

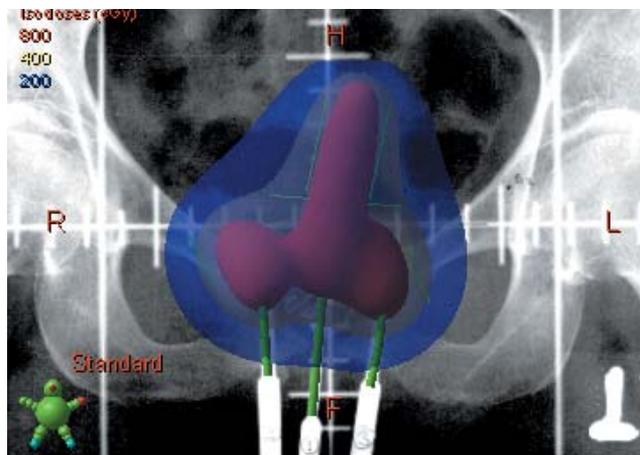
## Brachytherapy

The combination of the BrachyVision™ 3D™ treatment planning system with the VariSource™ 200 HDR afterloader and GammaMedplus™ HDR/PDR afterloader establishes Varian as a leader in brachytherapy. In addition to being sold as a standalone brachytherapy planning system, BrachyVision can also be part of an Eclipse treatment planning system. For those customers who wish to perform film-based brachytherapy planning, Eclipse includes BrachyVision 2D. BrachyVision 3D is available as an option for Eclipse users who require image-guided 3D brachytherapy planning. Information on BrachyVision 3D can be found in a separate brochure.

### Film-based Brachytherapy Planning

BrachyVision 2D in Eclipse accepts plan data entered using digitizer tablets, film scanners, or other 2D image sources. Reference images can be orthogonal or semi-orthogonal pairs, isocentric shift films, or films created using custom reconstruction jigs. It is also possible to enter plan data manually using coordinates.

Multiple film sets are supported for more complex plans. If scanned films are used for planning, BrachyVision 2D displays the location of sources projected onto the film planes. This improves source positioning accuracy and aids in rapid identification of individual sources. As part of Varian's ARIA™ oncology information system, BrachyVision 2D gives Eclipse clinicians the advantage of direct use of fluoroscopic (or flat panel) images from the Acuity™ treatment planning, simulation and verification system – greatly speeding and simplifying the planning process.

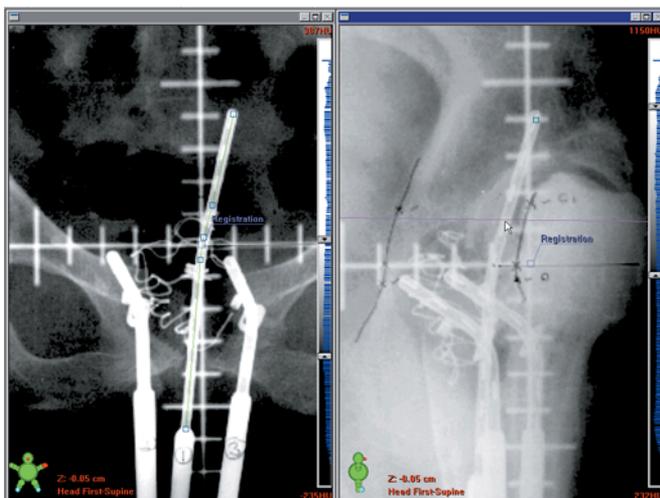


Dose is displayed over film for aid in visualization.

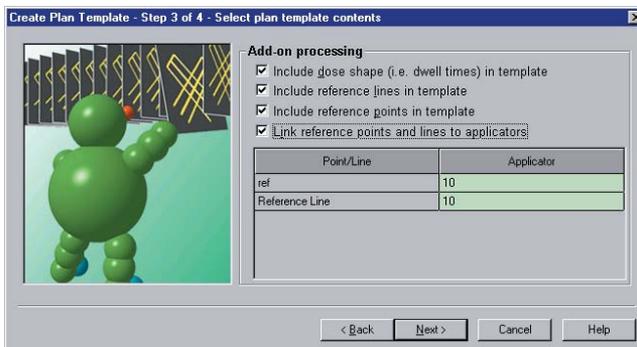
### Supported Sources and Techniques

BrachyVision 2D supports the use of any brachytherapy source for which TG43 format data is available, whether as individual sources or used in afterloading devices. HDR, MDR, LDR, and PDR treatment modalities are all supported. Clinicians can plan according to Manchester or Paris rules, with automatic calculation of and normalization to basal dose points.

Preplanning may be carried out using implant templates or plan templates. The clinician can experiment with a number of configurations in an imageless plan before implanting the patient.



Digitized film images for aid in data entry.

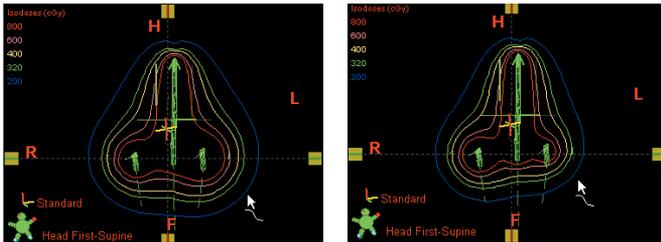


BrachyVision has the ability to store template plans.

# Eclipse™ Treatment Planning System

## Flexible Plan Normalization

To achieve precise control over the delivered dose, BrachyVision provides several options for adjusting the dose distribution, such as normalization to a user-defined point, dose rescaling, and dose shaping. Interactive renormalization can be carried out using the Dose Rescaler™ tool, which allows the clinician to pull the isodose distribution to the desired size. For plan types where dwell times change within a single applicator (e.g., HDR with a stepping source), the planner can shape the dose distribution simply by pushing or pulling isodose lines using the unique Dose Shaper™ tool.



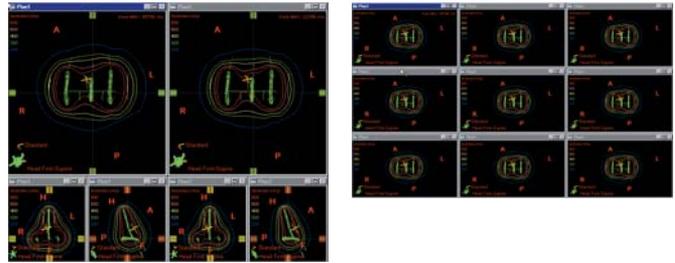
The Dose Shaper tool provides interactive dose optimization.

## Plan Analysis

Dose distributions in Eclipse are easy to evaluate using the extensive range of tools available. For fast and simple plan comparisons, any two plans can be compared side-by-side during plan evaluation. The clinician can also compare and combine plans of different modalities using Eclipse (e.g., brachytherapy and external beam plans). It is possible to manipulate the 2D orthogonal planes and the 3D dose model with zoom, rotate, and pan features in order to view the dose distribution along any plane of the implant. Dose distributions can be projected onto the reference images using the patient anatomy as a frame of reference. The Point Dose tool can display the dose at any point in the plan simply by holding the cursor over the point of interest. The dose-volume histogram (DVH) can also be viewed for the entire dose matrix to enable this tool to be effectively used for 2D plans.



3D over film view helps to visualize anatomy.



Evaluate two plans side-by-side (left), or view multiple planes (right).

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