

Press Release

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Sonialvision G4 R/F system Maximum range of examinations

Best-in-class features /

“SUREngine-Advance” technology supports excellent image quality /

Premium application software

Shimadzu, a world-wide leading manufacturer of diagnostic imaging equipment, has further enhanced the range of exams of its Sonialvision G4 R/F system. In both functionality and operability, this universal R/F table outperforms other R/F systems. The Sonialvision G4 R/F is part of the Shimadzu product range shown during the ECR 2016 congress in Vienna, Austria.

Equipped with the largest available FPD at 17” (42 x 42 cm) and Shimadzu’s next generation digital imaging platform, the Sonialvision G4 covers the widest possible range of examinations, providing inter-departmental hospital capability. Combined with the large longitudinal stroke of Sonialvision, the FPD's provides an extensive imaging area.

The new functions cover applications such as Tomosynthesis, T-smart and SLOT

Advance:

- **Tomosynthesis**

Shimadzu’s latest imaging technology, the new **"High Definition**

Tomosynthesis" enables the reconstruction of the tomosynthesis image from original images acquired in the 1x1 high definition mode using a 6-inch (15 cm) field-of-view. This new mode provides tomosynthesis images with even higher spatial resolution and is very effective to diagnose small areas such as bones in the finger tips etc. in detail, or to detect a very small micro-fracture.

The new Oblique Tomosynthesis feature provides oblique tomographic images

reconstructed at any optimal angle up to ± 20 degrees laterally or vertically to match the ideal diagnosis angle. This feature is helpful when examining spines, hip joints and other areas that could be difficult to observe by standard horizontal tomographic images parallel to the table-top.

Low-dose Tomosynthesis allows multiple slices of volume data to be observed with a minimized X-ray dose, requiring a single linear tomography stroke acquisition only. By switching the field-of-view and using collimation, X-ray exposure can be reduced to prevent unnecessary radiation exposure outside the area of interest. The new mode allows to minimize the dose level even further, which makes the system ideal for pediatric use as well.

Position-free tomography Tomosynthesis by SONIALVISION allows images to be recorded at any angle required for diagnosis. This includes a variety of table angles, also with the patient standing and reverse inclined position to apply gravity, which is not possible with CT scanners. This helps to expand the examination possibilities, for example to examine joints under weight-bearing conditions.

- **T-smart**

is the latest and most sophisticated tomosynthesis technology that automatically divides the original projection images into two projection images sets (metal-free projection images and metal-only projection images). It then performs iterative re-constructions on each of them and finally integrates the two data sets in one, providing a "T-smart" image.

- **SLOT Advance**

provides high accuracy images with long fields of view, such as for full spine or full leg images, taken with minimal X-ray dose. The combination of SONIALVISION G4's extra-long imaging chain slide coverage, and its large FPD of 17" achieves even a wider longitudinal and transverse imaging area up to 55" x 17" (141 x 42 cm) compared to the image stitching capabilities of CR units.

"SUREngine-Advance" technology supports excellent image quality

In addition, advanced "SUREngine-Advance" technology (Shimadzu Ultimate Real-time Enhancement Engine) contributes to creating excellent image quality. It enables the natural enhancement of the entire image for clearer revelation of all examination areas and small, faint targets.

Additionally, the grid is removable from the table, effective for a much lower dose required especially in pediatrics and gynecology. Furthermore, the table's heavy-duty design supports a patient load of up to 318 kg in the horizontal position.



Figure 1: Sonialvision G4 R/F system for the widest possible range of examinations



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