PATIENT DOSIMETRY
PRE-TREATMENT IS JUST THE BEGINNING

IMSURE QA™ SOFTWARE
In this illustration of a linac head, the red beam represents the primary photon source and the white lines show radiation scattered by the primary collimator and the flattening filter. Some scattered radiation may leak from the head and reach the patient through the jaws and multi-leaf collimator, contributing up to 12% of the dose the patient receives. IMSure QA is the only dose calculation software that uses the patented 3-Source Algorithm to calculate the contribution to dose accurately from all three of these sources as well as jaws & MLC.
**ADVANCED FEATURES**

IMSure QA Software includes many advanced features allowing you to streamline your plan QA.

- **In-vivo measurement support** – IMSure QA automatically calculates an expected reading for a diode placed at the surface in relation to the isocenter or any valid calculation point. A printable comprehensive setup report allows for easy setup and reporting of measured results.

- **Multiple calculation points** – Import unlimited points of interest from your treatment planning system or manually enter these for more complete plan evaluation.

- **Block editor** – An interactive block editor allows for the creation of standard or island blocks or editing of block shapes imported from your treatment planning system.

- **Heterogeneity correction** – Import CT images and structure set for automatic calculation of effective depths in IMSure QA.

- **Decimal compensator support** – Utilizing a full convolution algorithm, IMSure models the scatter, beam hardening effects and field-size dependencies to calculate a true compensator factor for even the most complex decimal filters.

**THOROUGH STEREOTACTIC QA**

Calculate and confirm cone-based or MLC-based stereotactic treatments, including conformal and dynamic arcs. Create specific energies in the physics module to accurately model small fields found in stereotactic plans.

**CYBERKNIIFE PLAN VERIFICATION MODULE**

The Cyberknife module quickly and easily validates monitor units and dose for Raytrace and Monte Carlo plans created on the MultiPlan® treatment planning system. Color coding immediately allows you to recognize individual projections that are outside tolerance.
COMPREHENSIVE VERIFICATION OF YOUR ENTIRE PLAN

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.

Does checking a single point constitute good QA? In classic IMRT QA protocol a phantom is placed on the couch with an ion chamber to check point dose, and film is placed between the phantom slabs to measure fluence for an overall plan evaluation. IMSure QA is the only software of its kind that can complete both parts of the classic IMRT protocol, point dose verification and a fluence check.

With multiple calculation point support, IMSure allows you to place an unlimited number of ‘virtual’ chambers anywhere in the field to sample point doses. IMSure will also import the fluence from your treatment planning system and directly compare that to an independently calculated fluence for comprehensive verification of your entire plan.

STRUCUTRES

Importing the structure set along with your plan allows for better visualization of your plan data. Utilize contours to draw blocks for tissue sparing or to account for missing tissue (flash). Also import CT images for automatic effective depth calculation to account for patient heterogeneity.

STRUCTURE SPECIFIC ANALYSIS

Utilize the Volumes control to analyze your plan based on anatomical structures of interest such as the PTV or a critical structure for in-depth analysis of your plan.

INTUITIVE COMPUTING

Automatic SSD and effective depth calculations are performed when CT slices and structures are imported along with a plan. This allows the system to account for heterogeneities within the patient geometry. For VMAT plans, an optional Control Point Report provides segment by segment values for the SSD and effective depth of each calculation point.

IMSURE SOFTWARE/COMPUTER REQUIREMENTS

**OPERATING SYSTEM** — Windows® 10 Professional, 64 bit recommended

**PROCESSOR** — Dual Core: 1 GHz; Quad Core: 2 GHz recommended

**MEMORY** — 32-bit OS: 2 GB, 4 GB recommended; 64-bit OS: 4 GB, 8 GB recommended

**RUNTIME ENVIRONMENT** — Visual C++ 2010 Runtime

**HARD DRIVE** — 32 GB or greater, 3 GB free space for initial software installation. Sufficient free space to store the input RT Plan, Structures, and Image files as required. 25% free space recommended.

**SCREEN RESOLUTION** — 1024 x 768 or greater

**OPTICAL DRIVE** — Compact Disc (CD) or Digital Versatile Disc (DVD)

**CONNECTIVITY** — IPv4 LAN, 100 Mbps or greater

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