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Hong Kong Sanatorium & Hospital Introduces Definition Flash CT Scanner Flash Speed • Lowest Dose • Dual Energy Benefits Elderly, Children, Women and Patients in Critical Condition

(28 January 2010, Hong Kong) Hong Kong Sanatorium & Hospital (HKSH) announced today the launch of Siemens Definition Flash CT Scanner. Together with the existing Aquilion ONE 320 Dynamic Volume CT Scanner and Discovery CT750 HD Scanner, HKSH becomes the first and only hospital in Hong Kong that is equipped with the three most advanced CT scanners in the world. This enables the Hospital to bring comprehensive and high quality imaging services to patients in Hong Kong.







The new Definition Flash CT Scanner offers the following benefits:

## 1) Flash Speed

In conventional CT imaging, table movement is below 1cm per rotation. Due to the Flash Spiral technology brought by the Definition Flash CT Scanner, the table movement can now be as fast as 12cm per rotation or more. This helps fasten scan speed to 430mm per second and enables the entire thorax (including coronary arteries) to be performed in only 0.6 second. A whole body scan requires less than 5 seconds. With this new scanner, data acquisition time is shortened by more than 12 times, so it is fast enough to image the body without any breath hold during scanning. Therefore, scanning of the elderly, children, trauma patients and patients in critical condition is successful every time.

It is a well-known fact that young children are always restless; making it time-consuming to perform CT scanning on them and thus the success rate is low. Now, because of the extremely fast speed of the Definition Flash CT Scanner, it can scan young children without sedation.



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## 2) Lowest Dose

The introduction of Flash Spiral technology can perform a coronary artery CT scan in 0.25 second. Due to high speed rotation, it requires less than 1mSv to perform coronary artery imaging, which is much less than conventional CTs that may require 8-40mSv. This significantly reduced the radiation dosage. If fact, the dosage of below 1mSv is even lower than the radiation we receive from natural sources. For instance, in average, each person living in Hong Kong receives a radiation dose of 2.2mSv from natural sources (background radiation).

## 3) Dual Energy

Conventional CT using single energy X-ray tube can only provide morphology images of patients' organs. With the introduction of Dual Energy technology, the new Definition Flash CT allows characterization and visualization of the chemical composition of different materials. As a result, not only morphology of organs but also functional CT such as lung ventilation examination using xenon can be provided. This leads to unsurpassed diagnostic accuracy and will lead to new clinical applications. Besides, the Selective Photon Shield is able to block clinically irrelevant dose and therefore significantly reduces the possibility of over-radiation.

## 4) X-CARE

X-CARE allows protection of individual organs. When scanning the more radiation-sensitive body organs such as breasts and thyroid glands, the X-ray tube is turned off to avoid direct exposure of those organs to x-ray. An Adaptive Dose Shield dynamically blocks clinically irrelevant dose by automatically moving shields into place. This helps save up to an additional 25% of dose in routine examinations.

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