Penta-Guide QUASAR BY MODUS CA

Perform true spatial alignment and coincidence tests on IGRT systems

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The QUASAR[™] Penta-Guide Phantom contains lowdensity 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.

KEY FEATURES

- Enables daily testing to ensure on-board imaging targeting accuracy
- Contains low-density rings and hollow spheres to minimize high-density artifacts
- Includes FREE image analysis software to simplify CBCT QA testing
- Apply simple Pass / Fail acceptance criteria
- Testing does not infringe upon patient treatment time
- ► Light field alignment 4x4; 10x10; 12x12
- 16 cm cube -5kg
- 1/4 mm accuracy



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 phantom ensures the accuracy of linac-mounted imageguidance 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





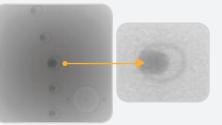
Left: Phantom centered in field of view, spheres centered in rings

*All images 6MV AP



Left: Example of translational misalignment

Right: Example of rotational misalignment



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.

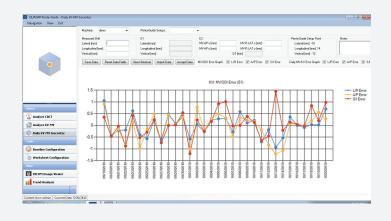


IMAGE QUALITY ANALYSIS SOFTWARE

QUASAR[™] Penta-Guide QA Software is a time-saving application designed to simplify, enhance and automate the image analysis, trending and reporting of 3D CBCT and kV-MV projection images.

ORDERING INFORMATION

100-1009 QUASAR[™] Penta-Guide Phantom

- 1-Phantom
- 1-Software (Lite)
- User's guide

OPTIONAL ACCESSORIES

500-3503QUASAR™ Penta-Guide Tilt Plate500-3501QUASAR™ Hood for Frameless Array



Optional: QUASAR[®] Penta-Guide Tilt Plate is used to verify Image-Guided shifts for Six Degrees of Freedom Couches



Optional: QUASAR[®] Hood is used to confirm that the Varian Frameless Array or other visual position indicator is aligned with the CBCT and OBI

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