

CT re-imagined: GE Healthcare introduces world's first High Definition and ultra low dose CT scanner across the region

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GE Healthcare, a global leader in healthcare solutions providing transformational medical technologies and services, today, introduced to the Middle East the company's latest breakthrough - the **Discovery CT750 HD**, which brings unparalleled image quality and lowest possible dose to address this region's health challenges.

The new diagnostic solution is particularly relevant given the recent study of McKinsey & Company, which predicts that over the next 20 years, healthcare demand will rise by 240 per cent in the GCC countries alone. Healthcare infrastructure and the availability of qualified and trained personnel will need to expand considerably to cope with this demand. Moreover, by 2015, the number of deaths caused by cardio-vascular diseases in the region is projected to increase by 20 per cent.

GE Healthcare is addressing the challenge through a proactive outlook. **GE** recently announced that it will spend US\$3 billion over the next six years on healthcare innovation that will help deliver better care to more people at lower cost. The company will also commit US\$2 billion of financing and US\$1 billion in related **GE** technology and content to drive healthcare information technology and health in rural and under-served areas. These investments are the foundation of **GE**'s 'healthymagination' initiative, which is built on the global commitments of reducing costs, improving quality and expanding access for millions of people.

"Today, the Middle East region has one of the fastest growing healthcare infrastructures. Healthcare providers are facing increasing demand from patients for more and better quality services and enhanced performance and profitability from shareholders. **GE**'s 'healthymagination' business strategy addresses the need for sustainable healthcare mechanisms, which will be vital in helping to transform healthcare delivery in the region," said Aziz Koleilat General Manager, Middle East and Pakistan at GE Healthcare.

Innovation with High Definition on whole body examinations

The new Discovery CT750 HD is a high definition CT system that advances image quality through increased resolution, lower x-ray dose, and innovative applications such as Gemstone Spectral Imaging. These advances are now possible due to a fundamental redesign of the entire image chain including the breakthrough Gemstone™ detector and High Definition reconstruction technology.

"Cardiovascular imaging on CT is gaining wide acceptance and clinical applications are expanding; yet and until recently, we faced two main drawbacks: relatively high radiation dose and limited diagnostic capability in some clinical settings. The Discovery CT750 HD tackled both issues by improving image quality (spatial resolution) while reducing dose by around 50 per cent, allowing us to provide better patient care and to move one step closer towards replacing invasive coronary angiography in the diagnostic setting," said Dr. Rami Neemtallah, Medical Director, Allied Diagnostics Dubai, UAE.

"Improving patient care with dose reduction features is the clinical environment we are looking for at King Faisal Specialist Hospital. With Discovery CT 750 HD, our patients will benefit from significant dose reduction for the entire body imaging and our radiologists can extend their diagnostic findings," said Dr. Stig Holtas, Head of Radiology Department at King Faisal Specialist Hospital and Research Center, Kingdom of Saudi Arabia.

At the core of Discovery CT750 HD is the proprietary **GE** Gemstone™ detector, built with the first new CT scintillator in 20 years and based on a garnet gemstone. With the industry's fastest primary speed and afterglow performance, the Gemstone™ detector enables spatial resolution improvements of up to 33 per cent for routine body imaging over today's existing products.

"High definition image quality improves the ability to visualize fine anatomical details," said Didier Deltort, General Manager, GE Healthcare's Computed Tomography (CT) Europe, Middle East & Africa. "While image clarity is a key advance, clinicians also desire improved characterization confirming that 'knowing more' is about better information, not just more data or slices."

On top of High Definition anatomical image quality, Discovery CT750 HD also provides large coverage functional information through a new adaptive technology, Volume Helical Shuttle, which allows clinicians to dynamically scan volumes by 32-cm coverage. These whole organ perfusion studies are key for emergency or oncology procedures.

UltraLow Dose for all applications

Most importantly to clinicians and patients, the unprecedented image clarity of the Discovery CT750 HD is available without increasing dose. Sustaining its investments in Low Dose Technology Innovations, GE Healthcare is introducing ASIR, a new breakthrough reconstruction technique enabling to reduce dose up to 50 per cent across the entire body while Gemstone™ improves image quality, maintaining GE's position as low dose technology leader.

While all patients will benefit from lower dose, this new technology is especially efficient for the population at risk such as children and young women. It also particularly benefits to cardiac procedures where the dose reduction is up to 83 per cent.

"Over the last 10 years we have witnessed an extraordinary period in the development of CT technology and the advanced clinical applications this has enabled. This has resulted in a significant increase in the clinical use of CT both for existing and new clinical services. With the launch of the CT750 HD and its technological innovations, we are embarking on the next part of this journey," said Dr. Mike Bourne, Clinical Director, Department of Radiology at University Hospital of Wales, UK.

"The availability of advanced reconstruction techniques, high resolution acquisitions and dual energy, material specific imaging allows us to tailor the examination to the clinical question that is being asked, as never before. This has resulted in a significant improvement in the diagnostic quality and diagnostic performance of CT examinations, often at a substantially reduced radiation dose to the patient," added Dr. Bourne.

Discovery CT750 HD delivers on its promises

Since its introduction last year at RSNA, almost a system per week has been sold in EMEA region. Today, there are 10 systems installed in Europe, with more than 18,000 patients already scanned.

"We have earned the respect of clinicians by manufacturing CT systems with revolutionary dose optimization features. This is an important endeavor that will continue to receive our highest level of commitment," added Deltort. "The true innovation comes from the increases in image quality we can deliver while simultaneously reducing significantly dose. We've incorporated the strong feedback from our clinical partners to unleash the customer-driven future of CT. That's CT re-imagined."

Closely aligned with a key "healthymagination" theme - accessibility - GE's CT strategy focuses on investing in an entire range of CT solutions that will benefit from the last eight years of HD750 R&D developments. There are more than 1,000 GE Healthcare R&D engineers working to ensure that the need for ultra low dose reduction does not come at a price of very high image quality.

GE's investments in High Definition CT technologies are yielding scanners that provide a new era of image quality and dose reduction.

(Zawya)