



RIT

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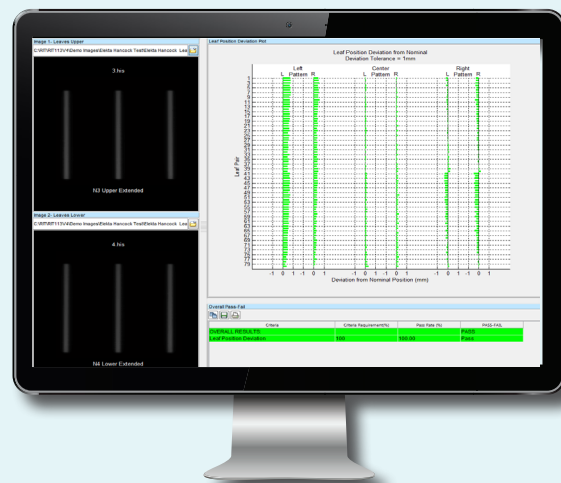
ELEKTA USERS

MLC & JAW QA

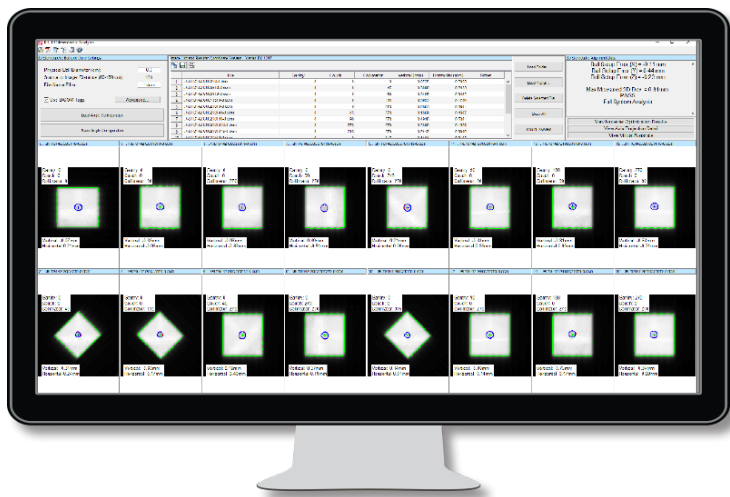
The **Hancock Tests** makes MLC and Jaw QA simple and efficient for Elekta machines, with the ability to utilize 2 and 4 images for analysis. The tests follow a simple image acquisition procedure on the iViewGT™ system, with automatic processing and reporting by RIT. The tests have versions specifically formatted for the Agility™ MLC head and the MLCi2 head. The Hancock Tests encompass several mechanical tests, including MLC position accuracy, jaw position accuracy, and take into consideration iViewGT™ imager position movement and collimator rotation isocenter walkout.

The Hancock Test results can be used as input data for adjusting the MLC and jaw calibration in the Elekta TCS (Treatment Control System). No more going into the treatment room to manually extend the image panel; All images can be taken without leaving the operating console. Utilizing RIT's Hancock Tests is the best way to ensure meeting the TG-142 requirement of measuring backup jaw position, relative to leaf position. The RIT system easily and seamlessly supports JPEG and HIS images from iViewGT™.

iViewGT™ and Agility™ are a trademarks of Elekta AB.



ISOCENTER OPTIMIZATION ROUTINE (3D WINSTON-LUTZ)



RIT *Complete*, RIT *Classic*, and RITG142 come equipped with an automated 3D Stereotactic Alignment routine, giving you a fast and accurate measurement of isocenter accuracy. Using a set of 3 to 16 EPID Winston-Lutz images, the RIT system will calculate deviations between radiation and mechanical isocenter, determine ball/BB setup error, and suggest couch alignment adjustments to optimize your system's accuracy. This routine enables individual component (gantry, collimator, couch) characterization to better understand distinct contributions to isocenter deviation, giving insight into adjustments that can be made to improve delivery performance, if needed. Integrate the Cerberus feature with Isocenter Optimization for hands-free, fully automated image analysis.

Increased angle flexibility allows you to mimic more clinically relevant angles to determine isocenter at specific treatment configurations. The added Couch Walkout Plot displays the beam deviation vs. the couch rotation angle, and is a very significant feature for customers intending to adjust the angle of their couches. Users can perform partial system analyses and generate results with as few as three images. Eliminate your need for films and increase your accuracy using Virtual Star Shot* with ANY combination of angles, reconstructed using a set of Winston-Lutz images!

Elekta Unity machine analysis is supported.

* US Patent 9192784, JP Patent 6009705, CA Patent 2918045, and other international patents pending.



IMAGING TESTS

CATPHAN® 503 FOR ELEKTA XVI

RIT's Catphan® analysis has been carefully designed to work with images from Elekta's XVI system and to provide test results equivalent to Elekta's Customer Acceptance Tests for:

- Low Contrast Visibility
- Resolution
- Uniformity

PLANAR MV (EPID) IMAGING

For EPID phantoms, RIT provides quality imaging QA and performs all tests recommended in TG-142. Results are accurate and consistent. Quickly perform measurements of resolution, contrast, noise, uniformity, and geometric scaling all in one image. RIT software supports Las Vegas, QC-3 (now capable of analyzing magnified images), and PTW EPID phantoms. TG-158 and Varian QA acceptance criteria have been added for the Las Vegas EPID.

PLANAR kV IMAGING

RIT software is designed to support vendor-supplied phantoms for planar kV imaging. Using your Leeds TOR-18 FG phantom, supplied by Elekta, you can quickly and easily meet all TG-142 recommendations for planar kV imaging QA in one exposure. Analysis of the QC-kV1 Phantom is also supported, with consistent, quantitative, and repeatable results that can be tracked in RIT*trend*™.

IGRT / KV-MV COINCIDENCE

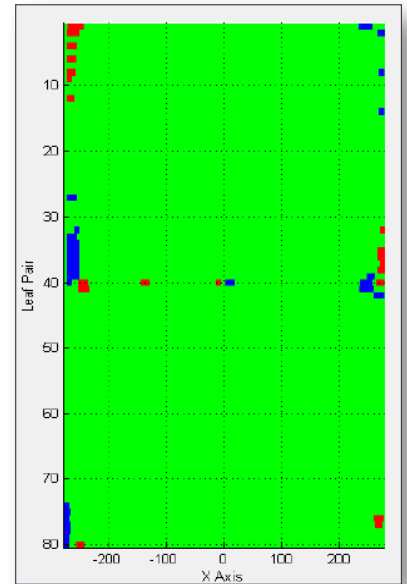
Perform precision IGRT daily QA with the Standard Imaging ISOCube phantom and RIT software. Quickly and quantitatively perform positioning-repositioning, laser alignment, field size checks, kV and MV coincidence measurements, CBCT isocenter coincidence, ODI accuracy, and 6 Degree-of-Freedom Couch Test.

Analysis of the Penta-Guide Phantom is supported for kV/MV/CBCT image coincidence.

OTHER RELEVANT TG-142 TESTS

ELEKTA LEAF SPEED ANALYSIS

The Leaf Speed analysis routine measures the consistency and accuracy of the MLC leaf speeds, as they traverse the imager. No use of log files is required, allowing for universal access.



BAYOUTH MLC TEST

This test analyzes the MLCs that require leaf gaps between banks.

RADIATION VS. LIGHT FIELD ALIGNMENT

Perform quick easy EPID-based radiation vs. light field alignment with the L-Rad Phantom. Fiducial markings for 5 x 5 cm, 10 x 10 cm, 15 x 15 cm, and 20 x 20 cm provide a wide range of testing.

BEAM PROFILES

Perform quick and easy measurements for Starshots, flatness and symmetry, FWHM, penumbras, depth-dose curves, and more.

RIT*trend*™ is a trademark of Radiological Imaging Technology, Inc.
Catphan® is a registered trademark of The Phantom Laboratory

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