

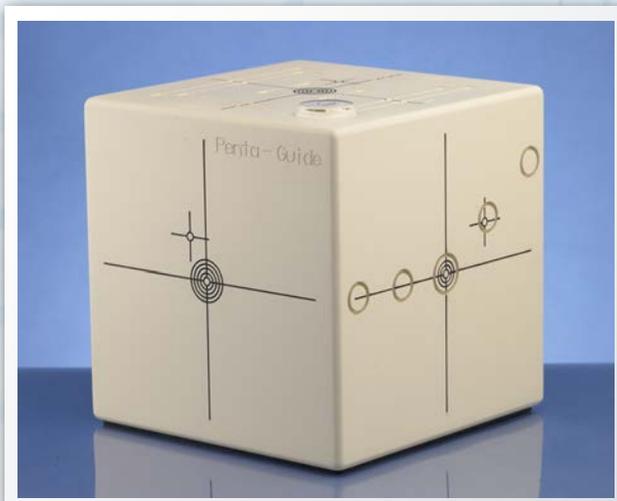


Perform true spatial alignment and coincidence tests on IGRT systems

Penta-Guide

KEY FEATURES

- ✦ Enables daily testing to ensure on-board imaging targeting accuracy
- ✦ Contains low-density rings and hollow spheres to minimize high-density artifacts
- ✦ Simple pass/fail criteria provided
- ✦ Testing does not infringe upon patient treatment time
- ✦ Optional Penta-Guide Software available to automate and simplify CBCT QA
- ✦ Light field alignment 4x4; 10x10; 12x12
- ✦ 16 cm cube -5kg
- ✦ 1/4 mm accuracy



User's Guide Includes: An enhanced Lehmann Yoke testing procedure for confirmation of the source to surface distance (SSD).

The Penta-Guide contains low-density rings and hollow spheres designed to minimize imaging artifacts. These unique visualization features provide quick confirmation of the phantom set-up before investing time in the QA procedure. They also serve to ensure isocenter alignment in accordance with accepted radiotherapy tolerances using 2D/2D and 3D/3D match.

Carried out by a therapist every morning, testing takes little or no extra time and can be completed during normal daily equipment warm-up procedures.

The QUASAR™ Penta-Guide ensures the accuracy of linac-mounted image-guidance systems, including cone beam CT (CBCT), x-ray volumetric imaging (XVI) and on-board imaging (OBI), by enabling daily testing for:

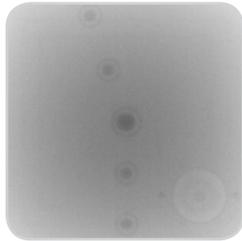
- ✦ 3D Cone Beam Registration
- ✦ kV and MV System Coincidence
- ✦ kV and MV Projection Images
- ✦ Laser and Light Field Coincidence
- ✦ Weekly Remote Table Adjustments



Optional: Penta-Guide Hood is used to confirm that the Varian Frameless Array or other visual position indicator is aligned with the CBCT and OBI

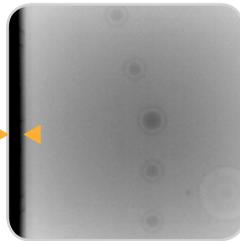
PASS/FAIL CRITERIA

For each test there are simple pass/fail criteria. A typical tolerance of +/- 2 mm in x, y, and z directions is recommended. Displacements can be tracked over time for trend analysis using the Excel spreadsheet provided with the Penta-Guide. Alternatively, shifts can be exported to the record and verify system.



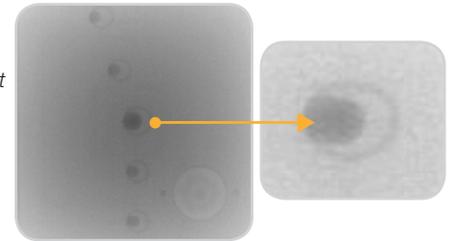
Left: Phantom centered in field of view, spheres centered in rings

*All images 6MV AP



Left: Example of translational misalignment

Right: Example of rotational misalignment



QA SOFTWARE

Perform 2D/3D Image Analysis

Penta-Guide

QUASAR™ in Radiation Therapy

The Quality Assurance System for Advanced Radiotherapy (QUASAR™) supports the testing of a wide variety of dosimetric and nondosimetric functions of planning systems, CT simulators and delivery systems.

QUASAR™ is a valuable part of any quality assurance program. From respiratory motion and MLC beam geometry to daily on-board imaging QA, QUASAR™ phantoms and software are ready to be incorporated into your QA protocols for regularly scheduled testing. They are also effective for commissioning new systems and upgrades, and testing repairs.

Designed by and for medical physicists, QUASAR™ quality assurance tools provide you with confidence that every patient is getting the best possible treatment.

ORDERING INFORMATION

100-1009 QUASAR™ Penta-Guide Phantom

OPTIONAL ACCESSORIES

- 500-3501 Penta-Guide Hood for Frameless Array
- 100-3060 QUASAR™ Penta-Guide Software:
 - ✦ 1-Network License for 1 LINAC
 - ✦ 1-Year of Annual (Software) Updates
 - ✦ 4 hours of (Software) Installation Support

CONTACT INFORMATION

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