



[Shyam Paryani, MD, (far left) director of Florida Radiation Oncology Group headquartered in Jacksonville, and staff members perform more than 120 PET/CT scans weekly with their three Siemens Medical Solutions Biograph 6 TruePoint PET•CT mobile units.]

PET/CT & Radiation Therapy

Take to the Road

Shyam Paryani, MD, believes in providing the best radiation therapy for his oncology patients and he wants to be sure it's available to all of them. His imaging technology of choice is PET/CT. The challenge for Paryani as director of the Florida Radiation Oncology Group (FROG) was how to bring it to FROG satellite cancer centers scattered across northern Florida and southeast Georgia. The solution—put PET/CT on wheels.



Today, FROG, a division of Integrated Community Oncology Network (ICON), headquartered in Jacksonville, Fla., offers the latest in PET/CT technology at all of its 14 centers using three mobile Biograph 6 PET/CT systems featuring TrueV by Siemens Medical Solutions. In the fall, they were the first customer to take delivery of the newly enhanced system, upgrading from the prior PET/CT systems.

From the start

FROG first took PET on the road in 2000 as part of a partnership with Siemens, says Paryani. Four years later, FROG blazed new trails, becoming the first provider to take its Siemens Biograph PET-CT mobile. A year later patient demand led to adding a second mobile unit. The solution offered them a way to serve patients in the rural locations where the image-guided radiation treatment would not have been available otherwise. “Our patients are used to not having to drive to other places to get this technology,” says Paryani.

Best in radiation oncology

FROG serves some 10,000 pa-tients each year, 6,000 to 7,000 of them receiving PET/CT scans for radiation treatment. With 14 locations, 60 miles apart it would have been financially prohibitive to place a scanner in each facility. By using the mobile treatment planning units, they are able to offer the best technology for scanning cancer patients, says Paryani. Taking the technology on the road “is critical for us, specifically because we have so many facilities,” he says. “So what we’ve done is the best of both worlds—we take a scanner to wherever the patients are and because we have three scanners, now they can often go multiple days to certain facilities that have more patient volume.”

FROG’s 30 radiation oncologists utilize the technology for scanning patients to diagnose cancer, determine the extent of their disease and then, most importantly, use the images to carefully plan radiation therapy treatments. “It allows us to assess the effectiveness of our therapy—to gauge how effective chemotherapy and radiation therapy is in combating cancer, says Paryani. The Biograph 6 with TrueV is the best technology available for radiation oncology, Paryani adds. “We really can’t practice radiation oncology without these scanners being at our centers,” he says.

“We got the [Biograph 6] because it allows us to scan at a very fast rate. The average scanning time with the TrueV is 10 minutes because of the extra detector and the efficiency of the detector is so much greater that the scanning time is reduced significantly,” says Paryani, noting previous scan times were 15 to 20 minutes. “We also believe it has the best accuracy.”

PET/CT not only reduces scan time, says Paryani, dose also is reduced. “Because of the efficiency, the time required, the time of the detectors, you don’t have to use as high a dose of the radio-

active contrast that we normally use. You can use a lower dose and get the same scan quality or better, Paryani says, adding the dose is reduced by 30 to 50 percent. TrueV also widens the axial field by 33 percent.

Paryani points to another benefit. “What’s different about our PET/CT scanner is that it has laser setups, and it’s all done in the same anatomic position that the patient is treated in. That’s very important because you don’t have an accurate scan if you don’t scan in the same position.”

In February, the group will upgrade to High-Definition PET (HD-PET), Siemens’ newest innovation in PET-CT. The technology provides distortion-free imaging throughout the entire field of view. When TrueV and HD-PET are combined, resolution improves all the way to 2mm which will aid physicians in visualizing even the smallest lesions.



“What we’ve done is the best of both worlds—we take a scanner to wherever the patients are and because we have three scanners, now they can often go multiple days to certain facilities that have more patient volume.”

Shyam Paryani, MD, Director, Florida Radiation Oncology Group

All on wheels

FROG’s mobile units are 18-wheelers designed by Medical Coaches of Oneonta, N.Y. Each of the three units travels 15,000 miles annually to the different satellite sites. Inside the self-contained imaging suites, the 46-ft. trailers feature a Biograph PET-CT scanner with two adjacent workstations, two patient prep areas, a hot lab room and a control room. The newest version of the Biograph 6 system boasts significant workflow improvements to facilitate remote operation and support for multiple site connectivity.

The Biograph 6 has been completely redesigned to incorporate hardware improvements such as a shorter gantry to save space in the scan room; a special cantilevered patient handling system with automatic lock-down; and a completely integrated closed loop cooling system with no external chilling requirement.

Into the future

“We believe in the future that every modern oncology center will have access to a PET/CT scanner that’s dedicated for oncology,” says Paryani. “And having done it for seven years, we are really sold on the technology.” **MI**