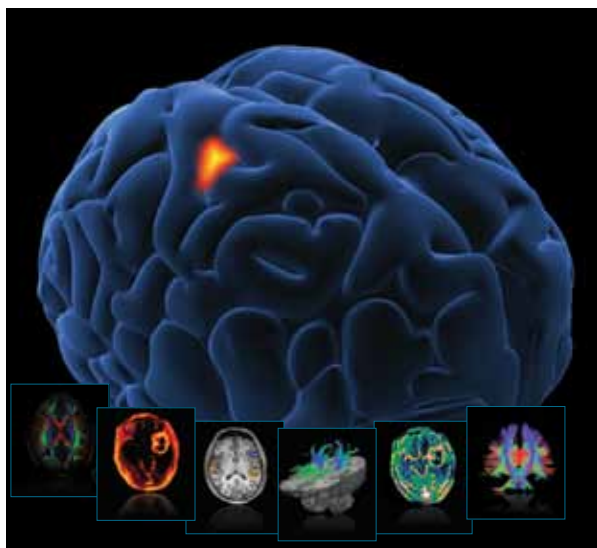


# nordicICE

Image processing and analysis application for functional imaging methodologies



- *Module-based post-processing and analysis of Perfusion/DCE, BOLD and Diffusion/DTI image data*
- *Integrated DICOM database for easy image/data retrieval and saving*

nordicICE is a general-purpose image processing and analysis application with emphasis on the clinical use of functional imaging methods. nordicICE is a module-based solution for BOLD, Diffusion/DTI, and Perfusion/DCE imaging.

nordicICE is easy-to-use Windows-based software that can be readily integrated into the clinical workflow in any hospital. Simultaneously, nordicICE provides flexibility for the research-oriented user who wants to explore and take advantage of the state-of-the-art visualization and post-processing techniques offered by this versatile, high-performance application.

## nordicICE Perfusion/DCE Module

The nordicICE Perfusion/DCE module couples a perfusion package and a permeability analysis package. With this module a large range of physiologically relevant parameters related to tissue perfusion and capillary permeability can be addressed both qualitatively and semi-quantitatively using state-of-the-art methods.

With nordicICE Perfusion Module a user can create high-quality perfusion maps from dynamic contrast enhanced MRI (T1 or T2/T2\* weighted) in seconds. The combination of a user-friendly interface, state-of-the-art methods and fast processing times ensures maximum productivity without loss of quality.

## nordicICE Perfusion/DCE Module

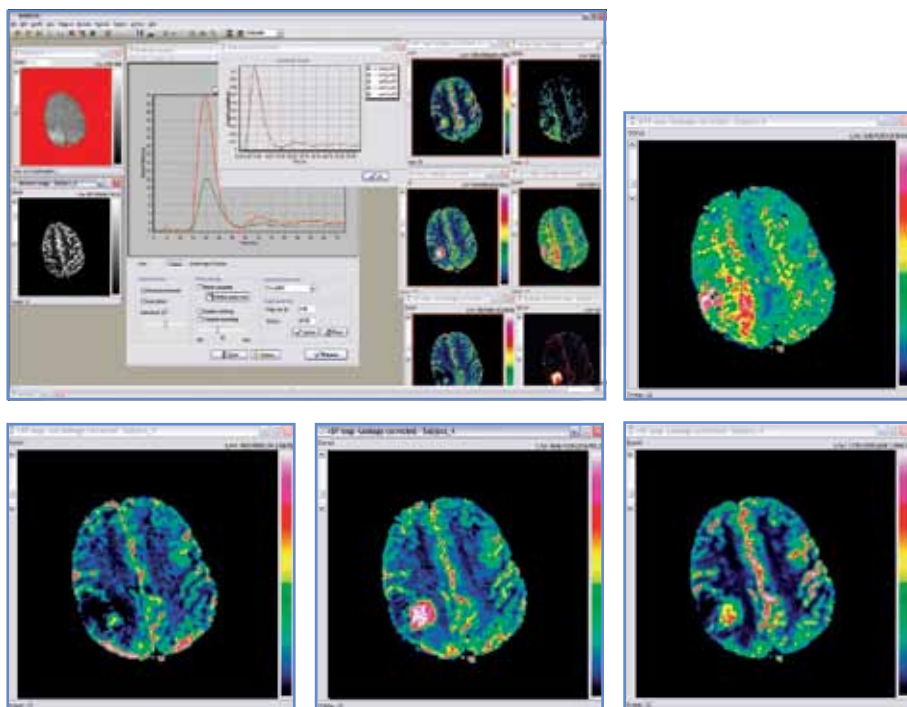


Image Courtesy of Division of Medical Imaging and Intervention, Rikshospitalet University Hospital, Oslo, Norway

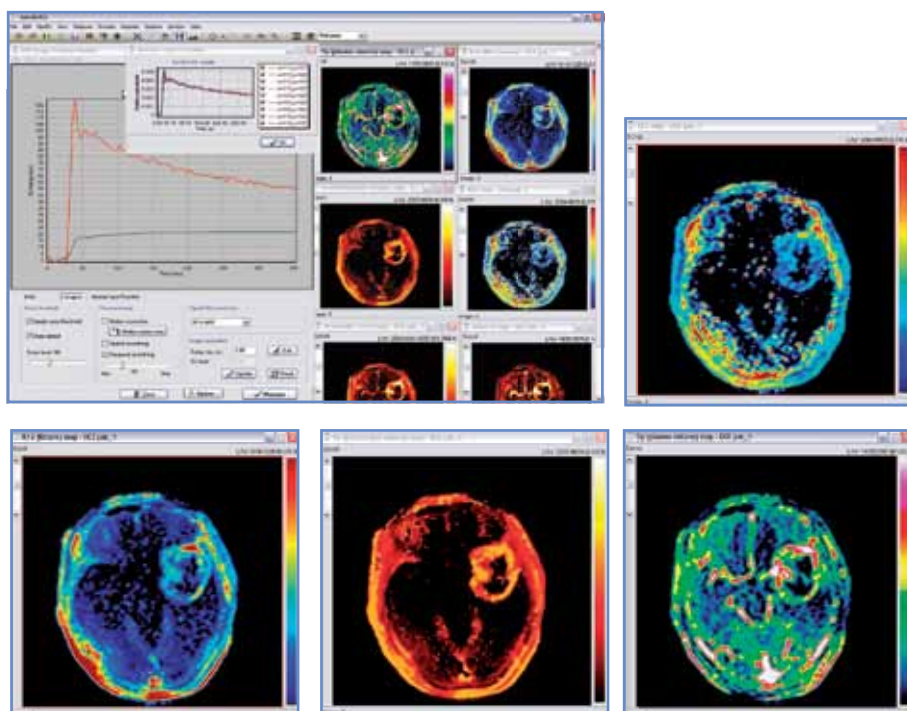


Image Courtesy of Bob L. Hou, Memorial Sloan-Kettering Cancer Center, New York, USA and Central South University, Changsha, PRC

### FEATURES

- Fast generation of perfusion maps:
  - Blood volume (BV)
  - Blood flow (BF)
  - Mean Transit Time (MTT)
  - Time to Peak (TTP) or Delay (SVD)
- "One-button" perfusion analysis using pre-defined settings
- Choice of manual or fully automatic selection of arterial input function (AIF)
- Integrated motion correction
- Optimized for tumor perfusion analysis; including advanced processing methods like vessel segmentation and contrast agent leakage correction ("leakage" (Ktrans) maps)
- Visual (graphical) inspection of residue function and individual AIF pixels
- Large range of advanced processing options
- Optional gamma-variate fitting of input function and tissue curves
- Easy image fusion (drag & drop) of perfusion maps and structural image
- State-of-the art deconvolution techniques for arterial input function (AIF) corrected kinetic analysis
- Fast generation of both quantitative maps:
  - $K^{trans}$ ,  $k_{ep}$ , Distribution volume ( $V_d$ ), Plasma volume ( $V_p$ )
 and qualitative maps:
  - Area under curve (AUC), Time to peak, Peak enhancement, Wash-in/wash-out rates
- Choice of manual or fully automatic selection of arterial input function (AIF) with visual inspection of individual AIF pixels