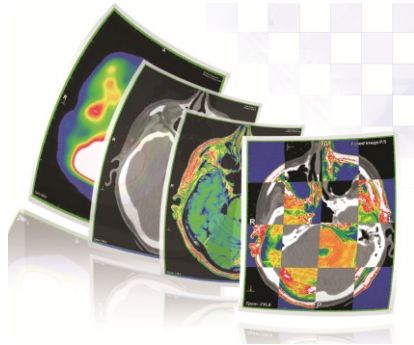


ImSimQA™

Image Fusion and Registration QA Software

ImSimQA™ is software designed to aid physicists test a range of medical imaging and radiotherapy applications, such as rigid and elastic image fusion algorithms, and IGRT and 4D imaging systems. It



is ideal for training in image fusion, auto segmentation, 3D margin growing and CT/MR/PET imaging. ImSimQA provides a toolkit of 15 virtual phantoms that can be extensively edited and transformed, before being converted to DICOM CT, MR & PET simulated images.

Here's what physicists have to say about ImSimQA:

"...ImSimQA is such an exceptionally valuable tool. We could not have implemented image fusion at NGH without it; and there have also been unforeseen advantages... We look forward to using it to commission respiratory gating, CT-PET fusion and other new developments in the future – all of which will be a lot less time consuming via ImSimQA."

Nicky Whilde
Principal Radiotherapy Physicist
Northampton General Hospital, England

"...ImSimQA software has tremendous potential for evaluating the deformable registration algorithm used against a known applied deformation. The software has tools to allow the user to apply known deformations on a patient DICOM studyset thereby replicating a clinical scenario and then applying the deformable registration algorithm to evaluate what you recover after the deformation.

We are currently working towards the development of a framework within which ImSimQA tools can be used to validate deformable registration algorithms. We believe ImSimQA is a powerful software with applications in both clinical and research settings."

Raj Varadhan M.S.,M.Phil,D.A.B.M.P.
Senior Medical Physicist
Minneapolis Radiation Oncology

Software Modules

The ImSimQA software package is comprised of four modules:

ImSimQA

Enhances and simplifies QA
Provides an image fusion test protocol

ImSimQA^{4d} (optional)

Because anatomy moves
Simulate respiratory gated images

ImSimQA^{dform} (optional)

Because anatomy changes
Simulate non-rigid transformations

ImSimQA^{contour} (optional)

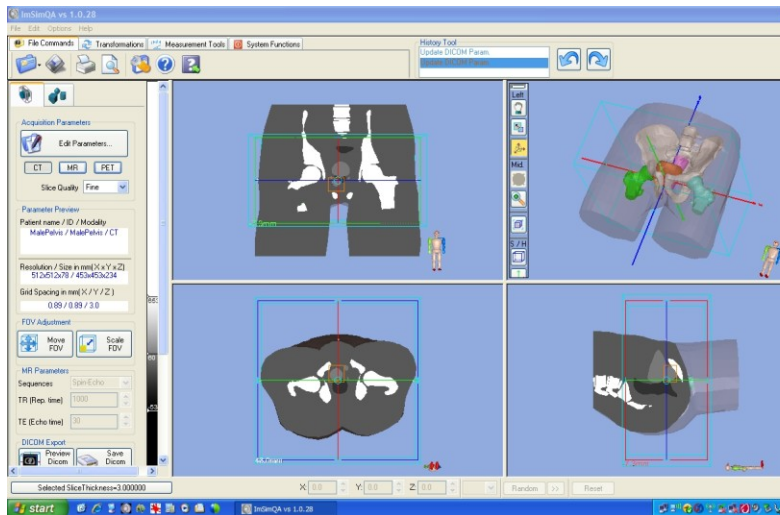
For quantifiable and visual comparison of contours
Make inter-operator or inter-system comparisons

Key Benefits

- Extends the range and quality of testing of commonly-used radiation therapy and imaging systems
- Increases accuracy of testing
- Provides a cost effective toolkit of multiple phantoms
- Offers flexible and infinite scope for test scenarios
- Reduces the time needed to acquire test images on busy CT/MR/PET scanners, 4D and IGRT imaging systems
- **Test without the hard phantom, without the scanner**

Virtual Phantoms for Real QA

Modify the virtual phantom by changing the orientation, density and slice spacing. Then export the phantom DICOM images to the test application, minimizing the use of the real scanner and increasing the efficiency of testing. Real DICOM images can also be imported into ImSimQA for editing, without having to re-scan.



Screen shot – Virtual phantom of male pelvic anatomy

Image Fusion Test Protocol

ImSimQA is delivered with an extensive Image Fusion Test Protocol which has been developed for testing multi-modality image registration algorithms. The Test Protocol guides the physicist through which parameters need to be tested and how to test these, using ImSimQA.

About ImSimQA

Modus Medical Devices has partnered with UK-based ImSimQA developer, Oncology Systems Limited (OSL), to deliver their innovative virtual phantom software in North America. ImSimQA is complementary to the existing line of high quality advanced radiotherapy QA tools from Modus because it significantly expands the range of QA scenarios without having to buy a new phantom for every new configuration tested. To find out more, please contact Modus.

Modus reserves the right to make changes without notice. Product may not be exactly as shown.

February, 2011

Ordering Information

200-1000 ImSimQA Virtual Phantom Software

Optional Modules

200-1015 ImSimQA^{4d}

200-1020 ImSimQA^{dform}

200-1025 ImSimQA^{contour}