



ATLANTIC HEALTH



Morristown Memorial Hospital Department of Radiation Oncology

Center of Excellence

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SIEMENS



Center of Excellence

Morristown Memorial Hospital has been serving the Morris County community for more than 100 years, setting high standards for patient care in state-of-the-art facilities with a full range of medical specialties and services. Named a Level I Regional Trauma Center by the American College of Surgeons and a Level II by the state, Morristown Memorial offers superlative care with highly trained trauma teams.

Offering advanced methods to diagnose, treat, and manage all types of cancers, Morristown Memorial's mission is to provide comprehensive, compassionate, and individualized care to its patients. Combining the latest medical technologies such as minimally invasive surgery and Image-Guided Radiation Therapy (IGRT) with complementary medicine, the highly trained physicians and oncology professionals work together in a collaborative setting to promote a coordinated, multidisciplinary approach to cancer care.

A partner of the Cancer Institute of New Jersey, Morristown Memorial is also accredited by the Joint Commission. As a clinical and academic affiliate of Mount Sinai Hospital and Mount Sinai School of Medicine, and a partner with the Cancer Institute of New Jersey, Morristown Memorial offers superior cancer care.

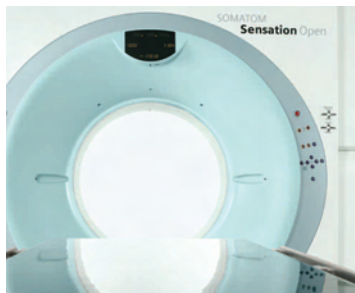
With CTVision™, we now have the ability to identify and localize the exact location of the target and organs at risk without any internal or external markers, even for bariatric patients. These positions are then compared with the planned positions. The daily movements of the organs are then corrected and a new isocenter is derived.

Dr. James Wong, Chairman

The workflow of our image-guided procedures using the in-room CT is optimized through the use of the Adaptive Targeting™ application. Within only a few minutes we are able to scan, register, and reposition the patient.

Elizabeth Rodriguez, Department Manager





Key Personnel

James Wong	M.D., Chairman
Chee-Wai Cheng	Ph.D., Chief Physicist
Jeff Gao	Ph.D., Research Associate
Scott Merrick	B.Sc., Dosimetrist
Elizabeth Rodriguez	R.T.T., Department Manager
Teri Rizzolo	R.T.T., Lead Therapist
Jackie Vizoso	Business Coordinator

Equipment

Linear Accelerators

- ONCOR™ Linear Accelerator
 - OPTIFOCUS™ 82-leaf MLC
 - OPTIVUE™ 1000ST Electronic Portal Imaging Device (EPID)
 - MVision™ Megavoltage Cone Beam (MVCB) Imaging Package
 - CTVision System with SOMATOM® Sensation Open CT (4D)
 - ModuLeaf™ Mini Multileaf Collimator (mMLC)
 - 550 TxT™ Treatment Table

Two PRIMUS™ Linear Accelerators

- 3-D MLC™ Multileaf Collimator
- Both with OPTIVUE 1000ST EPID
- One with the CTVision System (CT Plus 4)
- Two ZXT™ Treatment Tables

Imaging

- SOMATOM Sensation Large Bore CT (4D) for simulation
- SOMATOM Sensation Large Bore CT (4D) in the treatment room
- CT Plus 4 in the treatment room
- MVision Megavoltage Cone Beam Imaging
- BEAMVIEW™ EPID

Simulation

- Conventional: SIMVIEW™ 3000
- SOMATOM Sensation Open CT (4D)

Treatment Planning

- syngo® RT Dosimetrist (KonRad™) for ModuLeaf IMRT plans
- Pinnacle 7.4 (Philips)

Oncology Information System (OIS)

- LANTIS™ OIS

Patient Localization

- syngo RT Dosimetrist 3D – registration and viewing applications to register and set up CTVision patients
- syngo RT Oncologist with Adaptive Targeting planned
- Tx review, 2D portal image review

Workflow

- syngo RT Dosimetrist (3 workspaces)
- syngo RT Oncologist (3 workspaces)
- syngo RT Therapist (1 workspace)

Treatment Environment

Patients treated per day	~80-100
Time slots	Avg. 10 minutes (25 minutes with use of CT)
Disease state breakdown	Prostate 30%
	Breast 30%
	Lung 15%
	Head & Neck 25% (including IMRT)
Clinical focus of site	Intensity-Modulated Radiation Therapy (IMRT), IGRT, Conformal Therapy
Number of physicians	3
therapists	12
physicists	3
dosimetrists	3



Highlights to See

- Image-guided procedures using CTVision Systems
- ModuLeaf mMLC with *syngo* RT Dosimetrist IMRT planning
- *syngo*-enabled workflow
- LANTIS OIS
- Simulation using SOMATOM Sensation Open Large Bore CT

Site Development and Strategic Partnership

The radiation oncology team at Morristown Memorial Hospital uses the CTVision System from Siemens to reduce uncertainties caused by organ motion and setup inaccuracy. Through the large variety of patients treated, they found CTVision offers significant implications for dose escalation and for decreasing normal tissue complications in the treatment of cancer.

CTVision consists of a Siemens PRIMUS or ONCOR Linear Accelerator and a modified SOMATOM diagnostic CT scanner that travels on two parallel rails in the treatment room (CT-on-rails), offering a unique, straightforward approach to IGRT. While CT-on-rails can be used for all disease sites, the major interest has been for anatomical regions that require exquisite soft-tissue contrast and/or tumor motion management.

Superior Soft-Tissue Contrast Through CTVision

Multiple studies indicate the prostate is not stationary and can move as much as two centimeters. An in-room CT can account for prostate motion, due to a change in the filling states of the rectum and bladder, with the ability to maintain and deliver excellent image quality, even for large patients.

Other image guidance options suffer from limited image quality, relying instead on internal and/or external markers to locate the prostate.

CT-on-rails addresses this problem in the treatment room with consistent, optimum image quality. With CTVision, clinics now have the ability to identify and localize the exact location of the prostate, seminal vesicles, and rectum without any internal or external markers, even for bariatric patients. These positions are compared with the planned positions, and the daily movements of the prostate and rectum are then corrected and a new isocenter is derived. "We can treat our patients immediately, with much more confidence, using the new isocenter," says Dr. James Wong, Chairman of the Department of Radiation Oncology. "We found that daily intrinsic prostate movements can be easily and precisely corrected for any patient,

independent of their size, before each radiotherapy session, allowing extremely precise prostate cancer treatment."

Unmatched Ability to Accurately Treat All Patients

Siemens and the team at Morristown Memorial partnered to showcase CTVision as the "Gold Standard of IGRT." With two of its three linear accelerators, Morristown Memorial offers CTVision for image-guided treatments. Patients have taken notice of this technology in northern New Jersey. "Self-referrals have gone up steadily during the past year or so," points out Dr. Wong. "The combination of large-bore CT image guidance with the 550 TxT Treatment Table, for patients up to 550 pounds, enables us to accurately treat patients who would otherwise have a much increased chance of side effects or decreased tumor control."

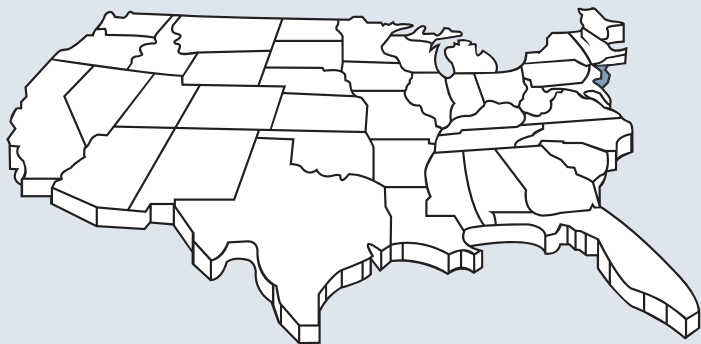


Visit Guidelines

Due to HIPAA regulations and general privacy, security, and space issues, visitors must adhere to the following guidelines:

- Maximum of 4-6 people per visit
- Visitors must sign a confidentiality statement to allow access to patient information, including charts and computer display monitors containing patient information
- Visitors must remain with the group during a tour and be escorted by Morristown Memorial personnel at all times
- When in treatment rooms or control areas, visitors must not direct questions to or engage therapists in conversation during patient treatments – conversation among visitors should be kept to a minimum
- Visitor badges must be displayed in a visible location

Location



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Clinic Type: General Hospital

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