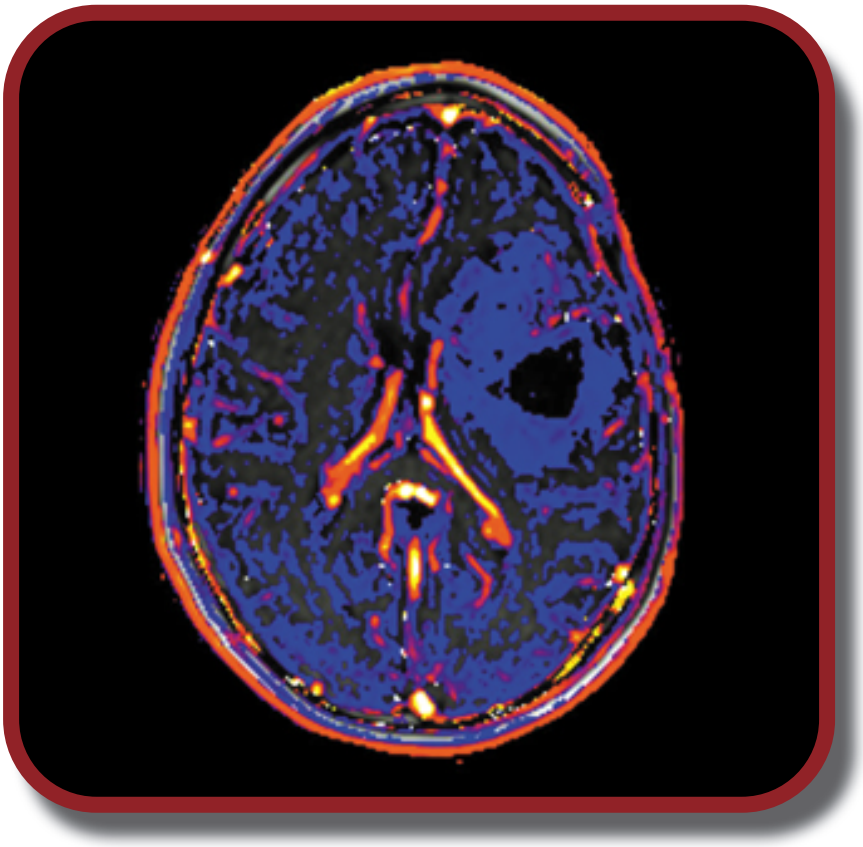
# EXAM-3D® MRI Perfusion

## Faster, more detailed and accurate diagnoses through extensive, easy-to-use and cutting-edge tools for quantitative vessel analysis of CTA.



- Benefit from market leading model implementations or use custom pharmacokinetics or input function models.
- Optimized workflow for the most promising imaging modality and method of assessment in quantitative functional analysis.
- EXAM-3D MRI can be integrated seamlessly into the RIS/PACS environment and is an add-on module to EXAM-3D Diagnostic.

**Faster. EXAM-3D** DCE-MRI Perfusion's unique core design optimizes memory and computer resource utilization allowing for quick rendering of image volumes.

**Easier. EXAM-3D** DCE-MRI Perfusion is designed to adapt to doctors' needs according to user profiles with an easy-to-use interface that can be as feature-rich or as simple as users desire.

**Better. EXAM-3D** DCE-MRI Perfusion permits in-depth quantitative functional analysis of enhancing structures enabling an accurate assessment of the response to therapy.

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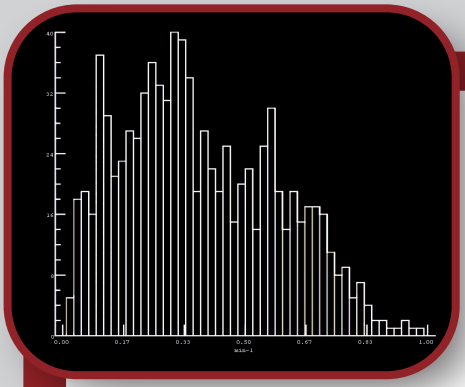
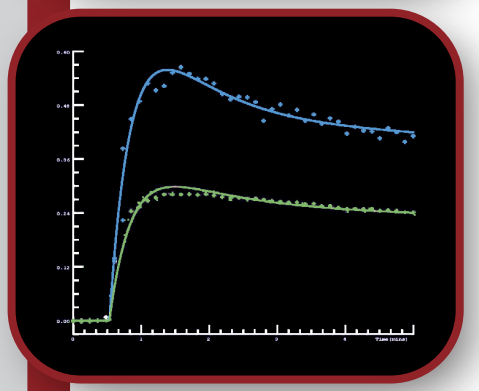
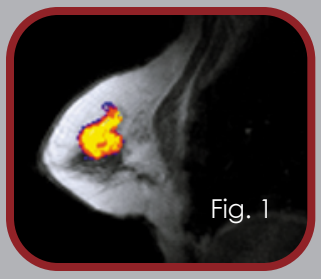
# 3D MRI Features

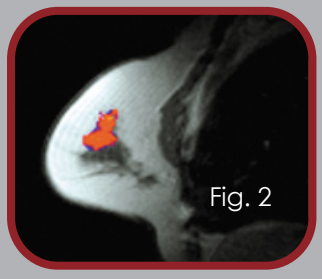




## CASE STUDY

*A 40-year-old female with breast cancer before treatment (Fig.1) and after 60 days of chemotherapy treatment (Fig. 2).*




*Pharmacokinetics analysis using DCE MRI Perfusion was used to monitor a patient's response to therapy. In this case, a substantial decrease in permeability can be seen by the kTrans maps and histograms as the patient positively responds to treatment.*

### Comparison mode
Display prone and supine datasets simultaneously on the same screen (or on different screens). The datasets can be the same volume displayed at different settings or the volumes can be linked for comparison mode.

### Workflow Centered
Simple and intuitive step-by step process from signal intensity to contrast agent concentration conversion, Pharmakokinetic modelling, and dynamic analysis.

### DCE-MRI Analysis
Reliable DCE-MRI analysis clinically validated by the Institute of Cancer Research and the Royal Marsden Hospital in London, UK.

### Analysis Output
Contrast Agent Concentration, Transfer constant (kTrans), EES volume fraction (ve), Rate constant (kep), Plasma volume fraction (vp), cell fraction, goodness of fit, onset time, and area under the curve for every voxel analyzed.

### DCE-MRI Maps
Maps for the above parameters can be seen overlaid on the data and average concentration/time curves and region histograms for each parameter can be visualized and exported.

### Custom Models
In addition to our default state-of-the-art Pharmacokinetics models, you can specify your own model or Input Function to be seamlessly implemented in the application.

### Advanced MPR
Interactive Multi-Planar & double oblique reconstructions, MinIP, AvIP, MIP. Numerous view Layouts supporting 2D, 3D or a combination of both.

### Measurement & Annotation
Save lengths, diameters, angles, add text comments and insert arrows.

### Volumetric Tools
Semi-automated tool to perform volumetric and area measurements on arbitrary 3D structures.

### Image Processing
Time and spatial navigation, image subtraction, and special filtering options.

### Comparison mode: Support for two datasets
Display two datasets on the same screen (or on different screens). The datasets can be the same volume displayed at different settings or the volumes can be linked for comparison mode.

### Study reporter
Output selected views to create pre-defined, editable reports reducing the time to complete an exam and increasing departmental throughput.

### Fully integrated with your RIS/PACS
EXAM-3D DCE MRI Perfusion can be easily integrated into the RIS/PACS environment.

Recommended System Specifications:
Quad core 64 Bit Processor, Windows 7/Vista/XP,
8GB RAM, 200MB hard disk space, nVidia Quadra graphics card

CE 0344

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