

**Canon**



***Aquilion Exceed LB***

Expand your view

wide bore CT for Radiation Oncology



## Expand your view

While the prevalence of cancer is expected to rise sharply, treatment precision and patient outcomes are also improving at a rapid pace. Accurate radiation therapy planning plays a key role to positively impact survival rates.

To this end, Canon Medical's all-new Aquilion Exceed LB is designed for fast, smart, and accurate CT simulation. Featuring the world's largest bore, it enables you to easily position your patients with extraordinary precision.

Furthermore, powerful AI-based imaging technologies and advanced treatment-specific features to enable fast and efficient radiation oncology workflows without compromising on patient position, image quality, or reproducibility.



## See the bigger picture

The Aquilion Exceed LB transforms radiation therapy planning with its 90 cm wide bore, edge-to-edge extended reconstruction, and our Advanced intelligent Clear-IQ Engine (AiCE) Deep Learning Reconstruction technology, so you can quickly obtain sharp, clear, distinct images with excellent delineation.

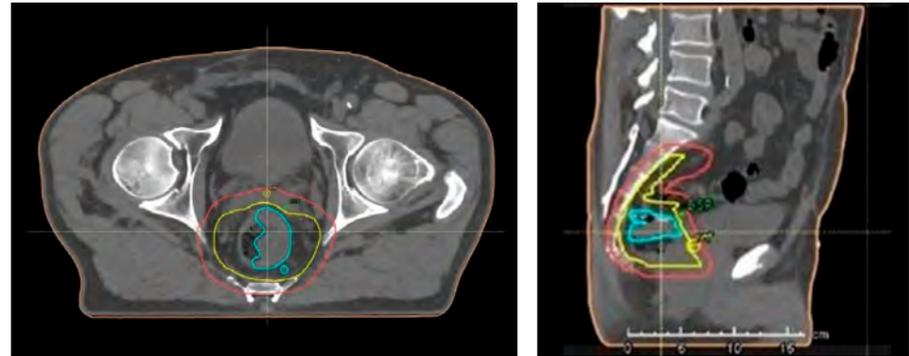


powered by  **Altivity**

## Better contouring powered by AI technologies

The comprehensive target identification and contouring of organs at risk is key to the successful delivery of radiation therapy. With this in mind, Aquilion Exceed LB enables you to perform high-quality, low-dose CT scans that provide a clear view of the targeted lesion and support you in optimizing the simulation of the exact treatment position for high-accuracy therapy planning.

Furthermore, AiCE is an innovative Deep Learning Reconstruction technology that has been trained to reduce noise and increase spatial resolution to deliver sharp, clear, and distinct images fast. AiCE has been designed to provide outstanding anatomical resolution across many body regions and tissue types, so you can confidently contour the extent of the tumor and the surrounding organs at risk. Therefore, create the best therapy plans for your patients.



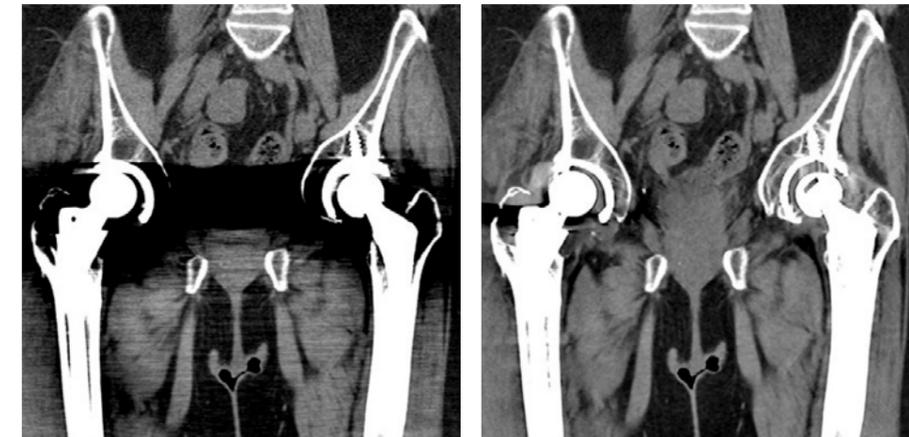
## Position your patients with confidence

Regardless of where your patients' lesions are located or whatever their individual therapy need, the 90 cm large gantry bore opening of the Aquilion Exceed LB allows for more comfortable patient positioning as well as efficiency and accuracy in the CT simulation process, reducing the patients' time on the table.



## See more with SEMAR

Canon Medical's innovative Single Energy Metal Artifact Reduction (SEMAR) utilizes a sophisticated reconstruction technique to virtually eliminate metallic artifact and improve the visualization of implants, supporting bone, and the adjacent soft tissue for clearer and more confident planning.



Original

SEMAR

## The industry's widest true FOV and eFOV\*

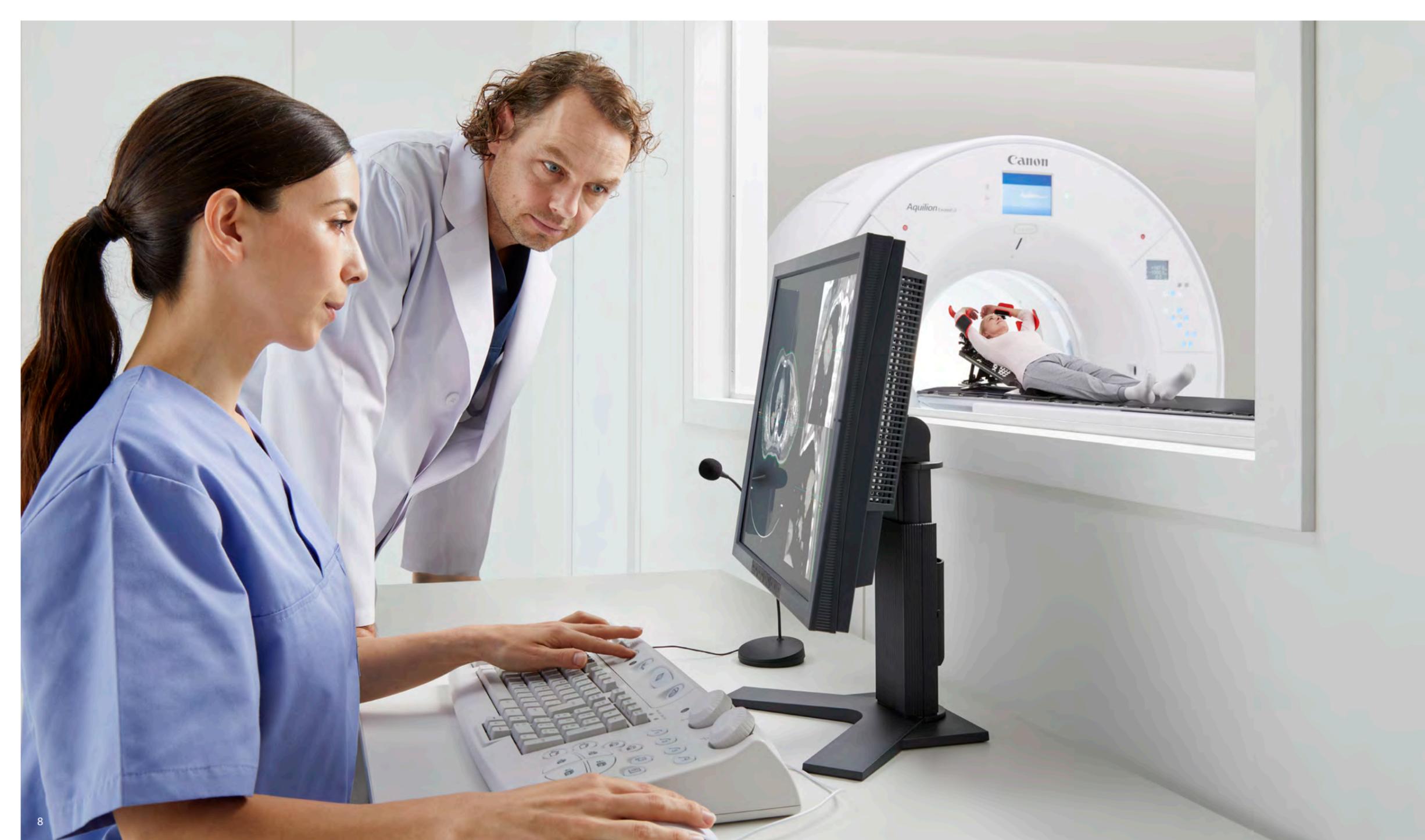
For most patients, the standard 70 cm field of view (FOV) provides the scope required to successfully simulate their radiation therapy. However, for those who are more complex due to positioning requirements, an extended FOV (eFOV) of 90 cm is essential in order to visualize the skin margin.

With the largest eFOV in the industry, you can now ensure that all your patients get the comprehensive radiation therapy planning they require for a more tailored and targeted treatment approach.



e-field of view

\* Option



## Experience an intelligent workflow

The Aquilion Exceed LB enhances your productivity and maximizes your clinical capabilities at every stage, from acquisition to simulation with the latest tools and applications.

## Dual Energy

Aquilion Exceed LB prepares you for the future in Radiation Oncology with Dual Energy capabilities designed for high accuracy therapy planning, enabled by improved visualization. Dual Energy results such as Virtual Equivalent kV image, Virtual Monochromatic Image and Iodine Maps can be generated and output directly from the scan console for seamless workflow. Additionally, also introducing Effective Atomic Number and Electron Density results that may help further optimize your radiation therapy planning.

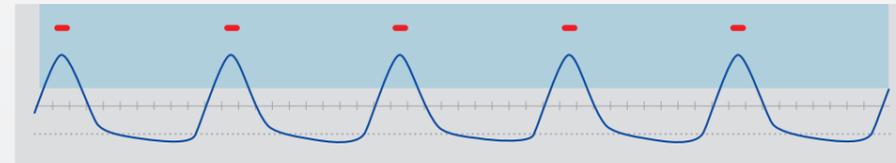
## Manage respiratory motion

Aquilion Exceed LB supports Canon Medical's sophisticated suite of SURETechnologies and other advanced software tools to further increase clinical utility. It integrates seamlessly with a range of respiratory gating devices and can perform both phase and amplitude binning.

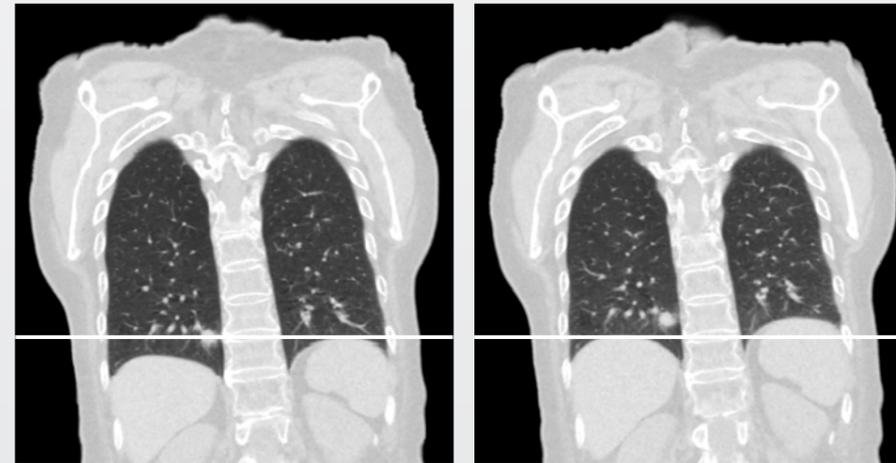
It supports respiratory-gated scanning based on two scan modes. The first mode, helical scan, supports both phase and amplitude binning and allows for retrospective respiratory gated image acquisition. The second mode, volume scan, allows for prospective single phase acquisition as well as whole breath cycle acquisition with phase reconstruction (binning).

The system's 80 row detector\*, 4 cm coverage per rotation, which is the widest in large bore CT systems, is a major advantage for this type of scanning. The wider coverage allows an area of anatomy to be scanned faster compared to narrower detector configurations. This allows respiratory gated scans to be performed in fewer breath cycles, making the exam more comfortable for the patient.

\* Option



phase and amplitude binning



Peak Inspiration (0%)

Peak Expiration (50%)

## Quick and automated patient set-up

The Aquilion Exceed LB is specifically designed to meet your oncology challenges and improve patient care. Canon Medical's advanced SUREPosition technology remotely adjusts your patient's position to the gantry's iso-center for enhanced accuracy. Combine this with our smart Tech-Assist Lateral Slide, which enables you to remotely move the couch left or right at the touch of a button, and you'll have everything you need to position your patients for successful imaging and planning.

## Fast acquisition with high resolution

With its 80 row\*<sup>1</sup>, 0.5 mm detector, the system can deliver 160 slices\*<sup>2</sup> per rotation, so you can achieve a greater volume of coverage in a fraction of the time you're used to. This is ideal when working with complex cases that involve anatomy such as the heart or chest, as it enables you to quickly obtain high-quality images.

## Dose management

A range of technologies has been built into the Aquilion Exceed LB to lower the dose and maximize image quality with an accelerated workflow. You can now expect reconstructions at up to 70 fps\*<sup>1</sup> with automatic transfer to simulation or planning.

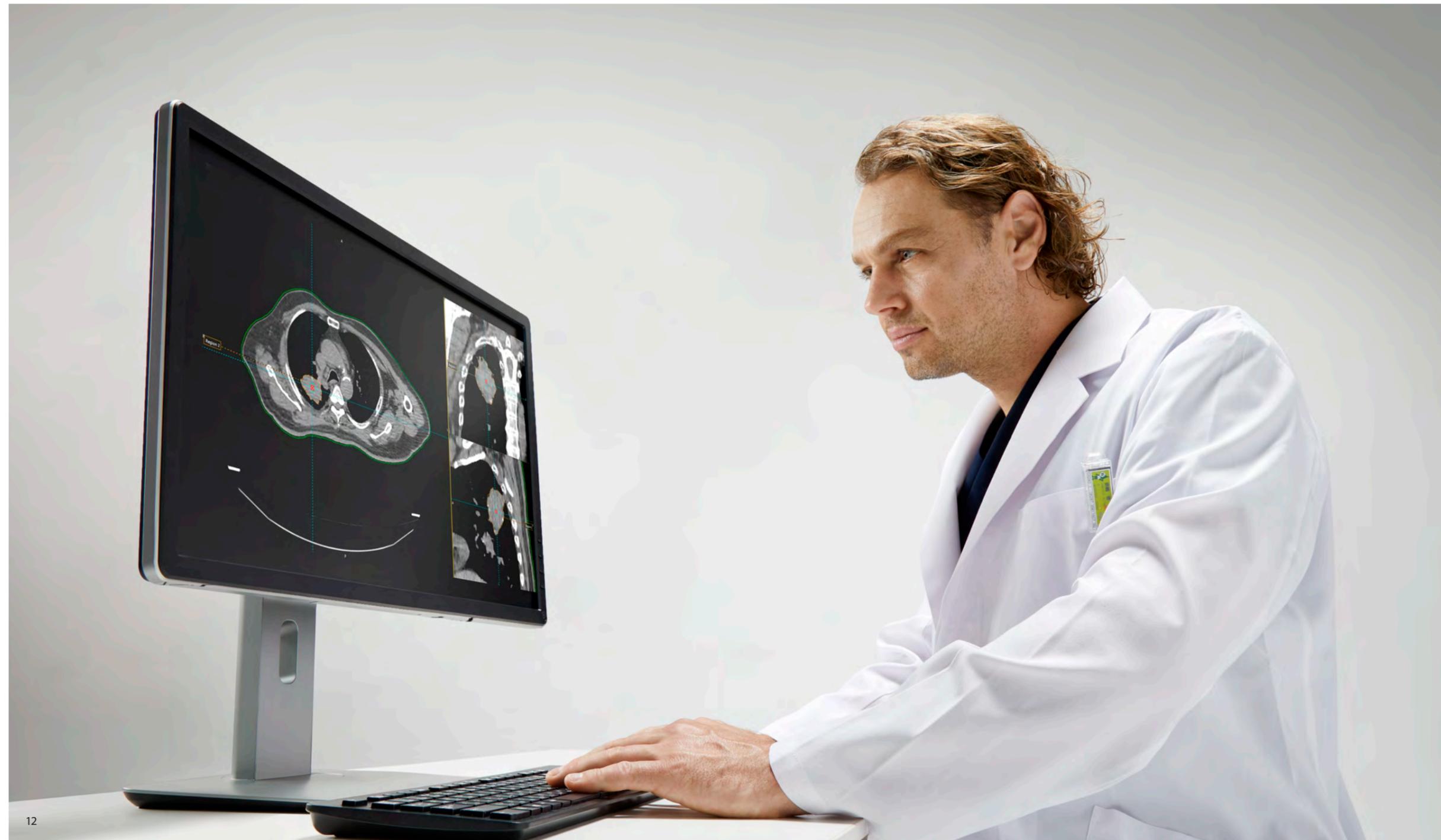
## One system for all your challenging cases

The Aquilion Exceed LB offers all the versatility and diagnostic imaging capabilities you would expect from a top-of-the-line radiation oncology planning system that has the widest CT bore currently available. It even connects with your existing solutions, planning devices, and positioning lasers for a smoother and productive workflow.

\*<sup>1</sup> Option

\*<sup>2</sup> with coneXact





## Broaden your business horizon

The Aquilion Exceed LB is a smart, efficient solution which is designed to enhance your operations with fast installation, high reliability, and low energy requirements.

## Easy installation and integration

Thanks to its compact gantry and small footprint, the Aquilion Exceed LB can fit into most standard radiation oncology suites without the need for major building renovation or adaptation. What's more, installation is fast, cost-effective and efficient, and can thus be completed with minimal disruption to your department.

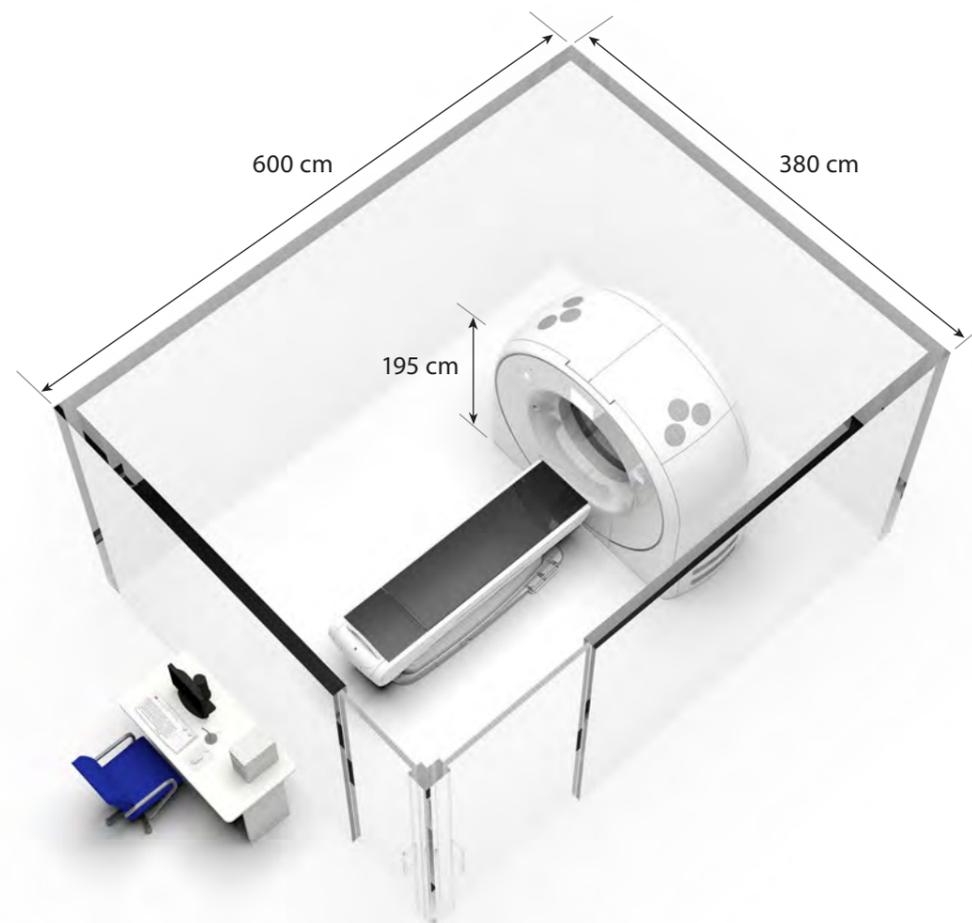
## Increased reliability and uptime

The power of Aquilion Exceed LB is backed by Canon Medical's high-quality service and education offerings to ensure it remains in peak condition for many years.

This includes access to expert technicians, remote service solutions, as well support from your local engineering and clinical application teams to help ensure you have everything you need to make the most of your CT scanner.

## Expand your clinical capabilities

Built with tomorrow in mind, the Aquilion Exceed LB is a system that will enhance the way you deliver oncology care today and long into the future with advanced technologies that will help you deliver a tailored approach to patient care.



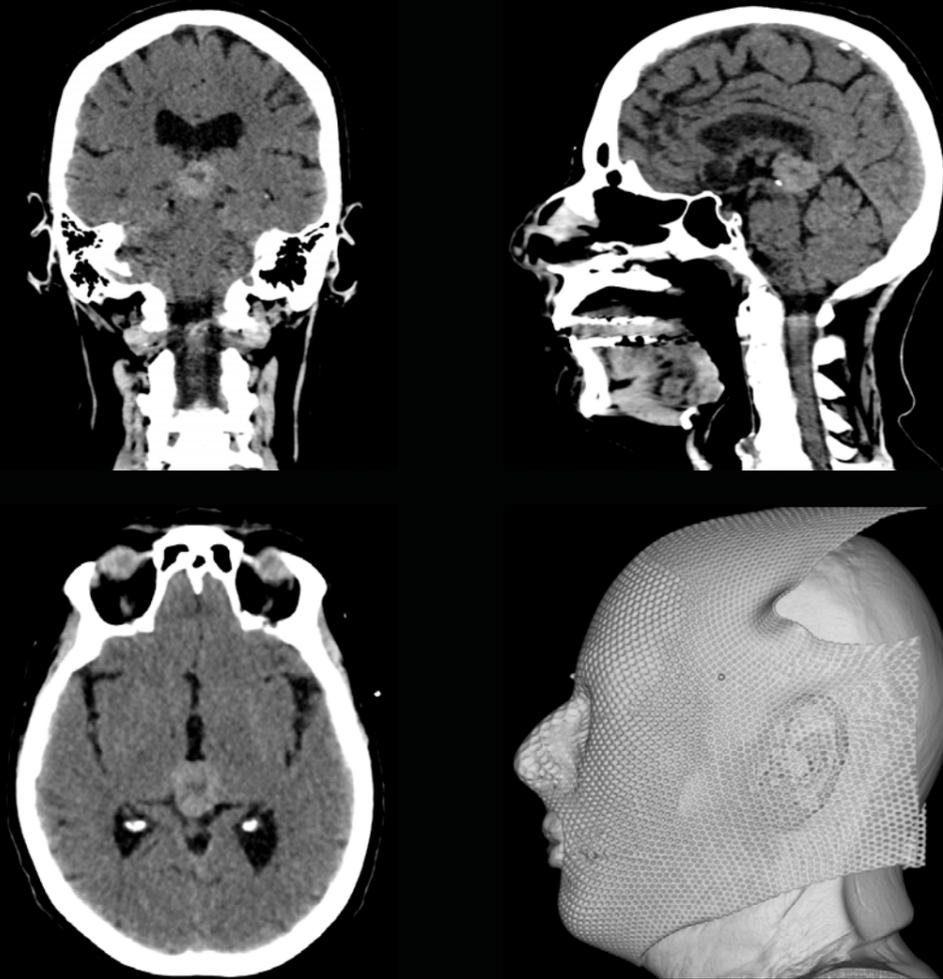
Installation Space



Power Capacity

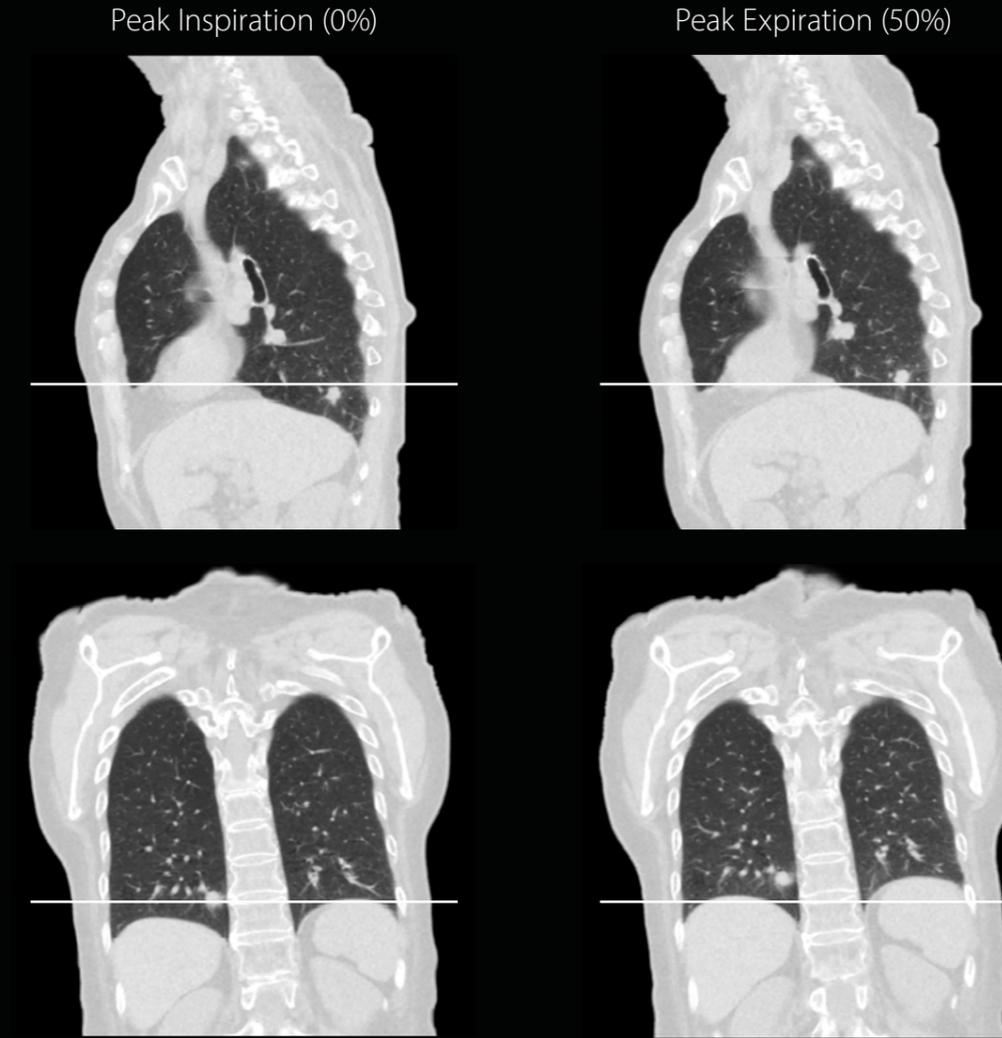


# Head



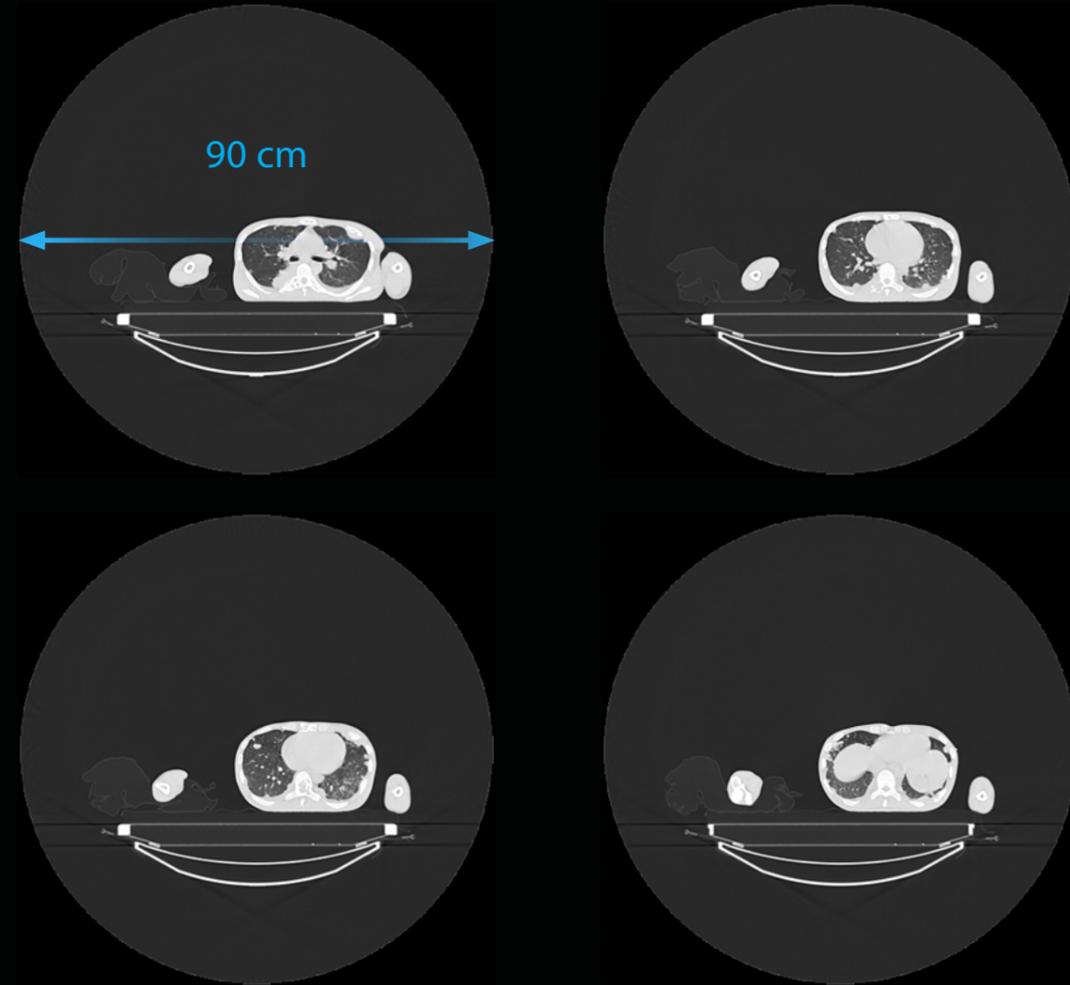
A brain tumor is seen in this scan of the head and neck reconstructed with AiCE. For the CT-Simulation scan the patient is scanned in the treatment position with immobilization device.

# Chest Respiratory Gated



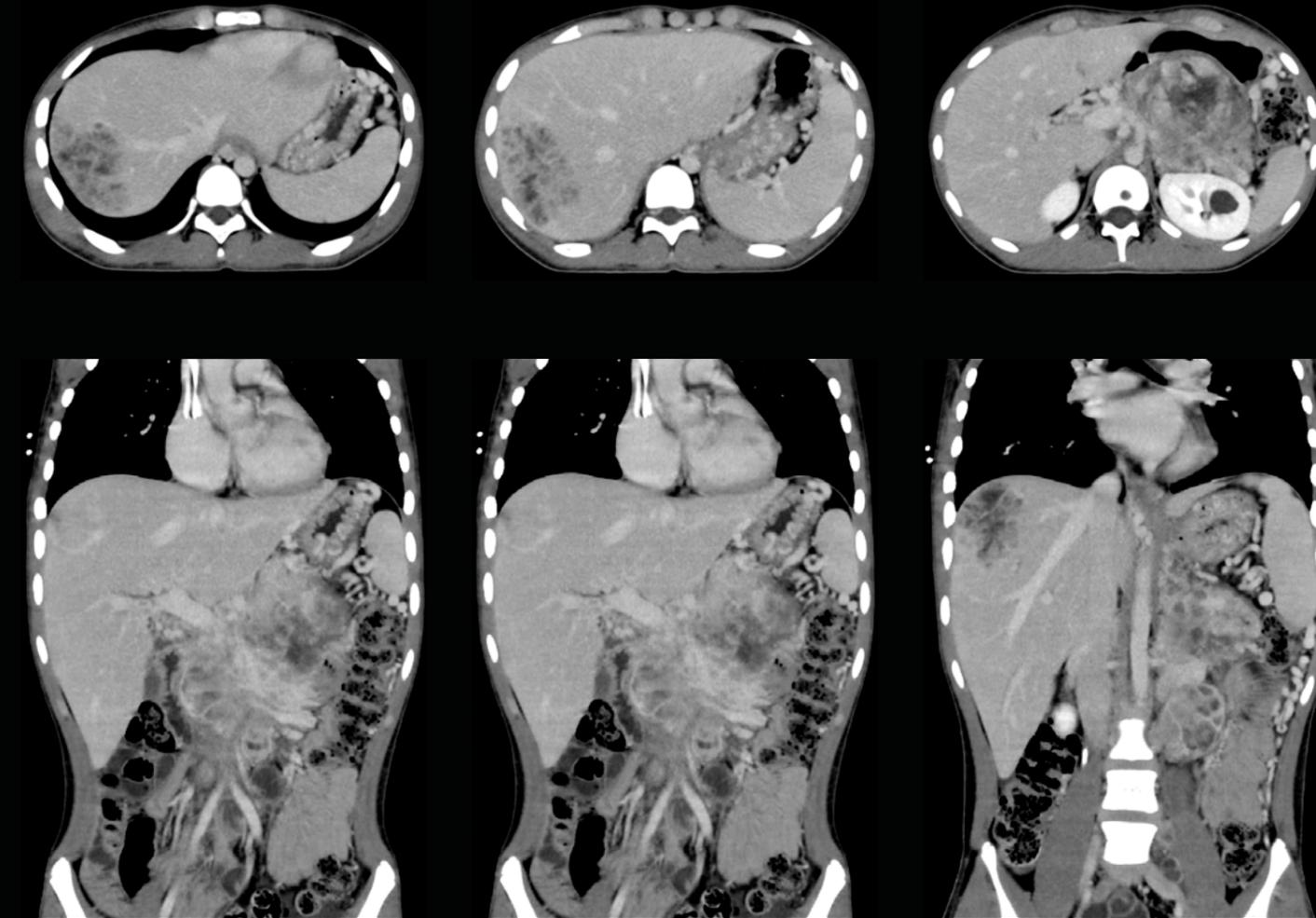
A tumor is seen in this respiratory gated scan of the chest reconstructed with AiCE. The scan is performed while the patient is breathing in a natural rhythm. Reconstructions are made at multiple respiratory phases in order to help the physician define the range of motion of the tumor and surrounding anatomy.

# Chest



This is a patient with multiple metastatic disease for palliative treatment planning. The arms had to be positioned beside the trunk and the right arm is on a moulded support. Images are reconstructed with the full 90 cm eFOV to show the entire body contour and couch top.

# Abdomen



This abdomen scan was performed for stereotactic radiotherapy treatment (SRT) planning of the liver tumor, reconstructed with AiCE. The liver lesion can be easily identified.

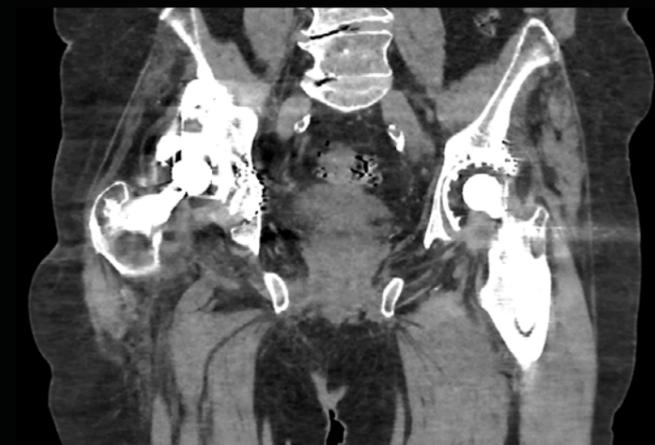
# Pelvis



Gold fiducial markers are seen in this scan of the pelvis for treatment planning of the prostate. Reconstructed with AiCE and SEMAR. The SEMAR images reduce the artifact from the gold fiducial markers.



This is a patient for Prostate CT Simulation. Complex metallic implants as shown on the scanogram produce severe artifacts which completely obscure the pelvic organs. The SEMAR reconstruction show the pelvic organs and the skin margins.





Main specifications		
Detector		PUREVISION detector
		80 rows, 0.5 mm
Gantry	Rotation time	Min. 0.4 s
	Bore size	90 cm
Patient couch	Load	315 kg, 694 lbs* <sup>2</sup>
	Scan range	200 cm* <sup>2</sup>
Reconstruction speed	Helical	70 fps* <sup>1</sup> , 50 fps
	Iterative reconstruction	AIDR* <sup>3</sup> 3D Enhanced
Reconstruction	Deep learning reconstruction	AiCE* <sup>1</sup>
	FOV / eFOV	70 / 90 cm* <sup>1</sup>
Installation	Power capacity	110 kVA
	Space	22.8 m <sup>2</sup>
Scan Modes		Dual Energy* <sup>1</sup>
		Respiratory gated scan* <sup>1</sup>

\*<sup>1</sup> Option

\*<sup>2</sup> Depending on system configuration

\*<sup>3</sup> Adaptive Iterative Dose Reduction



Aquilion Exceed LB was one of ten Canon Group products recognized with an iF Design Award in 2022. One of the world's most prestigious design awards, iF Design Awards are presented annually by the iF International Forum Design GmbH upon selections by an independent jury of international design experts.

<https://ifdesign.com/en/winner-ranking/project/aquilion-exceed-lb/330090>



Altivity is Canon Medical's new approach to AI innovation. It is a multimodality, overarching brand, which pulls together all the AI technology that Canon Medical provides under one name.

# *Aquilion* Exceed LB

**Canon**

CANON MEDICAL SYSTEMS CORPORATION

<https://global.medical.canon>

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*Made For life*