

**RIT®****RIT'S ORIGINAL SOFTWARE
PRODUCT FOR PATIENT QA,
MLC QA, AND MACHINE QA****RIT** *Classic*

RIT *Classic* is RIT's original software product package, developed to enable Medical Physicists to perform all the necessary analyses with both efficiency and accuracy in Machine QA, MLC QA, and Patient QA. RIT *Classic* is one of the few products on the market that has the capability to analyze images from all sources, including EPID, 2D arrays, film (Vidar and flatbed scanners), gel, and CR.

DAILY, MONTHLY & ANNUAL LINAC MACHINE QA



BEAM MEASUREMENTS

- **Fully-Automated Star Shot Analysis**
RIT's enhanced Star Shot beam detection routine has a fully-automated interface with robust and highly accurate artificial intelligence algorithms. Polarity, ROI, number of spokes, and spoke center are automatically extracted from the image and applied in the analysis.
- Radiation/Light Field Coincidence
- Asymmetric Field/Matchline
- Electron Energy (TG-25)
- Quick Flatness and Symmetry
- Water Tank Beam Measurement Analysis
- Depth Dose, Cross, and Orthogonal Profiles
- Isodose Contours
- Image Histogram
- 3D Dose Profile
- **Enhanced 3D Winston-Lutz (Isocenter Optimization) with Virtual Star Shot***
Automatically process a set of EPID Winston-Lutz images for a fast and accurate measurement of isocenter position. RIT's version of this test allows you to use 3 to 16 images, and provides error estimates for ball setup and wobble around isocenter. Increased angle flexibility allows you to mimic more clinically relevant angles to determine isocenter at specific treatment configurations.
- Stereotactic Alignment (2D Winston-Lutz) Test
- Stereotactic Cone Profiles
- Field Alignment
- Gibbs Cone Analysis
- TomoTherapy® Beam Planarity and Jaw Twist
- TomoTherapy® Overhead Laser Position Tool
- Import TomoTherapy® DICOM Film Files
- Import TomoTherapy® Calibration Files
- IGRT Alignment

*US Patent 9192784, JP Patent 6009705, CA Patent 2918045, and other international patents pending.
TomoTherapy® is a registered trademark of Accuray, Inc.

RADIOLOGICAL IMAGING TECHNOLOGY, INC.
MEDICAL PHYSICS' LEADING QA SOFTWARE FOR OVER 30 YEARS

Connect with RIT
@RIT4QA



**RIT**RIT'S ORIGINAL SOFTWARE
PRODUCT FOR **PATIENT QA,**
MLC QA, AND MACHINE QA**RIT****Classic**

PATIENT QA SOLUTIONS

- **Patient QA Measurements**

RIT *Classic* includes the following Patient QA (IMRT) measurements: Gamma Analysis, Distance-to-Agreement (DTA), Profiles, Van Dyk's Analysis, Subtraction, Composite Analysis, Isodose Curves, Addition, Centroid Measurement, and Proportion Passing Plot, and others.

- **Plan-Based Calibration***

Make quick, relative comparisons between any dose map and your EPID, film, and CR images.

*Patents: EP 1683546, CA 2567197, JP 4366362, JP 4838161, US 7024026, US 7233688, US 7639851, and US 7680310.

- **Dose Calibrations**

This includes perpendicular dose calibration, parallel dose calibration, MLC calibration technique*, iView™ calibration, Kodak CR (perpendicular and spatial calibrations), optical density (OD) calibration, and daily output factor adjustment for calibration curves. *Patents: EP 1318857, CA 2418232, JP 3817176, US 6675116, US 6934653, and US 7013228

- **Scanner Spatial Calibration**

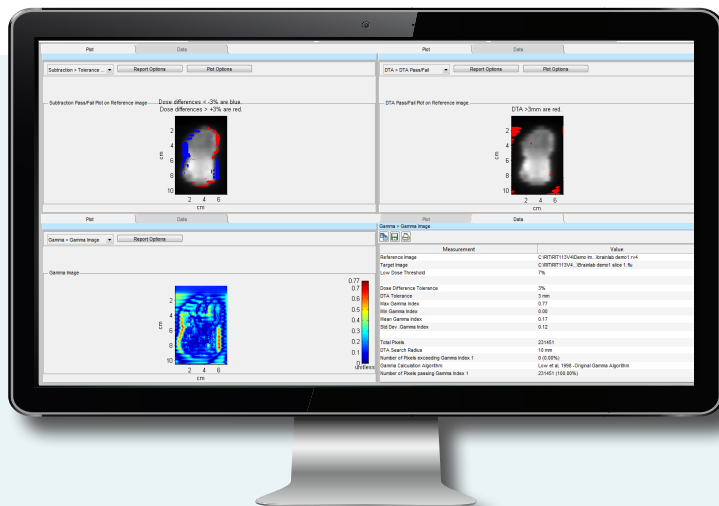
The spatial calibration is not a dose conversion, but rather a means to determine the exact pixel size for the Vidar film scanner or flatbed scanner. This gives you the most accurate distance measurements.

- **Automated Image Fill for Anthropomorphic Phantom QA**

Use this function to automatically correct and fill any holes or cutouts in the image file. Perform patient QA with an anthropomorphic phantom for both calibrated and uncalibrated images.

- **Patient QA Image Registration**

Simultaneously perform fully-automated registration control point positioning in both traditional and RunQueueA (automated batch analysis) IMRT. Template-based registration may also be performed.



FAST & EASY, QUANTITATIVE MLC QA

- **Hancock Tests for Elekta Machines**

The Hancock Tests (2-Image Test, 4-Image Test, and With Backup Jaw Test) use the Elekta iView™ imager to automatically measure leaf position vs. isocenter position, and jaw leaf setback measurements.

- **Elekta Leaf Speed Test**

This test aligns two images to analyze the consistency of the leaf speed for both Elekta iView™ and Agility™.

- **EPID Picket Fence Test**

For both Varian and Elekta, this routine automates the classic picket fence test.

- **Automated Varian RapidArc® Tests**

Images may be taken at any distance from EPID, Film, or CR Images. RIT's RapidArc QA routines support the Millennium 120, HD120 MLC, and Halcyon MLC models. This includes: Tests 0.1, 0.2, 1.1, 1.2, 2 and 3.

- **Varian Leaf Speed Test**

Without the use of log files, this test measures the consistency and accuracy of Varian MLC leaf speeds as they move across an imager.

- **Varian Halcyon® MLC Analysis**

Perform a picket fence or comprehensive RapidArc analysis of the Halcyon MLC.

- **Additional MLC Tests**

These include: Bayouth MLC Test, TG-50 Picket Fence Test, MSK Leaf Test, Varian DMLC Test Patterns, and MLC Transmission analysis.

Agility™ and iView™ are trademarks of Elekta AB.

RapidArc® and Halcyon® are registered trademarks of Varian Medical Systems, Inc.