

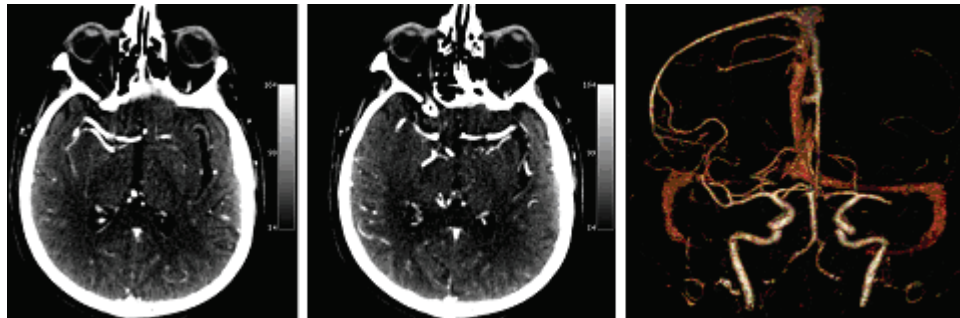
3D CT Images Reconstructed from 4D CT Data

Overview of Technology:

Investigators at the University Health Network have recently developed a novel method to obtain high quality, clinically useful 3D static computed tomography (CT) volumes from relatively low quality 4D data, thus allowing clinicians to obtain the benefits of both 3D and 4D imaging from a single scan.

Currently, radiologists need to perform two independent intravenous contrast agent enhanced CT scans to obtain diagnostic quality functional and anatomic information for diagnoses such as stroke, tumor or organ perfusion, vasospasm, and arteriovenous malformations or fistulae. This technology has the tremendous advantage of creating high quality planar images and 3D volume renderings from a single 4D CT scan. It also functions well with reduced contrast agent dosing, and is ideal for routine use in pediatric and renal failure populations and particularly on an emergency basis. These new capabilities will reduce clinical care costs and improve patient safety.

This innovation is currently entering clinical use at UHN and is available for world-wide exclusive licensing.



Axial slices from a reconstructed 3D CT angiogram (left and center) and blood vessel volume rendering (right) using 4D CT perfusion data in a patient with acute stroke.

Patent:

US61/264,746 - Filed 27 November 2009

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UHN Reference # - 9031