Bringing the Power of Imaging to your Patient

NeuroLogica
A Subsidiary of Samsung Electronics

Retractable Lead Curtain

Handheld Operator's Console

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Critical Care

“Clearly, the ability to image patients at their point-of-care in the ICU will facilitate rapid clinical decision-making and reduce the risks associated with transport...by reducing staff and time requirement for transport, the portable scanner may achieve annual ’oPи P ̧Ў’ P o¸ ´ Ⅱ ' ▁ | , Ⅱ ▄ ©È i ̧℠Ƃ ̧P P” Ў’ X ’ ̧Ўи | ▁ ̧Ў’ a scanner dedicated for ICU patients allows for the conventional scanner to perform an additional 1182 outpatient studies each year. Together taken, the introduction of the portable scanner may offer a net ɬ ’ oŸoP ’ ɾ ɬŸɬXи o¸ ´ ▁ ' ’ | ' , ” ¯Ÿ и ▁ ɬ XЇPи Ƃɬ ̧Ї o¸ ¯иP oэɬЇ ̧и oŸ ̧Ў : ̧ иои ̧ɜ ɾ ɬŸɬXи oЎɬЇ , Ƃɬ ̧ЇP ’ Ї ɬ ̧ иɬЇ и ▁ ̧Ў $2,619,000.” [1]

Operating Room

“Intraoperative portable-head CT leads to change in operative plans in 32% of selected cases. This potentially avoids return to the operating room and can diagnose or rule out remote lesions in need of additional ¯Ÿиɬ ЇЎɬŸи oŸ ▌ ə ▁ ɬ эоїи ̧ ɾɜɬ ’ oŸX ’ і Ї ̧и oŸ ̧℠ P ¸ оЇ increased versatility and cost-effectiveness compared ио XFɬ : PƂPиɬ P P ▌ и [2]

Pediatric ICU

“Two-thirds of CT scans obtained in the PICU were portable because of patients’ intensity of therapy and illness severity. Portable CT showed major new pathology in greater than 1/3 and led to a change in management in 1/4 of higher acuity patients scanned. The estimated radiation dose from portable CT is within the current national guidelines.” [3]

Trauma

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Advanced Imaging

Rapid Scans Right at the Point-of-Care

Reduce Artifacts

The highly advanced N-DAS detectors are built within a temperature regulated housing that helps maintain calibration between scans. An all new translation system for scanning, tracks the movement of the OmniTom® Elite with submilimeter accuracy.

VlɔlŸʾɬ roPɬ©ˬXˉɬŸʾƃlŸ:åPlʾɬ filɔˉиƃ

The combination of an ultra-low electronic noise detector and a 24-bit lossless imaging chain Ïɬ:iʾɬPlÏӣXˉlɔˉ Plʾɬ ŸoˉPɬʾÏɬlцɬ:rƃɬɔɬʾиÏoŸˉʾP▮ OmniTom® Elite is proud to support MITA smart dose and is XR-29 compliant with structured dose reporting lŸ:Риl Ÿ:lÏ:ˉнɬ:эÏоиоʾоɔP▮ !иоPlӣʾ ©ҒэоPiÏɬ Control (AEC) provides mA modulation during helical lŸ:lғˉlɔPʾlŸŸˉŸʾ ˉŸoï:ɬÏиoÏɬʾ iɔlцɬ:oPɬlŸ:ˉPlʾɬ quality.

ŏlғˉPˉнɬ ÕoÏⁱ хóˆ ©ˬXˉɬŸʾƃ

Perform CT angiography and CT perfusion at the rɬ:Pˉ:ɬ▮ !иоPlӣʾ rоɔiPиÏlʾiˉŸʾ _ ɬɔэPио PlғˉPˉнɬ ˆ oÏⁱ хóˆ ɬˬXˉɬŸʾƃ▮–

Advanced Reconstruction at your Fingertips

Fully featured advanced reconstruction for 3D and multiplanar reformation including average, minimum lŸ: PlғˉPiPˉŸиɬŸPˉиƃ эÏoˉɬʾӣoŸ| lŸ:orɔ̄Èiɬ:lцlPɬиP▮

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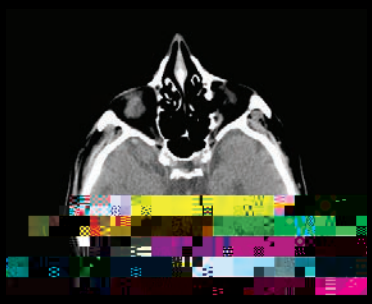
Image Gallery

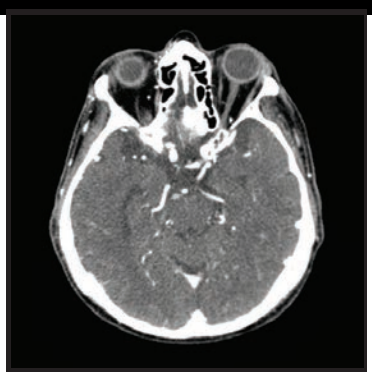
Adult Bleed



Adult Neuro

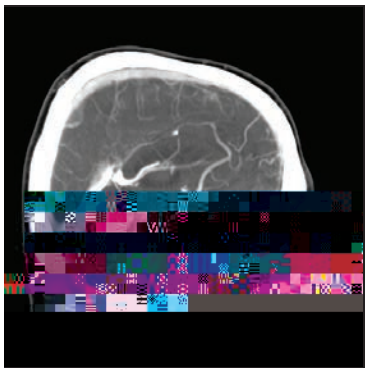
CTA

Coronal CTA

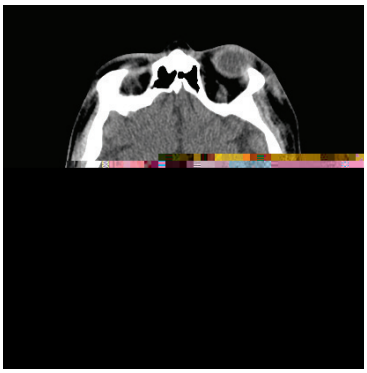


CTA

Adult Craniectomy



Sagittal CTA



Stroke

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Radiation Safety

Safe for Staff

According to the ALARA standard 500mRem/year per operator and using a typical brain scan protocol at a distance of 2 meters (6 feet) from the OmniTom's isocenter, your operator can perform over 26 scans per day, for 250 days per year without any additional lead protection. The OmniTom® Elite front cover is internally ʾoιиɬ:⁀¯и_ ¬▮‘ P P ɔιPˉŸιиɬ:ɔɬι: ɔÏoՇ:ˉŸ’ PιFˉP i P Pʾιииɬ Ï Ïɬ: i ʾй¯oŸ▮åŸ ι: :ˉй¯oŸ⌡_ ɬFиɬÏŸιɔɔБ PoiŸиɬ: 0.5 Pb equivalent curtains in the front and one .25mm in the back provide added shielding to the gantry.

Safe for Patients

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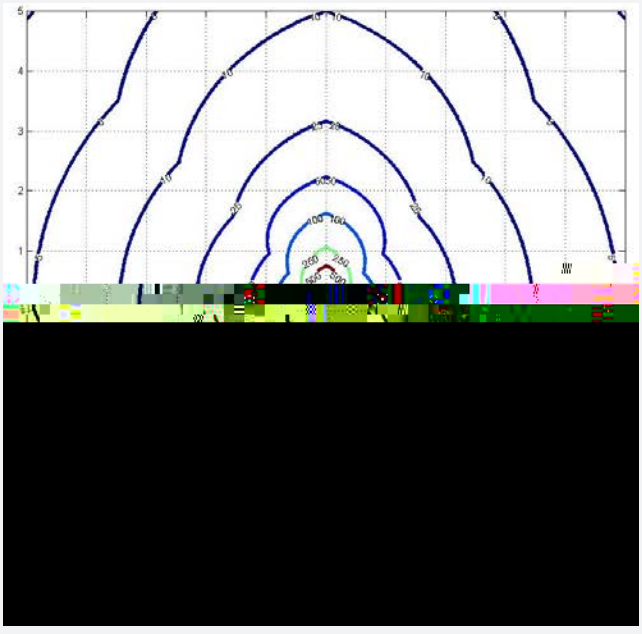

©FɔoPiÏɬ¯Poℑ¯ŸɬP¸oÏ‖_—¦ⁱ 8ɔ⌡_, P ! Front and Back Curtains closed, No Patient Absorption

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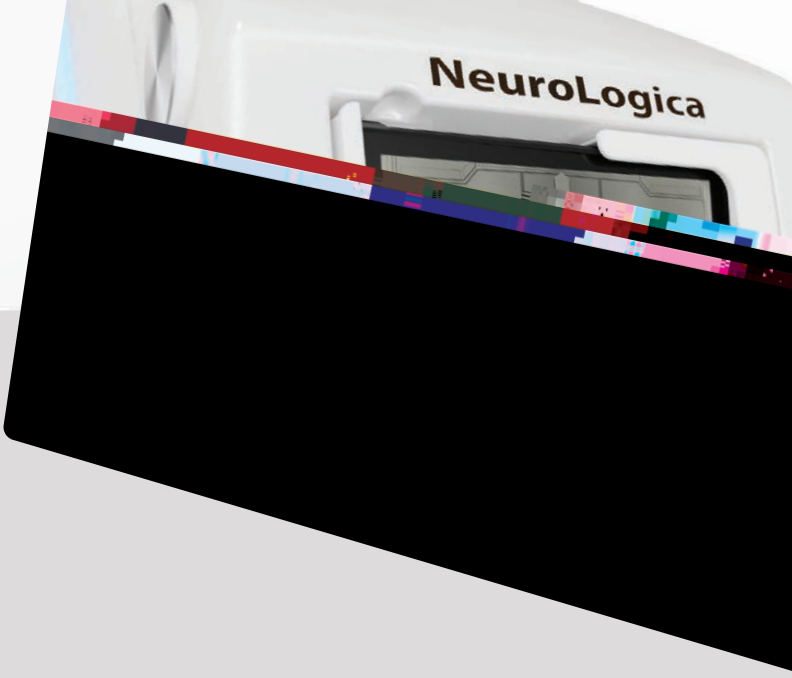
OmniTom® Elite scatter data was acquired using the CTDI 16cm head phantom with the back curtain closed and the front curtains partially closed. The data was measured using a scan protocol with 120 kV, 25 mA and 2 second scans. The iso-dose curve are presented in uR per scan. The data can be converted to uRem by using the multiplication factor 0.87.

(Radcal Corp., 20X6- 1800 1800 cc probe, 2026C meter)



Data Protection

Data Encryption

To prevent unauthorized access to sensitive data, Neurologica has implemented "data-at-rest" encryption. CT medical devices store all patient information in an encrypted format. Disk encryption is primarily used to encrypt the entire storage, requiring a passphrase to access the system.

Access Control

Account Management

NeuroLogica's CT medical devices provide role based authentication to ensure that users have access to only the necessary functions needed for their role. User

Audit Trail

NeuroLogica's CT medical devices track user activities performed on the devices in order to aid in the investigation of cybersecurity threats. The audit trail records major security logs such as user login info, creation and

Vulnerability Assessment

Vulnerability Scans

Neurologica uses monthly vulnerability scans to discover any vulnerabilities

addressed in future software releases.

NeuroLogica, the healthcare subsidiary of Samsung Electronics Co., Ltd., develops, manufactures, and markets innovative imaging technologies and is committed to delivering fast, easy and accurate diagnostic solutions to healthcare providers. NeuroLogica, the global corporate headquarters and manufacturer of mobile computed tomography, is also the US headquarters for sales, marketing and distribution of all Samsung digital radiography and ultrasound systems. NeuroLogica's growing portfolio of advanced medical technologies are used worldwide in leading healthcare institutions

References

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2) Carlson, Andrew P, Jeremy Phelps, and Howard Yonas. "Alterations in Surgical Plan Based on Intraoperative

3) LaRovere, Kerri L, Molly S Brett, Robert C Tasker, Keith J Strauss, and Jeffrey P Burns. "Head Computed Tomography Scanning during Pediatric Neurocritical Care: Diagnostic Yield and the Utility of Portable Studies." Neurocritical Care 16, no. 2 (April 2012): 251–57. doi:10.1007/s12028-011-9627-3.

4)Taddei, Graziano, Alessandro Ricci, Francesco D I Cola, Giuliano Maselli, Sara Marzi, and Renato J Galzio. "The Usefulness of Intraoperative Mobile Computed Tomography in Severe Head Trauma." Neurosurgery 23, no. 3 (January 2013): 401–3. doi:10.5137/1019-5149.JTN.5474-11.0.

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