GE Healthcare

More flexibility
More performance
Less dose

Optima CT580 W

More performance

Less dose

More flexibility

This system is loaded.

Optima CT580 W* puts more capability at your fingertips – in a wide-bore, multi-purpose, reliable 16-slice CT scanner that offers high throughput and extreme flexibility to your radiology department.

* Optima CT580 W is a configuration of Optima CT580.

A large bore. An ample field of view. A powerful X-ray tube. High-resolution imaging. ASiR™ dose-reduction technology available. Lightning-quick scan speeds. It's all within reach on the Optima CT580 W. It can be your "go-to" CT system – the one you'll use day in and day out for routine CT studies, complex or challenging exams, convenient large-patient scans, streamlined interventional procedures, and more.

What's more, it comes from GE, the established name in CT scanners, with a long and growing list of multi-slice innovations, and superb service support and uptime.

Boost diagnostic confi

Optima CT580 W is built on GE's legendary multi-slice technology – a balanced blend of power, resolution, speed, coverage and dose. For exceptional image quality. Extreme imaging versatility. And the ability to scan anatomy from head to toe without compromise.

Routine efficiency
Optima CT580 W arms you for a full range of studies from head to toe, with exceptional image clarity. And with efficiency that may optimize dose for virtually every scan. An ample 65 cm variable field of view provides extended visualization for large patients.

More productive workflow
Optima CT580 W simplifies management of large, thin-slice datasets and combines speed with flexibility. With optional fast image reconstruction at 16 fps, it streamlines your workflow from acquisition to final report.

Extremely versatile
From routine imaging to radiation oncology, from the emergency department to the interventional suite, Optima CT580 W gives you impressive image quality to support confident diagnoses across a wide range of anatomy and applications. Abdomen. Thorax. Head and neck. Extremities. Vasculature. Its wide bore, state-of-the-art table design, powerful tube, and fast, high-resolution imaging facilitate everyday studies – plus exams for bariatric patients, critical trauma patients attached to monitoring devices, and patients receiving interventions.

Crystal clear
Optima CT580 W delivers outstanding images. Period. Its Performix™ Pro VCT 100 tube delivers impressive power from a 100 kW generator with 800 mA maximum current for sub-millimeter, sub-second imaging. That's power to handle challenging exams with ease. And virtually eliminate tube cooling for efficient patient throughput. Fast, true 16 x 0.625 microVoxel™ imaging – a GE exclusive – lets you routinely obtain 16-slice acquisitions with thin slices in all scanning modes to improve 3D and reformatted 2D resolution.

dence.

Have it both ways.

Fine Image detail. Low dose. Enhanced Low-Contrast Detectability (LCD). Compromise no more. Now you can reduce dose dramatically and still see the same image detail – thanks to the latest GE dose-management innovation.

A leap ahead in dose management
GE-exclusive ASiR™ ** (Adaptive Statistical Iterative Reconstruction) dose reduction technology, an advanced reconstruction technology that may enable reduction in pixel noise standard deviation (a measurement of image noise). The ASiR reconstruction algorithm may allow for reduced mA in the acquisition of diagnostic images, thereby reducing the dose required*. This reconstruction technology may enable improvement in low contrast detectability*. The ASiR reconstruction technique reduces noise during image reconstruction – while preserving anatomical detail. It overcomes the limitations of the conventional CT reconstruction approach known as filtered back projection and produces an optimized image using the advanced iterative computation. It's great news for your patients, including pediatrics and those who need follow-up CT exams.

Always improving on the proven
In addition to ASiR, the Optima CT580 W keeps key imaging and dose-management features of previous GE CT systems. Our exclusive Volara™ 24-bit Digital Data Acquisition System (DAS) reduces noise for exceptional image quality in signal-starved anatomy, low-contrast soft-tissue areas, and large patients. Smart mA™, an automatic dose modulation technique, tells you the dose before the scan starts, so you can easily personalize dose protocols and minimize dose for virtually every patient – large and small.

IQ Enhance (IQE) allows faster pitch scanning covering more anatomy without sacrificing image quality for speed. Optima CT580 W also gives you flexibility to address critical situations, such as polytrauma and non-cooperative patients.

Bowtie beam shaping filter
The bowtie filter automatically attenuates off-axis rays to maintain a more uniform x-ray field at the detectors. This minimizes dose and reduces x-ray scattering effects.

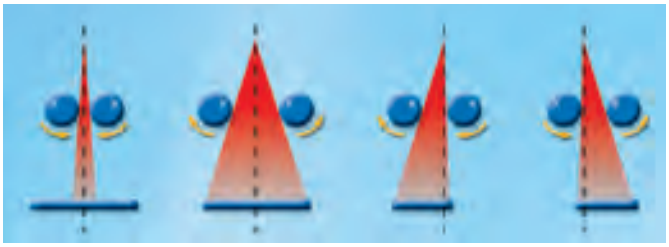
Dose report and prospective dose display
Optima CT580 W features a DICOM-structured dose report, which provides a clear summary of CTDIvol and DLP parameters. It also comes with a prospective dose display that allows clinicians to monitor dose before the scan, helping to avoid any unnecessary dose delivery to the patient.

3D dose modulation
Optima CT580 W uses a 3D modulation algorithm which automatically adjusts the mA as you scan along x-y-z axes. The modulation maintains image quality while optimizing dose for the image quality selected.

*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.
** Option

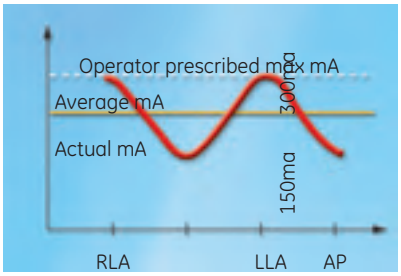
Z-axis tracking

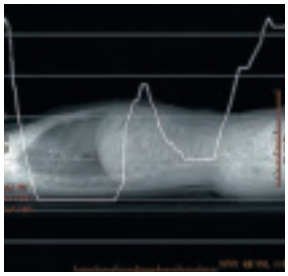
Z-axis tracking provides automatic and continuous correction of the X-ray beam position, adjusting the beam collimation and position to get a constant narrow beam on the detector.



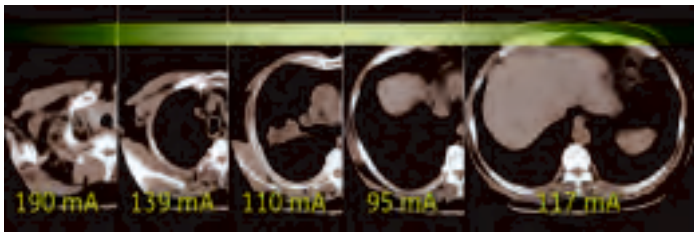
Closed cams for narrow beam | Open cams for wide beam | Counter rotate cams to position beam

3D Dose Modulation utilizing SmartmA™ and AutomA

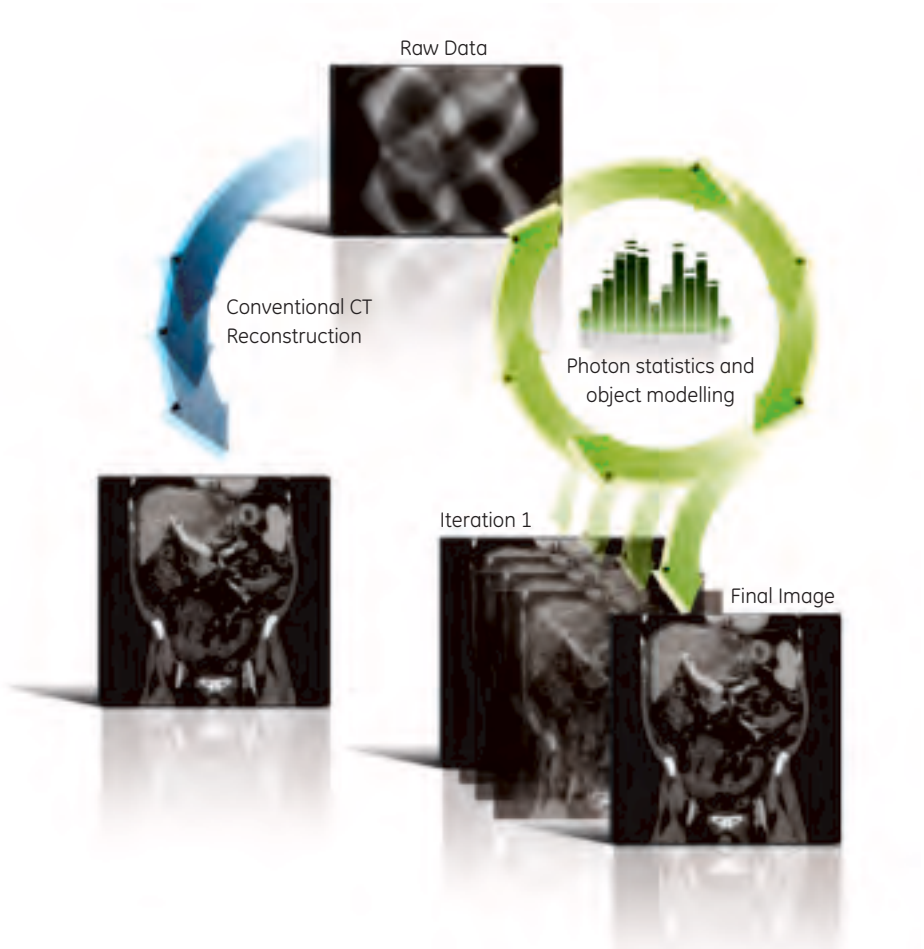




The mA (tube current) is adjusted (raised or lowered) according to the different anatomy being imaged and body habitus.



Constant image quality throughout scan.



ASiR workflow

It’s remarkable.

Look.
More closely.

See how Optima CT580 W delivers extreme clarity and high diagnostic confidence across your full range of CT procedures.

Very accommodating
Trauma patients encumbered by backboards, IVs and other emergency medical apparatus may enter into the Optima CT580 W, with its spacious 80 cm gantry opening.

Lightning fast
Full 360° gantry rotation in just 0.5 seconds means helical scans are extremely fast. For shorter breath holds. More comfortable exams. Less patient motion.

Get the big picture. Every time.
For many large patients, CT scans are more than uncomfortable. They're impossible. Optima CT580 W provides solutions in those challenging situations.

A super-size bore
Ten centimeters larger than conventional scanners, an 80 cm gantry opening offers freedom to position large patients for challenging diagnostic studies. It also provides flexibility for positioning of radiation therapy patients .

High power
The combination of our Performix Pro VCT 100 tube and 100 kW generator enables an 800 mA maximum tube current – all the power you need for optimized image quality in obese patients.

State-of-the-art table design
The Optima CT580 W tables help you perform accurate scans on large patients. With our optional high-capacity table, you can support and scan patients weighing up to 650 pounds (295 kg). And a low minimum table height gives patients easy-on-and-off access. For radiation therapy cases our TG66-compliant tables help provide accurate positioning, thanks to a stiffer cradle made from an advanced composite fiber to keep patients steady.

Interventions improved.

Whether you're biopsying a lung lesion near the diaphragm or ablating a liver lesion, precise needle placement and ample patient access are essential.

Enter Optima CT580 W with exceptional flexibility.

With growing demand for minimally invasive procedures comes the need for accurate real-time image guidance. From lesion biopsies to pain management, Optima CT580 W lets you balance dose and temporal resolution and optimize breath hold applications. It's flexible and versatile to support a wide range of interventional procedures – so you don't need to send patients to multiple suites.

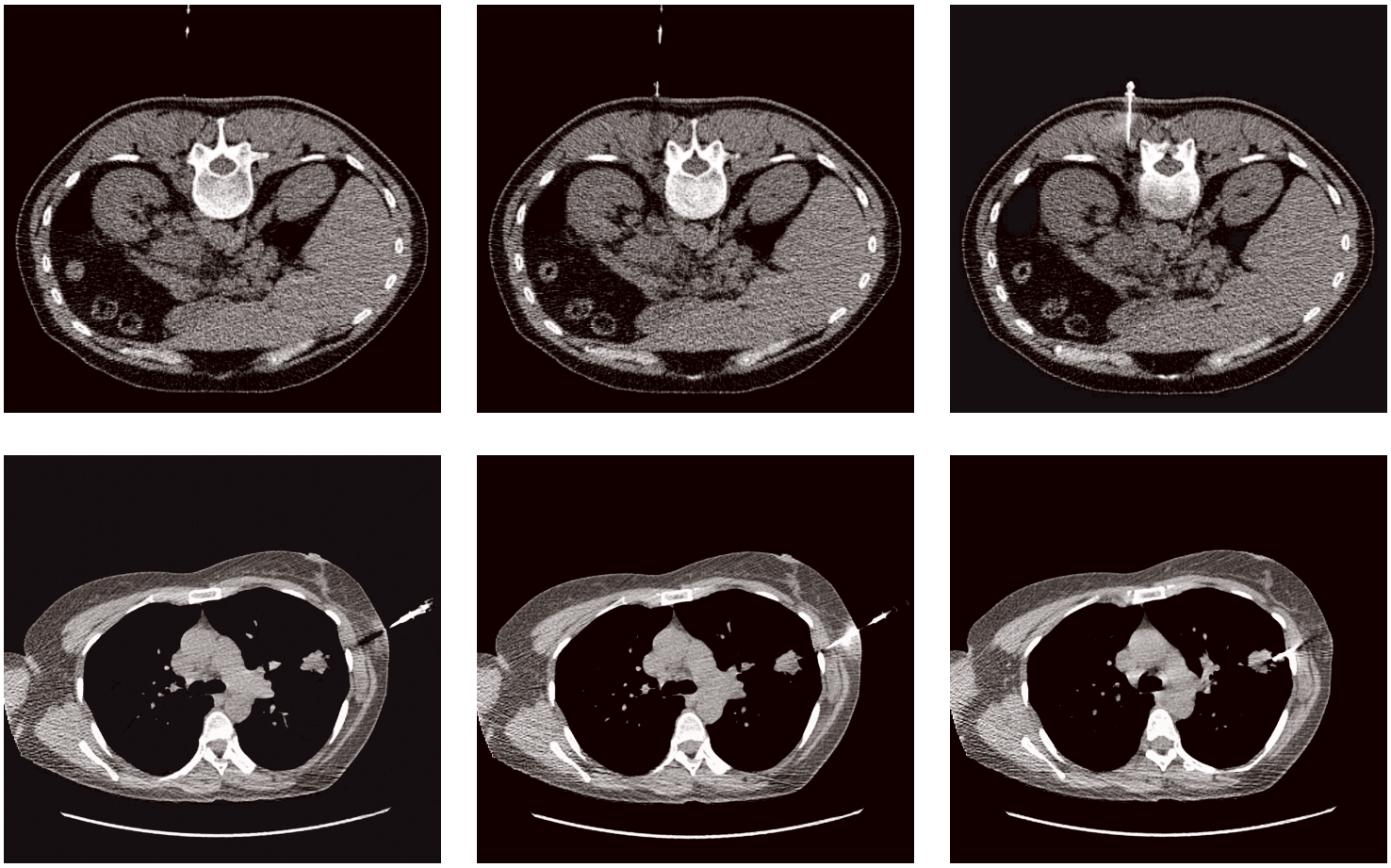
Wide-bore elbow room
A spacious, 80 cm wide-bore design gives you plenty of room to work around your patients and insert interventional devices. Flexible in-room controls enable fast procedures.

Customized procedures
GE-exclusive VariSpeed lets you adjust rotational scan time in 0.1-second increments between 0.5 and 1.0 seconds, enabling short breath holds, more comfortable scans, and adjustment of protocols for unique patients needs.

Precise control of interventions
GE's SmartStep tap mode lets you complete simple procedures quickly and accurately. And you can manage complex cases with SmartView™* Fluoro multi-slice real-time CT fluoroscopy. At 24 frames per second (3 view ports at 8 fps each), the SmartView Fluoro option gives you fast real-time image acquisition for precise needle control. A short latency time facilitates your navigation of a biopsy needle to a lung lesion during a breath-hold or free breathing. And SmartView Fluoro shows you exactly how your needle is adjusting when inserted into the spinal canal or abdomen.

Make it your workhorse
Sharp images. Low dose. High throughput. Versatility. They're all good reasons to put the Optima CT580 W to work in your facility. Find out more from your GE Healthcare representative.

* SmartView is available as an option



Needle placement using Smartview Fluoro.

GE Healthcare, a division of General Electric Company.

About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our "healthymagination" vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality and efficiency around the world. Headquartered in the United Kingdom, GE Healthcare is a $16 billion unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employs more than 46,000 people committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com

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imagination at work

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