



From left to right: Dr. Frassi, Dr. Bernardara and Dr. Bernasconi from the Studio Radiologico Bernasconi, Seregno, Italy.



Interview with Dr. Paolo Bernasconi (the Studio Radiologico Bernasconi S.r.L., Seregno, Italy) about their experiences with the Vantage Elan / NX Edition 1.5T MR system from Canon Medical.

Vantage Elan / NX Edition - Exceeding Expectations

The Studio Radiologico Bernasconi S.r.L. is a specialist diagnostic imaging clinic founded 70 years ago in Seregno, Lombardy, an area in northern Italy with approximately 840,000 inhabitants. It was one of the very first healthcare facilities in Europe to install a new Vantage Elan / NX Edition 1.5T MR system from Canon Medical. The new system has enabled the clinic to provide even better image quality and has drastically reduced scan time across all anatomies. Radiologists at the clinic spoke to VISIONS to explain what a difference the Vantage Elan / NX Edition has already made.

Already renowned for providing some of the highest quality imaging services in Italy, the Studio Radiologico Bernasconi is an accredited private clinic that carries out work for the Lombardy region on behalf of the Italian national health service. Its areas of expertise include breast, oncology, musculoskeletal and dental diagnostics, and it handles around 70,000 services per year. With medical staff comprising of

eight radiologists, anesthetists, medical radiology technicians, nurses and administrative staff, the clinic is headed by Dr. Paolo Bernasconi.

“We are well-known for delivering outstanding image quality and strive to achieve diagnostic confidence as a top priority,” remarked Dr. Bernasconi. “To maintain this capability, we need top class technologies.”



“Our new Vantage Elan / NX Edition has significantly improved the quality of all examination types and simultaneously reduced examination times.”

Dr. Bernasconi, Studio Radiologico Bernasconi, Seregno, Italy.

Benefits of 15 years of collaboration

This capability has been made possible by a 15-year relationship with Canon Medical.

“Our relationship with Canon started in 2007 when we bought a Toshiba Aplio XG ultrasound scanner. We were very satisfied with it and particularly appreciated the image quality and high reliability of the system,” said Dr. Bernasconi. “In 2011, I decided to discontinue another brand of CT scanner and opted for Canon Medical’s

Aquilion 64 CT, which offered much better performance. And as I was fully satisfied with Canon, in 2012 I decided to replace the Aplio XG ultrasound scanner with an Aplio 500.”

“A ‘turning point’ came in 2014 when our clinic purchased a Canon Astelion CT scanner, then in 2015, our first Aplio a and Xario ultrasound system also from Canon,” he continued. “Finally, when we moved to our new facility in 2016, we replaced various brands of equipment with Canon systems, such as a Vantage Elan MRI in 2016, several

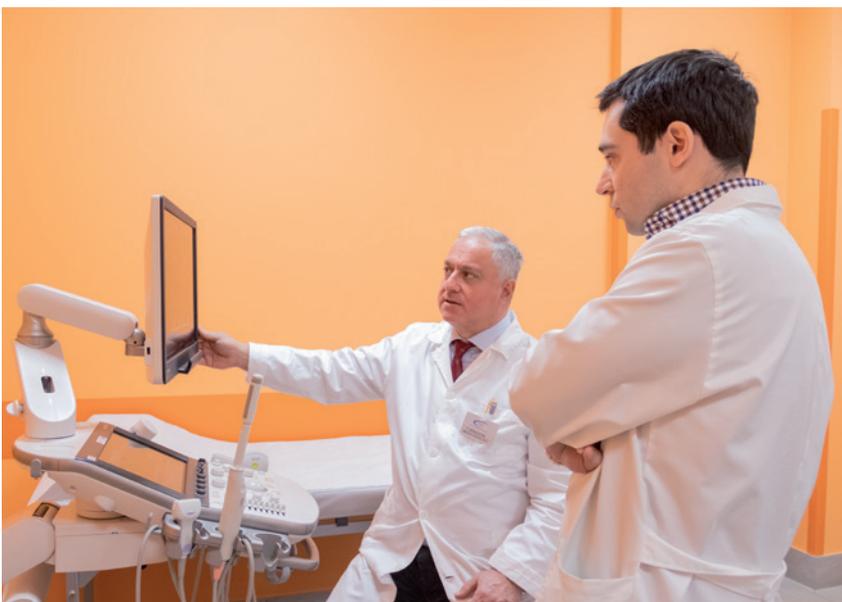
ultrasound units like the Aplio i800 in 2017, two Aplio a450s, one i600 and an a-series in 2018. The Aquilion Lightning CT was installed in 2019.”

In 2021, the clinic partnered on a pilot project with Canon Medical to implement the world’s first MR Deep Learning reconstruction technology: Advanced intelligence Clear-IQ Engine (AiCE). Which was installed on the new Vantage Elan / NX Edition MR system.

Supporting growth of an expanding healthcare facility

While expanding the scope and capacity of the clinic to meet increasing demand for high quality diagnostics, the progressive technology and structural modernization have necessitated relocation of the clinic to a more suitable space over the years.

In November 2016, it was moved to a 1600m² site, which was specially designed and built to accommodate the seven ultrasound machines, with five rooms dedicated to traditional radiology, a space for two Magnetic Resonance Imaging (MRI) rooms, a CT-room and ancillary areas for the influx of approximately 350 patients daily. In addition to diagnostic imaging, other rooms at the clinic are used for additional specialties, such as cardiology, heart surgery, gynecology,



Dr. Bernasconi and Dr. Papini from the Studio Radiologico Bernasconi, Seregno, Italy.



orthopaedics, urology, general surgery, vascular surgery and psychiatry.

Throughout this development period, Canon Medical has provided support and service. “My experience from Canon Medical has been and still is, positive both in sales and technical support,” remarked Dr. Bernasconi. “Compared to other vendors, one of Canon strengths is the direct contact with technicians in setting up the devices, which improves the efficiency in patients’ throughput.”

Significant improvements

Within a matter of months, the Vantage Elan / NX Edition has brought many benefits to the clinic in terms of productivity. The main new features are AiCE, Compressed SPEEDER and the combination of both technologies.

“Our new Vantage Elan / NX Edition has significantly improved the quality of all examination types, while simultaneously reducing examination times,” said Dr. Bernasconi. “This is most noticeable in the abdomen and multi-parametric prostate exams. Productivity has definitely been improved as we could increase the number of examinations performed every day. We also achieve way superior performance.”

“With the latest software upgrade, the machine’s performance has improved considerably in terms of image quality/ diagnostic quality and acquisition time on individual sequences,” added Dr. Attilio Bernandara, (Chief Radiology Technician). “The introduction of the AiCE system has meant that we can obtain images of a quality comparable to machines with a higher magnetic field, while remaining within the range of our working times. AiCE allows you to have a signal-to-noise ratio that enables you to have high-level diagnostic images in shorter times.”

“With uncooperative patients, we can complete the examination with good quality images in a much shorter time using Compressed SPEEDER (CS),” added Dr. Bernandara. “We introduced previously unavailable sequences on our system (e.g. WFS DIXON sequence for FSE2D) and considerably improved the STIR sequences.”

Dr. Bernandara has seen improvements in every sequence and anatomical region (body, neurology, musculoskeletal imaging etc.) with the Vantage Elan / NX Edition.



Dr. Bernasconi and Dr. Papini from the Studio Radiologico Bernasconi, Seregno, Italy.



“These were evident in the protocol for the prostate examination where the timing was reduced by almost 50 per cent while obtaining high-quality images,” he said. “Neurological examinations have also undergone significant improvements, for example with Fast 3D mode, which has significantly reduced the time of angiography sequences while increasing image quality.

Better for patients

Patients at the clinic also experience significant benefits from the Vantage Elan / NX Edition. “From a patient perspective, the ability to obtain high image quality scans in less time is crucial for patients undergoing long time examinations, such as patients suffering from multiple sclerosis (MS) or oncology patients,” said Dr. Papini Giacomo (radiologist).

“Now, we can routinely perform 3D FLAIR acquisition, not only in selected patients, such as ‘post-op’, but also as part of routine examinations. This increases our quality standards of care. We achieve shorter scan times while retaining overall good image quality, even in uncooperative patients. For example, this is particularly helpful in patients with spinal disc herniation or vertebral fractures, who find it hard to remain still due to sever of pain.”

Space- and cost savings

In addition to the imaging and workflow benefits of the Vantage Elan / NX Edition, the system has an industry-leading small footprint, can be installed rapidly and helps towards optimizing operational costs for the hospital with a low power consumption. //



Find out more about Canon Medical's Vantage Elan / NX Edition at our [website](#).

Canon Medical's Vantage Elan / NX Edition

The new functionalities for Vantage Elan / NX Edition are designed around customer and patients benefits. The demand for reduced scan times as well as high-resolution images without sacrificing scan time remains the first priority for all radiologists. Advanced intelligent Clear-IQ Engine (AiCE) and Compressed SPEEDER successfully answered to this necessity. AiCE is applicable on 96% of the MRI sequences, where it simultaneously reduces scan times as well as improving image quality. Fast 3D mode - a technique to accelerate 3D studies by up to 50% - is now extended to cover Time of Flight studies and is available on the Vantage Elan / NX Edition.

An easy and simple workflow is always a priority for MR users. The new software empowers technologists with multiple functionalities like ForeSee View, KneeLine+, SpineLine+ and more. These techniques assure reproducible image quality, automate the scan planning process and avoid the need to re-plan and re-scan in challenging studies including cardiac and ankle examinations, for example.



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