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™.

3D WINSTON-LUTZ (ISOCENTER OPTIMIZATION)

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 only a set of 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. Additionally, 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.

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!

**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

The RIT EPID phantom is designed to provide quality EPID image QA and performs all tests recommended in TG-142. Results are accurate and consistent, and implementation is easy. Quickly perform measurements of resolution, contrast, noise, uniformity, and geometric scaling all in one image. RIT software also supports the Las Vegas, QC-3 (now capable of analyzing magnified images), and PTW EPID phantoms.

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 now also supported. Results are consistent, quantitative, and repeatable, and can easily be tracked in RITtrend™.

**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 RIT L-Rad Phantom. Fiducial markings for 5x5 cm, 10x10 cm, 15x15 cm, and 20x20 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.

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Catphan® is a registered trademark of The Phantom Laboratory
ISOCube™ is a trademark of IMT, Inc.

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