

VITESSE 3.0 REAL-TIME PLANNING FOR ULTRASOUND-GUIDED HDR BRACHYTHERAPY

Vitesse[™] real-time planning for HDR brachytherapy allows ultrasoundguided brachytherapy to be performed accurately and quickly in the operating room. By eliminating the need for CT and including tools that facilitate planning with confidence, speed and ease, Vitesse enables the user to reduce the time to first fraction because of less transition for patient imaging. With Vitesse 3.0, users go from image capture to approved treatment plan in one integrated experience.

REAL-TIME PLANNING WITH VITESSE 3.0 MEANS

- A complete treatment planning system for ultrasound-guided HDR brachytherapy
- Straightforward structured workflow
- Placing and identifying needles with ultrasound guidance
- Using Volume Optimization to quickly generate plans in the operating room
- Viewing and adjusting dose on live images with easy-to-use tools



REAL-TIME WORKFLOW WITH VITESSE 3.0





STEPS 1 & 2 IMAGING AND CONTOURING

- Transfer digital ultrasound video via direct Ethernet connection* for improved image quality, reliability, and workflow.
- Automatic capture of transverse or longitudinal images** for speed, superior resolution, and reduced prostate distortion.
- Co-register and display additional image volumes imported from either DICOM images or another Vitesse study with the optional Fusion module. Preserve the existing primary image set as a secondary image volume before recapturing new data.
- Easy-to-use tools make contouring anatomy uncomplicated.
- Automatically create regions based on simple userdefined include/exclude structure lists.



STEPS 3 & 4 PLACEMENT AND PLANNING

- Plan needle locations using Automatic Needle Placement or by loading user-defined needle position sets.
- Manually define the range of dwell positions for needles.
- Generate dwell positions automatically based on target intersection or use manual tools to set the desired dwell coverage.
- Real-time guidance on needle positioning including dwell position visualization and coverage indicators.
- Compare and adjust needle tip positions using Needle Tip Adjustment.
- Generate a treatment plan using Volume Optimization based on user-defined dose and time objectives.
- Adjust the current plan, or create a new one, with easyto-use tools that allow isodoses to be interactively shaped or dwell times to be entered directly.

- Update dose calculations in real-time streamlining the planning process.
- Define angled and curved needles with as few as two clicks.
- View a dose as a wash of color over the captured images.
- Create and store multiple plan variations.



Vitesse creates treatment plans during patient recovery and eliminates the need for CT scans. Fewer patient moves reduce the probability of gaps in the timeline for equipment, transport, or personnel availability.



STEPS 5 & 6 ANALYZE AND TREAT

- Define dosimetric quality alerts and interactively alter the treatment plan.
- Use sector analysis to divide the target into sectors using a variety of patterns and calculate user-specified DQP values for each.
- View graphical or tabular presentation of cumulative, differential, and natural DVH data.
- Assess the plan using the updated 3D workspace. View the dose as a rendered surface or as color wash on structures and the image plane. User-defined orientation and scene presets make adjusting the view effortless.
- Ensure treatment is delivered only when ready. Two levels of approval required before a plan can be sent for treatment. Once a plan is approved, no further changes can be made.
- Deliver the first fraction minutes after implant.





Advanced planning and evaluation tools embedded within Vitesse 3.0 allow practitioners to smoothly develop an optimized plan ready for delivery. This all-in-one approach streamlines the treatment planning process.

* BK Medical's Pro Focus[™] and Flex Focus[™], with sufficient license from BK Medical

** Twister license required for longitudinal image capture. A tracked stepper is required for automatic capture.

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BrachyTherapy Offices USA

Varian Medical Systems BrachyTherapy Head Office Charlottesville, VA Tel: 888.666.7847 Fax:434.244.7181 www.varian.com

BrachyTherapy Offices Europe

Varian Medical Systems BrachyTherapy Haan, Germany Tel: 49.2129.551.0 Fax: 49.2129.551.55

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