RSNA 2017 in Chicago: South Building, Hall A, Booth 1937

Siemens Healthineers redefines the biopsy workflow in mammography with the new Mammomat Revelation

- 3D HD Breast Biopsy uses the benefits of HD breast tomosynthesis from Siemens Healthineers to take more targeted and accurate biopsies thanks to its 50° scan angle
- Automated breast density measurement allow immediate risk stratification and personalized imaging workflows
- Titanium contrast enhanced mammography now expands the diagnostic options and improves patient access to functional breast imaging

At the Annual Meeting of the Radiological Society of North America (RSNA) in Chicago, USA, Siemens Healthineers will present its new premium mammography system for the first time. Mammomat Revelation enables providers to expand precision medicine, improve clinical operations and increase patient satisfaction.

The unique 50 degree 3D HD Breast Tomosynthesis provides the highest depth resolution in tomosynthesis, and thus delivers excellent quality 3D images. Now also biopsies, in other words the taking of tissue samples, can be performed leveraging this wide tomosynthesis angle. The HD Breast Biopsy solution allows targeting suspicious areas with one click with a +/- 1mm accuracy. The new integrated specimen imaging tool facilitates the immediate control of the biopsy directly at the mammography system. The clinical workflow is improved by eliminating the need for a second imaging system and by reducing compression time for the patient.

The new Mammomat Revelation also provides automated breast density measurements at the point of examination. This allows for personalized risk stratification and necessary adjunct imaging exams can be triggered before the patient leaves.
As tumor tissue can be difficult to distinguish from breast tissue, functional breast imaging with contrast enhanced mammography now expands the diagnostic options with the new system and improves patient access to functional imaging.

"Mammomat Revelation gives our customers the ability to achieve precise diagnostic results," comments Lars Hofmann, Head of Marketing for the X-Ray Products business line at Siemens Healthineers. "As discomfort is a key reason for a woman to avoid mammography exams we are improving their imaging experience with our Personalized Soft Compression."

**HD Breast Tomosynthesis with a 50° scan angle for the first time available for biopsies**

With its unique 50 degree 3D HD Breast Tomosynthesis, Siemens Healthineers offers the largest scan angle available on the market. This large scan angle is the basis for the highest depth resolution, and thus provides excellent quality 3D images. This makes it easier to detect even the smallest lesions, which are no longer hidden by the overlying breast tissue improving diagnostic accuracy. With Mammomat Revelation the radiologist can now also perform biopsies (taking samples of potential tumor tissue) based on 3D HD Breast Tomosynthesis. The HD Breast Biopsy solution allows targeting suspicious areas with one click with a +/- 1mm accuracy.

**Mammomat Revelation with integrated specimen imaging tool**

As soon as the tissue sample has been taken, it has to be X-rayed to confirm that the biopsy was successful. In current settings, samples have to be imaged to a second system or a dedicated specimen scanner, usually in a different room. For this entire time, the patient's breast has to remain compressed – an uncomfortable or even painful situation that the Mammomat Revelation can substantially reduce. The system has an integrated specimen imaging tool called InSpect. Biopsy samples can be controlled within 20 seconds directly at the system without radiation exposure to the patient. The Mammomat Revelation improves the biopsy workflow and shortens the compression time for the patient.

**Automated measurement of breast tissue density using Insight Breast Density**

Women with dense breast tissue are at higher risk for developing breast cancer. There is also a higher likelihood that a tumor cannot be detected due to dense breast tissue. Breast density is therefore a critical parameter in diagnosing breast cancer. In case of high breast
density, additional examinations such as tomosynthesis or breast ultrasound might be indicated. Radiologists currently have to visually estimate breast density during the image reading process, which usually takes place after the patient has left. If additional imaging procedures become necessary, the patient has to be called back. This causes uncertainty and concerns for the patient.

Mammomat Revelation is the first mammography system that provides automated breast density measurements at the point of examination. This enables direct, personalized risk stratification and adjunct imaging can be initiated before the patient leaves. Patients get results faster, which also minimizes uncertainty.

Functional breast imaging with Titanium contrast enhanced mammography
Purely morphological information from a mammogram or tomosynthesis may sometimes be insufficient for a precise diagnosis. For example, it can be difficult to distinguish scar tissue from new tumors in a post-surgical examination. In addition to purely morphological information, there can be a need for functional information that can be obtained using contrast enhanced imaging. This involves injecting an iodine-based contrast agent, which becomes enriched in tumor tissue, and can be made visible using a dedicated dual energy scanning mode. Contrast enhanced imaging is currently usually performed using breast MRI. Mammomat Revelation now makes functional imaging possible directly on the mammography system. As mammography systems are more widely available than MRI systems, the patient access to functional breast imaging can be improved. Contrast enhanced mammography is still not a standard procedure. The modular arrangement of the new system therefore enables it to be expanded to include this and other functionality to suit customer requirements.

Improved patient experience in mammography
Discomfort or pain are key reasons for avoiding potentially life-saving mammography exams. With Personalized Soft Compression, the breast compression process is softened and the compression force is automatically and individually adjusted. Coupled with ergonomic SoftComp Paddles, Personalized Soft Compressions allows for better breast positioning, a more consistent image quality and reduces discomfort.
The new mammography system Mammomat Revelation will be commercially available in the first half of 2018.

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 Healthineers organizations.

Mammomat Revelation’s current FDA approval status is currently “510k pending”.

This press release and press pictures are available at www.siemens.com/press/PR2017110091HCEN


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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.