

## **Radiation Therapy Planning System IGRT efficiency through integration**

Fast, accurate and interactive treatment planning tools have made Philips Pinnacle<sup>3</sup> the #1 radiation treatment planning system in performance and reliability... and the foundation for IGRT adaptive planning. Fully integrated photon, electron, stereotaxy, brachytherapy, simulation, image fusion, and IMRT options allow you to perform treatment planning tasks from a single platform. And Pinnacle<sup>3</sup>'s Collapsed Cone Convolution Superposition (CCCS) algorithm is the industry's most accurate, true 3D dose calculation algorithm. Our Model Based Segmentation (MBS) software includes an anatomical library of 3D patient organ structures models, which reduce the time oncologists spend manually drawing contours. IGRT workflow is enhanced with our (MBS) software by allowing clinicians to propagate organs to alternate 4D datasets to determine the extent of tumor movement within the patient.

## **Volumetric 3D image processing**

Pinnacle<sup>3</sup>'s powerful visualization tools are evident in the crisp volumetric rendering of the images displayed. Volumetric rendering is the ability to compute and render all the image information in the image data set available. This allows the user to visualize actual patient anatomy based on the voxel information provided by the 3D data set. It also eliminates the need to outline/contour structures such as skin and bone to visualize in 3D.

## **Flexible, intuitive planning environment**

Pinnacle<sup>3</sup> is #1 because we have taken great care to design a planning environment that is easy-to-use and simplifies workflow.

### **Key features are:**

Scripting—The powerful, time saving Pinnacle<sup>3</sup> scripting tool allows you to record and play back steps in the planning process including:

- Region of interest names, colors and graphics, automatic isocenter placement,
- Beam sizes and orientations (gantry, couch and collimator)
- Blocks with automatic margins, including MLC,
- Dose grid resolution
- Treatment prescriptions
- Isodose normalization
- DVH setup

Plan modification and optimization—Isodose curves, 3D dose clouds and Dose Volume Histograms (DVHs) are updated real-time as beam weights, treatment prescriptions or normalization points are modified. If a plan is changed, only beams which are modified require recalculation. DVHs for single or multiple trials or beams may be viewed on a single display. Beam weight can easily be optimized and multiple trials compared.

Multi-desktop networking—Pinnacle<sup>3</sup>'s multi-institution environment allows patients to be shared between multiple hospitals and clinics. You can perform centralized planning at your main facility – while offering plan modification and review at off-site centers.