

RSNA 2017 in Chicago: South Building, Hall A, Booth 1937**Siemens Healthineers boosts MRI productivity with application GOKnee3D¹**

- **Novel MRI application can help to half scan time for MR imaging of the knee from 20 to 10 minutes², benefitting both radiology providers and patients**
- **Acquisition of a clinically validated, high-resolution isotropic 3D knee exam with all relevant contrasts and evaluation in all imaging planes**

During the Annual Meeting of the Radiological Society of North America (RSNA), which will be held in Chicago, USA, Siemens Healthineers presents an innovative MRI application that helps to shorten the time it takes to perform comprehensive diagnostic exams of the knee. At the moment, a standard knee examination could take around 20 minutes. With GOKnee3D, a high-resolution diagnostic 3D knee exam can be acquired in 10 minutes². The acquisition of high-resolution isotropic 3D images subsequently allows the flexible evaluation of the images in all possible planes including double oblique and curved planar. Increasing MRI efficiency in this way is especially important because knee examinations are the third most common type of MRI examination, accounting for 11 percent of all scans³. By cutting the scan time in half and by reducing routine work for the radiology staff, Siemens Healthineers is making a key contribution to boosting MRI productivity. It also helps reduce patient wait times and improve patient experience during the examinations.

The innovative volume acquisition is based on a Caipirinha Space protocol¹, which enables higher scan speeds and optimal image reconstruction with better signal quality than in previous technologies. To develop and clinically validate the technique, Siemens Healthineers partnered with Johns Hopkins University in Baltimore, USA. "GOKnee3D enables comprehensive evaluation of internal derangement to the knee," confirms Jan Fritz, MD, of the Johns Hopkins University School of Medicine. "The fully automated

Caipirinha Space protocol provides high-quality MR imaging in ten minutes and ensures consistency of image quality and operational efficiency. The high-spatial resolution isotropic data sets help to visualize abnormalities with high accuracy, enable reformations of virtually any imaging plane, and the creation of high-quality 3D rendered MR images,” says Fritz.

“Working closely with our valued partners, we were once again able to demonstrate our innovation leadership in the field of magnetic resonance imaging,” states Dr. Christoph Zindel, Senior Vice President and General Manager of Magnetic Resonance Imaging at Siemens Healthineers. “With GOKnee3D, we significantly accelerate MR imaging without compromising on diagnostic quality and expand our portfolio with a further highly automated and standardized application of high clinical relevance. We not only increase efficiency, but help improve patient care by opening up MR technology to more patients, and making the examinations much more comfortable,” says Zindel.

Supported by dedicated, high channel knee coils, and automated field-of-view adaptation based on machine learning and artificial intelligence, the scanner acquires the volume data of the knee joint at the touch of a button, thus reducing routine work for the radiology staff. GOKnee3D is available as an upgrade for Siemens Healthineers scanners, initially for Magnetom Skyra 3T and Magnetom Aera 1.5T systems. It is planned to be rolled out to other scanners of the Magnetom World.

¹ 510(k) pending.

² Achieved on a Magnetom Skyra with Tx/Rx Knee 15. Total examination time will vary with system field strength with up to 11 minutes on Magnetom Aera.

³ Based on the evaluation of 6.73 million Siemens Healthineers MRI exams conducted in 2016.

The products/features (here mentioned) are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Further details are available from the local Siemens organizations.

This press release and press pictures are available at

www.siemens.com/press/PR2017110085HCEN.

For further information on RSNA 2017, please see www.siemens.com/press/rsna2017.

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Siemens Healthineers is the separately managed healthcare business of Siemens AG enabling healthcare providers worldwide to achieve better outcomes at lower costs by empowering them on their journey towards expanding precision medicine, transforming care delivery, improving patient experience and digitalizing healthcare. A leader in medical technology, Siemens Healthineers is constantly innovating its portfolio of products and services in its core areas of diagnostic and therapeutic imaging and in laboratory diagnostics and molecular medicine. Siemens Healthineers is also actively developing its digital health services and enterprise services.

In fiscal 2017, which ended on September 30, 2017, Siemens Healthineers generated revenue of €13.8 billion and profit of €2.5 billion and has about 48,000 employees worldwide. Further information is available at www.siemens.com/healthineers.