

Addenbrooke's places first UK order for next generation imaging system

Cambridge hospital selects world's fastest CT with lowest radiation exposure

Addenbrooke's Hospital in Cambridge will be one of the first sites to benefit from Siemens' advanced CT, the SOMATOM® Definition Flash. The hospital, part of Cambridge University Hospitals NHS Foundation Trust, has placed the first UK order for the new system which will be installed later in the year.

The Definition Flash is a new generation of Dual Source CT that requires only a fraction of the radiation dose usually required to scan even the tiniest anatomical details at a faster speed than ever before. It carries out the fastest scanning speed in CT (430 mm/s) with a temporal resolution of 75ms. This enables complete scans of the entire chest region in just 0.6 seconds, eliminating the need for lengthy breath holds and improving the image quality of moving structures such as the heart. The Definition Flash can also perform a scan of the entire heart in just 250 milliseconds, which is less than half a heart beat. Additionally it can image hearts with a fast pulse or an irregular beat without using beta blockers.

"As a result of this installation, we will be able to image patients at a greatly reduced dose and this will be invaluable for the people we see on a more regular basis. Due to the technical developments the Definition Flash will provide, we are also hoping to omit one phase of the diagnostic study for some patients. This will not only alleviate dose on the individual, but enable us to make efficient use of the machine," said Dr. Ashley Shaw, Lead Radiologist for CT at Addenbrooke's Hospital. "We have continued to use Siemens for our CT services at Addenbrooke's as a result of a longstanding partnership that delivers consistently good value."

The Definition Flash will replace a seven year old four-slice Siemens system and will image patients alongside three other Siemens CT machines. Each system in the department is used for a range of imaging requirements including neurology and whole body scanning. The Definition Flash will support the systems already in place and play a large part in the development of cardiac services at Addenbrooke's Hospital.

Due to its rapid scanning speed, the system performs Coronary Angiography examinations in the sub-millisievert (mSv) range. For the first time ever, the heart can be examined at a radiation exposure level that is three times lower than the background radiation a person naturally absorbs in a year. The low dose possibilities of the Definition Flash will also be beneficial to Addenbrookes's paediatric patients, ensuring that they are submitted to the lowest possible dose at the fastest speed, without the need for sedation.

The CT also introduces a new level of image quality in Dual Energy scanning, increasing the contrast without having to apply higher radiation dose. This is achieved via a new, selective photon shield which blocks unnecessary parts of the energy spectrum. With improved separation of the two simultaneous data sets, radiologists at Addenbrooke's will be able to classify the chemical composition of tissues in routine CT studies.

"The SOMATOM Definition Flash is our most advanced CT offering, combining fast image acquisition with the lowest radiation exposure," said Graham Walker, Regional Sales Manager at Siemens Healthcare. "We have a good relationship with Addenbrooke's Hospital and are convinced that the installation will enhance not only the patient experience, but also provide numerous benefits to hospital staff due to its speed and efficiency."

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Siemens Healthcare is the global market leader in innovative hearing instruments. The company employs more than 49,000 people worldwide and operates in 130 countries. In the fiscal year 2008 (Sept. 30), Siemens Healthcare reported sales of €11.2 billion, orders of €11.8 billion, and Sector profit of €1.2 billion. Further information can be found by visiting <http://www.siemens.co.uk/healthcare>.

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Picture caption: The SOMATOM® Definition Flash is a new generation of Dual Source CT.

