Fits you like no other

Philips BrightView XCT

Designed specifically for nuclear medicine departments, BrightView XCT brings together the best qualities of SPECT and CT without compromising either. This helps healthcare providers simplify workflow, improve clinical efficiency, and lower life cycle costs. Fewer artifacts and high resolution-low dose CT are enabled by a unique combination of design and technology. As compact and patient-friendly as the standard BrightView SPECT system, the BrightView XCT is easy to install, scalable, and upgradeable with the full support of Philips Services in every season of ownership.

“...the BrightView XCT is very helpful in the interpretation of nuclear medicine images by providing high quality localization and attenuation correction. The quality of the SPECT images is noticeably improved with the addition of attenuation and scatter correction."

Dr. Richard Myers, Chairman of Nuclear Medicine Division, Radiological Associates of Sacramento, CA
BrightView XCT benefits

CoPlanar FP
The heart of BrightView XCT is CoPlanar FP (flat panel), the unique integration of BrightView SPECT in a co-planar design with advanced Philips flat panel X-ray CT technology. Confidence in registration is improved over conventional systems because, in many cases, the table does not move between SPECT and CT studies.

High Resolution CT
A unique combination of design and technology enables high resolution CT images with slices as thin as 0.33 mm. Acquisition of data in volume through true isotropic voxels provides high-quality images even when viewed at oblique angles.

Flexible Breathing
Due to intelligent design, BrightView XCT allows patients to breath normally during both SPECT and CT for attenuation correction, leading to greater comfort and better diaphragmatic alignment. During localization studies, a breath hold CT acquisition can be obtained in as short as 12 seconds, maintaining the image resolution and required anatomic detail over a 14 cm axial field of view.

Bone Sarcoma SPECT/CT:
0.33 mm thick isotropic CT slices; 24 second acquisition

Cardiac attenuation maps:
Gray was during tidal respiration (60 seconds)
Thermal during coached end-expiration breath hold (12 seconds)
Note differences in physiological states
Attenuation maps from a 60 second acquisition during tidal respiration.

Low Dose CT

BrightView XCT offers premium CT resolution at low dose levels—a fraction of a conventional diagnostic CT. Typical attenuation correction dose is < 1 mGy CTDI\textsubscript{vol}. Our high resolution approach supports low dose localization protocols as a result of the small detector element size used in the flat panel X-ray detector (Optimizing Detector Size in X-ray Imaging; Kachelrie & Kalender; IEEE 2005 Nuclear Science Symposium Conference Record).

The high resolution of the flat panel detector is a key feature that enables the projection data to be acquired isotropically, or evenly sampled in all dimensions.

CsI needle scintillator close-up: converts the x-rays to optical photons.

Amorphous silicon glass: converts the optical photons to electric charge.

Amorphous silicon close-up: each pixel is 194 x 194 micron.
Siting Advantages

BrightView XCT is as compact as it is intelligent, fitting in the space of a small nuclear medicine department. There is a potential for cost savings by not having to move walls and reinforce floors. An in-room shielded control area is available as an option, allowing the operator to remain in the room with the patient during the SPECT/CT procedure. The technologist operating the BrightView XCT requires no special licensing, in most cases, beyond the conventional requirements of nuclear medicine.