GE HealthCare

Revolution™ Maxima



High-performance care every step of the way

We understand your challenge to keep up with increasing CT procedure demands while maintaining patient comfort and balancing staff resources. We evaluated and streamlined every aspect of the CT workflow to turn your processes into a single click. Multiple setup steps into automated ones with AI.
And clear CT images into ultra-clear ones that can be acquired with less dose. All packaged it into a high-performance, reliable scanner we call Revolution™ Maxima. With Revolution Maxima, you'll be ready for what's next.

AI for workflow

AI workflows help provide maximum CT scanning efficiency, accuracy, clarity and consistency.

AI for imaging

Deep learning image reconstruction boosts image quality and contrast detectability while keeping the same dose.



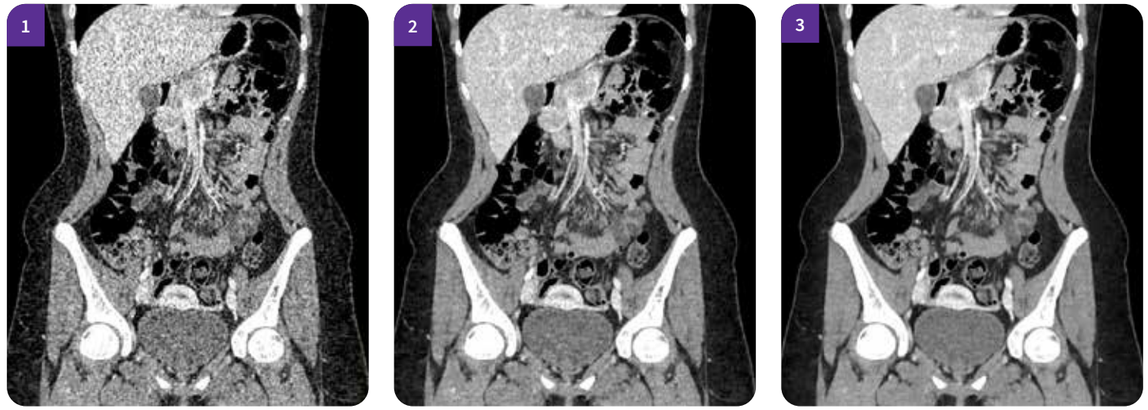
Deep learning for a deeper understanding

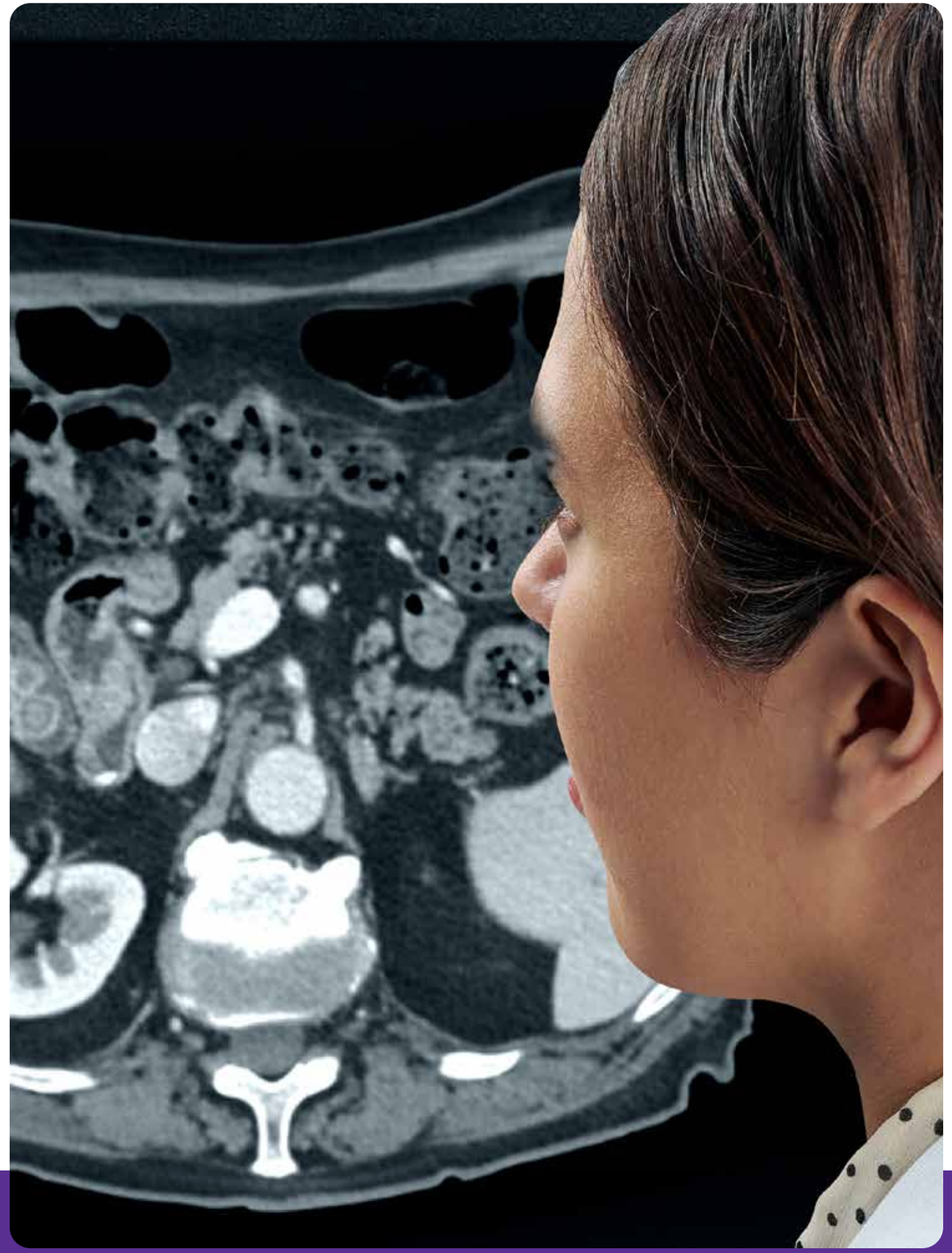
The clinical images shown are for illustrative purposes only and are derived from human evidence. Individual results may vary. These images are not intended to be diagnostic and should not be used as a substitute for professional medical judgment. TrueFidelity™ DL image reconstruction is intended to improve image quality while maintaining clinically relevant information.

TrueFidelity™ DL

TrueFidelity DL is our state-of-the-art AI-based image reconstruction technology that uses a Deep Neural Network (DNN) to generate high-definition, low-noise CT images. It produces images with exceptional sharpness, low-contrast image quality performance and your preferred noise texture, at the same dose.[3]

1. Filtered Back Projection (FBP)
2. ASiR-V 40%
3. TrueFidelity DL-M





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It all comes together with clarity

Revolution Maxima is designed to provide you high-speed, full coverage imaging. It's built on our Clarity imaging chain featuring a 40 mm detector and provides 0.28 mm[4] spatial resolution. This means you can quickly conduct routine scans and have the capability to amazing image quality across a diverse range of clinical needs.

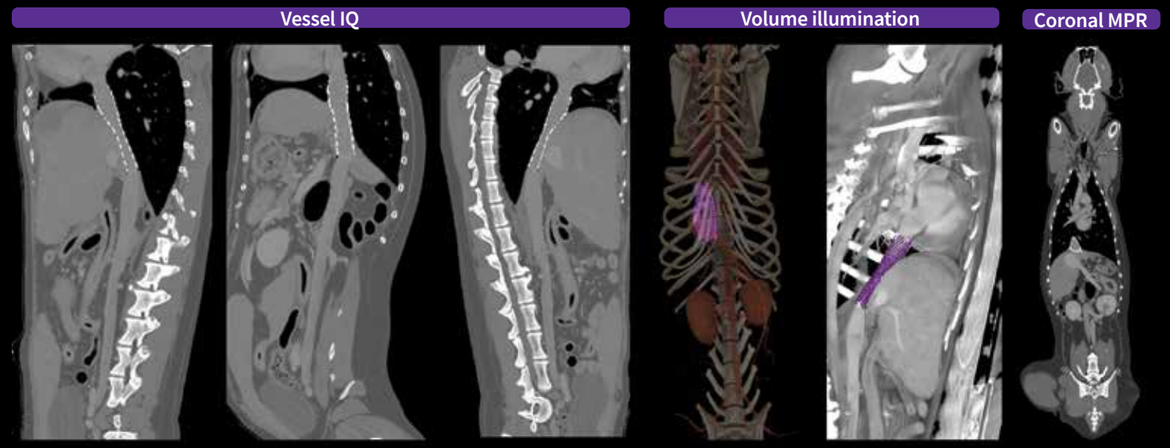
When paired ASiR-V you can expect to see an 82% reduction in dose[5] compared to filtered back projection reconstruction. Together, these core technologies provide you with everything you need to get to the right diagnosis, the first time, at the lowest dose possible.

40 mm
imaging detector

0.28 mm[4]
spatial resolution

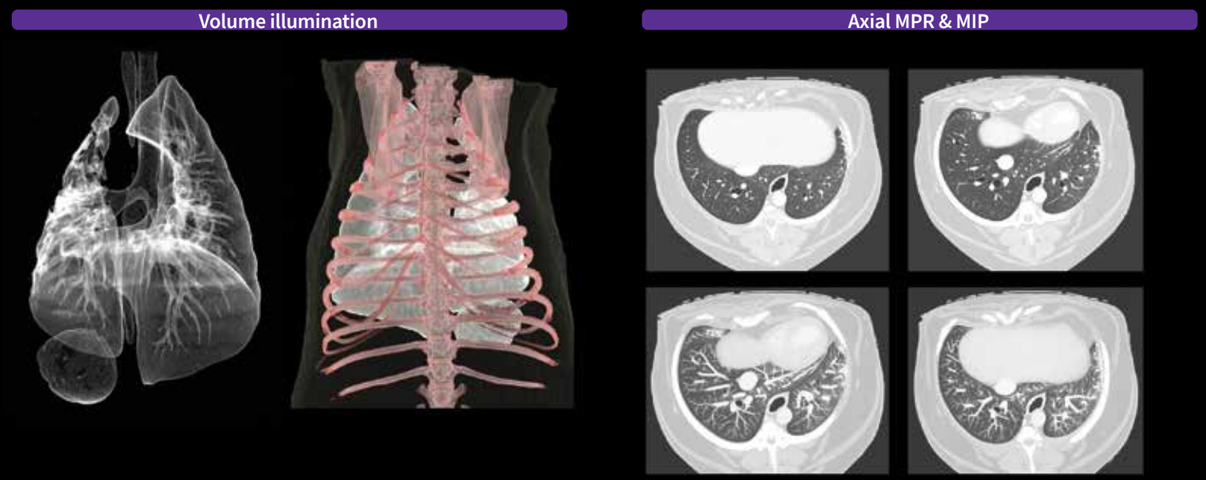
Up to
82%[5]
lower dose with ASiR-V

Inferior Vena Cava Filter



Courtesy of Anicura - Clinica Veterinaria Tibaldi

Abdomen Hydoureter



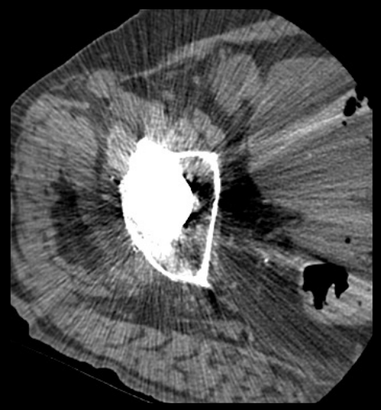
Courtesy of Anicura - Clinica Veterinaria Tibaldi

Imaging that goes beyond

To provide enhanced clinical flexibility, Revolution Maxima also features a suite of intelligent applications to help you assess challenging clinical cases such as patients with metal artifacts.

Smart MAR

Single acquisition metal artifact reduction.



Without Smart MAR



With Smart MAR

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Intranasal Mass

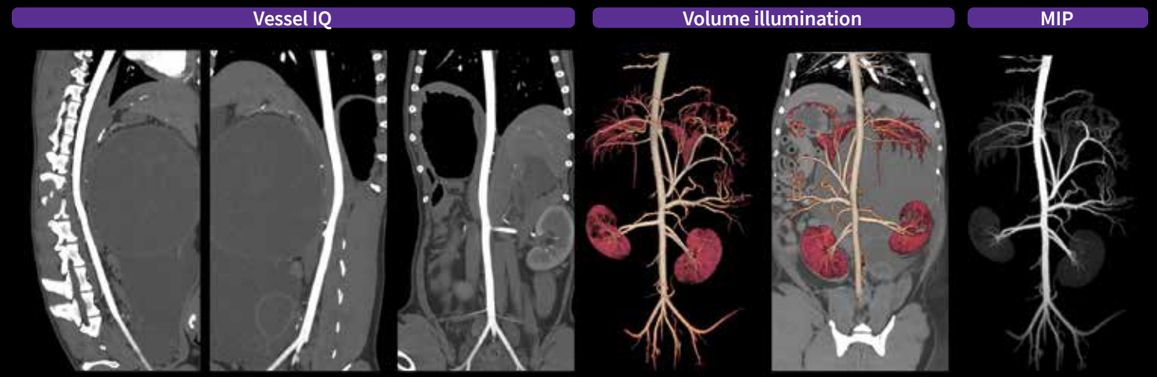


Courtesy of Anicura - Clinica Veterinaria Tibaldi

Courtesy of Anicura - Clinica Veterinaria Tibaldi

Periprostatic cyst

Arterial phase



Courtesy of Anicura - Clinica Veterinaria Tibaldi

Your CT works for you

When it comes to the operational and financial success of your imaging department, there is a lot your CT can do for you. With remote diagnostics, predictive analytics, cloud based solutions and subscription-based services, you can take comfort in knowing your CT is operating at peak efficiency. For example, Tube Watch uses a combination of artificial intelligence, machine learning and software analytics called Digital Twin technology to create a customized, digital model of your tube, system and usage profile. Using that digital model, Tube Watch can predict when your tube is going to need to be replaced. This is just one of many ways we ensure Revolution Maxima is always working for you.

Advanced Visualization

Elevate your CT imaging with our collection of advanced visualization applications that assist reading, automate post-processing and streamline imaging review.

Tube Watch

Predict when your tube will fail three days in advance, so you can schedule a service call before it disrupts your schedule.

Imaging Protocol Manager

Standardize your protocols across all of your CT systems with this cloud-based protocol management solution that allows you to access and update your protocols through a single application.

Imaging Insights

Collect and analyze system data to pinpoint operational inefficiencies, which we can use to help you target opportunities to streamline your operations.

OnWatch

Proactively screen key system metrics for anomalies and preemptively alert a remote engineer to either make a repair online or schedule a service call before it turns into a bigger problem.





Greater CT care with everything you need

Revolution Maxima provides you with our latest innovative CT solutions to ensure the most effective patient care possible. By optimizing the scan experience from referral to report with our latest AI technologies and scalable subscription software services, you'll have everything you need for greater CT care.

70 cm gantry

Up to **40 mm** coverage

up to **82%**[5] reduction in required dose

.28 mm spatial resolution[4]

Revolution Maxima

High-performance care every step of the way



Smart Subscription

Up to **.35 sec** rotation speed



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.

References:

[1] Kaasalainen, T., Palmu, K., Reijonen, V., & Kortesniemi, M. (2014). Effect of patient centering on patient dose and image noise in chest CT. American journal of roentgenology, 203(1), 123-130.

[2] Toth T, Ge Z, Daly MP. The influence of patient centering on CT dose and image noise. Med Phys 2007; 34:3093–3101.

[3] Image quality comparisons were evaluated by phantom tests of MTF, SSP, axial NPS, standard deviation of image noise, CT Number accuracy, CNR, and artifact analysis. Additionally, LCD was demonstrated in phantom testing using a model observer with the head and body MITA CT IQ Phantoms (CT191, CT189 The Phantom Laboratory). DLIR-H and ASiR-V reconstructions were performed using the same raw data. DLIR's image sharpness rated as same as or improved over ASiR-V*.
* As demonstrated in clinical evaluations on Revolution CT consisting of 40 cases and 6 physicians, where each case was reconstructed with both DLIR and ASiR-V
and evaluated by 3 physicians. In 100% of the reads, DLIR's image sharpness was rated the same as or better than ASiR-V's. This rating was based on each individual reader's preference. DLIR's noise texture rated as improved over ASiR-V*.
* As demonstrated in clinical evaluations on Revolution CT, consisting of 40 cases and 6 physicians, where each case was reconstructed with both DLIR and ASiR-V and evaluated by 3 physicians. In 92% of the reads, DLIR's noise texture was rated better than ASiR-V's. This rating was based on each individual reader's preference.

[4] Calculated based on MTF 4% value in X/Y. 4% MTF is measured under 120kv, 200mA, 1.0 sec gantry rotation and Edge Plus kernel.

[5] Image quality as defined by low contrast detectability. In clinical practice, the use of ASiR-V 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 Artifact were assessed using reference factory protocols comparing ASiR-V and FBP. The LCD measured in 0.625 mm slices and tested for both head and body modes using the MITA CT IQ Phantom (CCT183, The Phantom Laboratory), using model observer method.

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