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### 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 “healthmagination” 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](http://www.gehealthcare.com)

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GE Healthcare

# More flexibility More performance Less dose

Optima CT580 W



More  
performance

Less dose

More flexibility

# This system is loaded.

Less dose for all anatomy.

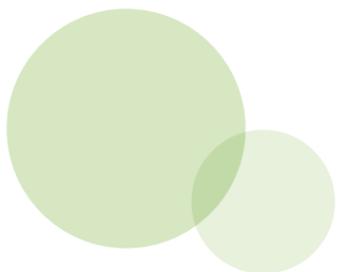
Optima CT580 W\* puts more capability at your fingertips – in a wide-bore, multi-purpose, reliable 16-slice CT scanner that offers high throughput and extreme flexibility to your radiology department.

\* Optima CT580 W is a configuration of Optima CT580. Optima CT580 is not commercially available in US.

An extra-large bore. An ample field of view. A powerful X-ray tube. High-resolution imaging. ASiR™ (Adaptive Statistical Iterative Reconstruction) dose-reduction technology available. Extremely 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, more 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 confidence.

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.

#### The routine made easy

Optima CT580 W arms you for a full range of studies from head to toe, with exceptional image clarity. And with efficiency that optimizes dose for 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 delays for quicker 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.



# Have it both ways.

Finer 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 overcomes the issues of noise and image artifact at low dose. An advanced iterative reconstruction technique, it models the causes of noise and thereby removes the noise during reconstruction. It overcomes the limitations of the conventional CT reconstruction approach known as filtered back projection and produces an optimized image using an advanced iterative computation. Result? You can reduce dose by up to 40% while maintaining image quality\* and improve low-contrast detectability (LCD) by up to 10% with equivalent dose or maintain LCD at up to 25% less dose. In any size patient. For any anatomic region. It's great news for a wide range of patients, including pediatrics and those who need follow-up CT exams.

## Always improving on the proven

In addition to ASiR, the Optima CT580 W builds on key imaging and dose-management features of previous GE CT systems. Our exclusive Volara™ 24-bit Digital Data Acquisition System (DAS) reduces noise up to 33% for exceptional image quality in signal-starved anatomy, low-contrast soft-tissue areas, and large patients. It also lets you optimize technique for dose-sensitive anatomy. Smart mA™, an automatic dose modulation technique, tells you the dose before the scan, 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

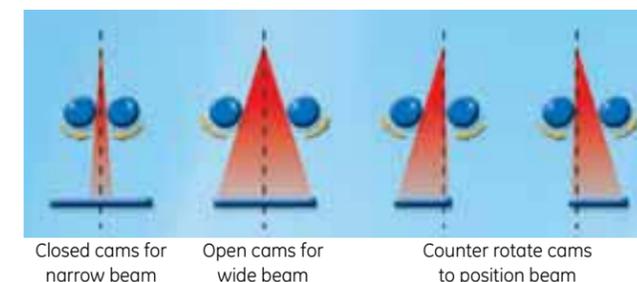
Optima CT580 W features a DICOM-structured dose report, which provides a clear summary of CTDIvol and DLP parameters. It also comes with a prospective dose display that allows clinicians to monitor dose before the scan, avoiding any unnecessary dose delivery to the patient.

## 3D dose modulation

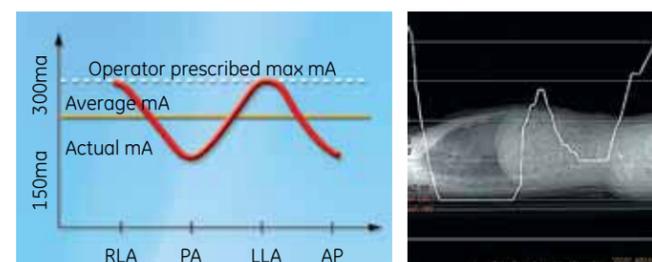
Optima CT580 W uses a 3D modulation algorithm which automatically adjusts the mA as you scan along x-y-z axes. The modulation maintains image quality while reducing dose.

## Z-axis tracking cuts dose by up to 40%

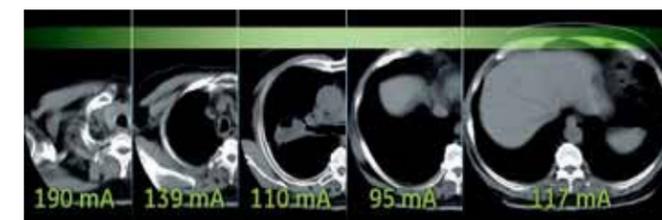
Z-axis tracking provides automatic and continuous correction of the X-ray beam position, adjusting the beam collimation and position to get a constant narrow beam on the detector, saving up to 40% dose.



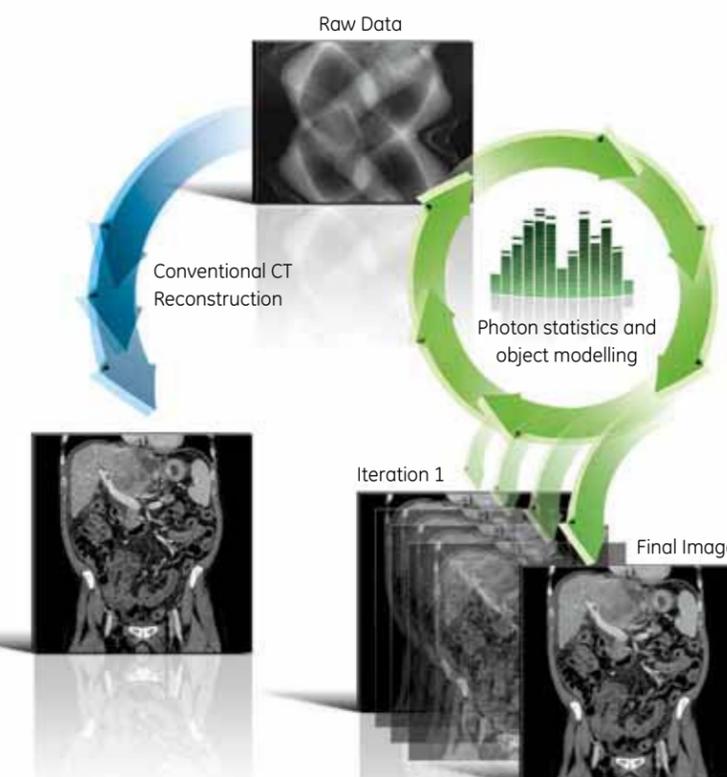
## 3D Dose Modulation utilizing SmartmA™ and AutomA



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



Constant image quality throughout scan.



\* Image quality measured as image standard deviation

# 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 slip easily into the Optima CT580 W, with its spacious 80 cm gantry opening.

#### **Remarkably fast**

Full 360° gantry rotation in just 0.5 seconds means helical scans are extremely fast ... with ASiR up to 40% faster. For shorter breath holds. More comfortable exams. Less patient motion and fewer rescans.

#### **A super-size bore... 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. Ten centimeters larger than conventional scanners, an 80cm gantry opening offers freedom to position large patients for demanding diagnostic studies. It also provides complete 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 full-body scans on large patients. With our optional high-capacity table, you can easily 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

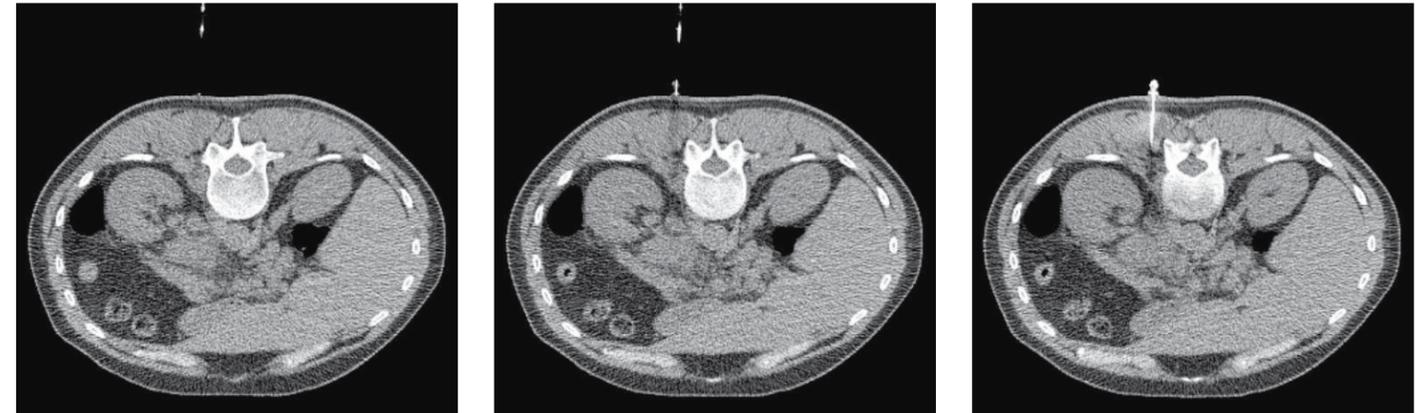
VariSpeed lets you adjust rotational scan time in 0.1-second increments between 0.5 and 1.0 seconds, enabling short breath holds, more comfortable scans, and adjustment of protocols for unique patient needs.

#### Precise control of interventions

GE's low-dose 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 lets you easily navigate 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.



Needle placement using Smartview Fluoro.

Exceptional flexibility

\* SmartView is available as an option