



For Immediate Release

Hong Kong Sanatorium & Hospital Heralds Strategic Partnership with GE Healthcare in Ground-Breaking PET/MR Technology

(4 July 2011, Hong Kong) – Hong Kong Sanatorium & Hospital (HKSH) is proud to announce the strategic partnership with GE Healthcare to engage in significant research into PET/MR technology, with the aim to contribute to the development of radiotherapy and proton therapy and also to prepare HKSH for its introduction of Proton Therapy System in 2015.

HKSH will be among the first partners with GE Healthcare to develop the PET/MR technology, after Zurich General Hospital in Switzerland.

For the trial of this ground-breaking PET/MR imaging technology, HKSH is committed to providing an ideal clinical setting with all necessary resources and research personnel. It is a recognition of HKSH's research competence by one of the world's largest health technology innovators.

HKSH has Longstanding Support for Medical Research

Setting its sights on being a centre of excellence in services, training and research, HKSH spares no efforts in expanding its research capacities, acquiring the best equipment and recruiting research personnel. HKSH has achieved a substantial submission and publication of over 200 research papers and scientific presentations in prestigious scientific journals and international conferences over the past 5 years (2006-2010), covering such wide-ranging specialties as nuclear medicine, PET/CT, interventional & diagnostic radiology, radiotherapy, ophthalmology, etc.

Dr. Walton Li, Medical Superintendent of HKSH, emphasized the Hospital's commitment to medical research in the interest of patients and medical advance. "HKSH is not only a hospital that serves patients but one that serves patients with commitment to research and medical advancement," said Dr. Li.

HKSH as GE Healthcare's Partner for PET/MR Research

From its very first X-ray machine in 1947 to the recent introduction of the world's first high definition CT scanner, i.e. Discovery CT750HD, in Hong Kong, HKSH has long maintained a strong, trusted partnership with GE Healthcare in pioneering and promoting latest medical imaging technologies.

The HKSH-GE Healthcare Project on PET/MR Technology is in its planning stage, while this partnership is a solid proof to the research capability of HKSH as a private hospital. Ms. Terri Bresenham, Vice President, Molecular Imaging, GE Healthcare, remarked, "Starting from 2007, GE Healthcare and HKSH are working as a partner for new production introduction and research studies on CT area. We are proud to move one-step forward into PET/MR technology with the hospital together."



The same excitement was shared with high anticipation by the Hospital. “Our eager embrace of latest medical technology, whichever deemed necessary for promoting our patients’ wellbeing, reflects our longstanding commitment to and capacity for facilitating medical advance,” said Mr. Wyman Li, Manager (Administration) of HKSH, “And working with GE, we all feel honored and excited to contribute to the study of this ground-breaking and promising medical imaging technology for our patients.”

The Project on PET/MR Technology boasts a heavy investment of HKSH for manpower and resources to the extent of hiring specialists for this project and GE Healthcare will provide the equipment for this joint venture. The Project will span across 3 to 4 years, as a cross-departmental initiative involving the Department of Nuclear Medicine and PET, Department of Diagnostic and Interventional Radiology, Department of Radiotherapy and Medical Physics & Research Department of the Hospital. It will also bring closer cooperation between the two parties to ensure the success of this project.

PET/MR – Application for Imaging, Radiotherapy / Proton Therapy

PET/CT (Positron Emission Tomography / Computed Tomography) fusion image is widely recognized as a functional-anatomical dual modality solution to cancer imaging and diagnosis. The Project on PET/MR technology has potential benefits in *imaging and diagnosis* as follows:

1. Reduced radiation dose up to 50%

An approximate 50% radiation dose reduction can be achieved by using PET/MR technique instead of PET/CT technique for diagnosis. It is beneficial to all patients especially for children.

2. Additional functional imaging data by MR

MRI is equipped with functional imaging capability. Therefore, it can provide re-verification for PET in addition to the anatomical information.

Advancement in imaging technology can also provide an effective way to increase positional and dosimetric accuracy of the radiation treatment for oncology patients. However, the current techniques mainly rely on X-ray imaging technologies (i.e. CT) and their success and application are limited by the additional radiation dose to patients.

The Project on PET/MR technology has potential benefits in *radiotherapy/proton therapy* as follows:

3. Increased positional and dosimetric accuracy of radiotherapy/proton therapy

Now that Magnetic Resonance (MR) Imaging provides superb soft-tissue contrast without ionizing radiation, it is an ideal imaging technology for image-guided radiotherapy (IGRT) if technical problems can be solved.



4. In-vivo post-treatment verification in proton therapy

In proton therapy, atoms in the site of irradiation are activated into positron emitters. Therefore, the location of irradiation can be accurately detected using PET scanner. It is for the first time in radiation therapy that the exact location of irradiation can be measured in-vivo. Without additional radiation dose, post-treatment positional verification can be done for every fraction of proton therapy for each patient using image fusion with PET/MR.

Clinical studies will be carried out at the Hospital to understand and familiarize the HKSH's radiotherapy team with the potential clinical workflow and cancer-therapy-related applications of PET/MR for oncology patients. Building upon the results of the project, HKSH sets out to become one of the leading centres to explore clinical potential of PET/MR for oncology patients.

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About Hong Kong Sanatorium & Hospital

Hong Kong Sanatorium & Hospital is one of the leading private hospitals in Hong Kong. With the motto “Quality in Service Excellence in Care”, the Hospital is committed to serving the public as well as promoting medical education and research.

About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Its expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, performance improvement, drug discovery, and biopharmaceutical manufacturing technologies is helping clinicians around the world re-imagine new ways to predict, diagnose, inform and treat disease, so their patients can live their lives to the fullest.

GE Healthcare's broad range of products and services enable healthcare providers to better diagnose and treat cancer, heart disease, neurological diseases, and other conditions earlier. Its vision for the future is to enable a new "early health" model of care focused on earlier diagnosis, pre-symptomatic disease detection and disease prevention.

Headquartered in the United Kingdom, GE Healthcare is a \$17 billion unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employs more than 46,000 people committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit its website at www.gehealthcare.com.

Photos

1. Hong Kong Sanatorium & Hospital (HKSH) signed an agreement with GE Healthcare on 4 July 2011 (Monday) to signify the strategic partnership between HKSH and GE Healthcare in significant research into PET/MR technology. The agreement was signed by Dr. Walton Li, Medical Superintendent of HKSH (second from left), Mr. Wyman Li, Manager (Administration) of HKSH (first from left), Ms. Terri Bresenham, Vice President & General Manager - Molecular Imaging, GE Healthcare (second from right) and Mr. Dicky Wong, Vice President & General Manager - HK, Macau & Taiwan, GE Healthcare (first from right).





2. The Hospital Management of the Hong Kong Sanatorium & Hospital, the staff of Department of Nuclear Medicine and PET, Department of Diagnostic and Interventional Radiology, Department of Radiotherapy and Medical Physics & Research Department of HKSH, and the guests from GE Healthcare attended the ceremony.



3. PET/MR is a combination of the best functional scan with the best anatomical scan. In this joint venture, GE Healthcare provides the advanced PET/CT system (Photo 1) and MRI system (Photo 2), and HKSH places a heavy investment for manpower and resources to the extent of hiring several PhDs for the Project.

GE Healthcare PET / CT system (Photo 1)



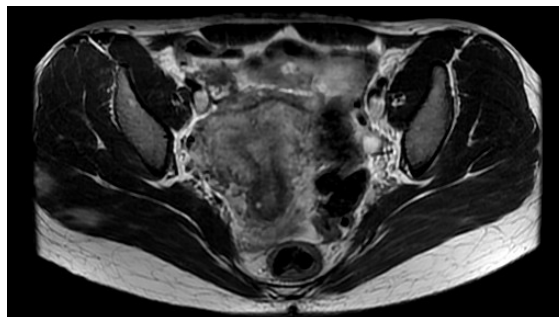


GE Healthcare MRI system (Photo 2)



4. Magnetic Resonance Imaging (MRI), as compared to Computed Tomography (CT) has more superior soft tissue contrast and image clarity, with significant radiation dose reduction and re-verification of functional imaging, which all make MRI a better choice for diagnostic imaging, in particular for oncology and paediatric patients. In figures below, it is a comparison of MR (Figure 3) and CT (Figure 4) images of Ovaries and Uterus.

MRI images of Ovaries and Uterus (Figure 3)



CT images of Ovaries and Uterus (Figure 4)





5. Dr. Walton Li, Medical Superintendent of HKSH



6. Mr. Wyman Li, Manager (Administration) of HKSH



7. Ms. Terri Bresenham, Vice President & General Manager - Molecular Imaging, GE Healthcare





8. Dr. Garrett Ho, Director, Department of Nuclear Medicine and PET



9. Dr. Gladys Lo, Radiologist-in-charge, Department of Diagnostic and Interventional Radiology





10. Dr. Ben Yu, Head, Medical Physics & Research Department



11. Mr. George Chiu, Head, Department of Radiotherapy





12. (From Left) Dr. Garrett Ho, Director, Department of Nuclear Medicine and PET, Dr. Joseph Chan, Deputy Medical Superintendent of HKSH, Mr. Wyman Li, Manager (Administration) of HKSH, Dr. Ben Yu, Head, Medical Physics & Research Department, and Dr. Gladys Lo, Radiologist-in-charge, Department of Diagnostic and Interventional Radiology



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