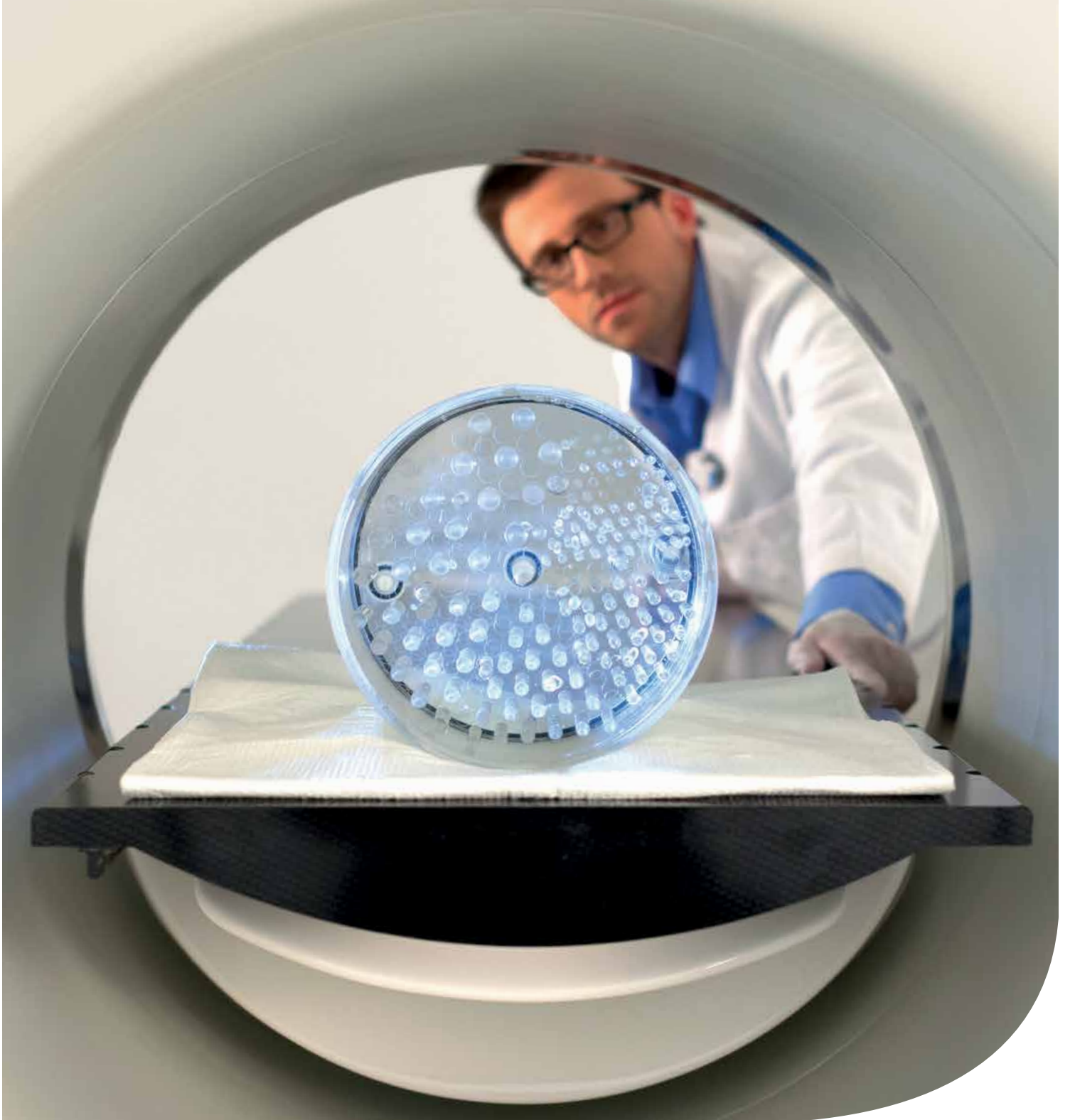


PVC

Partial Volume Correction





Partial Volume Correction

Partial Volume Correction modifies volume-of-interest statistics in order to compensate the Partial Volume Effect. It ensures the proper quantification of objects taking into account spill-over and spill-in between regions.

Following correction methods are available:

[Recovery-Coefficients-Method](#)

The Recovery Coefficients Method corrects the volume-of-interest measurement using a correction factor based on the volume. A reference table with these factors for different volumes is used and interpolated for the specific correction factor to be applied.

Different sets of recovery coefficients can be specified in a configuration file and then be selected within the application.

[Geometric-Transfer-Matrix-Method](#)

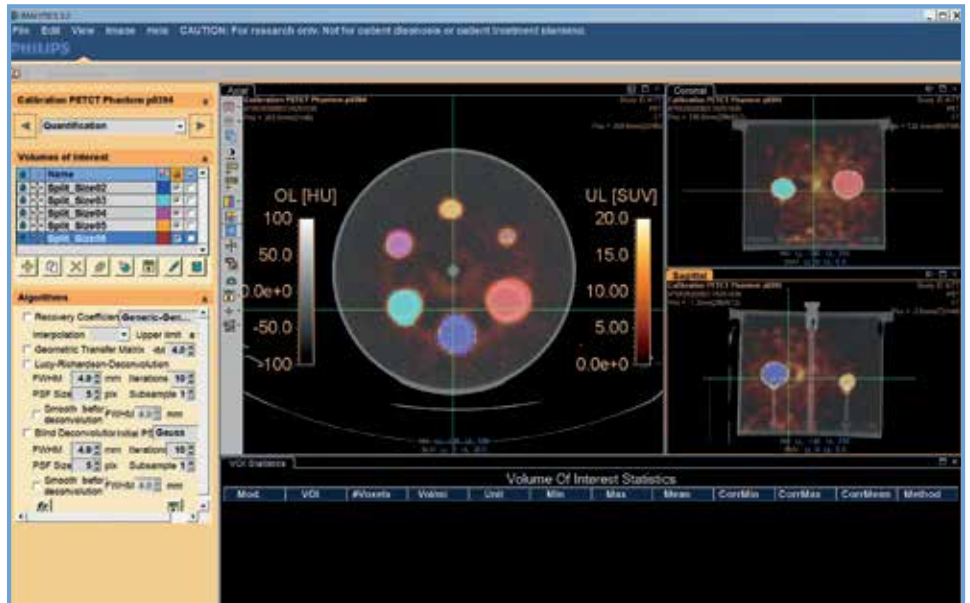
The Geometric Transfer Matrix Method calculates recovery and cross-contamination factors of volumes-of-interest in the image. These geometry-dependent transfer coefficients form a matrix representing the fraction of true activity from each volume-of-interest observed in any other volume-of-interest. This matrix can be inverted to correct for Partial Volume Effects, independent of the tracer concentrations in each volume-of-interest.

[Lucy-Richardson-Deconvolution](#)

Lucy-Richardson Deconvolution estimates a corrected image first and then evaluates the volume-of-interest on the corrected image. The corrected image is estimated in an iterative fashion starting with the acquired image. It takes into account the point-spread-function of the imaging system as well.

[Blind-Deconvolution](#)

Blind Deconvolution is an extension of the Lucy-Richardson Deconvolution where both the corrected and the point-spread-function (PSF) are estimated. The volume-of-interest is evaluated on the corrected image as for Lucy-Richardson. The corrected image and the PSF are estimated in an iterative fashion starting with the acquired image and initial PSF.



Selection of volumes-of-interest for the computation of the partial volume correction



Output table showing the corrected statistics for the selected volumes of interest

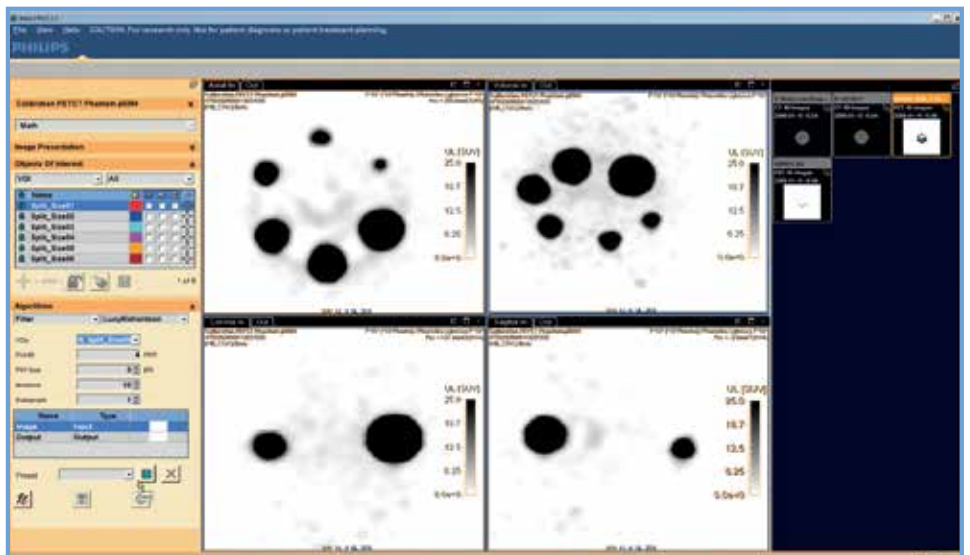


Image based partial volume correction using the Lucy-Richardson algorithm as a prerequisite for accurate lesion quantification



CAUTION: For research use only.
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Philips GmbH Innovative Technologies
Pauwelsstraße 17 · 52074 Aachen · Germany
www.philips.com/imalytics · imalytics@philips.com

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