

Ethos[™] therapy Feature Sheet

Varian ETHOS.

Initial Planning

1. Planning Directives

- Quickly define RT intent utilizing customized templates or real-time manual creation with simple, intuitive tools
- A template management system allows users to easily make changes to existing RT Intent templates
- Categorize RT Intent per anatomical site for streamlined insertion of clinical goals
- Define targets, dose specification, and fractionation scheme for the whole course of treatment
- Define organs at risk and associated dose limitations
- Define and prioritize clinical goals to be used in automated plan generation
- Define automatic arithmetic margins and combination structures (derived structures)
- Add setup notes, photos, and treatment delivery instructions
- Intuitive tools for revising RT Intent during the course of treatment if a change is necessary



2. Image Selection and Contouring

- Patient images from multiple PACS sources are made available for the user and displayed on a chronologic timeline view
- Diagnostic quality MR, PET, and CT may be selected for use with the planning image for contouring
- All supporting images selected will be automatically registered to the planning image
- Review of image registration quality and a rating of the registration will be available for the user before contouring
- Automated segmentation occurs upon loading the planning CT

- A comprehensive contouring package is available, as well as the ability to import structures from an outside PACS
- Automated contour quality checks access the contours for issues such as overlap with other OAR structures
- Apply automatic derived structures defined in the RT Intent
- Ability to display up to 4 multi-modality image sets during interactive contouring
- Passive logging of user actions in contouring tasks

3. Dose Preview

- The new Intelligent Optimization Engine, powered by GPUs, gives the user the ability to evaluate a dose preview of the patient based on their contours and RT Intent
- Compatibility of clinical goals and patient contours is automatically assessed
- The user has the ability to interact with the dose preview by re-ordering the priorities of clinical goals and pulling DVH curves to desired dose levels

4. RT Intent Authorization

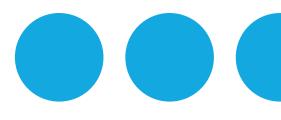
• An authorization of the intent based on the RT Intent Summary Report

5. Technical Structures

- Placement of simulation isocenter
- Automatic couch plane detection
- Automatic contouring and material assignment for areas of high density
 - i. The default material assigned is based on the size of the segmented area: water is assigned if the segmented volume is smaller than 10mm³ and titanium is assigned to all other segmented high density areas

6. Plan Review

- IMRT and VMAT plans are generated automatically using the new Intelligent Optimization Engine and calculated using the Acuros[®] XB advanced dose calculation algorithm
- Ability to import plans from Eclipse[™] treatment planning system
- Graphical comparison of plan clinical goals with tools for further dose evaluation
- Multi-tier approval workflow
- Full plan reports generated automatically
- Plan QA templates used to help streamline pre-treatment QA process

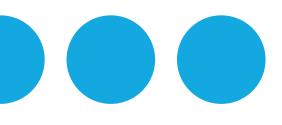


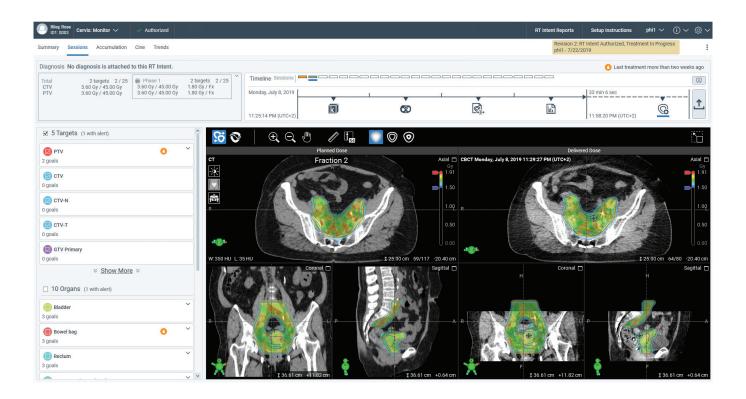
Adaptive Treatment Delivery

- Streamlined, guided workflow designed to lessen the cognitive load on users
- kV CBCT acquisition with iterative reconstruction form the basis of the on-couch adaptive treatment
- Extended CBCT (38.5cm)
- Automated Al-driven organ segmentation
- Automated target generation for the anatomy of the day
- Automated re-calculation of the initial plan on the anatomy of the day
- Automated re-optimization of the plan performed using the anatomy of the day
- Graphical clinical goal comparison between the two plans, with additional tools available for further dose evaluation
- Automated export of adaptive plan to our external quality assurance software, MobiusAdapt
- Patient Motion monitoring throughout the process with the ability to acquire a verification CBCT before delivering radiation treatments
- Display and acknowledge onsession alerts

Adaptive QA

- Real-time on-couch QA workflow to support adaptive technology
- Tracks all types of QA from initial plan check through delivery log file check on the treatment plan
- MobiusAdapt dashboard provides real-time status and QA results of target, DVH limits, and 3D Gamma of adaptive plan
- Single treatment summary page tracks all QA for the patient and links all on-couch adapted plans to the reference plan
- Adaptive treatment summary verifies every fraction's log files with imaging and structure of the day





Treatment Monitoring

- A session timeline details every decision point during the course of an adaptive treatment
- For each session, a delivered dose is automatically reconstructed on the anatomy of the day
- An accumulated dose is automatically calculated and displayed on the planning CT with dose quality checks to alert the user if there are areas of concern
- Dose forecasting is graphically displayed for each clinical goal, projecting the end doses for all goals should the anatomy stay the same as the current anatomy of the day
- Ability to visualize structure volume and dose forecasting trends
- Ability to play through a CBCT movie loop
- A full, delivered session report is automatically documented for each session complete with clinical goal comparisons and adaptive plan details
- Ability to Export DICOM data
- Based on information about trends and forecasts, the users will also have the ability to do off-line adaptive planning corrections using the same automation in planning as initially deployed

Intended Use Summary

Varian Medical Systems' linear accelerators are intended to provide stereotactic radiosurgery and precision radiotherapy for lesions, tumors, and conditions anywhere in the body where radiation treatment is indicated.

Important Safety Information

Radiation treatments may cause side effects that can vary depending on the part of the body being treated. The most frequent ones are typically temporary and may include, but are not limited to, irritation to the respiratory, digestive, urinary or reproductive systems, fatigue, nausea, skin irritation, and hair loss. In some patients, they can be severe. Treatment sessions may vary in complexity and time. Radiation treatment is not appropriate for all cancers.

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510(k) pending—Not available for sale in all jurisdictions

/arian Medical Systems as a medical device manufacturer cannot and does not recommend specific treatm<u>ent approaches</u>

Not all features or products are available in all markets and are subject to change.

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