

OmniTom[®] Elite PCD

The future has arrived!

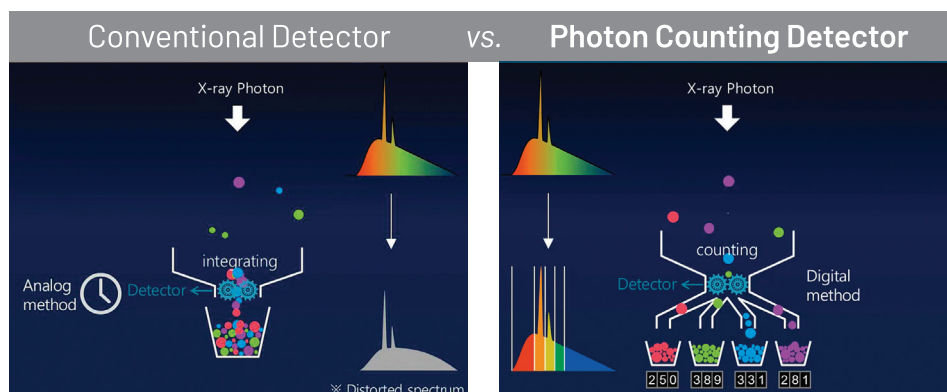
When a confident diagnosis is timely and critical, the OmniTom Elite Photon Counting mobile CT scanner advances your standard of care in a single scan.

Utilizing NeuroLogica's proprietary detector technology, the OmniTom Elite Photon Counting Detector (PCD) CT can directly measure the energy of x-ray photons relevant to the x-ray photon attenuation coefficient of tissue through which the x-rays have passed.

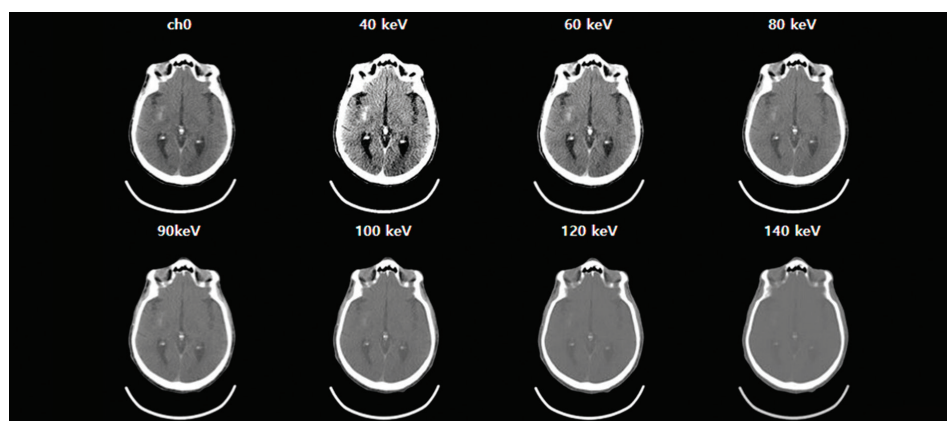


Photon counting detectors can measure the energy of each individual photon.

Traditional CT scanners use energy integrating detectors which measure the total amount of x-ray energy absorbed by the body.



Quantitative spectral capability of PCD-CT can provide accurate, simultaneous multi-energy images for material decomposition and VMI generation using a single exposure.



The first mobile photon-counting detector CT: the human images and technical performance study:

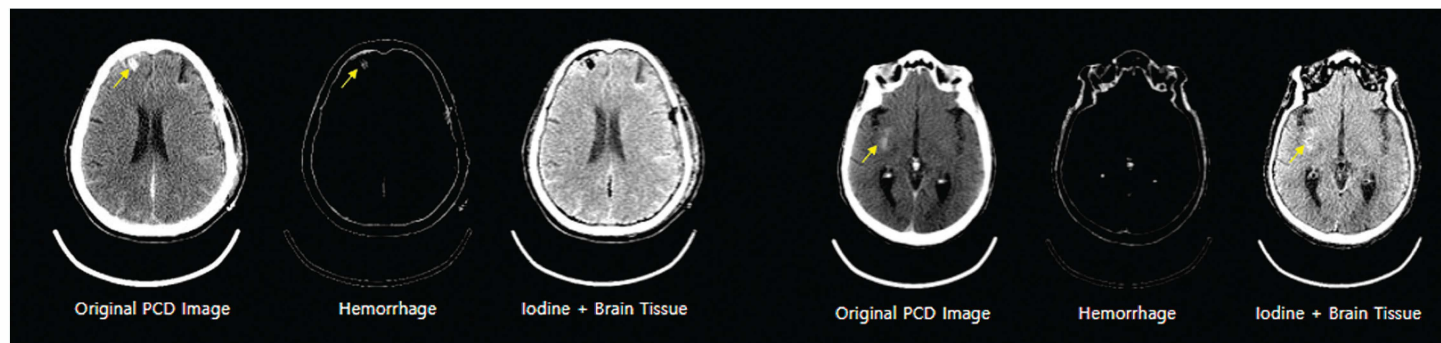
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Novel Photon Counting Detector (PCD) vs. Conventional Energy Integrating Detector (EID)*

- **Enhanced grey/white matter differentiation**
- **Better lesion characterization/delineation**
- **Better evaluation of ischemic and hemorrhagic stroke**
 - » Differentiate between infarcted and viable tissue
 - » Hemorrhagic transformation where blood flow to the brain is blocked
 - » Hemorrhage vs. clot
 - » Visualization and possible characterization of plaque
- **Ultra high spatial resolution for neuro and musculo-skeletal imaging**
- **Differentiation between materials driven by multi-energy material decomposition**
 - » Virtual non-contrast
 - » Iodine map
 - » Virtual mono-energetic image
- **Evaluation of stent structure with occlusion analysis**
- **Improved Iodine signal**
 - » Potential reduction in the amount of contrast administered to the patient
- **Improved Spatial Resolution, SNR and CNR**
 - » Equivalent contribution of each photon energy increased CNR at high kV
 - » Higher image resolution imaging for superior visualization of small structures
 - » Smaller detector size
- **Decreased Electronic Noise**
- **Artifact reduction**
 - » Streaking
 - » Beam hardening
 - » Metal
 - » Calcium blooming
- **Potential reduction of radiation dose**
 - » Photons with specific energy levels can be selected
 - » Reflected septum not required for each detector element – increased geometric efficiency

*Potential PCD applications. OmniTom Elite PCD is work under development and the above listed features/functionality is not yet integrated into the system.

Hemorrhage vs. Iodine



High Resolution

