

A man in a white lab coat is looking intently at a computer monitor in a laboratory setting. The monitor displays a dark image with some light spots, possibly a medical scan. The background is slightly blurred, showing other lab equipment and a bright window.

Stratos

Research Dosimetry Solution

Imalytics Research Workstation

PHILIPS



Stratos Dosimetry Solution

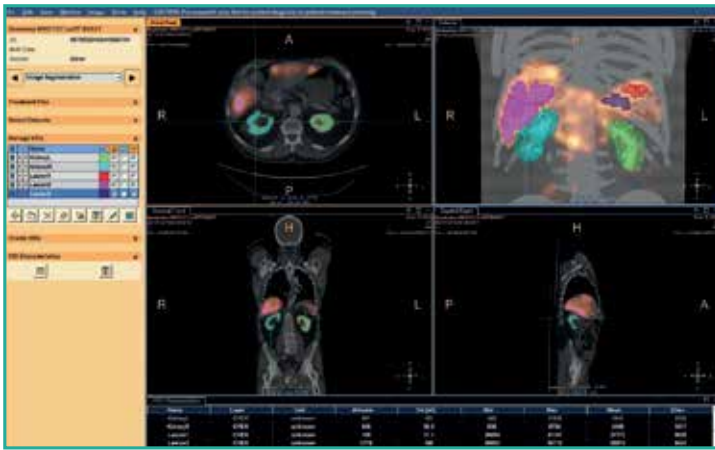
The STRATOS Dosimetry Solution is an advanced research software package for 3D voxelized dose calculation in nuclear medicine, using SPECT/CT and PET/CT data. It allows the calculation and visualization of patient-specific dose maps for targeted radionuclide therapies.

Key features of the Stratos Dosimetry Solution:

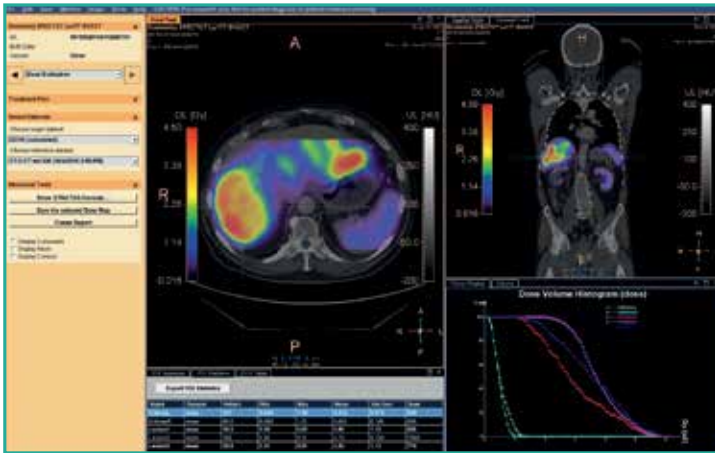
- complete workflow for multiple 3D images, including registration, segmentation and visualization
- calculation of voxel-wise residence-time maps
- calculation of voxel-wise energy-dose distributions using a Dose-Volume-Kernel approach according to MIRD pamphlet 17
- supported therapy isotopes: ^{131}I , ^{90}Y , ^{177}Lu , ^{166}Ho , ^{188}Re , ^{32}P , ^{153}Sm (others on request)
- support for all SPECT and PET imaging isotopes, enabling both prospective as well as retrospective studies
- calculation of dose statistics and Dose-Volume-Histograms per region
- tissue density correction based on the CT scan
- HTML report with key results and images from the analysis

Additionally, you can also use planar images as input for the calculation of 3D maps in dosimetry imaging procedures. This means that you can adapt the analysis to your clinical workflow and use a combination of 3D scans and planar images, considerably shortening the overall imaging time.

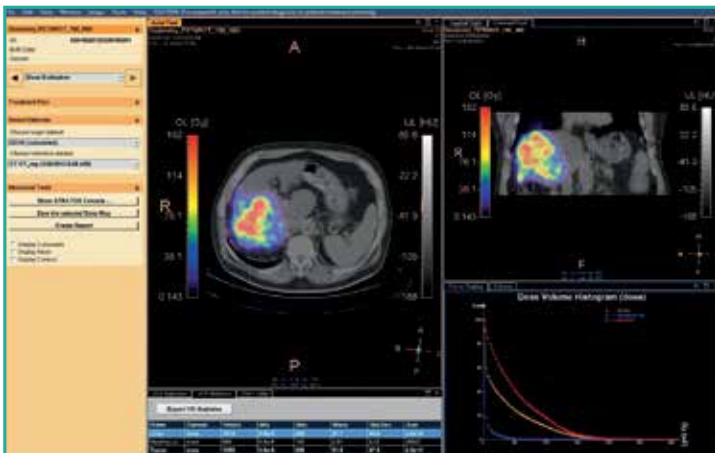
Note: STRATOS is an additional module for Imalytics sold separately



3D VOI definition on SPECT/CT images for a ^{177}Lu -DOTATOC therapy case



3D dose map fused with CT data; dose statistics and dose-volume-histogram for a ^{177}Lu -DOTATOC therapy case



3D dose map fused with CT data; dose statistics and dose-volume-histogram for a ^{90}Y SIRT case



Registration of a planar scintigraphy image to a 3D CT in Stratos+



Publications

Study-Parameter Impact in Quantitative 90-Yttrium PET Imaging for Radioembolization Treatment Monitoring and Dosimetry.

Goedicke A, Berker Y, Verburg FA, Behrendt FF, Winz O, Mottaghy FM.

Medical Imaging, Volume 32, Issue 3, March 2013, Pages 485-492

Activity quantification combining conjugate-view planar scintigraphies and SPECT/CT data for patient-specific 3-D dosimetry in radionuclide therapy.

Berker Y, Goedicke A, Kemerink GJ, Aach T, Schweizer B. *Eur. J. Nucl. Med. Mol. Imaging, Volume 38, Issue 12, December 2011, Pages 2173-2185*

Dosimetry in molecular nuclear therapy.

Wierts R, de Pont CD, Brans B, Mottaghy FM, Kemerink GJ. *Methods, Volume 55, Issue 3, November 2011, Pages 196-202*

Evaluation of voxel-based dosimetry for targeted radionuclide therapies in phantom studies.

Schweizer B, Schaefer A, Donsch P, Kremp S, Gouverneur E, Farmakis G, Grgic A, Bal M, Kirsch CM, Hellwig D.

Eur. J. Nucl. Med. Mol. Imaging, Volume 36, Issue 2 Supplement, September 2009, Page 428



CAUTION: For research use only.
Not intended for diagnostics or patient therapy planning.

Philips GmbH is part of Royal Philips

Philips GmbH Innovative Technologies
Pauwelsstraße 17 · 52074 Aachen · Germany
www.philips.com/imalytics · imalytics@philips.com

Disclaimer: This brochure has been created with utmost care.
The contents do not represent a legal contract.

Copyright: Microsoft® and Windows® are registered trademarks
of Microsoft® Corporation in the United States and/or other
countries. HP is a trademark of Hewlett-Packard Development
Company, L.P.

© 2014 Koninklijke Philips Electronics N.V.
All rights are reserved. Philips Research reserves the right to
make changes in specifications and/or to discontinue any
product at any time without notice or obligation and will not
be liable for any consequences resulting from the use of this
publication.

Printed in Germany · AUG 2014