



SPECTRUM
DYNAMICS MEDICAL

Clinical Care Path Defined by 360° CZT Digital SPECT/CT

15 years of breakthrough CZT-based 3D cardiac imaging, Spectrum Dynamics leads the transformation of nuclear medicine with its VERITON-CT® digital SPECT/CT



Transforming the nuclear medicine industry requires a true paradigm shift to bend the healthcare cost curve and improve clinical outcomes. Incremental improvements in million-dollar technology or add-ons to software simply aren't enough to achieve better and less expensive care. Fortunately, with companies like Spectrum Dynamics, with the vision, agility, and entrepreneurial spirit to bring new clinical innovations to the industry, the future looks bright for nuclear medicine and SPECT technology. In the 15 years since Spectrum Dynamics introduced the first digital Cadmium-Zinc-Telluride (CZT) based cardiac SPECT camera, it has remained focused on SPECT imaging advancements that improve the clinician's ability to guide therapy decisions and deliver better outcomes.

When Spectrum Dynamics was founded in 2000, its inventors envisioned digital CZT-based technology as a way to dramatically improve the quality of SPECT images. In 2006, it proved its theory with its D-SPECT® Cardiac Scanner, featuring its unique swiveling design and extraordinary sensitivity gains. D-SPECT® was the first major innovation in 30 years and is used today in hundreds of medical centers worldwide.

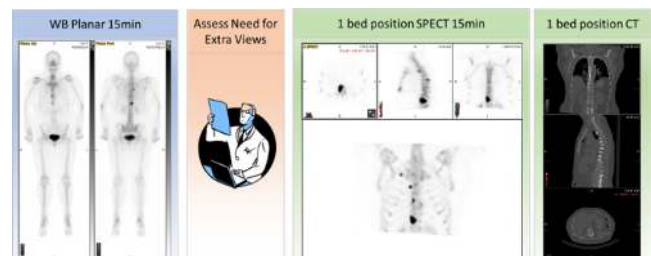
Spectrum has continuously expanded its offerings, scanner features, and functionalities to address the SPECT imaging limitations of older technology. In 2018, the company introduced the revolutionary CZT-based, 360° detector design VERITON-CT®, with a fully diagnostic, 80 cm wide-bore high-resolution 64-slice CT — the industry's most advanced hybrid nuclear camera.

www.spectrum-dynamics.com

Better data acquisition to detect and monitor change

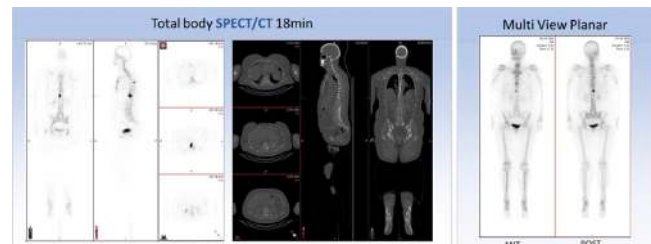
VERITON-CT® was designed with innovations that provide an 8 to 15 times improvement in sensitivity compared to a NaI conventional camera. Clinicians are ensured exceptional efficiency and image quality. The hybrid system's unique swiveling detector design, originated with D-SPECT scanner, transforms routine nuclear medicine.

Transition from Analog NaI Bone Workflow



Planar + Limited SPECT/CT = 30 min.

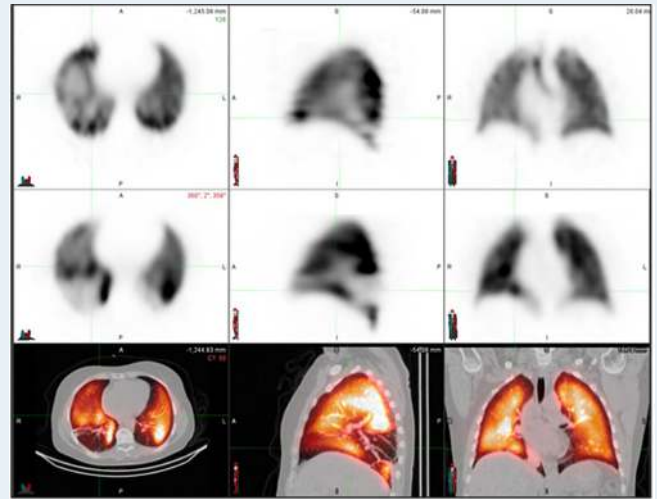
To Digital 360° CZT VERITON Total Body Workflow



Total Body SPECT/CT + Multi View Planar = 18 min.

Spectrum's proprietary **Broadview Technology** is implemented in twelve swiveling detector assemblies that move in radial and circular directions toward the patient's body to detect the exact location for imaging. The user defines the area to collect the information: organ focus or broad focus. The detectors contain proximity sensors that set them as close as possible to the patient's body to provide the maximum collection of photons. Because 100 percent of each detector's surface is utilized, the VERITON-CT provides superior coverage and exceptional sensitivity that lowers the radiation doses required for both SPECT and CT up to 50%, reducing both patient and staff exposure to radiation.

The scanner was designed with the patient's comfort in mind. The axial field of view, 32cm, ensures organs such as lungs are imaged in one bed position scan. Its 80cm bore, for both SPECT and CT, accommodates patients of all sizes. For patients worried about feeling claustrophobic, detectors will automatically pull back if they are accidentally or intentionally touched.



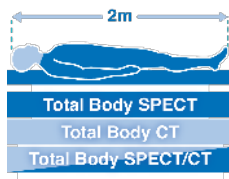
Ventilation: ^{99m}Tc-Technegas®; Perfusion: ^{99m}Tc-MAA; 64sl CT
Images: CHRU Nancy, France

Spectrum Dynamics has integrated its **TruView Console** into the VERITON-CT system, providing a single platform that handles acquisition, advanced reconstruction, and quantitative post-processing of 3D data in one place for true multi-tasking and workflow optimization. Based on VERITON's care path design, the technologist can customize TruView exam parameters according to protocol and patient's needs and move bed side to utilize in-room gantry visual tools to optimize the exam based on the patient's tolerance. Unique features for efficient and consistent patient positioning include a first-of-its-kind persistence scope and bed-side interactive scan range definition.



BroadView Technology

Proprietary *swivel* head detector design provides increased sensitivity for faster scans



Total Body 3D Imaging

2m coverage: head to feet;
Real-time body contouring
SPECT | CT | SPECT/CT

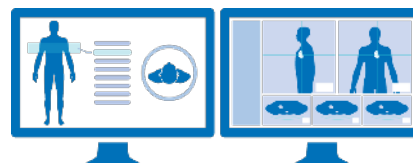


80cm NM and CT bore

Designed to accommodate bodies of all sizes



Choice of **16/64** slice diagnostic CT capabilities



TruView Console

One platform, one location for clinical care decision-making:

1. Acquisition
2. Advanced quantitative reconstruction
3. Both 3D and 4D data analysis and review

More accurate data: informed decisions

VERITON's TruView Console provides advanced reconstruction algorithms only offered with PET/CT scanners until now. Standard selections include tools to address partial volume effect, down scatter, septa penetration, and metal artifact. MIM-SD console integration provides the segmentation and analysis tools to identify lesions and quantitate key parameters for informed clinical decisions, empowering both technologists and clinicians.




Thanks to the company's foresight and agility, the VERITON-CT anticipates future needs with advanced diagnostic capabilities that early adopters and researchers can deploy, such as dynamic imaging. TruFlow or 4D SPECT/CT imaging for key applications: myocardial flow, 3-phase bone scan and renogram. The appeal of faster scans, lower doses, fully quantitative images and improved image quality offers real potential to bring more patients and studies back to nuclear medicine and pursue research opportunities.

From 2D to routine 3D imaging, Spectrum Dynamics is continuously driving new clinical applications in Nuclear Medicine with its focus on digital technology and innovation.

Its vision is to empower institutions that want to differentiate their programs in a competitive market to positively impact clinical outcomes in ways older technologies can't offer. In just 15 years, Spectrum Dynamics has led the way in innovation and has no intention of slowing down.

www.spectrum-dynamics.com

Total Body Bone Scan – SPECT/CT

Paget's Disease	Pseudoarthrosis	Fibrous Dysplasia
		
86 yr 178 cm	35 yr 175 cm	35 yr 175 cm

Scans courtesy of University Hospital De Toulouse, Toulouse, France
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