
New Siemens Mammography System Lowers Radiation Dose Up To 30 percent



Siemens Healthcare is launching the Mammomat Inspiration Prime Edition, the first mammography system that lowers patient dose up to 30 percent without compromising image quality.

The Mammomat Inspiration Prime Edition lowers dose by replacing the standard scatter radiation grid with a new algorithm for progressive image reconstruction. This algorithm identifies scatter-causing structures and calculates a corrected image, enabling complete use of primary radiation so physicians can achieve high-quality images with less dose.

In digital X-ray breast imaging, radiation passes through the examined breast to a detector. Primary radiation supplies the information needed to produce the X-ray image, while scattered radiation is absorbed by special grids positioned between the breast and the detector. Unfortunately, these scatter grids also absorb part of the all-important primary radiation, forcing physicians to use a higher dose to obtain images of desired quality. Since mammography means regular screening of healthy women, minimising dose is extremely important.

Siemens' new reconstruction algorithm for the Mammomat Inspiration system – known as Prime (Progressive Reconstruction, Intelligently Minimizing Exposure) – eliminates the need for the conventional scatter radiation grid. The Prime algorithm subsequently corrects the scattered radiation by identifying scatter-causing structures and recalculating the image. The primary radiation that radiologists rely upon remains intact. Therefore, a grid is no longer necessary, and lower doses are sufficient to produce high-quality images. The grid-free imaging technology of the Mammomat Inspiration Prime Edition can reduce radiation dose up to 30 percent compared to its predecessor model, depending on the thickness of the patient's breast tissue.

Shipping the first quarter of 2013, the Mammomat Inspiration Prime Edition is based on the modular Mammomat Inspiration platform for screening, diagnostics, biopsy, and tomosynthesis used by hospitals and physicians' offices since 2007. Facilities have the option of purchasing the basic equipment, upgrading biopsy or tomosynthesis later as the need arises.

The software-driven Mammomat Inspiration Prime Edition demonstrates the innovative power of Siemens Healthcare and meets a goal of the global "Agenda 2013" initiative, which the Siemens Healthcare Sector unveiled in November 2011. The initiative defines plans of action to be implemented within two years in the areas of innovation, competitiveness, regional presence, and human resource development.

Published on : Mon, 26 Nov 2012