GE HealthCare

Revolution™ Advance

Smart CT care at first sight

We understand that a lot of decisions go into choosing the right CT for your routine clinical capabilities. You need a CT scanner that is easy to use, easy to operate and still delivers outstanding image quality. All while keeping your patients comfortable. Which is why we chose to design the new Revolution™ Advance.

Revolution Advance is a smartly balanced, high image quality, 16-slice* CT scanner that features our enhanced workflow solutions to help shorten scan times, reduce dose and increase patient comfort. This enables smarter CT care, all in one system.

AI-based Auto Positioning

Streamlines patient setup and positioning with the touch of a single button.

Smart imaging capabilities

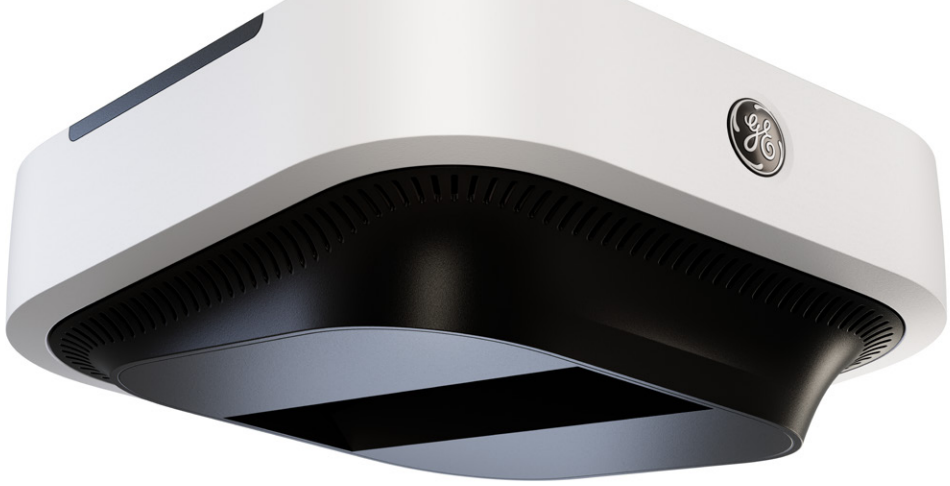
Robust applications and reconstruction capabilities help to reduce dose as well as improve image quality.

Intelligent investment

Built on the Revolution platform to improve efficiency and reduce operating costs.

*32-slice post reconstruction of images by Overlapped Recon (option)


Revolution



One-click and done

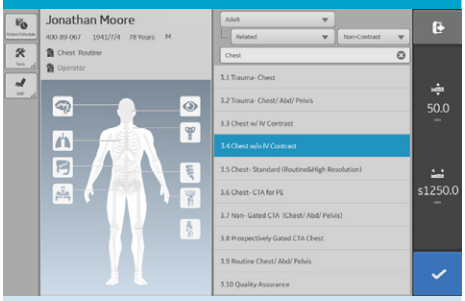
Improving workflow while maintaining consistency and patient comfort is more important than ever before. Which is why Revolution Advance takes advantage of our innovative AI-based Auto Positioning to help optimize the entire patient scan process.

Here's how it works. Our Xtream camera uses real-time depth-sensing technology to generate a 3D model of your patient's body. Then, using our deep learning algorithm, Revolution Advance pinpoints the center of the scan range and automatically aligns it with the isocenter of the bore.

With one click, Auto Positioning uses all of this information to automatically center your patient for a completely hands-free positioning experience.

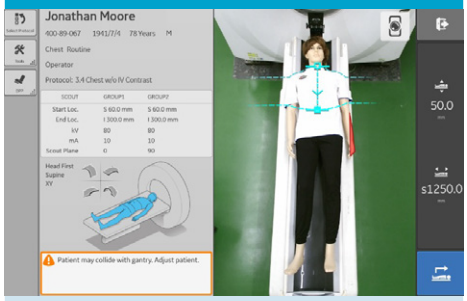
This intelligent technology provides faster patient positioning, making the scan experience more comfortable for your patients. It also optimizes dose, improves image quality and provides greater scan consistency.

Smart select



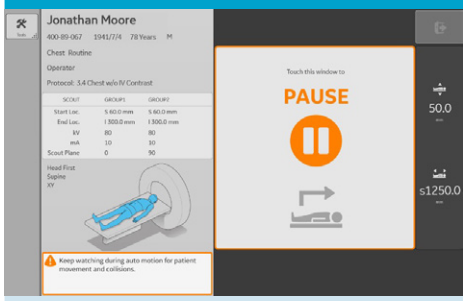
Quickly get to the appropriate protocol by choosing from a simple list of related protocols.

Auto center



By calculating the 3D center of the scan range, the system knows exactly how to align the table in the bore.

Click to position



With the click of a button, automatically position your patient at the start location of the scan.

Easy-to-use advance capabilities

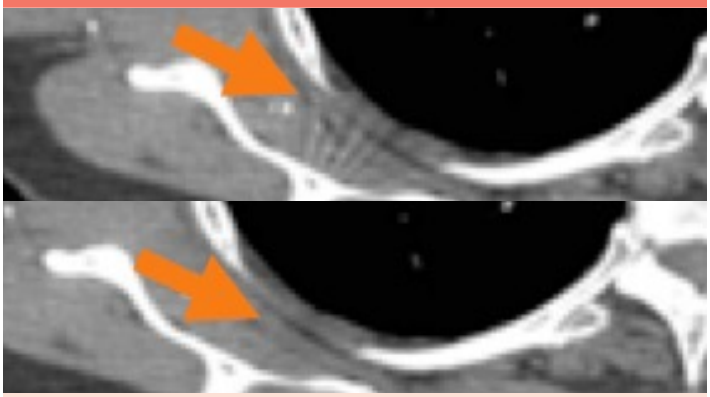
Built into Revolution Advance are easy-to-use capabilities accessible through the intuitive Xtream Tablet touchscreen gantry displays. Not only can you quickly set up patients for faster, more accurate scans, you have access to various scan modes such as Emergency Patient mode to start emergency cases quickly.

You can also take advantage of speed-enhancing applications like IQ Enhancement (IQE), which can provide faster scans without compromising image quality.

Emergency Patient Mode

Emergency Patient Mode is a dedicated user interface to quickly start emergency cases.

IQ Enhancement



IQ Enhancement (IQE) helps to reduce helical artifacts to maintain image quality while reducing scan speeds. IQE can accelerate its helical pitch up to 70%[1].

- 12.1 inch touch-screen
- Preset patient and protocol selections
- One-click auto positioning
- ECG waveform display


PATIENT SCHEDULE
EMERGENCY PATIENT
50.0
s1250.0

Intelligent imaging you can see

At the heart of Revolution Advance is a high-performance, reliable imaging chain with 42 kW of generator power, a 3.5 MHU X-ray tube and integrated detectors that reduce signal-to-noise by 20%*.

This is paired with our smart, dose-reducing reconstruction applications like ASiR[2], which can provide up to 40% lower dose while maintaining high image quality.[2]

When it comes to imaging more challenging cases, such as neurology, oncology and pediatric patients, VISR[3] (Volumetric Image Space Reconstruction) reduces noise without impacting the image resolution.

This means less dose for the patient while maintaining the high-image quality you need for more accurate diagnoses.

68 M+
exams using ASiR performed to date*

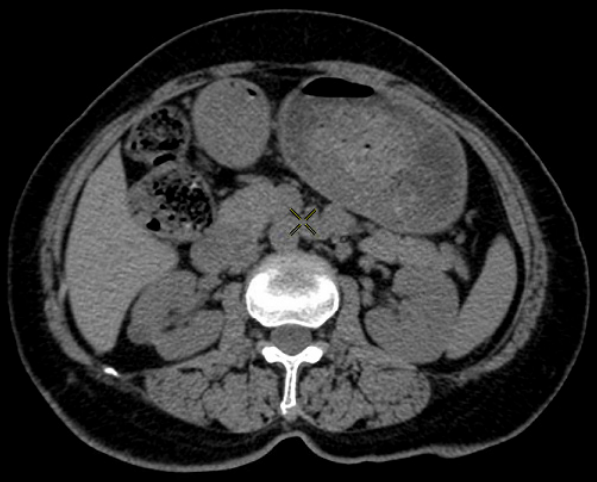
20%
lower noise with integrated detector technology*

Up to
1024
image reconstruction matrix for enhanced resolution

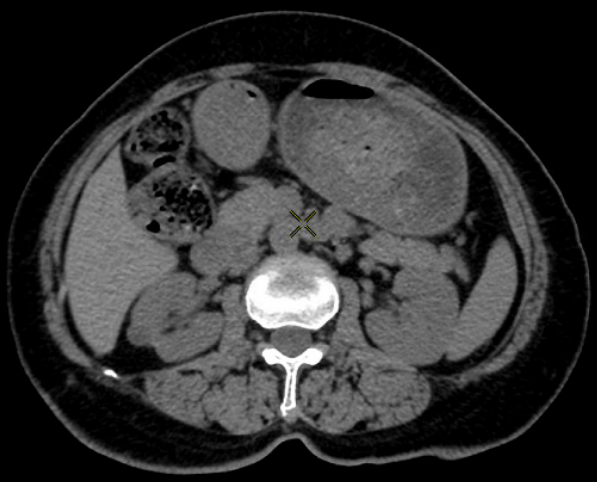
Up to
40%
lower dose at the same image quality with ASiR**

*Compared to previous generation detector technology; data on file
**Compared to FBP; image quality measured as image noise standard deviation
Data on this page is not for USCAN geography

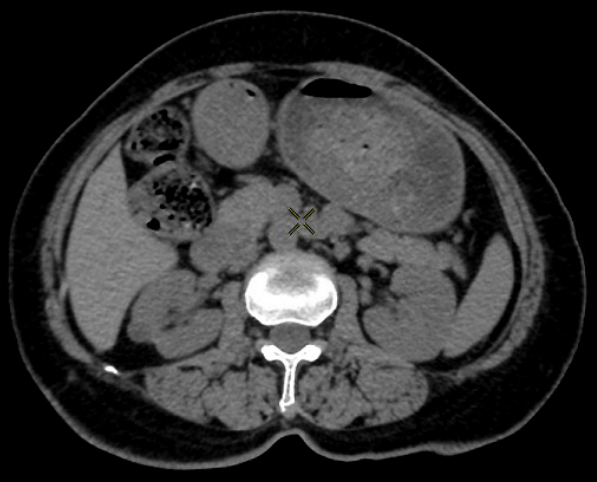
Routine abdomen ASiR level comparison



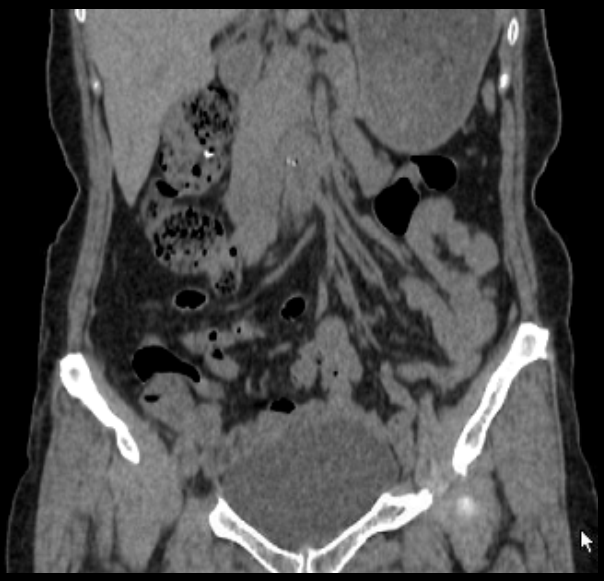
FBP



ASiR 30

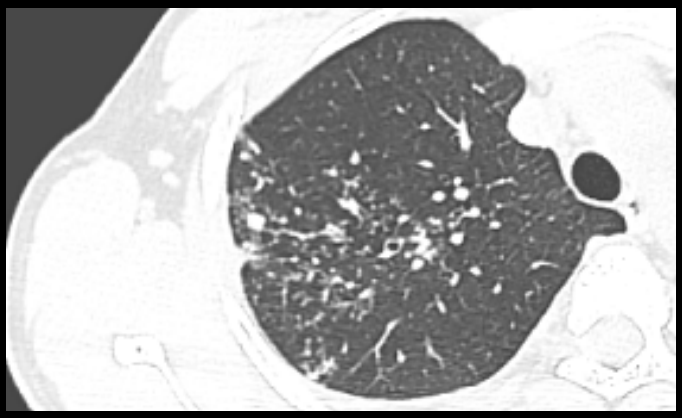


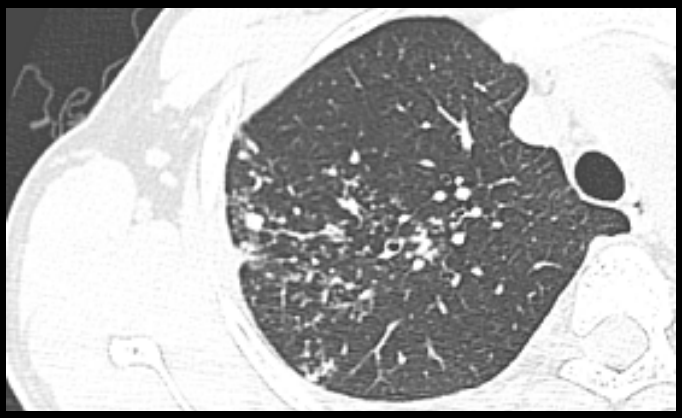
ASiR 50



ASiR 50 Coronal

High resolution lung imaging with 512 Vs 1024 recon matrix





Calcaneus fracture – 512 versus 1024 image recon matrix comparison

512

1024

Cervical spine sagittal and coronal reconstruction with 1024 matrix

Sagittal 1024

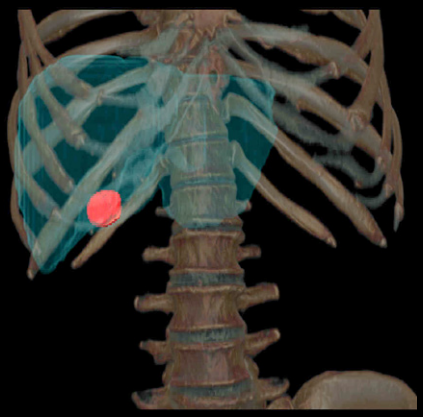
Curved coronal

High resolution lung imaging with 1024 recon matrix and 3D Volume illumination with lung segments differentiation

Axial 1024

Coronal 1024

Gallbladder stone imaging – Axial FBP, ASiR and 3D volume illumination



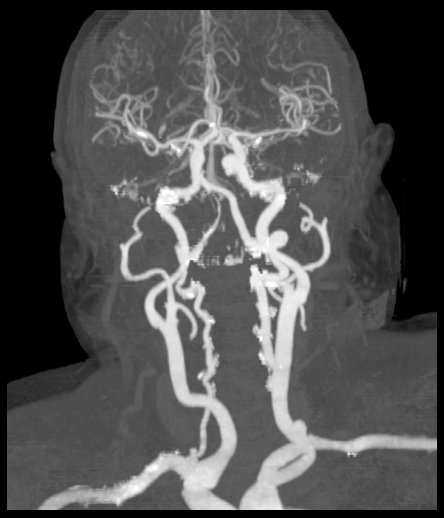
Volume Illumination

FBP

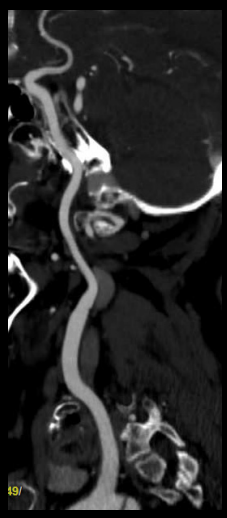
ASiR

Carotids CTA with 3D Volume Rendering, 3D MIP and left carotid artery curved reconstruction

Volume Illumination



Vessel 3D MIP



Curved L Carotis Int.


PATIENT SCHEDULE
EMERGENCY PATIENT
50.0
s1250.0

Designed with your needs in mind

Revolution Advance is designed on our innovative Revolution platform. Your technologists and clinicians can expect a familiar, consistent user interface, along with enhanced workflow solutions that reduce scan times allowing you to see more patients each day.

Fleet management is also completely optimized. Scan protocols can be shared across your entire fleet for consistency and intelligent remote monitoring ensures your scanner is operating at peak efficiency. Revolution Advance also features an Energy Saving Mode, which can reduce energy consumption up to 40%[4].

So you can take comfort in knowing that Revolution Advance is designed with your clinical and operational performance in mind.

Streamlined workflow with
3-click
scan start

Energy Saving Mode can reduce energy consumption by up to
40%[4]

Remote monitoring can help fix up to
50%
of issues remotely*

*Through continuous monitoring and proactive maintenance planning; data on file

Advance your care

Whether you are looking to improve workflow efficiencies in your CT department, achieve greater consistency and image quality in your scans, or better optimize your fleet, Revolution Advance is a smart choice that can achieve it all. So advance your CT care today with our latest addition to the Revolution family.

Features

Smart Dose technology
Features such as ASiR (Adaptive Statistical Iterative Reconstruction) and VISR (Volumetric Image Space Reconstruction) reduce radiation dose while maintaining high image quality.

Auto Positioning with AI
Utilizes AI technology for automatic table elevation, centering and positioning, reducing manual errors and improving patient throughput.

Smart Flow enhancements
Includes Gantry Display for improved workflow, Default Patient Positioning (DPP) for easy and accurate patient setup and IQ Enhancement (IQE) for reducing artifacts in thin-slice helical scans.

Xtream Camera and Tablet
The AI-powered Xtream Camera features automatic landmark detection and centering, while the Xtream Tablet enables easy patient and protocol selection, enhancing the user interface and workflow.

Emergency Patient Mode
A dedicated user interface for quick and efficient emergency case handling automatically assigns patient details and streamlines the scan setup process.

Remote Control Suite
Allows remote patient positioning and monitoring, minimizing contamination risks between the gantry and console rooms. Includes a 3-video monitoring system for real-time observation.

Energy Saving Mode
Designed to reduce electricity consumption by more than 12,085 kWh per machine annually, achieving up to 40% energy savings compared to previous technology.

Volume Helical Digital Tilt
Enables tilted image reconstruction without physical scanner tilting, improving efficiency and leverages advanced post-processing tools for various image views.

Specifications

Detectors	HiLight Scintillator with DAS on Detector
X-ray tubes	6.3 MHU equivalent with ASiR (3.5 MHU without ASiR)
Number of acquired slices	16 - 32 slice is enabled by overlap recon as an option
Rotation time	360° in 0.8, 1.0, 1.5, 2.0, 3.0, 4.0 sec
Image reconstruction algorithm	ASiR
Generator power	70 kW equivalent with ASiR (42 kW without ASiR)
kV settings	80, 100, 120, 140
Spatial resolution	0.33 mm isotropic resolution
AI solutions	Auto Positioning
Table load	205 kg

About GE HealthCare

GE HealthCare is a leading global medical technology, pharmaceutical diagnostics, and digital solutions innovator, dedicated to providing integrated solutions, services, and data analytics to make hospitals more efficient, clinicians more effective, therapies more precise, and patients healthier and happier. Serving patients and providers for more than 100 years, GE HealthCare is advancing personalized, connected, and compassionate care, while simplifying the patient's journey across the care pathway. Together our Imaging, Ultrasound, Patient Care Solutions, and Pharmaceutical Diagnostics businesses help improve patient care from diagnosis, to therapy, to monitoring. We are a $19.6 billion business with 51,000 colleagues working to create a world where healthcare has no limits.

Follow us on LinkedIn, X (formerly Twitter), and Insights for the latest news, or visit our website www.gehealthcare.com for more information.

[1] When acquiring the same helical artifact level compared to the same scanner with IQ Enhance disabled.

[2] In clinical practice, the use of ASiR may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. Low contrast detectability (LCD), image noise, spatial resolution and artifacts were assessed using reference factory protocols comparing ASiR and FBP.

[3] In clinical practice, the use of VISR may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.

When ASiR is installed, 3D Neuro filter will be disabled.

[4] Revolution Advance is designed to reduce electricity consumption for operation and ambient cooling by more than 12,085 kWh per machine annually, an energy savings up to 40% compared to prior GE HealthCare technology.

GE HealthCare