

# Tool for Quantification of Cardiac PET Data

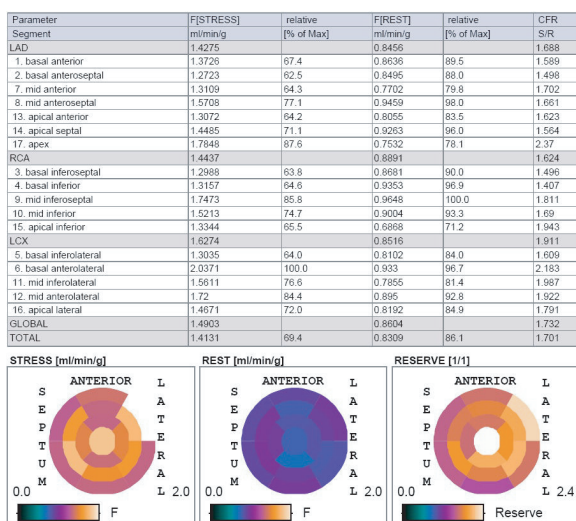
## True Quantification of Cardiac PET Data

Non-invasive assessment of myocardial function is an important domain of PET. Traditionally, cardiac PET images have been visually interpreted, using uptake as a measure of function. This approach, however, takes only a fraction of the full PET information into account. In contrast, the application of tracer kinetic modeling to dynamically measured data is able to extract objective measures of perfusion and/or metabolism, depending on the tracer. While such true cardiac quantification has only been accessible to a few research sites, our unique cardiac tool now makes this state-of-the-art technology readily available. It offers a comprehensive set of specialized kinetic models covering all tracers typically used in cardiac PET.

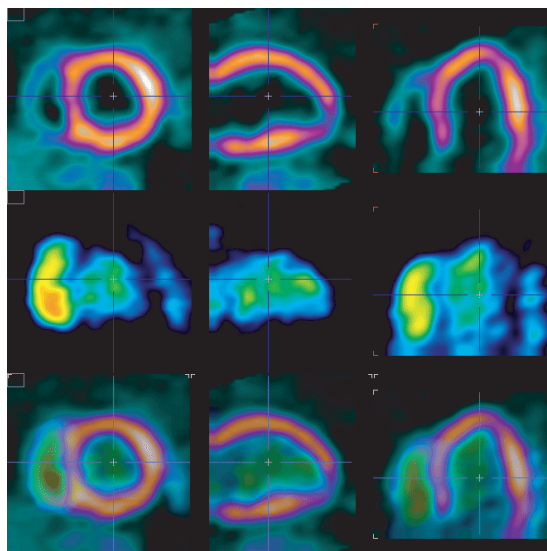
## Streamlined Processing and Results Investigation

Several processing steps are involved in the proper quantification of cardiac PET studies. Our cardiac tool offers automatic routines for all of these tasks such as short axis reorientation, region-of-interest definition and cardiac segmentation, which can be tailored to a particular study protocol. Should the automatic operation fail, there are powerful tools supporting the user in achieving a reproducible result with manual interactions. Rest/stress studies can be processed in parallel, and the coronary flow reserve determined. The results are documented using the 17 or 20 segment AHA scheme and can be interactively explored in a multitude of ways. Database functionality is included. If a user acquires data from a set of normal volunteers, he can easily compile the results into a database, and use it for assessing his patient results.

CFR Summary Report



Myocardium - Blood Fusion (optional)



## Models for Blood Flow and Metabolism

- <sup>13</sup>N-Ammonia
- <sup>11</sup>C-Acetate
- <sup>82</sup>Rubidium
- <sup>15</sup>O-Water
- <sup>18</sup>F-FDG
- Double spillover correction
- Metabolite corrections
- Factor analysis for water

## Results Documentation and Visualization

- Function in 17 or 20 segment models
- Segmental CFR report
- Rest/stress fusion
- Normal database compilation
- 3D renderings (option)