

NM/CT 870 CZT



BRING THEORY TO LIFE WITH CZT

NM/CT 870 CZT is the third generation of our general purpose digital SPECT/CT system designed with breakthrough CZT detection technology.

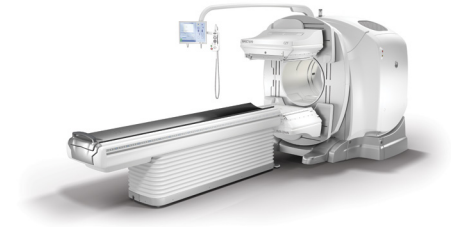
CZT is the key component to the future of nuclear medicine. Not only is it lighter and more compact than the NaI crystals used in analog technology, it's pixelated, which means there are tens of thousands of tiny 2.46 mm-sized pixels capturing events independently. Then, through registered collimation, each photon is directly converted into an electrical signal that more accurately identifies its location and energy. This design reduces the signal loss and noise inherent in conventional SPECT detection.

The result is increased spatial and energy resolution, consistently reproducible quantitation and a patient-centric system design that brings you closer to anatomies. NM/CT 870 CZT truly is a SPECT/CT that brings theory to life.

- | Super-premium solution leading a family of scalable SPECT and SPECT/CT systems
- | Photons directly converted to digital signal, reducing signal loss and noise that comes with analog detection technology
- | Up to 75 percent reduction in injected dose or scan time¹
- | Improved system spatial resolution, from 4.3 mm to 2.8 mm²
- | Exceptional energy resolution, 6.3 percent compared to 9.5 percent
- | Greater than 40 percent improvement in SPECT contrast-to-noise ratio³
- | 1.4 times higher count rates than conventional technology



SPECT/CT AS YOU HAVE NEVER SEEN IT BEFORE



NM/CT 870 CZT is a SPECT/CT built for consistent, reproducible quantitation. The improvements to detector performance that you get with CZT enable exceptional spatial and energy resolution compared to NaI detectors.

Not only that, but all of our new 800 Series SPECT/CT systems build on the success of the 600 Series with a collection of SPECT technology enhancements that add to the value of nuclear medicine. The all-new SmartConsole provides enhanced workflow, increased accessibility and untethered clinical collaboration. Step & Shoot Continuous SPECT acquisitions improve volume sensitivity compared to Step & Shoot acquisitions. Clarity 2D processing also enhances resolution by reducing planar image noise without degrading signal as it seamlessly blends original images with contrast enhanced versions.

These SPECT improvements, combined with CT advancements that include a 32-slice overlapped reconstruction capability, ASiR™ dose reduction technology, Q.AC, Wideview and Smart MAR, are what make this system capable of transforming your entire nuclear medicine experience.

SITING REQUIREMENTS

■ Minimum exam room size: 20'8" x 12'1" (6.30 m x 3.68 m)

■ Minimum control room size: 9'0" x 14'0" (2.74 m x 4.27 m)

References:

¹ Together with Clarity 2D and Evolution⁶ and compared to Discovery NM/CT 670 Pro/ES/DR without Clarity 2D and Evolution⁶. As demonstrated in phantom testing using a bone scan protocol, and the NEMA IEC Body Phantom. The actual time/dose reduction depends on the clinical task, patient size, anatomical location and clinical practice.

² At detector surface.

³ Demonstrated in phantom testing using NEMA IEC Body Phantom at 50% scan times with Evolution⁶. Compared to Discovery NM/CT 670 Pro/ES/DR.

⁴ In clinical practice, the use of NM/CT 870 CZT may improve quantitation of lesions larger than 5.5 mL, depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose or scan time to obtain the claimed quantitation accuracy for the particular clinical task.

⁵ In clinical practice, the use of NM/CT 870 CZT may improve lesion detectability depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose or scan time to obtain diagnostic image quality for the particular clinical task.



More accurately assess treatment response to guide your treatment planning decisions with increased quantitation accuracy⁴



Improve imaging results by scanning in closer proximity to your patients



Push nuclear medicine's boundaries by developing new diagnostic services



Continue your efforts to diagnose and stage disease earlier with smaller lesion detectability⁵



Discover new protocols enabling differential diagnosis by visualizing multiple tracers simultaneously



Pursue opportunities for tracer development and better utilization of currently available tracers



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