

SOMATOM go.Open Pro

The future is in motion

siemens-healthineers.com/somatom-go-open-pro



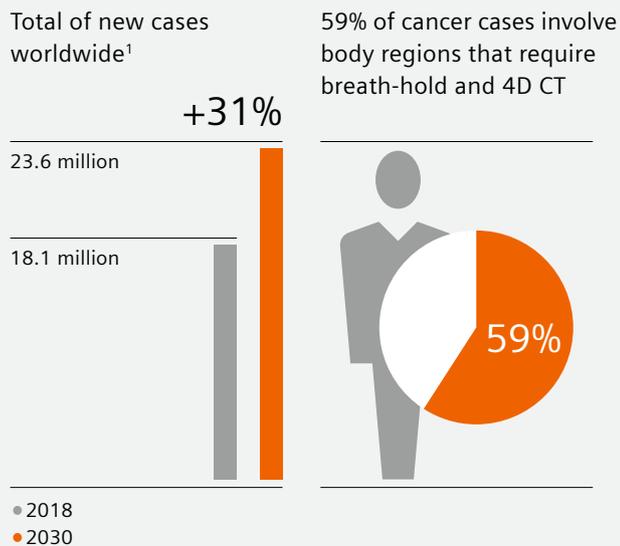
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Staying competitive in a growing market

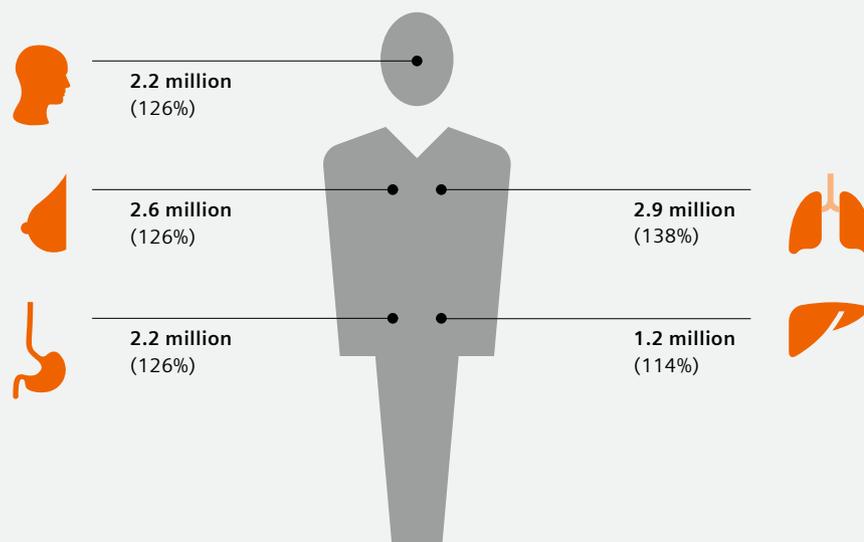
Healthcare providers are under increasing pressure to deliver radiotherapy to more patients than ever. This demands innovative, efficient solutions that will achieve the best possible treatments and optimal patient outcomes – particularly when you are working with challenging cases.

A growing problem



With cancer cases expected to surge between now and 2030,¹ RT departments will have to treat more patients than ever. Motion will be a major obstacle in many of these cases.

Challenging cancers are on the rise



The number of patients with conditions that create challenges for treatment (e.g. head and neck, breast, lung, liver, stomach, and esophageal cancer) is set to grow significantly.² To manage this trend, you need technology that can push clinical boundaries and help you lead your field for years to come.

The future is in motion

Push the boundaries to better treat the most challenging cases

Precision medicine, curative intent, and hypofractionated treatments hold enormous potential for patients. Yet they are only possible if the treatment planning data are absolutely precise. Many patients with conditions that present major challenges – such as the inability to hold one’s breath – miss out on the benefits because current CT simulation cannot manage the individual complexities they present. Poor-quality, imprecise information makes it especially difficult to target tumors and protect vital organs in these complex cases. In addition, error-prone workflows and time pressure can further hamper CT simulation.

We believe the future is in motion – and this belief shaped the development of SOMATOM go.Open Pro. This advanced CT simulator provides seamless patient marking and reduce unwarranted variations that can break down the barriers to modern treatments and individualized care. By harnessing the power of a unique detector width, improved tumor contrast and intelligent real-time breathing adaptation, it delivers exceptional clarity for confident treatment planning. Input from RT specialists guided the design, so the fully integrated hardware and software are specifically tailored to your requirements. These pioneering features, combined with data synchronization across all components, allow you to master challenging cases and devote more time to your patients.

SOMATOM go.Open Pro helps you expand precision medicine. This unprecedented, intelligent CT simulator with advanced automated patient modelling allows you to push the boundaries to better treat the most challenging cases.



**Push the boundaries
for challenging cases**



**Simulation
reinvented**

Welcome to a new world of CT simulation.

The future is in motion

SOMATOM go.Open Pro

Push the boundaries for challenging cases

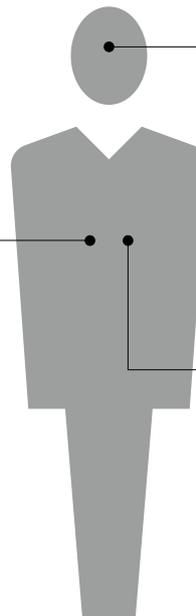
A CT simulator that provides seamless patient marking and reduce unwarranted variations that can break down the barriers to modern treatments and individualized care. SOMATOM go.Open Pro allows you to push the boundaries for challenging cases.



Lung cancer

Direct i4D^{3,4} is a 4D CT sequence that intelligently adapts to the patient's breathing in real time.

Potentially reduce target margins by reducing unwarranted variations in the images, and make 4D CT available for more patients.



Head & neck cancer

TwinSpiral Dual Energy³ is a new form of dual-energy acquisition. It uses a Tin Filter for optimal spectral separation.

Achieve precise target delineation with TwinSpiral Dual Energy and Monoenergetic Plus³.

Breast cancer

With a wide detector coverage and fast rotation times, SOMATOM go.Open Pro makes deep inspiration breath-hold available to more patients. It offers acquisition in breath-hold of just eight seconds.

Improve access to tailored treatment, and boost image quality for more confident contouring.



Improve patient experience



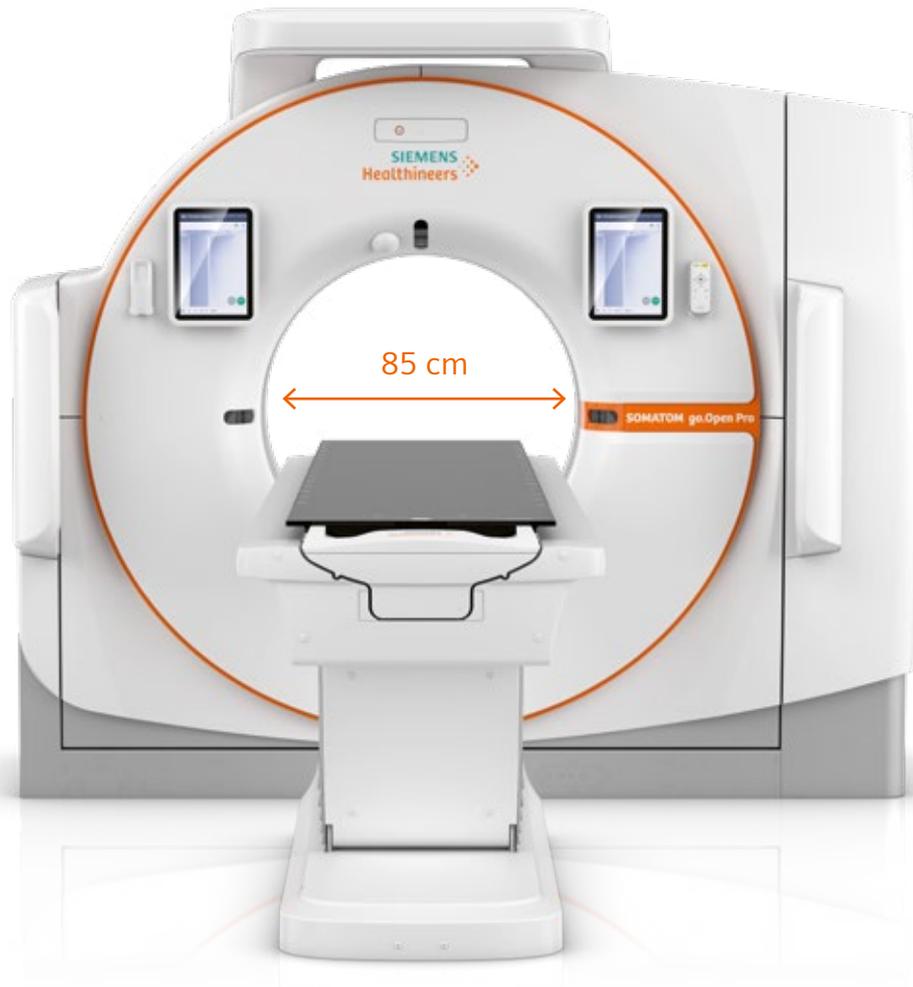
Reduce unwarranted variations with high-quality OAR contours

AI-powered DirectORGANS³ delivers consistent organs-at-risk (OAR) autocontouring. It reduces unwarranted variations with high-quality contours that approach the level of consensus-based contours.



Saves time by eliminating manual step with DirectORGANS (e.g., ribs, sternum, and lung lobes contours).

Cardiac chamber segmentation paves the way for research in the field of cardiac toxicity.



Simulation reinvented

SOMATOM go.Open Pro reinvents simulation for multiple cancer types, driving precision, and caring for patients and users. Co-created with RT specialists, it features fully integrated hardware and software tailored specifically to your requirements. The flexible, intuitive system synchronizes data across all integrated components. It operates via one user interface and requires a single vendor service contract.

Spend less time managing CT simulation and more time focusing on your patients – in the comfortable and calming environment that SOMATOM go.Open Pro creates for them.

Key technical data

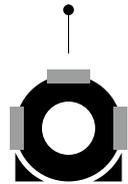
sFoV	Acquired slices/reconstructed slices	Z-axis coverage	Rotation time	Power	Max. table load
60 cm	64/128	3.84 cm	0.35 ³ , 0.5, 1.0 s	75 kW	227 / 307 ³ kg (TG-66 compliant tables)

Simulation reinvented

Take integration further. Go Direct.

Minimize sources of errors in QA

Direct Laser QA³ provides an automated laser QA procedure with no need to switch workstations or interfaces with integrated patient-marking lasers.



+ RTP laser



+ Simulation software



+ Acquisition console



+ Contouring station

Reduce complexity and errors in laser steering

Direct Laser Steering, combined with the mobile tablet, enables a fast, seamless, and less error-prone workflow for patient marking.

Personalize images for target contouring

DirectDensity^{3,6} allows you to tailor kV settings for each patient, and eliminates the need for tube voltage-dependent calibration in the TPS.

Simplify the current practice for particle therapy

DirectSPR³ solves challenges and makes stopping power images directly available for automatic, calibration-free dose calculation.



Courtesy of Leopoldina Krankenhaus Schweinfurt, Germany⁵

Image optimization specifically for consistent OAR contours and fewer side effects after treatment

DirectORGANS³ offers the world's first contours generated by a CT simulator using an optimized reconstruction, and deep learning. Combined with Direct i4D^{3,4}, DirectORGANS delivers contours with reducing unwarranted variation for the most challenging cases.

Other features:

- **iMAR³** is our proven metal artifact reduction algorithm that gives you confidence in tumor visualization
- **Respiratory Motion Management³** with FAST 4D provides automated and reproducible results independent of the operator

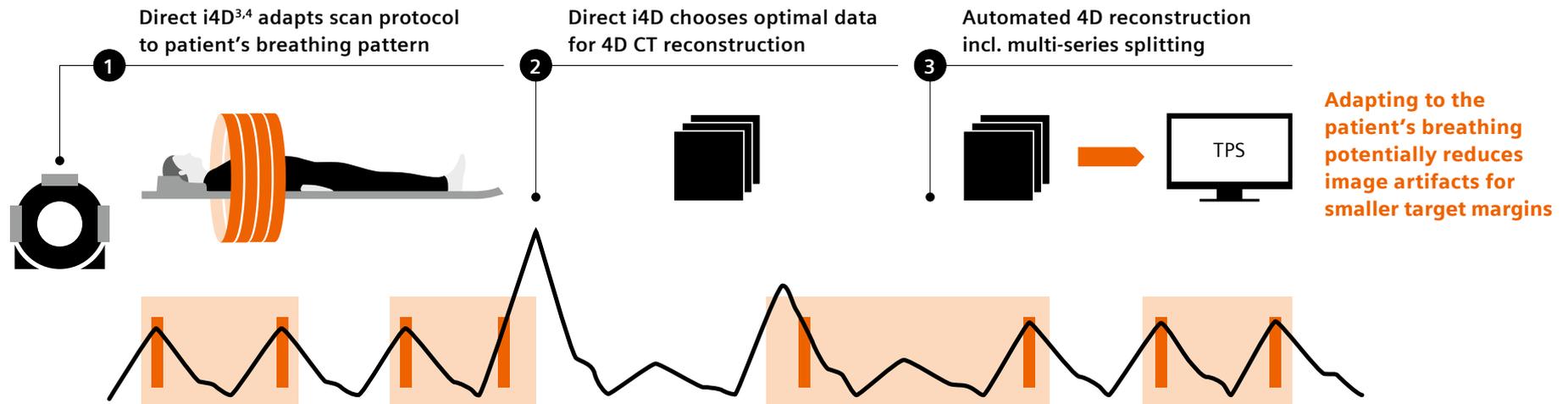


Powered by co-creation

To explore what really matters to you, we spoke to over 300 RT specialists: radiation oncologists, medical physicists, dosimetrists, RTTs, and financial decision makers. We learned about your biggest challenges and created a CT simulator to address them.

Direct i4D

Reduce motion artifacts with real-time breathing adaptation

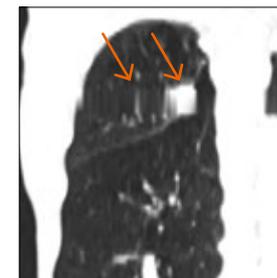


Direct i4D delivers the world's first 4D CT that adapts to the patient's breathing in real time.

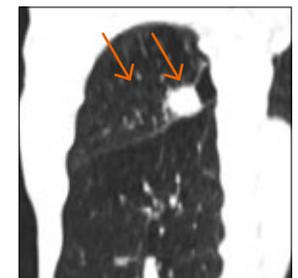
During the 4D CT scan, SOMATOM go.Open Pro intelligently adapts the scanning parameters to the individual breathing pattern in real time. Automated 4D reconstruction and optimized binning then produce 4D images with virtually no artifacts caused by incomplete breathing cycles. This reduces unwarranted variations in the images that can potentially decrease target margins, and leads to less dependency on user and patient.

Push the boundaries for lung cancer treatment

- Robust and simple 4D image acquisition for every user, with potential to avoid re-scans and time-consuming edits
- Fewer motion artifacts for exceptionally accurate visualizations of moving tumors
- More confident treatment planning with potential for smaller target margins



Without Direct i4D



With Direct i4D (simulation)

Courtesy of MAASTRO clinic, The Netherlands

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¹ Union for International Cancer Control (UICC), <https://www.uicc.org/>; Cancer Research UK, www.cancerresearchuk.org

² International Agency for Research on Cancer, <https://www.iarc.fr>

³ Optional

⁴ Online gating device such as RGSC or Anzai is required

⁶ As shown by measurements with a Gammex 467 Tissue Characterization Phantom comparing [T]standard reconstruction and DirectDensity reconstruction. Image value to relative electron/mass density conversion for the standard reconstruction was based on a two-linear-equations approach with individual calibration for each tube voltage.

For DirectDensity images, a single tube-voltage-independent linear conversion was used. DirectDensity reconstruction is designed for use in Radiation Therapy Planning (RTP) only. DirectDensity reconstruction is not intended to be used for diagnostic imaging

⁵ Volume rendered image is for illustration purposes only and not part of DirectORGANS

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