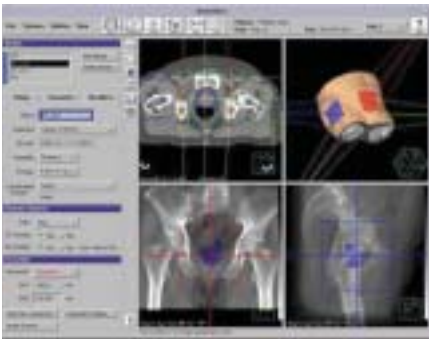


North Shore Radiation Oncology

DIVISION OF NORTH SHORE HEMATOLOGY / ONCOLOGY ASSOCIATES, P.C.

*"State of the art technology,
Compassionate care"*



North Shore Radiation Oncology (NSRO) is a modern outpatient facility conveniently located in the Stony Brook Technology Park in East Setauket. With the installation of our *new Varian linear accelerator*, NSRO offers the most advanced radiation treatment methods available today.

MARTIN J. SILVERSTEIN, M.D.

JOSEPH S. CIRRONE, M.D.

CERTIFIED BY THE AMERICAN BOARD OF RADIOLOGY

What is IMRT?

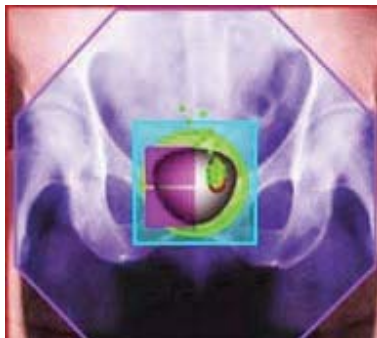
Intensity modulated radiation therapy (IMRT) is a revolutionary type of external beam treatment that is able to conform radiation to the size, shape and location of a tumor. It involves varying (or modulating) the intensity of the radiation beam.

IMRT compared to conventional radiation

The effectiveness of conventional radiation therapy is limited by imperfect targeting of tumors and insufficient radiation dosing. Because of these limitations, conventional radiation can expose healthy tissue to radiation, causing complications. With IMRT, the optimal dose of radiation is delivered to the tumor and dose to surrounding healthy tissue is minimized. Preliminary clinical studies indicate that higher radiation dose delivered with IMRT techniques are improving the rate of local tumor control.

IMRT patient benefits

- ◆ **IMRT** allows for more precise tumor targeting which allows physician to increase the dose to the tumor.
- ◆ Higher doses made possible by **IMRT** are more likely to control the tumor and prevent recurrence.
- ◆ **IMRT** results in less doses to surrounding healthy tissue and organs reducing the complication rate.
- ◆ **IMRT** can treat odd-shaped tumors, or tumors wrapped around or near critical structures.
- ◆ **IMRT** is used to treat patients with tumors of the prostate, breast and head and neck region.



B-Mode acquisition and targeting system

BAT is an ultrasound-based stereotactic tumor localization device designed to maximize the precision and effectiveness of external beam radiation therapy. Ultrasound is ideal for localizing the prostate gland on a daily basis for IMRT.

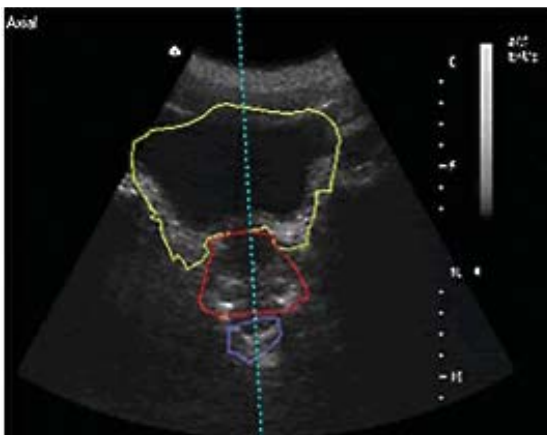
Safe and compatible

BAT is the first of its kind: a system that tracks tumor location and allows physicians to more precisely position the patient in alignment with the treatment plan. BAT offers the benefits of:

- ◆ Reduced target uncertainty- from 2cm to 2mm
- ◆ Safer dose escalation – increases confidence for field positioning
- ◆ Ultrasound-based technology – provides safe, non-invasive imaging

Useful for any soft tissue structure

Though originally developed to localize prostate tumors, BAT is considered a valuable tool for many kinds of radiation treatment, including cancers of the breast, bladder, liver, pancreas and neck.



HIGH DOSE RATE (HDR) BRACHYTHERAPY/MAMMOSITE® RADIATION THERAPY SYSTEM



Offer the benefit of Breast conservation Therapy (BCT) to more patients. Ideal for partial breast irradiation, the Mammosite® Radiation System (RTS) is a balloon catheter brachytherapy device (pictured left) used to deliver a highly conformal dose to the tissue surrounding the lumpectomy cavity, where tumors are more likely to recur.

Advantages

- ❖ Treatment time of 5 days compared to 6 weeks with conventional therapy.
- ❖ A precise dose of radiation is delivered to the tissue surrounding the resection cavity, as opposed to treating the whole breast.
- ❖ Minimizes radiation exposure to healthy tissue.

Radiation therapy – simplified

- ❖ Creates treatment geometry that is easily identifiable and reproducible
- ❖ Easy insertion and removal of catheter
- ❖ Performed as an outpatient procedure

Our HDR unit is currently capable of treating cancers of the breast and gynecological sites. For additional information, ask your doctor or visit the MammoSite RTS website at www.mammosite.com

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