

Wrist Scanned with the Ease of an X-ray

“The Area Finder provides faster and more comfortable scans of the hand, wrist, and elbow; it is as easy as taking a plain X-ray. This is truly a new way of performing CT examinations of the extremities which enables scans to be performed for patients in severe pain, who may not be capable of lying on the table.”

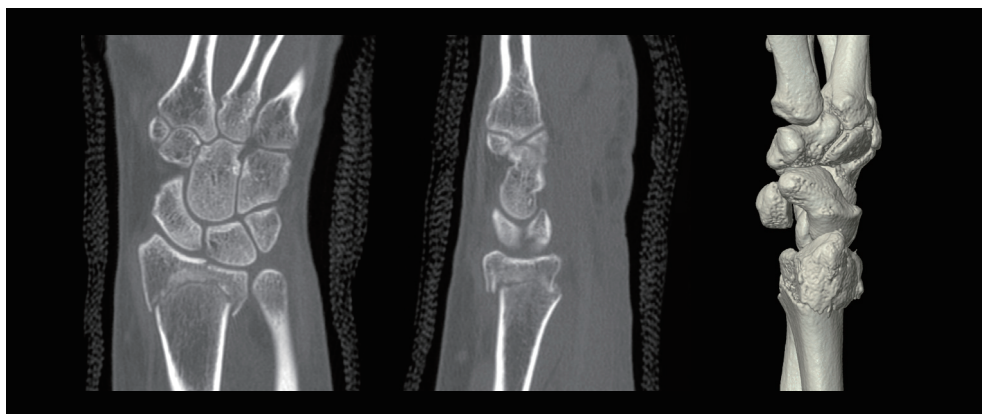


Willem Jan van der Woude
CT Specialist Radiographer
Radboud University Medical Center
Nijmegen, the Netherlands

Patient History

A 44-year-old man presented to the emergency department with a suspected fracture of the right wrist after a fall. Following fracture reduction, the patient complained of increased pain, faintness, and nausea. A CT examination of the wrist was requested to evaluate fracture alignment after reduction. The CT scan was performed with Area Finder^{*1}, allowing the patient to be scanned while he was seated comfortably at the rear of the gantry.

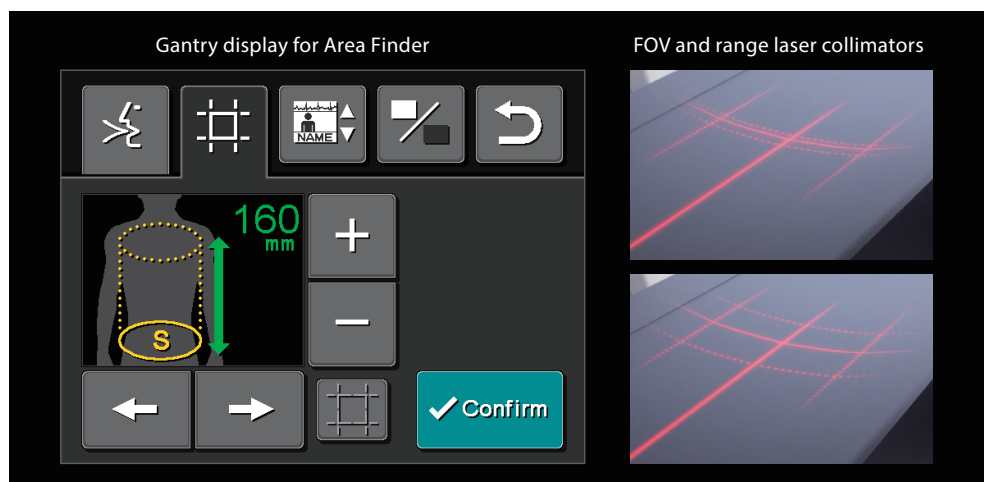
Results



The CT scan shows good alignment of the fracture fragments with no complications.

Technology

Area Finder allows the field of view and scan range to be set directly at the gantry as easily as light beam collimation for an X-ray. This technology bypasses the usual scanograms and scan planning workflow, improving patient comfort and increasing speed in CT examinations of the extremities.



Conclusion

With GENESIS Edition, a CT scan can be performed with the speed and ease of an X-ray. You can position the patient comfortably, plan and start a volume scan directly from the gantry. CT scanning has never been so easy.

TOSHIBA MEDICAL SYSTEMS CORPORATION

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Model number: TSX-305A MCACT0307EA 2017-04 TMSC/Produced in Japan

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Acquisition

CT Model:
Aquilion ONE™ / GENESIS Edition

Scanned using Area Finder with the patient seated comfortably at the rear of the gantry

Scan Mode: ONE Volume
Collimation: 0.5mm x 200
Exposure: 120 kV, 55 mAs
Rotation Time: 0.275 second
Dose Reduction: FIRST^{*1}
CTDI: 3.5 mGy,
DLP: 34.8 mGy·cm
Effective Dose: 0.02 mSv
k-factor: 0.0008^{*2}

Technology highlight

The Forward projected model-based Iterative Reconstruction Solution (FIRST) algorithm from Toshiba Medical is a true MBIR^{*3} algorithm, meaning that a forward projection step is performed for every iteration. FIRST provides improved high contrast spatial resolution and dose reduction of up to 84.6%. The integration of FIRST with automatic exposure control allows users to take full advantage of the capabilities of true iterative reconstruction without any of the guesswork that can interfere with clinical workflow.

^{*1} Option

^{*2} CT Dose version 0.6.7, National Board of Health, National Institute of Radiation Hygiene, Denmark

^{*3} Model-Based Iterative Reconstruction

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