

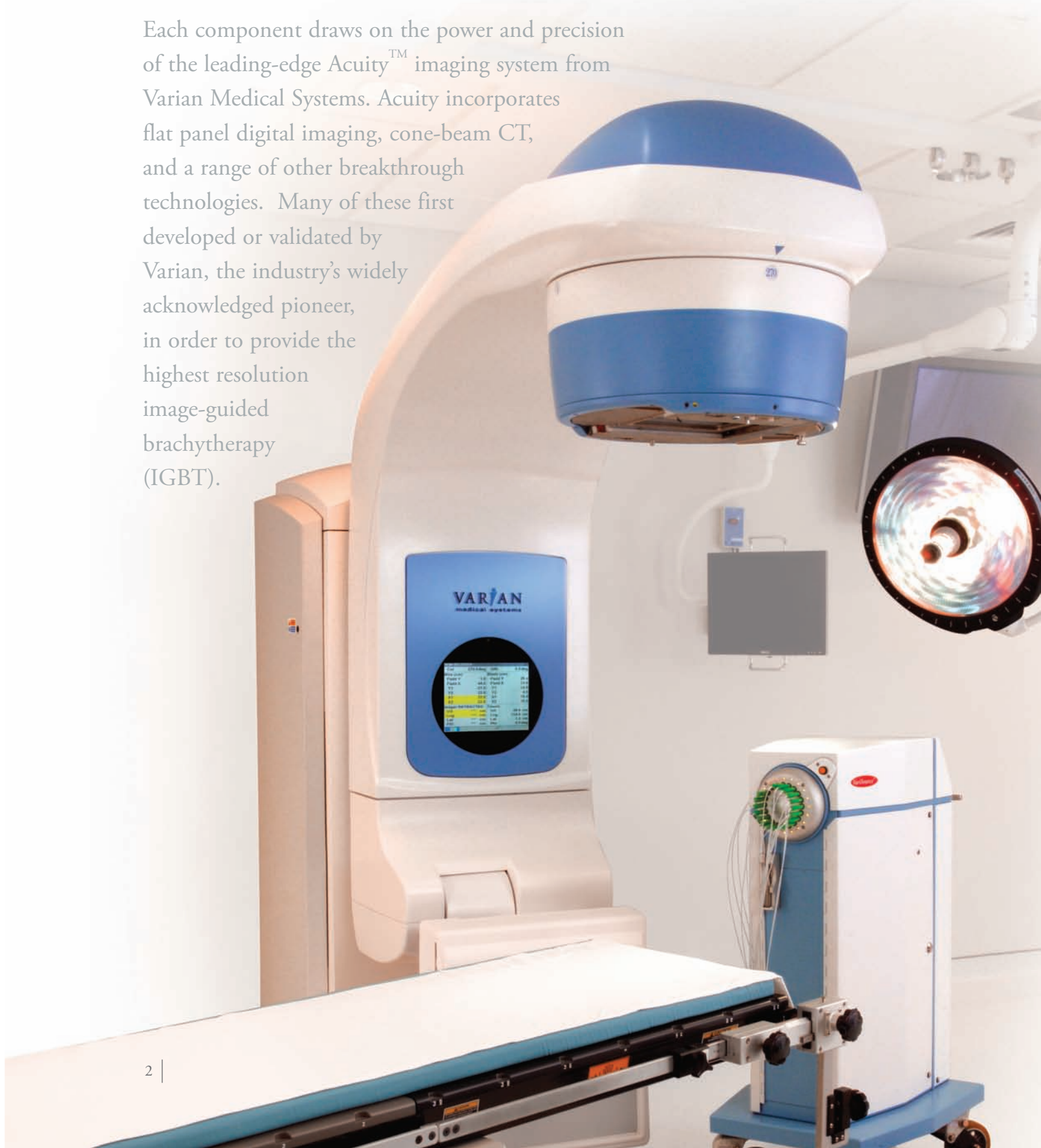
Varian Acuity™ BrachyTherapy Suite™
One Room Integrated Image-Guided Brachytherapy



The Acuity BrachyTherapy Suite

Integrating Imaging, Planning, and Treatment in a Single Room

Each component draws on the power and precision of the leading-edge Acuity™ imaging system from Varian Medical Systems. Acuity incorporates flat panel digital imaging, cone-beam CT, and a range of other breakthrough technologies. Many of these first developed or validated by Varian, the industry's widely acknowledged pioneer, in order to provide the highest resolution image-guided brachytherapy (IGBT).



True Image Guidance

Taking Brachytherapy to the Next Level

You want the best possible outcomes for your brachytherapy patients. That means employing the most advanced techniques and technologies available, as well as ensuring your patients' comfort and convenience under stressful circumstances.

Varian's Acuity BrachyTherapy Suite provides the solution. With the Acuity Brachytherapy Suite, you can image, plan, and perform an entire patient procedure all in the same room at your clinic. As a result, the benefits are already reshaping brachytherapy. You no longer need to worry about inaccuracies that might arise from patient movement. And your patients will appreciate how you're sparing them unnecessary waiting and anxiety.

Acuity uses its advanced imaging capability both to create distortion-free treatment planning images and to guide precise placement of catheters and needles during brachytherapy procedures.

Powerful yet demanding in its implementation, next-generation brachytherapy requires the best possible imaging and control capabilities. Varian's Acuity BrachyTherapy Suite delivers, leveraging advanced image guidance features that take treatment to a whole new level.

Designed with flat panel imaging, cone-beam CT, and an advanced, 3D image-based planning system (such as Varian's BrachyVision™, VariSeed™ or Vitesse™), the Acuity BrachyTherapy Suite provides remarkably detailed volume images that enable you to:

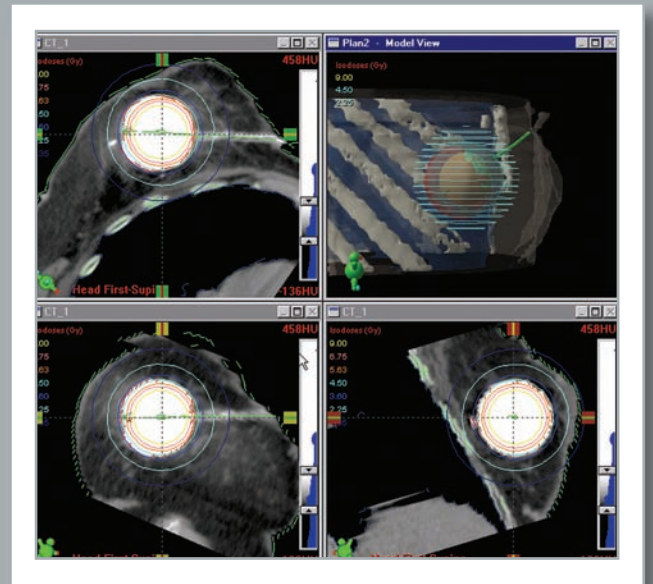
- Delineate targets and critical structures reliably and accurately.
- Calculate quickly and review complete, customized dose distribution plans.
- Verify easily the position of applicators, catheters, needles, and LDR sources or seeds during placement or treatment delivery.

The Acuity BrachyTherapy Suite is highly flexible, supporting a variety of procedures where true image guidance plays an especially effective role—from pelvic applications to breast, lung, esophagus, nasopharynx, and more. The retracting flat panel imager allows clinicians excellent patient access during procedures. The Acuity Brachytherapy Suite is easily configured to perform all procedures in a single room, but considerable benefits accrue even if treatments need to be done in a separate area.



Cone-beam CT

CBCT can be considered for many brachytherapy LDR and HDR applications including breast, prostate and gynecological sites.



MammaSite breast treatment

CBCT is the ideal way to produce treatment planning information - with the CT data produced in the treatment location there is no worry about applicator displacement, and no need to transport the patient.

Cone-beam Computed Tomography (CBCT)

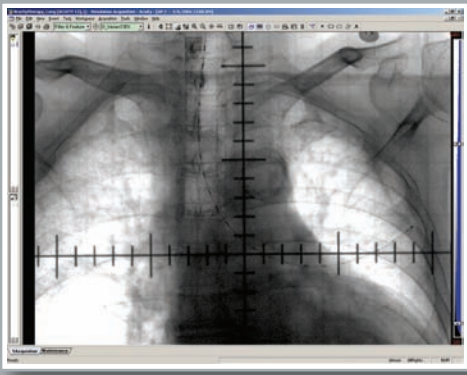
The ideal tool for brachy planning and treatment

Varian developed cone-beam imaging for radiation therapy simulation and verification. Now the Acuity BrachyTherapy Suite integrates this powerful technology with state-of-the-art treatment and patient care as an image-guided brachytherapy solution.

In brachytherapy, resolution, speed, and facility are all essential. The Acuity BrachyTherapy Suite's cone-beam CT (CBCT) quickly generates high-resolution 3D images of tumors and surrounding anatomy, which allow easy identification and localization during treatment planning. CBCT can also quickly obtain digital 3D volume images of the treatment before, during, and after a procedure. With CBCT, you can efficiently scan the patient's treatment volume, review the 3D relationship of

the applicator or source placement to the anatomy, and immediately begin an optimized 3D treatment plan.

The Acuity BrachyTherapy Suite with cone-beam CT gives you all the tools and high quality images you need to optimize results for your patients—whether it's verifying catheter location in real time for a lung case, or getting a quick look at the inflation of a MammaSite® applicator, the Acuity BrachyTherapy Suite makes it possible.

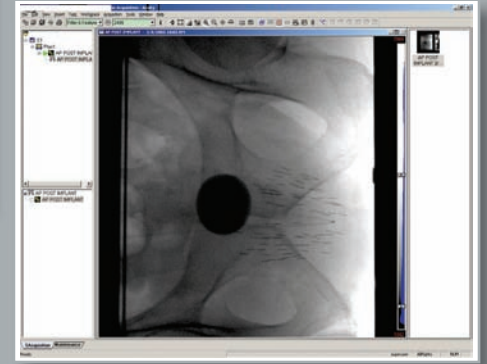
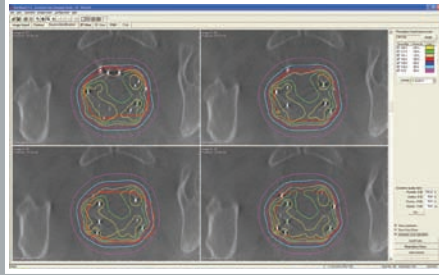


Lung treatment

Digital distortion free images provide significant control in the placement and verification of catheters and seeds. With these high resolution images, a patient's treatment is planned and delivered in the same room avoiding moving the patient and eliminating the risk of applicator movement.

Prostate implant

This capability is particularly useful in the case of seed implantation. Here CBCT can be used to generate a post-implant plan before the patient even leaves the procedure room. Using imaged-guided brachytherapy gives real time dosimetry.

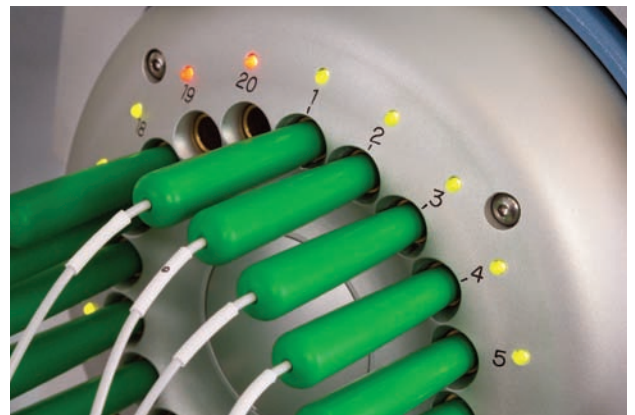


Fluoroscopy and Digital Radiography

The Acuity integrated advantage

The Acuity BrachyTherapy Suite redefines technology for brachytherapy planning, simulation, and verification. It gives you the tools you need today, while providing you with the dimensions of the future.

Acuity's innovative technology and design are uniquely suited to the needs of brachytherapy imaging. Its distortion-free digital fluoroscopy provides significant feedback and control advantages during applicator placement and verification. And with Varian brachytherapy software, such as BrachyVision (or other planning systems via DICOM RT export), you gain immediate access to high-quality images for treatment planning.



Acuity BrachyTherapy Suite Applications

The versatility your clinic requires

A complete Acuity Brachytherapy Suite with HDR in the procedure room eliminates the need for patient movement, resulting in improved accuracy, increased patient throughput, convenience, and privacy.

Prostate Applications

The Acuity BrachyTherapy Suite lets you schedule and perform prostate implants in your own brachytherapy suite, avoiding operating room constraints and costs. Following implant, you can acquire cone-beam CT images for use in 3D treatment planning (HDR), or use the images as the basis to confirm dose plan (for seed implants). The Vitesse software module from Varian provides volume ultrasound data that can be fused with high-resolution 2D (planar) or 3D (volume CT) data, enabling convenient transfer of the prostate outline to the CT data set.

Lung and Esophagus/Nasopharynx Applications

The ability to image, plan and treat without moving the patient helps speed the process and minimize patient discomfort. A slant board accessory can further enhance patient comfort, while Acuity's wide aperture makes imaging easier even in difficult positions required by these applications. For precise catheter placement in endobronchial cases, you can use fluoroscopy data to augment a bronchoscope. For esophagus and nasopharynx applications, the fluoroscopy data can constitute the principal source of applicator placement verification.

Breast Applications

For breast brachytherapy, cone-beam CT images are ideal for developing the initial plan. With Acuity's unique verification capability, the patient's set-up can be checked for each of the multiple fractions that typically would be involved. In addition, clinics can now use Acuity in conjunction with MammoSource™—an HDR brachytherapy afterloader—specifically developed to work with MammoSite device for localized treatment of breast cancer.

GYN Applications

Thanks to the Acuity BrachyTherapy Suite's rapid imaging process and near real-time dosimetry, relocating the patient becomes unnecessary. This speeds the overall process and helps to minimize patient discomfort. In addition, high-resolution orthogonal pair images and cone-beam CT images can be used for gynecological brachytherapy procedures. A convenient table extender and stirrup accessories facilitate treatment. You can also easily adjust equipment to make ample working space for applicator placement, and then use real-time fluoroscopy to verify that placement. After you acquire 2D and 3D images following conclusion of the implant, they immediately become available for treatment planning.

With the kind of integration afforded by the Acuity BrachyTherapy Suite, a complete brachytherapy session can take as little as 30 minutes, including catheter placement, image acquisition for treatment planning, and treatment delivery. This speed and efficiency lets patients quickly resume living their normal lives. For oncologists, it means being able to treat more patients, quickly and precisely, thereby encouraging better outcomes.



Col		358.1 deg	GPs	0.0 deg
Wire (cm)			Blade (cm)	
Field Y	25.0		Field Y	20.4
Field X	25.0		Field X	25.0
Y1	-12.5		Y1	-10.2
Y2	+12.5		Y2	+10.2
X1	-12.5		X1	-14.0
X2	+12.5		X2	+14.0
Imager		Couch		
Vit	-82.3 cm	Vit	-18.6 cm	
Lng	0.0 cm	Lng	+127.7 cm	
Lat	0.0 cm	Lat	0.0 cm	
FPD	178.1 cm	Rot	0.2 deg	



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Acuity BrachyTherapy Suite is part of the
Inspiration™ integrated oncology environment.

Inspiration, the Varian advantage

For more information on Acuity BrachyTherapy
please visit <http://www.varian.com/AcuityBrachyTherapy>

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