# MIM®
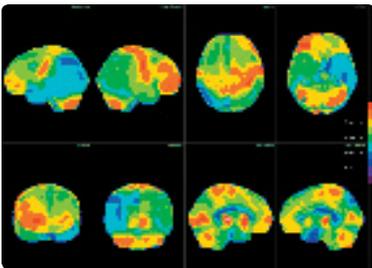# neuro

enhancing patient care

## PET/SPECT quantitative analysis

MIMneuro is a fully automated and quantitative PET/SPECT analysis package assisting in the detection of various neurological disorders and dementias including Alzheimer's disease. **Sophisticated non-linear registration** allows for more accurate statistical comparisons to a database of age-appropriate controls. Several easy-to-use, configurable work flows are provided, allowing for visualization and **tabular display** of the results. Intuitive **reporting tools** allow referring physicians to receive images and results for easy evaluation.



## powerful analysis tools

Several robust and powerful analysis tools are provided with MIMneuro. **Region based analysis** performs statistical comparisons for selected regions of interest to a normal database. **Voxel based analysis** highlights localized abnormalities on a voxel-by-voxel basis. **Cluster analysis** aids in determining which spatially clustered voxels are significantly abnormal. Stereotactic surface projections **(SSPs)** are also included for targeted cortical analysis.
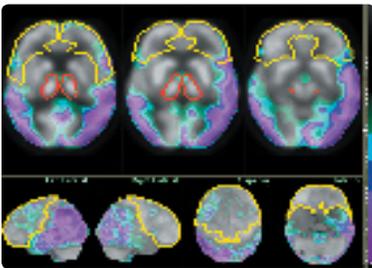


## anatomical atlas

A comprehensive 3-D **anatomical brain atlas** is included to facilitate localization of structures of interest. Fast and accurate identification of anatomy will increase the physician's diagnostic confidence. Lists of favorite structures can be created for specific neurological disorders.

# increased confidence
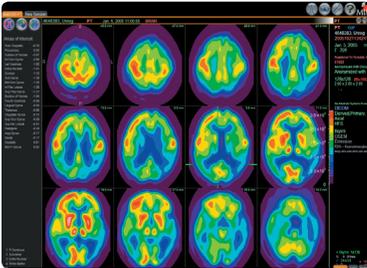
## normal database

MIMneuro includes an extensive database of **age-appropriate** volunteers with no neuropsychiatric symptoms. Selections from the database can be made based on vendor and patient demographics, including age and gender, to increase the sensitivity of the comparisons. Tools are included to create a site and protocol specific database.
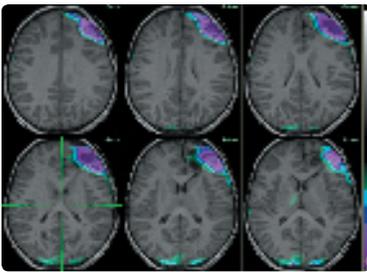
## advanced tools

A number of powerful clinical and research tools are included in MIMneuro for advanced analysis. Voxel and surface based statistics can automatically be displayed on fused and **co-registered MR or CT** volumes. Region based analysis can be enhanced with user defined regions of interest developed with MIM's extensive contouring tools. Analysis can be performed in patient space, providing information for surgical cases by registering the template to the patient volume.
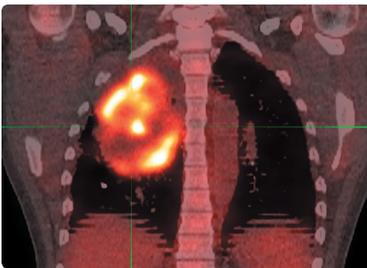
## comprehensive image review

MIM provides unparalleled functionality as a multi-modality image review workstation which includes display of fusion images acquired on both separate and combination scanners. A thorough PET review and fusion package is offered, as well as cardiac and 2D support. MIM provides excellent flexibility with both image manipulation and display variety, including tabbed screens for multi-patient presentation.

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# contouring · cardiac · fusion · neuro · connectivity

## intuitive and efficient interface
- multi-modality fusion & display (PT, NM, CT, MR, 2D)
- assisted alignment completed in ~10 seconds
- assisted alignment on user defined local anatomy
- intuitive manual alignment
- comprehensive PET review
- operator controls accessible with a mouse click
- multiple display options
- generate multiple slices of any view
- display volumes at any magnification
- synchronized display of aligned images
- original volume resolution is maintained
- on-screen help
- create subtraction/difference images

## contouring
- automatic PET/SPECT 3D contouring tool
- contour editing with 2D/3D paintbrush in axial, sagittal and coronal views
- segment tumor volumes based on SUV levels
- quality true color image fusion facilitates contour definition
- highlight voxel contours on aligned CT/MR volumes for legacy RTP systems

## cardiac
- ASNC orientation
- automatic calculation of cardiac volumes
- gated PET/SPECT LVEF measurements
- fusion of stress/rest images
- difference images expressed in percent of maximum myocardial intensity

## neuro
- quantitative comparisons to normal databases
- automated nonlinear registration for PET/SPECT
- region, voxel, cluster, and cortical-based analyses
- co-registration of fused MR/CT volumes
- analysis performed in template or patient space
- anatomical atlas

## system specifications
- Pentium 4 3.2+ GHz
- 2 GB RAM
- 48x CD-RW drive or 16x DVD-RW
- 400 GB hard drive
- 64+ MB VGA/DVI graphics card
- 19" high res or 19"/20" flat panel monitor(s)
- 10/100/1000 ethernet card
- MS Windows® 2000/XP Professional

## import formats
- 3D DICOM PT, NM, CT, MR
- 2D DICOM NM, US, CR, DR, CT scout, Secondary Capture
- ECAT PET and Siemens ICON
- JPEG, TIFF, BMP
- Interfile

## output formats
- DICOM aligned PT, NM, CT, MR
- DICOM RT Structure Sets for ROI contours
- DICOM Secondary Capture
- MIP as DICOM, AVI, MPEG
- JPG, BMP, TIFF
- DICOM Print
- Windows® Print

## networking
- DICOM send/receive & query/retrieve
- send volumes and secondary captures to PACS
- FTP send/receive

## enhanced marketing tools
- MIMvision DICOM viewer with fusion capabilities
- annotation
- report generation
- screen capture utilities

## MIMvista Corp.