

IMRT at a Freestanding Facility: The Greenbelt Radiation Oncology Center

by Astara March

The Greenbelt Radiation Oncology Center (GROC) in Greenbelt, Md., is a freestanding radiation oncology facility that is currently the only IMRT center in either underserved suburban Prince George's County or its highly affluent neighbor, Montgomery County.

Radiation oncologist Larry P. Shombert, M.D., director of the center, believes networking is the key to GROC's success, and sees himself and the physicians at nearby hospitals as colleagues who work cooperatively to provide the best possible care for people with cancer in their area.

Shombert originally worked at Washington Adventist Hospital in Takoma Park, Md., another D.C. suburb. When one of the urologists at Adventist wanted to start a prostate seed brachytherapy program, he asked Shombert to provide the radiation services. The chair of Shombert's department at Adventist was amenable, and the new service quickly grew beyond anyone's expectations. Demographic studies showed that most of the program's patients came from Prince George's County, so GROC's current building was leased and the medical staff moved to the new Prince George's County location.

Since Medicare only pays for prostate seed brachytherapy as an inpatient procedure, once the center became freestanding Shombert was restricted to performing prostate volume studies alone. After the volume study is completed, eligible patients go to either Prince George's Hospital or Doctor's Hospital in Prince George's County for further care.

Shombert initially became interested in IMRT when he attended the Sixth International Symposium on 3D-Conformal Radiation Therapy, held in Williamsburg, Va., in late June 2001. Most of the conference was focused on IMRT, and Shombert credits his motivation to go forward with the procedure to the symposium's supportive atmosphere. While most of the conference's presenters came from large university medical centers, they were all enthusiastic about IMRT moving into the community setting, and the vendors at the conference were helpful as well.

Back at home, Shombert conducted a cost/benefit ratio study and discovered that, even though GROC only sees around 200 patients per year, IMRT would pay its way at the center because half of GROC's patients had diagnoses that made them IMRT-eligible. He thinks looking at the cost/benefit ratio should be the first step for any entity that wants to add IMRT to its treatment arsenal.

Next came choosing the equipment and the software. Since GROC already had a computerized accelerator, Shombert thought he was only in the market for software.

After a manufacturer's representative pointed out that a combination system would certainly work but would not be able to move GROC into the future, Shombert decided to juggle his finances and purchase completely new IMRT equipment and computer programs.

GROC purchased a Siemens PRIMUS Accelerator and multileaf collimator, SIMTEC software for auto sequencing of treatment delivery, and LANTIS, a Siemens software program that records and verifies treatment data and provides IMRT patient information and treatment programs wherever needed in the department. GROC also purchased the CMS treatment planning system.

GROC produces digitally reconstructed radiographs (DRRs) instead of films for simulation purposes. A CT scan is taken, the computer produces a DRR, and a special printer creates an image that looks like an X-ray and can be used the same way. The DRR set-up was a cost-saving measure, since a laser printer is much less expensive than a film processor. Shombert maintains that cost containment is even more important for freestanding centers than hospitals because freestanding centers can have much higher overhead and cannot raise money through donations.

Shombert said his three biggest headaches during the IMRT implementation process were getting the right hardware and software, learning how to work with electronic charts since the center was used to paper records, and finding a physicist who had previous experience with the system he had selected. Making time for the physicist to come in and commission the machines without disrupting the patient treatment schedule was another problem.

Once Shombert had his staff in place, Siemens provided training for the start-up phase of the operation in both general machine use and IMRT-specific issues. The center has two full-time radiation therapists, a part-time dosimetrist, and a full-time physicist.

Shombert and his staff treated their first IMRT patient on March 31, 2003. Although their equipment arrived in the autumn of 2002, it took them four months to commission it because, said Shombert, "The handful of people who know how to do what we needed are running here, there, and everywhere. Everyone wants them and we had to wait our turn. That will change over the next two years or so. More people will be trained to teach each system and be available to help new facilities start their IMRT operations in a much more timely manner." ■

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