rate
- Color overlay
- Correct for breathing motion

M-TOM: QMass T1 analysis module

- Measure T1 value based on automatic motion corrected T1 Maps
- Calculation of T1 relaxation time in MOLLI and Look Locker sequences
- Calculation of residual maps
- Automatic Motion Correction
- Color overlay
- Correction for breathing motion

M-FLX: QFlow app

- Phase-contrast MR blood flow analysis
- Automatic contour detection
- Copy of contours in forward and backward diretion
- Various background correction methods to correct for flow-induced artifacts,
- "Stationary Flow Fit" and
- "Phantom Correction"
- Phase unwrapping to correct for aliasing
- Color-coding to visualize velocities
- Calculation of velocities and volumetric blood flow in up to 4 ROI's
- Automatic calculation of regurgitant fraction and volumes
- Display of min and max velocity pixels
- Calculation of maximum pressure and mean systolic pressure gradient
- Quantification of CSF flow

M-4DV: QFlow 4D app

- Simple MPR tool (multi planar reformatting)
- Single click noise removal
- Single click Background offset correction (1st, 2nd & 3rd order)
- Color overlay displaying the speed
- Allow launching of QFlow quantification of volumes, regurgitant fraction and peak flow velocity (see M-FLX QFlow app, separate license)
- Visualization of Streamlines in 2D and 3D
- Enhanced visualization of vectors
- Review flow as overlay on Cine SSFPs in 2D
- Single click phase unwrap functionality

M-MRA: 3DView app

- Viewing 3D MR and CT Angiography series, double oblique viewing, MPR, MIP, slabbed MIP, VR
- CPR (Curved Planar Reformatting)
- Efficient caliper measurements, including double distance measurement
- Sculpting (isolating custom volume of interest)
- Create reformats
- Add temporal resolution

M-SMR: QStrain MR

- Enhanced: Deep learning contour detection in SAX for LV and RV
- NEW: Deep learning contour dection in LAX for LV, RV, LA, and RA
- Automatic 2CH/3CH/4CH view recognition
- Automatic mirroring of Long Axis images
- Rubber banding and other contour editing tools
- Quantify strain in SSFP images for LV in either LAX or SAX, RV in 4CH, LA in 2CH or 4Ch and RA in 4CH
- Quantification of global (GLS, GCS and GRS) and regional strain based on feature tracking
- Quantification of delta rotation
- Quantification of 16 segment AHA strain parameters: Strain, Strain Rate, velocity
- Quantification of RV segmental (septum and free wall) strain parameters: Strain, Strain Rate, velocity
- Generate results for endo, mid and epicardial wall
- The AHA segment model results are part of the XML and JSON output
- More extensively research report can be exported in XML and MS-Excel

M-INW: QStrain Inward Displacement add-on

- Quantification of Inward Displacement (InwD) and Inward Displacement Index (InwInd) allowing for the objective evaluation of regional dysfunction
- Modality independent, works on MR as well as CT series

M-HDF: QStrain Hemodynamic Forces add-on

For research-use only

- Instant calculation of Hemodynamic Forces from routine apical views, based on a mathematical model validated against 4D Flow MRI
- Hemodynamic Forces (HDF) analysis for the evaluation of Intra-Ventricular Pressure Gradients (IVPGs), a global property describing LV function

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Available packages

Medis Suite MR

	Modules	Packages				
		Essentials	Advanced Edition	Premium Edition	Premium Plus	Dedicated Strain
Clinical	3D View	✓	✓	✓	✓	
	Function Global	✓	✓	✓	✓	
	Function Regional		✓	✓	✓	✓
	DSI	✓	✓	✓	✓	
	TSI		✓	✓	✓	
	T1		✓	✓	✓	
	T2/T2*		✓	✓	✓	
	2D Flow	✓	✓	✓	✓	
	4D Flow					
	Strain LV			✓	✓	✓
	Strain RV and Atrium			✓	✓	✓
	Inward Displacement			✓	✓	
Research	T1				✓	
	T2/T2*				✓	
	ECV				✓	
	Hemodynamic Forces				✓	

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MS-ECV: QMap ECV
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- Create parametric maps for T1-ECV
- Quantification of delta T1 (pre and post adenosine stress exams)
- Supports LL, MOLLI, SR, console generated maps
- Correction factor
- Offset, scaling, fit residual error
- Display of relaxation graphs
- Automatic Motion Correction for pre- and post-contrast T1 images (either one by one or simultaneously)
- Flexible manual motion correction
- Flexible co-registration of T1 native (pre-contrast) and T1 post-contrast maps
- Comprehensive results for myocardial segments and up to 4 ROI's and segments
- The 16 segment model results are part of the XML and JSON report output
- Save maps as DICOM
- Save results to MS-Excel

MS-REL: QMap T1&T2 relaxometry
For research use only

- Create parametric maps for T1, T1*, T2 and T2*
- Supports LL, MOLLI, SR, T2 prep and console generated maps
- Correction factor
- Offset, scaling, fit residual error
- Display of relaxation graphs
- Flexible manual motion correction
- Flexible co-registration of T1 native (pre-contrast) and T1 post-contrast maps
- Comprehensive results for myocardial segments and up to 4 ROI's and segments
- AHA 16 segment model results and bull's eyes
- Save maps as DICOM
- Save results to MS-Excel

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