

Siemens unveils the world's first molecular MR system

The Biograph mMR is pioneering medical imaging. Siemens succeeded in bringing together two separate technologies – in one integrated system. It allows - for the first time - simultaneous visualisation of the organs, their function as well as their metabolism, all in a single image.

Siemens Healthcare is pleased to announce, for the first time, a Magnetic Resonance (MR) scanner and PET (Positron Emission Tomography) detection system have been combined to simultaneously capture tissue and cellular data from inside the human body. The [Biograph mMR*](#) system from [Siemens Healthcare](#) is a new concept in diagnostic imaging that will revolutionise whole-body scanning. The first clinical installation has just been announced in Germany.

The 3 Tesla MR provides exquisite morphological and functional details in human tissue and PET goes further to investigate the human body at the level of cellular activity and metabolism. The innovative system has the potential to be a valuable tool for identifying neurological, oncological and cardiac conditions of disease and in supporting the planning of appropriate therapies.

Peter Harrison, Divisional Director, Imaging and Therapy at Siemens Healthcare in the UK states, "This is an exciting development in the field of medical imaging combining established and proven imaging techniques to deliver simultaneous image acquisition. It offers a tremendous opportunity to improve our understanding of neurological and cardiac functional impairment, enabling the potential for more personalised and effective medicine. Initial research also suggests that Molecular MR can scan the entire body in 30 minutes compared to one hour or more for sequential MR and PET examinations.

This combination of speed, lower dose and greater anatomical data has the potential to improve the diagnosis and ultimate treatment of many conditions.”

Until now, it was nearly impossible to integrate MR and PET technologies. The conventional PET detectors, which use photomultiplier tubes, could not be used in the strong magnetic field generated by an MR system. Integration was further limited by the lack of space inside the MR device. For this reason, MR-PET imaging was the result of two separate scans (MR and PET) with a significant time lag. With the Biograph mMR, Siemens brings the first molecular MR system for clinical research that integrates MR with compact, specialised PET detectors.

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Notes to editors:

More information, pictures and videos can be found via:
<http://www.siemens.com/press/healthcare/Biograph-mMR>

*The Biograph mMR system requires 510(k) review by the FDA and is not commercially available. Due to regulatory reasons its future availability in any country cannot be guaranteed. Please contact your local Siemens organisation for further details.

The outcomes achieved by the Siemens customers described herein were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist, e.g., hospital size, case mix, level of IT adoption, there can be no guarantee that others will achieve the same results.

About Siemens Healthcare

The **Siemens Healthcare Sector** is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids. Siemens offers its customers products and solutions for the entire range of patient care from a single source – from prevention and early detection to diagnosis, and on to treatment and aftercare. By optimizing clinical workflows for the most common diseases, Siemens also makes healthcare faster, better and more cost-effective. Siemens Healthcare employs some 48,000 employees worldwide and operates around the world. In fiscal year 2010 (to September 30), the Sector posted revenue of 12.4 billion euros and profit of around 750 million euros. For further information please visit: www.siemens.com/healthcare.

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Picture caption: Siemens Healthcare has unveiled the Biograph mMR, a Magnetic Resonance (MR) scanner and PET (Positron Emission Tomography) detection system combined for the simultaneous capture of tissue and cellular data from inside the human body.



Picture caption: The Biograph mMR gives spectacular visualisation of organs, their function as well as their metabolism, all in a single image. Left to right: Brain cancer; lung cancer, liver cancer.

