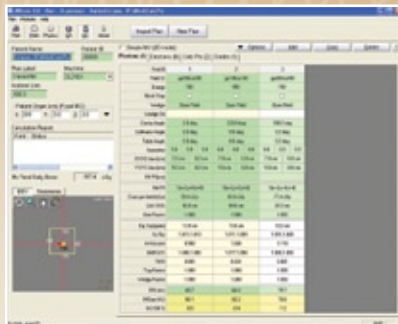




FAST, PRECISE

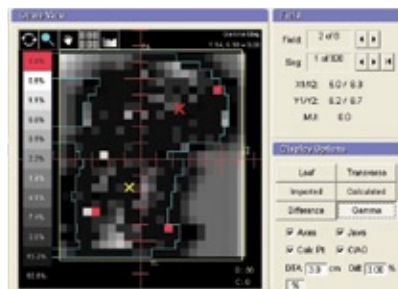
Unprecedented accuracy from the patented “3-Source Model” algorithm, easy standard plan MU checks, and uniquely comparative IMRT Plan QA — no film, no phantom, no linac time required



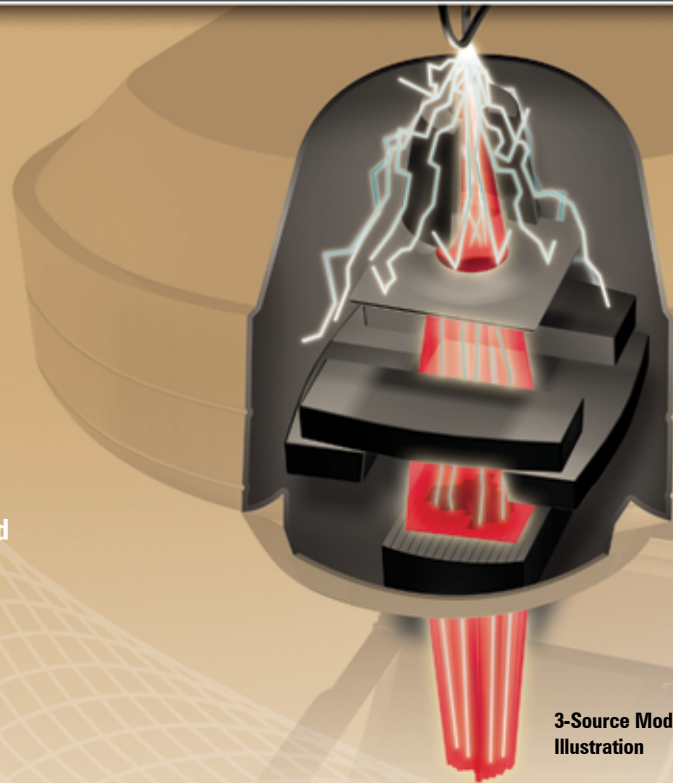
Easy Monitor Unit Calculation



Fast IMRT Plan Verification



In-Depth IMRT Analysis



3-Source Model Illustration

● INTUITIVE MU DOSE CALCULATIONS

Automate hand calculations of conventional plans or create simple plans with just a few clicks. A single screen for inputs, outputs, and field-to-field comparisons offers quick review and easy editing of plans.

- **NEW!** Electron MU calculations
- **NEW!** Advanced diode support

● ACCURATE IMRT DOSE CALCULATIONS

The patented Stanford University “3-Source Model” considers the dose from the primary photon source, the primary collimator scatter, and the flattening filter scatter resulting in extremely accurate dose calculations including those in high-gradient / low-dose regions common in IMRT.

- **NEW!** Multiple calculation points
- **NEW!** S_p correction factor for accounting for flash

● IN-DEPTH IMRT PATIENT QA

Independent verification of complex IMRT plans in minutes, not hours. The treatment planning system predicted fluence is imported giving you a direct comparison to IMSure QA calculated fluence from any of six different methods, including gamma map comparisons, difference maps, and a patented correlation coefficient for each beam.

- **NEW!** Histograms for map analysis

Features

Intuitive MU Dose Calculations

- Check MU or specific-point dose quickly and easily
- A single screen for inputs, outputs, and field-to-field comparisons offers quick review and easy editing of plans

Accurate MU Dose Calculations of IMRT

- Multiple dose calculation points, including off axis measurements from 3 effective sources
- Patented 3-Source Model more accurately models high-gradient / low-dose regions of small fields common in IMRT
- MLC leaf and jaw leakage are also considered so linac parameters are accurately modeled

Simple Physics Interface and Reporting

- Supports unlimited machines, energies, treatment planning systems and record & verify systems
- Completely characterizes output aspects from linear accelerator for simulated dose delivery and easily imports TMR, OF, OCR, PDD (electrons), cone factor (electrons), MLC, jaws, wedges including dynamic wedge angles, and head scatter sources
- Easily imports TPS fluence maps, MLC leaf sequence files in DICOM RT and RTP format, and provides graphical representation of beam data
- Provides hard copy output for billing and patient documentation and electronic output for paperless record keeping (in U.S. use CPT Code 77300)

Fast IMRT Patient Dose Verification QA

- Calculated fluence compares directly with the TPS predicted fluence resulting in accurate and in-depth patient plan QA analysis

- Compare to either the true patient plan or a phantom plan
- Compares plans in six different ways, including difference maps, gamma maps, and histograms
- Compares dose at one or multiple 3-dimensional points on a field-to-field basis as well as composite dose
- ACR Practice Guidelines for Intensity Modulated Radiation Therapy (IMRT) recommend an independent dose calculation method as an alternative to physical measurements once dosimetric accuracy of the planning / delivery system has been demonstrated

Validated Results

- IMSure QA is proven as effective as measurements and TPS¹
- The performance of IMSure QA Software has been verified in multiple publications (see below)

More New Features in Version 3.0

- 3D coordinate system (MU module)
- Block editor (MU module)
- Multiple isocenter support (MU and IMRT modules)
- Multiple energy calculations (IMRT module)
- Ability to delete beams (IMRT module)
- Absolute values (hot/cold) for difference maps (IMRT module)
- Single pixel information displays for maps (IMRT module)
- Custom reporting options
- Diode set up reports
- Percent of pixels out-of-range for gamma analysis
- Reverse MU calculation

IMSure QA Software (REF 91326) SPECIFICATIONS

OPERATING SYSTEM

Microsoft® Windows® 2000
Microsoft® Windows® XP

PROCESSOR

Intel® or AMD®, 600 MHz or greater

MEMORY

256 MB or greater

HARD DRIVE

50 MB or greater

SCREEN RESOLUTION

1024 x 768 or higher

CD-ROM DRIVE

2X speed or greater

PRODUCT STANDARDS

Designed to meet IEC 60601-1-4 **CE**

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PERFORMANCE VALIDATION

1. Y. Yang, L. Xing, J. G. Li, J. Palta, Y. Chen, Gary Luxton, A. Boyer, "Independent dosimetric calculation with inclusion of head scatter and MLC transmission for IMRT," **Med. Phys.** 30 (11), November 2003.
2. Yong Yang, Lei Xing, Arthur L. Boyer, Yixin Song, Yimin Hu, "A three-source model for the calculation of head scatter factors," **Med. Phys.** 29 (9), September 2002.
3. L. Xing, Y. Chen, G. Luxton, J. G. Li and A. L. Boyer, "Monitor unit calculation for an intensity modulated photon field by a simple scatter-summation algorithm," **Phys. Med. Biol.** 45 (2000) N1-N7.
4. Lei Xing and Jonathan G. Li, "Computer verification of fluence map for intensity modulated radiation therapy," **Med. Phys.** 27 (9), September 2000.
5. Daniel A. Low, William B. Harms, Sasa Mutic, and James A. Purdy, "A technique for the quantitative evaluation of dose distributions," **Med. Phys.** 25 (5) May 1998



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