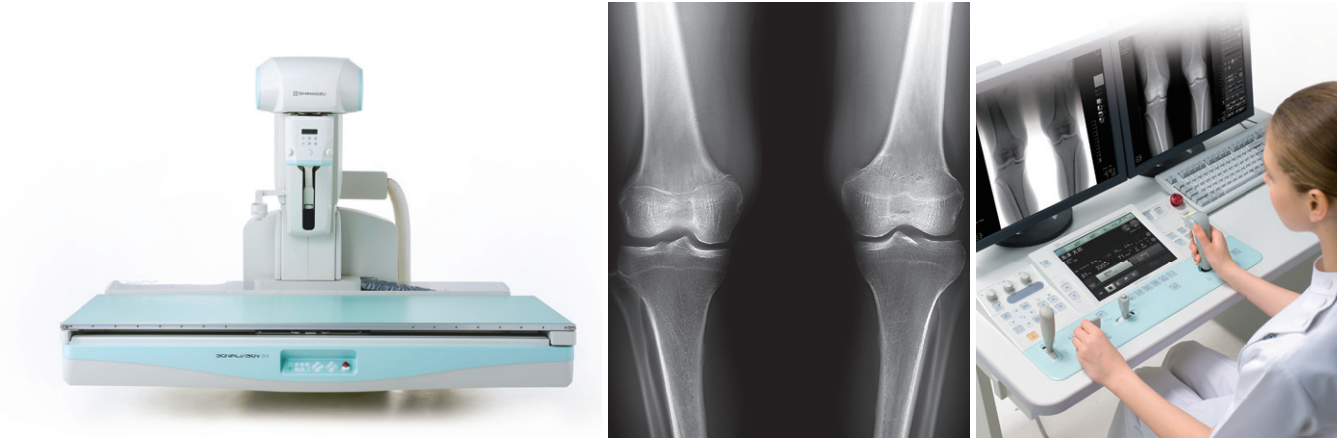


Premium Option

Tomosynthesis

Advanced Digital Multi-Slice Tomography Technology
making the invisible visible



Cutting Edge Application Option
for
SONIALVISION G4

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Shimadzu Corporation

Headquarters
1, Nishinokyo-Kuwabara-cho, Nakagyo-ku, Kyoto 604-8511, Japan
<http://www.shimadzu.com>



Shimadzu Corporation Medical Systems Group has been certified by TÜV Rheinland as a manufacturer of medical equipment and systems in compliance with ISO9001:2008 Quality Management Systems and ISO13485:2003 Medical Equipment Quality Management Systems.

- Remarks:
- Every value in this catalogue is a standard value, and it may vary a little from the actual at each site.
 - The appearances and specifications are subject to change for reasons of improvement without notice.
 - Certain configurations may not be available pending regulatory clearance. Contact your Shimadzu representative for information on specific configurations.
 - Before operating this system, you should first thoroughly review the Instruction Manual.

Tomosynthesis Premium Option

Tomosynthesis is new state-of-the-art imaging technology that integrates cone-beam CT reconstruction technology and digital image processing technology. A single linear tomography acquisition movement of SONIALVISION G4's imaging chain provides multi-slice coronal tomographic images easily with only a very simple and quick workflow.

■ Tomography at any patient position

SONIALVISION G4 enables performing Tomosynthesis freely at any patient position, such as standing for weight-loaded examinations or lying horizontally on the table. It can also easily examine the elbow or knee in a bended position, which is difficult with a CT scanner.

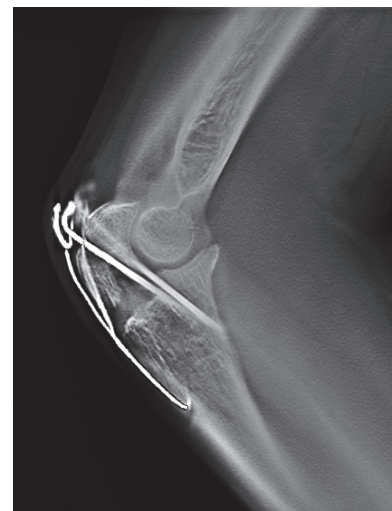
■ High resolution images with minimal metal artifacts

SONIALVISION G4's superfine resolution Flat Panel Detector with 139 μ m pixel size and Shimadzu's advanced imaging technology realizes excellent resolution Tomosynthesis / Tomography images with minimal metal artifacts. Therefore, its clinical values are more and more spotlighted nowadays, and practically highly appreciated especially in observing micro fractures or detail diagnosis around metal orthopedic implants or fixators.

■ Minimal X-ray Dose

Tomosynthesis allows you to observe multiple slices of volume data with minimizing X-ray dose, requiring a single linear tomography stroke acquisition only. By switching the field-of-view and using collimation, X-ray exposure to areas outside the area of interest, such as when viewing the femur, can be minimized to prevent unnecessary radiation exposure.

A new "Low-dose Tomosynthesis" mode is now available to reduce the dose level even further, which makes the system ideal for the pediatric use as well.



Making the invisible visible

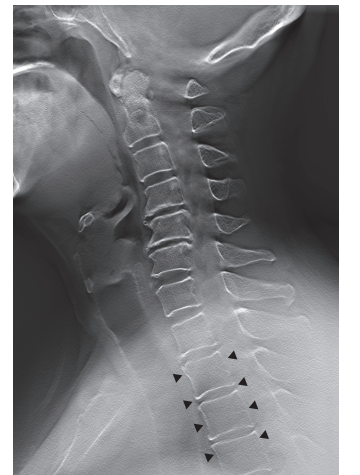
■ High Definition Tomosynthesis mode

Reconstructing images from original images acquired in the 1x1 high definition mode (using 6-inch field-of-view) allows you to obtain tomosynthesis images with even higher spatial resolution. This mode is very effective to diagnose small areas such as bones in the finger tips etc. with more precision.

■ Oblique Tomosynthesis (*)

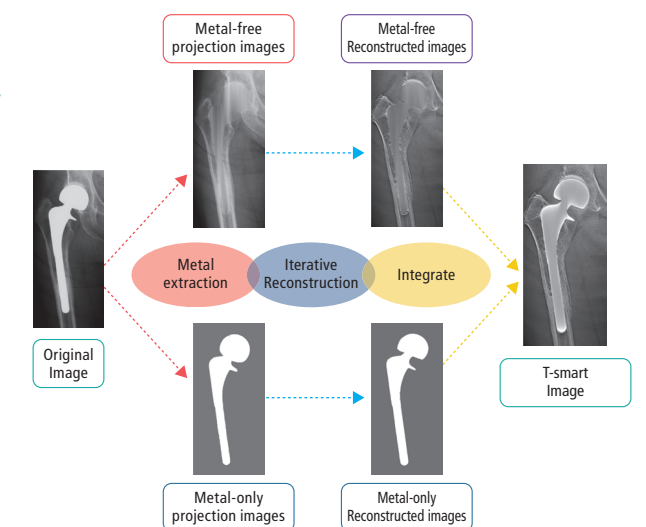
The new Oblique Tomosynthesis feature provides oblique tomographic images reconstructed at any optimal angle up to ± 20 degrees laterally or vertically to match your ideal diagnosis angle.

This feature helps when examining spines, hip joints and other areas that could be difficult to be observed by the standard horizontal tomographic images parallel to the table-top.



T-smart^(*) Tomosynthesis-Shimadzu Metal Artifact Reduction Technology

"T-smart" is our latest and highest grade tomosynthesis technology evolved further with iterative reconstruction method. T-smart automatically divides the original projection images into two projection image sets metal-free projection images and metal-only projection images by using advanced metal extraction algorithm. Then, it performs iterative reconstruction to each of them, and finally integrates the two data in one. That is how "T-smart" image is provided.



■ Metal Artifact Reduced Further

T-smart provides even clearer Tomosynthesis images suppressing the artifacts around metal objects even further. This application will be a great help in the orthopedics especially for the patients with metal implants or fixators, as it enables you to diagnose the status of the boundary between bone and implant very exactly.

■ High Image Quality with Low Noise

Since the reconstruction process is performed without filtering, it improves visibility of trabeculae, hairline fractures, and other details, even around metal objects, without accentuating noise. Consequently, this allows images to be viewed with even higher image quality.



(*): Requiring the "Side Station i3" separately.