



# SCMR – iCMR

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## **Interventional CMR**







#### **Realtime Interface**

- Interface to 3rd party computers
- Image transfer
- Remote parameterization
- Advanced interactive realtime sequence
- Enabling active tracking



#### **Third Party Workstation**

- Starter package (incl. **Code snippets)** available
- **Responsibility lies with** the user

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\* This product is currently under development, is not for sale in the US and other countries. It's future availability cannot be guaranteed. Siemens Healthcare - AT / MR

#### SIEMENS

## Interactive Front End (IFE) v3.1\*

- Interventional CMR
  - New interactive WIP features:
    - Saturation
    - Contrast manipulation
    - Slice thickness
    - Projection mode
    - Tracking ratio /device following
    - ...

#### Interventional CMR\*



- Support of entire right heart catheterization workflow at NIH/NHLBI
- iCMR hands-on workshops at NIH
  - First workshop in November 2015
  - Second workshop planned for April 11-12, 2016
- Percutaneous Interventions
- Thermometry

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## Research: EP Interventions - from X-ray Cath Lab to "MR Cath Lab"



#### **Benefits of standard cath lab:**

- optimized workflow
  - table-side controls
  - footswitch
  - integrated mapping systems
- large in-room screen
- EP signal quality
- patient access
- ...

- ... but:
- X-ray
- missing real-time soft tissue imaging

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## **Research prototype lab\* to be evaluated:**

- MAGNETOM Aera 1.5T MR system
  - advanced interactive realtime sequence
- two 32 inch in-room screens
- Angio footswitch (MR-compatible)
  - acq. on/off, change seq., change screen layout, alert
- Catheters for passive and active tracking
- EP recording and mapping
- RF ablation
- ..

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## Research: MR Guided Ablation for Treatment of Ventricular Tachycardia

# Feasibility Study\* planned (to be started in Q2 / 2016)

## • up to 24 animals

- 12 of these on VT based on a prior 3 hour LAD occlusion (Tschabrunn et al.)
- Transseptal puncture or transaortic retrograde access
- Left ventricular mapping and ablation

## Topics to be evaluated

- Safety of the research prototype lab
- Accuracy and reliability of electrograms (EGM) within the MR scanner
- Accuracy and efficacy of MR-guided RF lesion placement
- Utility of intra-procedural MR-assessment of lesion formation (acute and chronic)
- Efficacy of ventricular tachycardia ablation (MR-guided, substrate based)
- Potential for further development of MR imaging techniques
- Potential for workflow optimization

<sup>\*</sup> Feasibility Study only – data will not be used for seeking approval or clearance under applicable medical device law. Siemens Healthcare – AT / MR





# Thank you

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