



VARIAN IMRT: RAISING THE BAR WORLDWIDE

Hospitals and cancer centers around the globe are raising the standard of health-care with automated, high-precision Varian intensity-modulated radiation therapy (IMRT) technology. As a result of Internet research, many patients are now demanding SmartBeam™ IMRT treatment for themselves.



BRINGING INNOVATION TO INDIA

The Kailash Cancer Hospital and Research Centre in the western state of Gujarat, India, has been treating cancer patients for the past 25 years. D. Elangovan, MD, chief physicist at the hospital, says IMRT has been one of the greatest advances in radiotherapy. IMRT significantly enhances precision compared to its predecessor, 3D conformal radiation therapy, by segmenting a tumor into hundreds of treatment fields—enabling different doses to be delivered to different parts of the treatment area. The Varian platform provides fast, integrated information management and image processing to help simplify the complex treatment planning that SmartBeam IMRT requires.



“We have used IMRT to treat 52 patients so far—cases ranging from brain cancer to prostate and, more recently, pancreatic cancer,” Dr. Elangovan explains. “IMRT has enabled us to give higher doses without the complications and side effects we saw in the past.” For example, 3D conformal radiation therapy delivered a uniform dose across the entire treatment field, typically requiring manual delivery and slow, “trial-and-error” planning.

Advancing the Cure. Cancer patient Mayank Dholakiya (top) enjoys precious time with his family after intensity-modulated radiation therapy (IMRT) recommended by Dr. D. Elangovan (center) and Dr. Vivek Bansal.

Pancreatic cancer patient Mayank Dholakiya was told by his surgeon that his tumor was inoperable because it was too close to critical organs and arteries. However, Dr. Elangovan and Dr.

Vivek Bansal, chief physician and head of radiation oncology, devised a treatment plan that combined IMRT with chemotherapy to shrink the tumor for surgical removal. “The challenge was accounting for tumor motion in the abdomen during radiation therapy,” Dr. Bansal explains. “Using IMRT, we were able to contour the dose and instruct Mr. Dholakiya to hold his breath for 15-second periods during treatment.”

Dholakiya, a local educator, was relieved to hear that IMRT offered him a chance against this typically fatal disease. “The doctors at Kailash told me this is one of the most patient-friendly treatments available,” says Dholakiya, who feels positive about his chances. “Overall, I feel much better in myself. I know I’m going to win.”

SAVING LIVES IN CHILE

Dr. Pelayo Besa at the Centro de Cáncer at Pontificia Universidad Católica, Santiago, Chile, has been attracting patients from all over South America. Most recently, Hugo Victario, a 61-year-old patient with prostate cancer, traveled from his home in Argentina to receive IMRT.

“I did a lot of Internet research,” Victario explains. “My doctor confirmed that IMRT would be the best treatment.” Victario’s search took him from Argentina 1,000 miles across the Andes to Dr. Besa in Chile, who prescribed 39 treatment sessions over the course of two months. “Today I feel great and life is back to normal,” Victario says. “Except now I see life differently. I make more time to appreciate all the small things that come together to make life happy.”

INSPIRING HOPE IN BRAZIL

Since the end of 2004, João Victor Salvajoli, MD, Chief of the Radiation Oncology Department at Hospital AC Camargo (Hospital do Câncer) in São Paulo, Brazil, has treated about 50 patients with IMRT. One of Dr. Salvajoli’s patients, 79-year-old Hector Afonso Mita, says that incurring fewer side effects was a key factor in his decision to opt for IMRT. “When I found out I had prostate cancer, I immediately consulted with three doctors,” Mita says. “I was soon convinced that radiotherapy was the best method and the results have proved this to be true. Now I feel like Lance Armstrong—I have at least 30 years left.”

CONQUERING CANCER IN FRANCE

The Centre Georges-Francois Leclerc in Dijon, France, is one of 20 cancer centers participating in the French government’s initiative to defeat cancer. The center routinely treats about 15 patients each day, mainly focusing on gynecological malignancies. “IMRT is particularly useful because it allows us to deliver much higher doses than in the past,” says Philippe Maingon, professor of radiation oncology and head of the radiation oncology department at the center. In a recent case, a 33-year-old cervical cancer patient was able to receive a particularly high dose of radiation after another tumor appeared in a nearby lymph node. “Without IMRT, that would not have been possible because of the risk of damage to the small bowel area,” Maingon explains. “IMRT enabled us to increase the dose and destroy the tumor.” **V**

Growing Demand. Patients in countries around the world including Chile, Brazil, and France (from top) are seeking access to IMRT treatments.

