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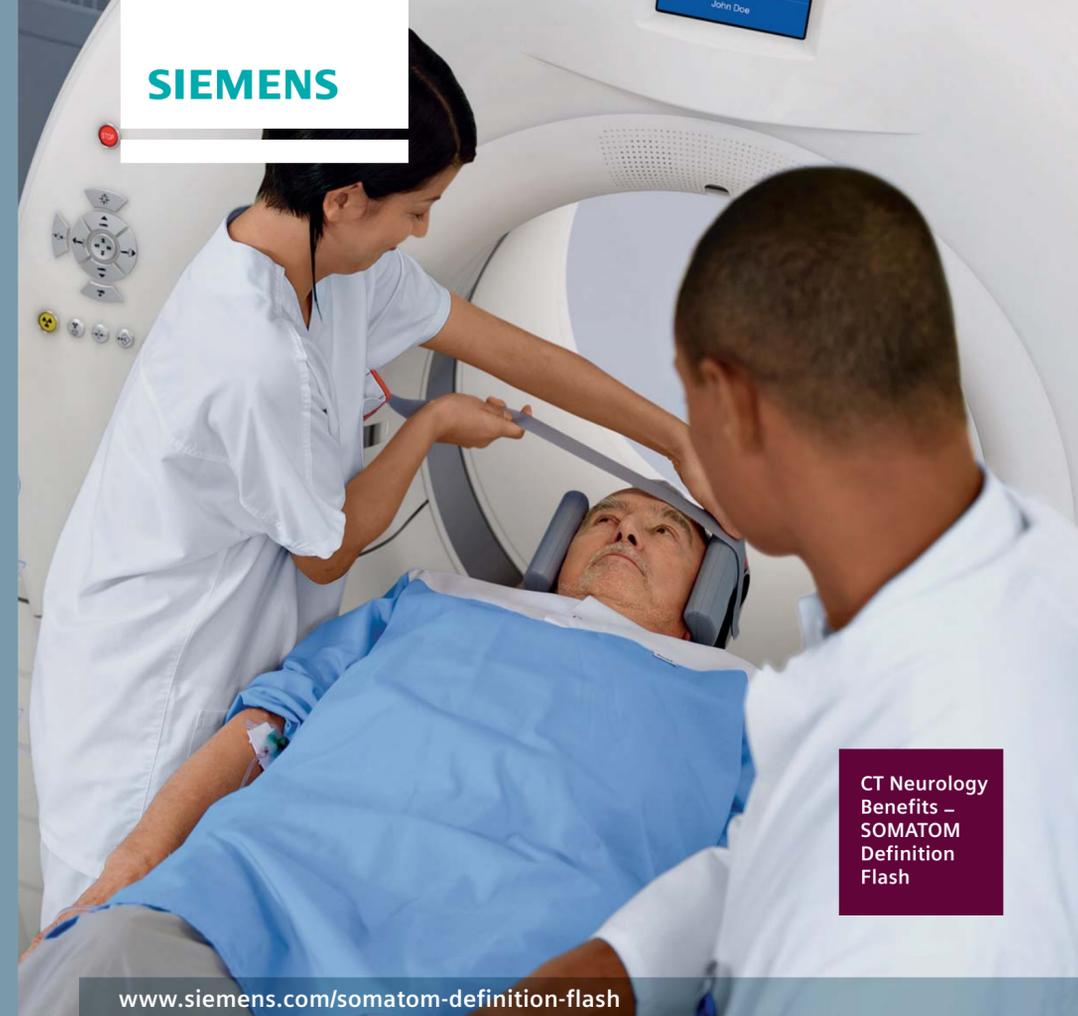
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SIEMENS



CT Neurology
Benefits –
SOMATOM
Definition
Flash

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Multiply Your Potential in CT Neurology

Generation Flash

Unique Innovations

- Tube power: 30 MHU, 7.3 MHU/min
- Focal spot size: Small: 0.7 x 0.7 mm / Large: 0.9 x 1.1 mm
- Generator power: 200 kW
- kV settings: 70/80/100/120/140 kV
- 3D voxel size: 0.24 mm / 0.33 mm
- Coverage perfusion: 14 cm @ 50 cm FOV
- Coverage 4D CTA: 48 cm @ 50 cm FOV
- Bore size: 78 cm
- Max. table load: Up to 307 kg / 676 lbs
- Reconstruction performance:
Up to 50 ips (1 oncology staging exam with 1000 images in up to 20 sec.)
- SAFIRE*
- Dual Energy
- Adaptive Dose Shield for any spiral CT examination
- X-CARE
- Pediatric CT protocols
- 4D Noise Reduction
- Selective Photon Shield
- Flash Spiral with 458 mm/s scan speed
- 1 kW Scan room heat dissipation
- Tube Guard
- Siemens Remote Services
- FAST Planning
- FAST Spine
- FAST Scan Assistant
- FAST Adjust
- CARE kV
- CARE Child
- CARE Configurator
- CARE Contrast III
- CARE Profile
- CARE Dashboard

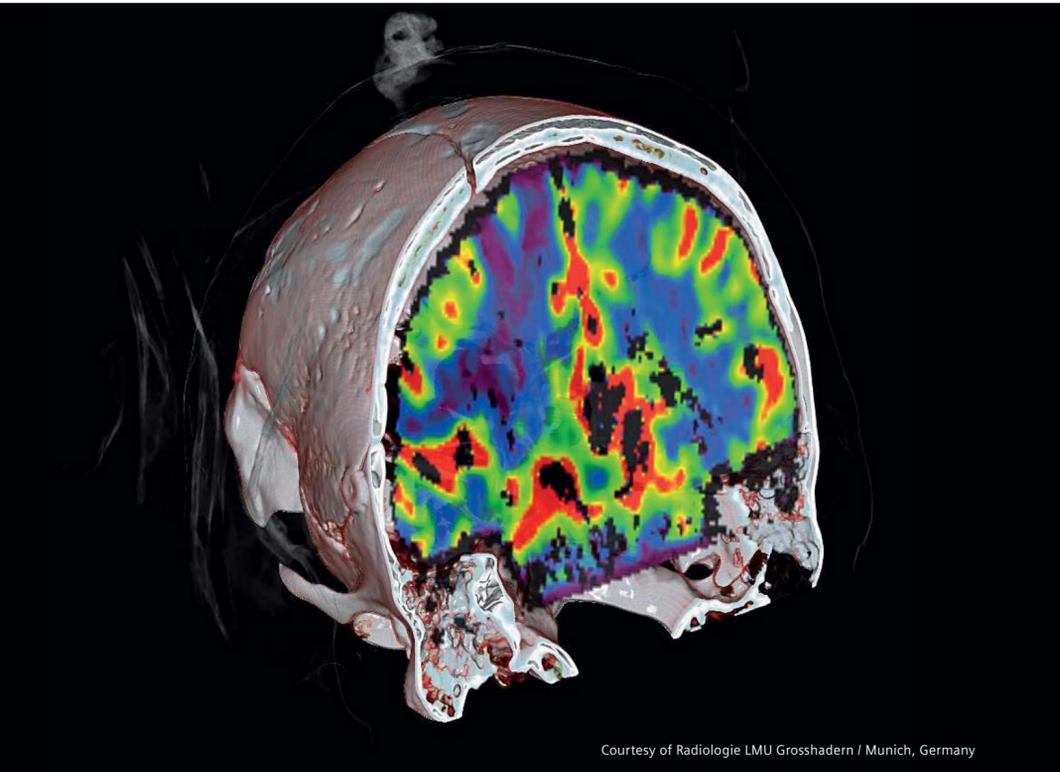
*The information about this product is being provided for planning purposes. The product is pending 510(k) review, and is not yet commercially available in the U.S.

The SOMATOM Definition Flash, Siemens' latest high-end scanner, was especially designed to make CT exams much healthier for your patients.

Its core innovation – the revolutionary Flash Spiral – can be summarized in four words: Flash speed. Lowest dose.

Answers for life.

Whole Organ Perfusion



Courtesy of Radiologie LMU Grosshadern / Munich, Germany

CT neuro imaging is critical for diagnosis and often contributes to these life and death decisions. With up to 42 cm dynamic scanning, virtually any organ can be covered in 4D, such as when performing a complete stroke assessment with syngo Volume Perfusion CT Neuro.

The scan ranges “[...] allow coverage of the whole brain or an entire organ for perfusion imaging.”

Haberland U et al. Performance assessment of dynamic spiral scan modes with variable pitch for quantitative perfusion computed tomography. Invest Radiol. 2010 Jul;45(7):378-86.

collimation: 32 x 1.2 mm
scan time: 45 s
scan length: 100 mm
rotation time: 0.285 s
80 kV, 200 effective mAs
eff. dose: 6.5 mSv

Dose-neutral Dual Energy



Courtesy of Abbott Northwestern Hospital / Minneapolis MN, USA

Siemens' unique Dual Energy (DE) solution provides additional information beyond morphology without dose penalty. For example, syngo DE Direct Angio: differentiates bone and vessels in complex anatomical regions, making time-consuming manual bone removal or scanning twice for subtraction unnecessary. Siemens' DE is compatible with all other dose-reducing features, such as CARE Dose4D™, Iterative Reconstruction and X-CARE.

“Our results suggest that DE-CTA [Dual Energy CT Angiography] of the carotid arteries has become a clinically practicable and accurate method to suppress bone in the final CTA image to speed up image analysis and provide 3D rendered vascular models [...]”

Lell MM et al. Dual energy CTA of the supraaortic arteries: technical improvements with a novel dual source CT system. Eur J Radiol. 2010 Nov;76(2):e6-12.

collimation: 32 x 0.6 mm
spatial resolution: 0.33 mm
scan time: 3.3 s
scan length: 202 mm
rotation time: 0.28 s
100/5n140 kV,
181/156 effective mAs
DLP: 378 mGycm
CTDIvol: 11.91 mGy
eff. dose: 1.17 mSv

Lowest Dose



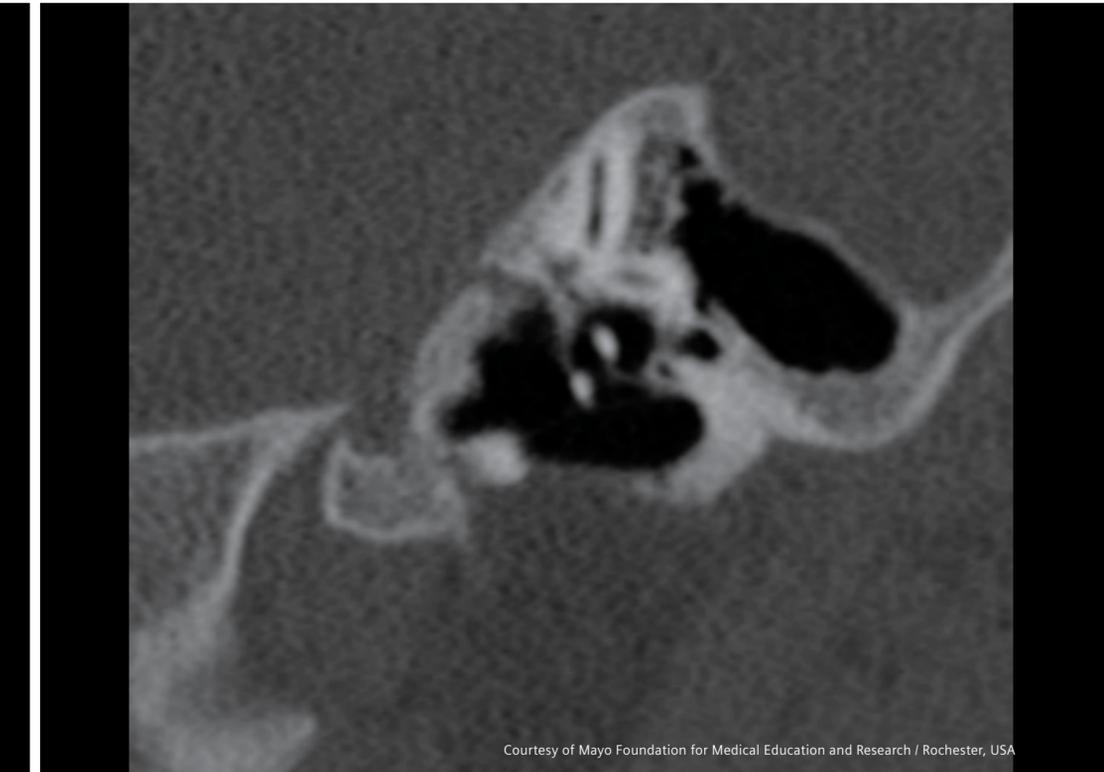
Courtesy of UCLA Medical Center / Los Angeles, USA

Iterative Reconstruction (SAFIRE*) provides excellent image quality or significantly lower dose in neuro imaging. In addition, X-CARE protects individual organs and the most radiation-sensitive body regions, for example, the eye lens, by accurately and efficiently minimizing exposure while preserving image quality. In clinical practice, the use of SAFIRE may reduce CT patient dose 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 to obtain diagnostic image quality for the particular clinical task.

*The information about this product is being provided for planning purposes. The product is pending 510(k) review, and is not yet commercially available in the U.S.

collimation: 32 x 1.2 mm
spatial resolution: 0.33 mm
scan time: 16 s
scan length: 160 mm
rotation time: 2.0 s
120 kV, 192 mAs
CTDIvol: 40 mGy
DLP: 640 mGycm
eff. dose: 1.3 mSv

Highest Resolution



Courtesy of Mayo Foundation for Medical Education and Research / Rochester, USA

The challenge in neuro imaging is to achieve better contrast without an increase in noise or dose. Neuro BestContrast supports this by intelligently improving gray to white matter differentiation on a routine basis. This feature is automatically built in to the head and neuro scan protocols. Combined with Siemens z-UHR Technology, the system offers unparalleled 0.24 mm isotropic resolution in neuro imaging.

collimation: 16 x 0.3 mm
spatial resolution: 0.33 mm
scan time: 11 s
scan length: 47 mm
rotation time: 1.0 s
120 kV, 209 mAs
CTDIvol: 45.42 mGy
DLP: 249 mGycm
eff. dose: 1.6 mSv