EANM 2015, Congress Center Hamburg (CCH)

New PET/CT from Siemens helps more patients benefit from premium technologies

- Versatile new PET/CT system addresses a broader range of indications
- Cost-effective image processing solution expands with clinical needs
- Latest SPECT system has the potential to double patient throughput
- Comprehensive PET/CT solution tailored for radiation treatment planning
- Shorter exams and higher image quality in MR/PET

At the 28th Annual Congress of the European Association of Nuclear Medicine (EANM) in Hamburg, Germany, Siemens Healthcare introduces the new Biograph Horizon™¹. The PET/CT (positron emission tomography/computed tomography) system offers premium performance at an attractive total cost of ownership to support clinicians in addressing more clinical indications. This versatility gives users the capabilities needed to serve a broader patient mix and expand into new service lines, without compromising on quality due to budget constraints. Also at EANM 2015, Siemens features its latest single-photon emission computed tomography (SPECT) system, Symbia Evo™². It boosts user productivity, providing facilities with more time to plan treatment schedules, personalize studies, serve additional patients and improve workflow efficiency. Additionally, Siemens’ recently released Biograph™ RT Pro edition, a comprehensive PET/CT solution for radiation therapy (RT) treatment planning, provides physicians with high-quality images that drive the development of tailored therapy approaches. Finally, a new software version for Biograph mMR reduces examination times and improves image quality in MR/PET.

Biograph Horizon PET/CT

Biograph Horizon leverages the standard in PET/CT technology to image patients using all commercially available PET tracers, giving users the ability to address more indications in oncology, neurology and cardiology. To help physicians visualize
smaller lesions earlier, the system’s 4 mm LSO crystals scintillate faster and have a higher light output, providing better image quality and enabling Time-of-Flight. With more precise information, physicians can diagnose disease earlier, contributing to more effective care pathways. This can help reduce costs and patient side effects related to ineffective therapies.

Biograph Horizon simplifies staff’s daily routine by automating manual tasks and offering protocol-based exams to increase productivity. For example, Quanti•QC runs quality control procedures overnight, scans can be performed in as fast as 5 minutes, and reconstruction runs alongside acquisition for image delivery just 30 seconds after the scan.

As the smallest PET/CT system with the lowest power requirements, Biograph Horizon minimizes the initial capital investment, while low operating and maintenance costs help manage the total cost of ownership. Additionally, Siemens Guardian Program™ predicts downtime ahead of time, so maintenance is scheduled when convenient to minimize the impact on system utilization. Automated technologies, such as gentle system warm-up and automatic standby, help extend the economic life of the system as well as help reduce power consumption.

**syngo.via Molecular Imaging Workplace**

Configured specifically for Biograph Horizon, *syngo.via*® Molecular Imaging Workplace is a cost-effective image processing solution designed to expand with an institution’s clinical needs. The solution offers automated tools to instantly visualize diagnostic information, measure with confidence and report more comprehensively. *syngo.via* automates pre-fetching, preprocessing, and display and comparison of previous findings for up to 45 percent faster processing. Also, ALPHA technology provides automatic registration with organ-based recognition capabilities. EQ•PET-normalizes SUV measurements across different scanners for more precise calculation of changes in tumor uptake.

**Symbia Evo SPECT system**

The Symbia Evo SPECT system – the most recent addition to Siemens’ all-new Symbia™ family of SPECT and SPECT/CT systems – possesses features to help users read with greater confidence, image a wide variety of patients, and potentially double an institution’s patient throughput.
Symbia Evo automates routine manual tasks with Automated Quality Control and Automated Collimator Changer. Siemens’ IQ•SPECT ultra-fast cardiac imaging solution offers the potential for vastly improved scan times. Possessing advanced HD detector technology, Symbia Evo offers industry-leading4 collimator sensitivity and 24 percent4 higher reconstructed resolution for high-quality images that contribute to a more definitive diagnosis. The system’s detector flexibility supports stretcher and hospital bed imaging, and the patient bed accommodates patients up to 500 lbs (227 kg). Furthermore, the system’s lowest bed position offers easy access to patients with limited mobility.

**Biograph RT Pro edition**

Biograph RT Pro edition, available for all Biograph mCT PET/CT scanners, is a comprehensive solution tailored for RT treatment planning, helping physicians devise treatment strategies with confidence. Biograph RT Pro edition allows nuclear medicine departments to expand their service lines to radiation oncology, in addition to providing a complete solution for dedicated RT professionals. This solution includes Siemens' HD FoV Pro algorithm, which uses intelligent contour and attenuation estimation. This improves visibility outside the scan field of view (FoV), enabling visualization of the body outline up to 78 cm for RTP planning and bariatric patients, in certain cases, while providing sufficient HU accuracy. Biograph RT Pro edition integrates metal artifact reduction into the PET/CT imaging workflow with iMAR (iterative metal artifact reduction). This is designed to yield images with a reduced level of metal artifact distortion caused by hip implants, shoulder prostheses, dental fillings and other forms of implanted metal in the patient.

**Improved accuracy and higher image quality in MR-PET**

MR-PET offers major advantages such as excellent soft tissue contrast, minimized radiation dose, and simultaneous image acquisition of both modalities. However, the hybrid technique has faced some challenges, such as motion artefacts, as well as the difficulty of imaging bones in MRI, which results in imperfect attenuation correction in and close to bones. The new software version of Siemens’ MR-PET system Biograph mMR® will provide core improvements in these areas, potentially leading to benefits especially in neurology as well as oncology imaging. A new technology called BodyCOMPASS is designed to enable motion-free PET images with MR-based motion compensation beyond gating. A new and advanced whole-
body PET Attenuation Correction with a 5-compartment model will be available to include bones, and is designed to result in an even better comparability to PET/CT.

Additionally, the new software significantly shortens whole-body examination times with several acceleration techniques. Siemens is also introducing the MRI exam software DotGO for Biograph mMR, which facilitates easier scan planning and ultimately increases efficiency and consistency.

Furthermore, with the new software version syngo MR E11 on Biograph mMR users get access to newest MR applications and technology such as Quiet Suite, which reduces sound pressure significantly. FREEZEIt will also be available for the system, which enables free-breathing and accurate contrast timing in liver examinations.

1 Biograph Horizon is pending 510(k) clearance, and is not yet commercially available in the United States or in all countries worldwide. Due to regulatory reasons, its future availability cannot be guaranteed. Please contact your local Siemens organization for further details.
2 Symbia Evo is not commercially available in all countries. Due to regulatory reasons its future availability cannot be guaranteed. Please contact your local Siemens organization for further details.
3 Optional.
4 Based on competitive literature available at time of publication. Data on file.
5 Results may vary.
6 For oncology diagnosis. Compared to previous versions.
7 Requires calibration to NEMA parameters for measurement normalization.
8 Biograph mMR with syngo MR E11 is still under development and not commercially available yet. Its future availability cannot be ensured.

This press release and press pictures are available at
www.siemens.com/press/PR2015100011HCEN

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