MunichHeart

A Platform For Integrated Cardiac Imaging

March 2010

MunichHeart

MunichHeart was initially developed in order to efficiently process cardiac studies in a research environment.
Initially, the target were just cardiac PET data. Since then, it developed into an extensive array of quantitative analysis tools for volumetric data analysis encompassing PET, MRI, SPECT and CT data .
This set of tools handles large amounts of multi modal cardiac data and facilitates the extraction of quantitative parameters in preclinical and clinical studies. Furthermore -due to its modular design – it can rapidly be adjusted to specific problems - even with user supplied code.
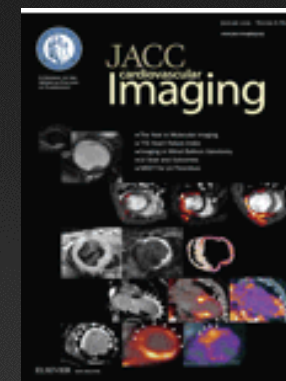
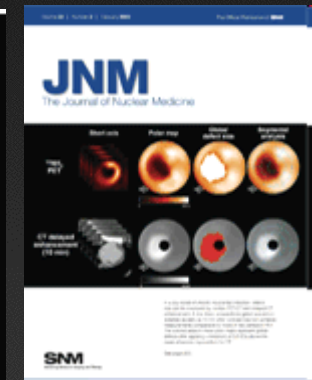# MunichHeart

Core concepts are:
- Quantification (physics->physiology)
- Rapid feedback between acquisition and processing
- Cross modal comparison and validation
- Use of synergistic information
- Fast transfer from research into routine
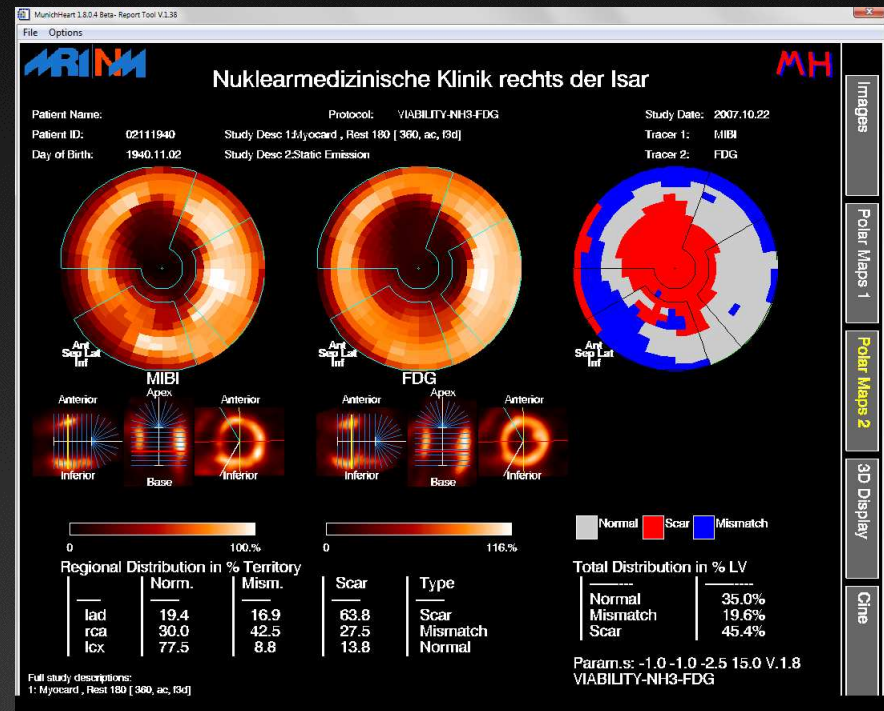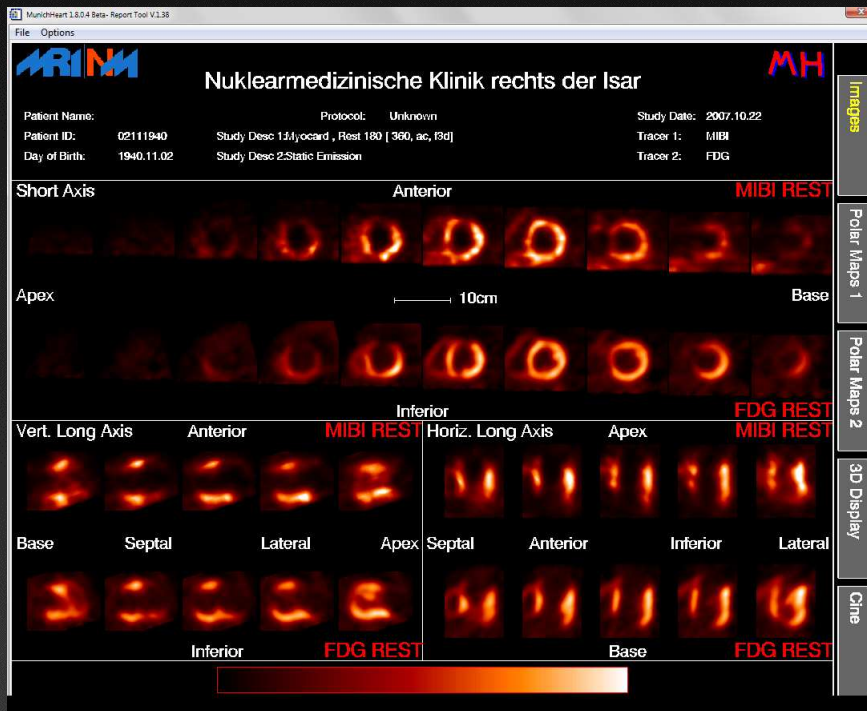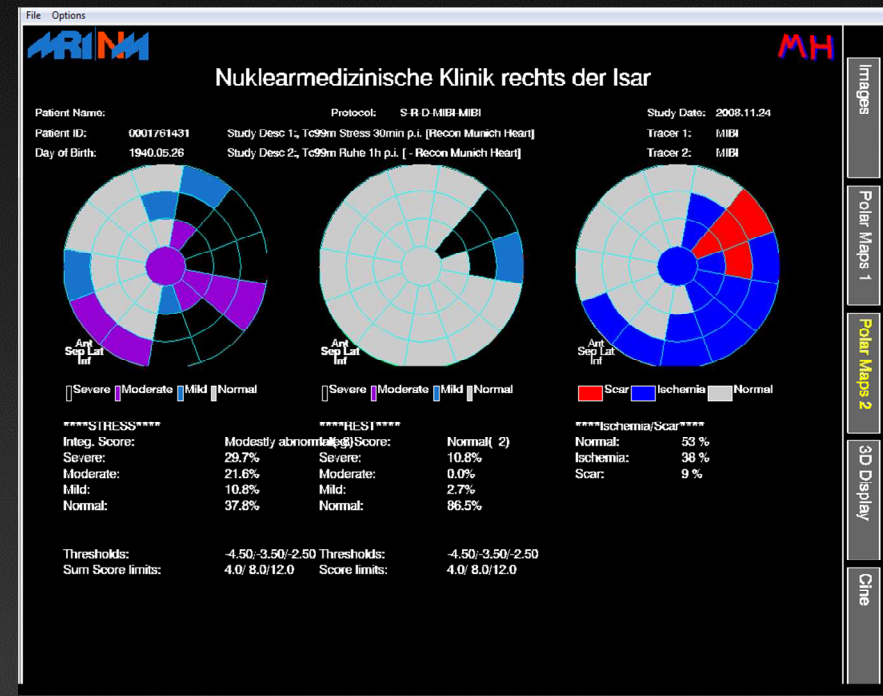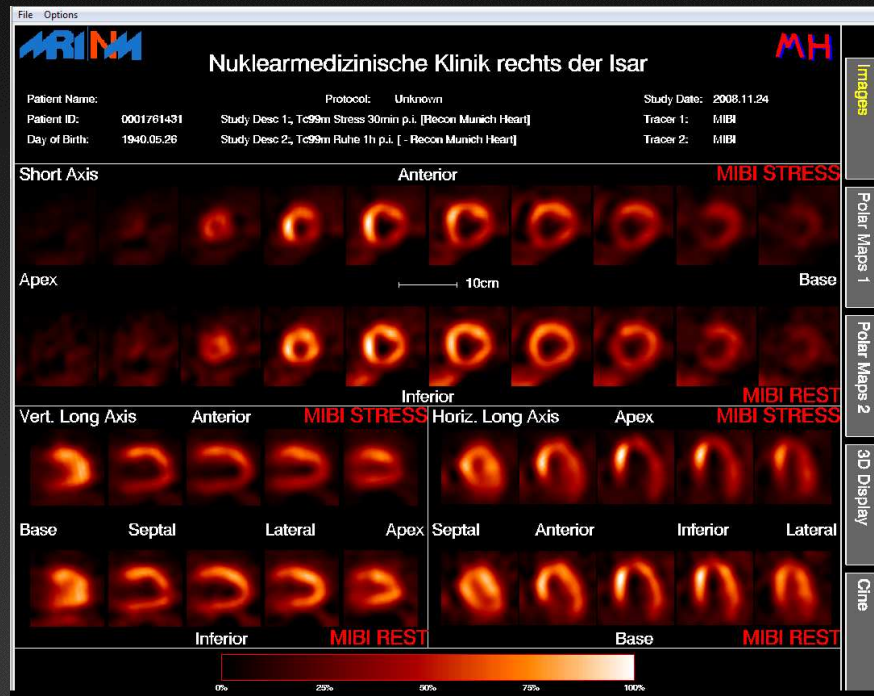- Identical tools for preclinical and clinical imaging

01/2007

01/2009   02/2009

Since 1995 until 2010: > 100 publications (9 * JNM , 8 * EJNMMI, 4 * EHJ, 8* Circulation, 11 * JACC, 2 * JAMA, 2 * NEJM and many others)

MunichHeart: Clinical Workflows – Viability PET/PET and SPECT/PET
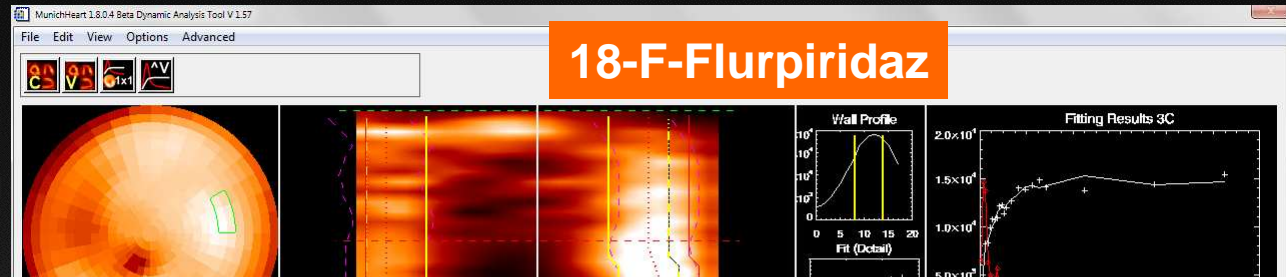
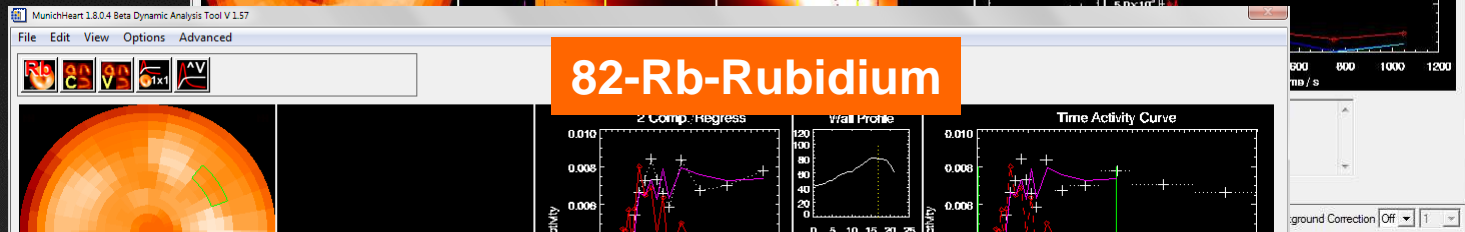# MunichHeart: Clinical Workflows – Ischemia/Scar PET and SPECT

MunichHeart: Any Tracer – One Tool
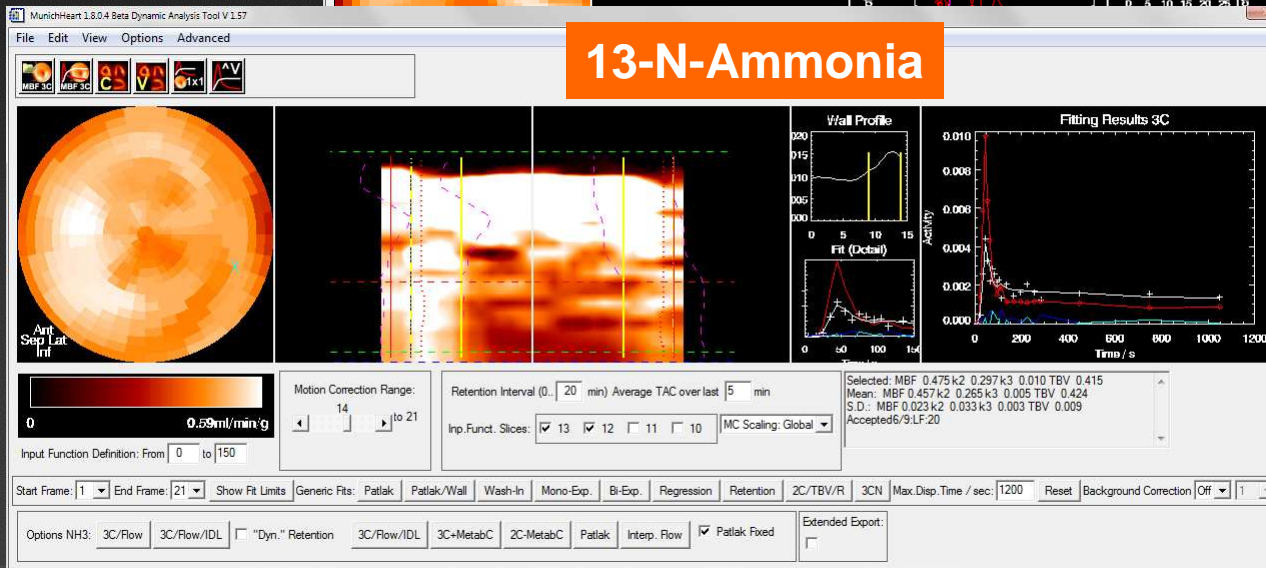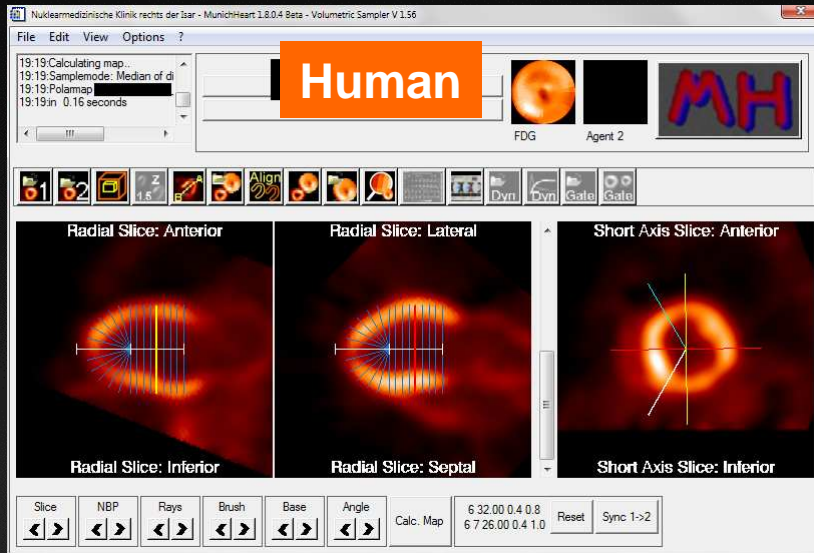
Examples: Flow

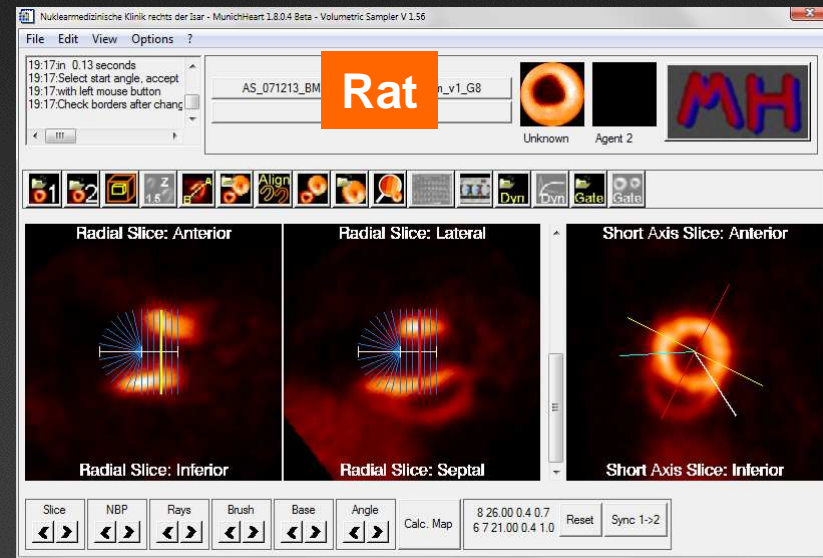**18-F-Flurpiridaz**

82-Rb-Rubidium

13-N-Ammonia

…plus other modules for FDG (Patlak) and C-11 compounds (retention, washout)

MunichHeart: From Mouse to Man – One Tool

	SPECT	PET	MRI
Human	✓	✓	✓
Pig/Dog/Rabbit	✓	✓	✓
Rat/Mouse	✓	✓	✓

MunichHeart – Installations

MunichHeart – The Next Steps

Based on the success in research environments, several request for a commercialization were forwarded to us. Thus, preparations for CE and FDA approvals are ongoing.

The targeted SPECT and PET cardiac applications covers the spectrum of already available tools. However, their features will be extended by the integration of quantification of myocardial blood flow, metabolism and myocardial function to further optimize the image based diagnosis.

Furthermore, MunichHeart will be distributed as a dedicated, non-FDA approved research platform for customers with a focus on clinical and pre-clinical cardiac studies.

MunichHeart – Advanced Visualization*

Regional Analysis - Normal: 77%   Mismatch: 23%   Scar: 0%
The coronaries show calcifications above 400 HU in yellow.

Substantial calcifications but no NH3 coronary blood flow deficit

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