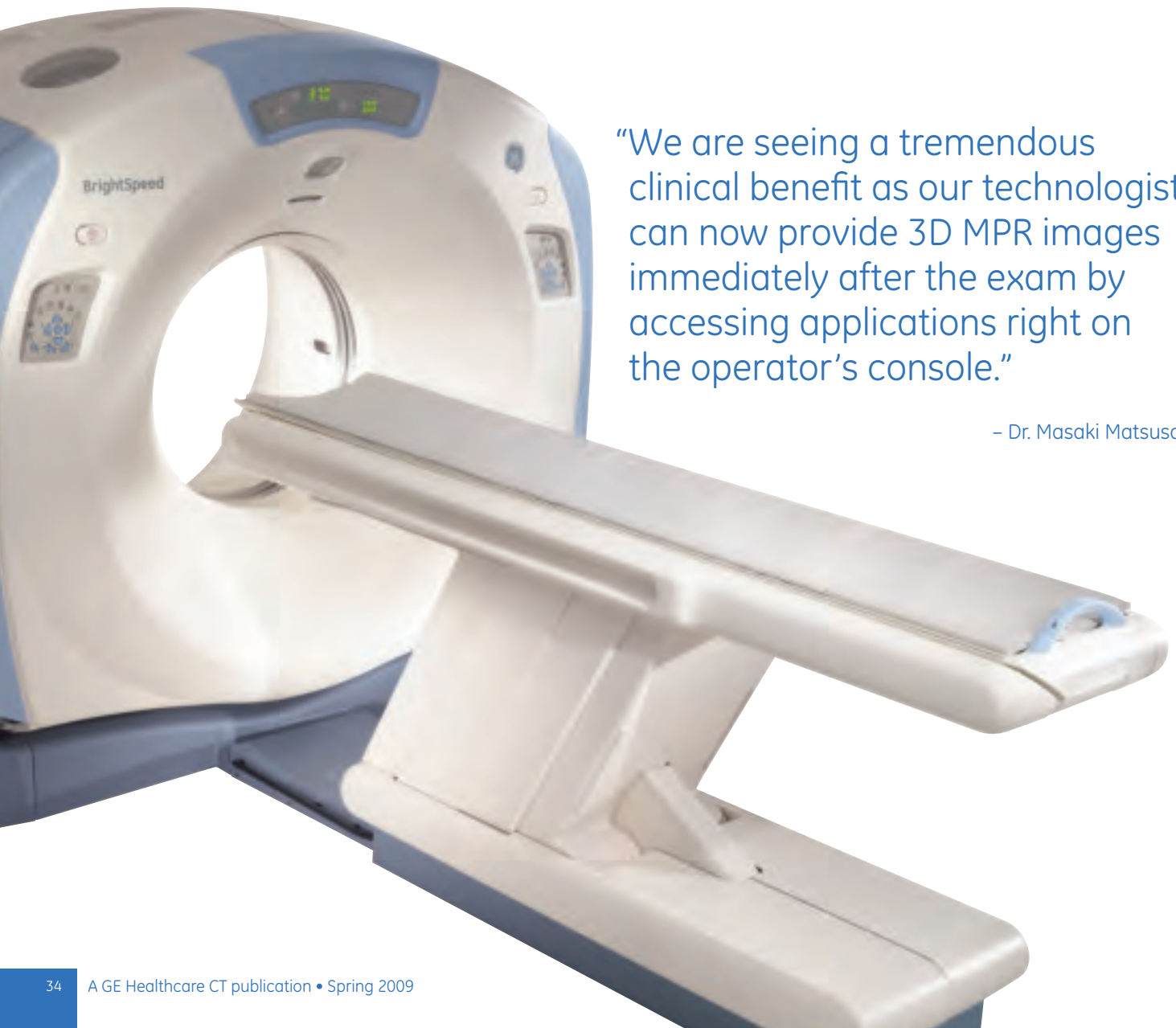


Compact, Multi-detector CT Answers the Imaging Challenges for Japan's Most Modern Hospitals



“We are seeing a tremendous clinical benefit as our technologists can now provide 3D MPR images immediately after the exam by accessing applications right on the operator’s console.”

– Dr. Masaki Matsusako

For many hospitals, space is at a premium. Replacing older systems with newer technology is often hampered by the fact a site does not have the additional space needed for a larger system.

Recognizing this, GE Healthcare introduced a new family of CT systems that provide the power of advanced imaging capabilities with a compact footprint and easy-to-use interface. With LightSpeed® VCT technology inside, the BrightSpeed® Select family of CT systems delivers exceptional images, fast-paced productivity and remarkable reliability of GE's industry-leading LightSpeed scanners.

So when it was time for St. Luke's International Hospital (Tokyo, Japan) to upgrade a GE Healthcare HiSpeed® NX/i CT scanner, the facility sought a system with advanced technology that could fit into the existing CT room without undergoing reconstruction. According to Masaki Matsusako, MD, Katsunori Oikado, MD, and Takayuki Suyama, RT, the facility examined several 16-slice scanners based upon image quality, ease of use, and dose performance.

The answer became clear after evaluation of the BrightSpeed Elite Select, a 16-slice CT system. Requiring less than 234 square feet (12'11" x 19'3") St. Luke's discovered they could install the system into the existing space of the two-slice HiSpeed NX/i CT scanner.

Clinical capability and patient throughput were additional considerations. The facility already had a LightSpeed¹⁶. Dr. Matsusako knew that any significant difference in clinical capability between two scanners could compromise the facility's ability to handle its high patient volume.

Again, the BrightSpeed Elite Select rose to the challenge. With the same easy-to-use and familiar interface as GE's LightSpeed systems, St. Luke's discovered that technologists could easily move between both CT systems from an operational standpoint.

"BrightSpeed Elite Select is a well-balanced system with a very accurate mA modulation," says Suyama. "One technologist can operate it without sacrificing patient throughput."

The BrightSpeed Elite Select contains many of the same technological advancements found in the highly regarded LightSpeed VCT. For instance, GE's exclusive Volara™ 24-bit Digital Data Acquisition Systems (DAS) delivers high processing power for high-resolution images and low-dose performance. It reduces noise up to 33%, resulting in proven image quality in signal-starved areas, such as shoulders, hips, and large patients.



About the facility

Japan's first modern hospital, St. Luke's International Hospital (Tokyo) was founded in 1902 by a dedicated missionary, Dr. Rudolph Bolling Teusler. A statement attributed to Dr. Teusler explains the philosophy of St. Luke's as, "This hospital is a living organism designed to demonstrate in convincing terms the transmuting power of Christian love when applied in relief of human suffering."

There are three major segments for medical care at St. Luke's International Hospital.

1. **Comprehensive Centralized Services:** St. Luke's is proud to be the first hospital in Japan to develop a centralized approach to radiology, anesthesiology, pathology, and clinical laboratory, thereby achieving optimum efficiency in the delivery of diagnostic and therapeutic services.
2. **Ward Residency and Attending Doctor System:** St. Luke's residency and attending doctor system affords invaluable opportunities for onsite learning. Under the supervision of attending doctors, full-time residents stationed in the wards of internal medicine, surgery, pediatric, and obstetrics and gynecology are directly responsible for the care of inpatients. Specialized training and mentoring are available from chief and senior residents in each ward.
3. **Clinical Preventive Service:** One of St. Luke's core beliefs surrounding patient care is that prevention is just as important as the treatment of disease or injury, and that clinicians can and should exercise leadership in the ongoing improvement of public health services. In 1954, St. Luke's became the first hospital in Japan to provide preventive examinations for company workers. Since then, these services have expanded, from one-week, three-day in-hospital examinations to one-day ambulatory check-ups, brain scans, lung cancer screening, prenatal education and post-partum care for mothers and infants, including Well Baby Clinics.

In 2002, St. Luke's celebrated its 100th anniversary and today continues to explore the cutting edge of medicine and technology.



Takayuki Suyama, RT

Katsunori Oikado, MD

Yukihsa Saida, MD,
Chief Radiologist

Masaki Matsusako, MD

In fact, St. Luke's radiology team prefers the BrightSpeed® Elite Select for head, pediatric, and interventional procedures because of the system's image quality and dose performance. For all emergency patient exams, it is the scanner of choice due to usability and flexibility. Consistent, superb image quality is equally attained by both seasoned and new technologists.

Dr. Oikado notes that the BrightSpeed routinely performs 1.25 mm helical scans, which is particularly beneficial for chest exams. "With the BrightSpeed's rapid acquisition time, we see fewer motion artifacts around the ascending aorta and left lung," he adds.

Plus, technology such as the Freedom Workspace table and the Xstream™ FX workflow and productivity engine make the BrightSpeed Elite Select stand out at St. Luke's. For instance, lightning-quick image reconstruction is just one key feature that impacts the workflow productivity of both technologists and radiologists.

Explains Dr. Matsusako, "We are seeing a tremendous clinical benefit as our technologists can now provide 3D MPR images immediately after the exam by accessing applications right on the operator's console. This is especially useful for the road mapping of interventional procedures such as RF ablation."

Features such as auto segmentation tools and one-touch protocols help St. Luke's technologists seamlessly handle large datasets without sacrificing time. The impact has already been felt. "We now perform 10% more exams each day than with our previous scanner," adds Mr. Suyama. Each day, the department conducts approximately 50 of its 90 exams on the BrightSpeed Elite Select.

"Great image quality is really the biggest benefit of using our BrightSpeed system," states Dr. Oikado. In a hospital that consistently uses advanced applications, including AutoBone® and the Add Vessel tool in VolumeViewer,™ it stands to reason that image quality would be a major factor in the type of CT scanning system being depended on for routine radiology exams.

With superb image quality, improved workflow, and usability, the BrightSpeed Elite Select has helped St. Luke's deliver a modern solution into a compact space for maximum results. ■