



Enabling Digital Transformation in SPECT & SPECT/CT

Radical new design of Spectrum Dynamics' VERITON system ensures digital SPECT has staying power.

By Christian O'Connor

An article by Spectrum Dynamics, an SNMMI Value Initiative Industry Alliance Principal Member Partner

There is little debate that SPECT and SPECT/CT imaging have proven benefits in lesion detection, better definition and localization of disease when compared to traditional planar imaging. But there is an additional question to be asked when evaluating new equipment purchases and the future growth potential of a nuclear medicine service line:

"Should we pursue digital technology with SPECT as we have elsewhere in imaging?"

To confidently answer this industry advocates must first create awareness as to the clinical effectiveness of digital nuclear technology, evaluate the operational and economic impact, and understand any tradeoffs between options in the marketplace.

Much of this thought leadership is coming from perhaps an unexpected place. Spectrum Dynamics Medical, a company well known in nuclear cardiology for its market leading D-SPECT® series cameras, is the new disruptive player in radiology's general purpose nuclear marketplace. Drawing from the digital experience of the last decade with D-SPECT, Spectrum is making industry take notice with the new VERITON™ series of SPECT and SPECT/CT systems. The game changing nature of this technology since its FDA and CE approval has been recognized by consumers, lauded by media, and recently awarded by Frost & Sullivan as a key enabling technology for growth. This new system addresses historical design barriers and creates a new industry standard in digital SPECT.

Early 3rd party general purpose digital designs showed promise, but adoption fell short of expectations. Converting

a dual head camera to the more expensive CZT technology and not realizing a broader clinical impact for SPECT offered too small a value proposition. Spectrum engineers realized early that a digital detector alone wouldn't appreciably advance the science. So, in a bold move Spectrum Dynamics decided to literally change the shape of nuclear medicine in advancing an unprecedented 360o CZT detector design. This shift to comprehensive detector coverage in VERITON delivered both the improved resolution and 3x volumetric sensitivity needed to truly affect change.

If you've seen the mesmerizing video online or live at a trade show, you'll know from first glance the VERITON scanner is different. Twelve digital detector arrays mounted on robotic arms trace the contours of the patient to maximize photon detection. Swiveling detectors hidden from view beneath the radome covers can be used for a full or a focused field of view acquisition. The additional photon detection efficiency translates to shorter scan times and twice the throughput of conventional dual head SPECT cameras.

When the highest sensitivity SPECT system is further enhanced with fully diagnostic, wide-bore CT, scalable to 128-slices, VERITON-CT 64™ becomes the industry's most advanced hybrid nuclear camera.

Imaging has seen the shift to digital technology sweep across X-Ray, Mammography, PET/CT and now SPECT. Given the extended useful life of imaging assets seen in the

last decade, choosing to not invest in the latest digital innovation relegates an institution to lagging industry standards for years to follow. Consider not only the impact on clinical outcomes but the ability to attract key talent, participate in research grants and differentiate in competitive markets.

While the VERITON's improved lesion detectability is a win for patients, it could be just the start. VERITON opens an intriguing array of operational and economic opportunities. Faster scan times at lower injected doses can transform the way imaging is scheduled and executed. The ability to consolidate systems has been confirmed by early adopters and prospective buyers. Consider also the impact of returning certain cases to SPECT and restoring capacity to an overloaded PET/CT system, or repurposing a freed-up room for another revenue generating technology.

Spectrum Dynamics is the catalyst ushering in a new era for nuclear medicine. Molecular imaging can at times be an afterthought vying for resources against the aura and revenue potential of a busy CT, MR or interventional lab. In recent years PET/CT focus has increased with the demonstrated impact of digital imaging and new radiopharmaceuticals, during which SPECT imaging took a back seat. But the impact of aged SPECT assets in the market must be addressed and the timing to do so is now. Effective digital general purpose SPECT imaging is one of the greatest breakthroughs in years to fuel nuclear medicine growth. To learn more visit: www.spectrum-dynamics.com