

SOMATOM go.Up

# Expand your successful CT business

[www.siemens-healthineers.co.in](http://www.siemens-healthineers.co.in)

192  
Slice  
CT



*“Your needs drive what we do. If the challenges on the right-hand side are yours, read on. You’ll find good answers how to tackle them.”*

**Dr. Philipp Fischer**

Head of Business Line Computed Tomography  
at Siemens Healthineers

# Do you find these healthcare trends challenging?



Concerned that patients may leave your institution dissatisfied?



Wondering if you are operating your CT scanner at its full potential?



## Patient satisfaction

“Improving patient satisfaction with their CT experience” is ranked top priority by CT department responsables.<sup>1)</sup>

## Scanner operation

“The use of protocols and radiation dose varies greatly,” studies<sup>2)</sup> that analyzed millions of CT examinations worldwide showed. And this is not because of the equipment characteristics, but mainly because of the choices of the individual users.



Curious about the use of AI in your CT system? But also skeptical about it?



## Artificial Intelligence

“Already, 77% of the devices anyone of us uses feature one form of AI or another.”<sup>3)</sup>

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# Focus on your patients

Today's healthcare market is highly competitive. And with patients turning into critical consumers, it's becoming increasingly important to optimize their diagnostic experience in order to stay successful.

Improve patient experience and focus on your patients throughout the CT imaging workflow with SOMATOM® go.Up. We upgraded our successful scanner with our unique Mobile Workflow and smart tools that help you stay with your patients longer and provide closer care.

SOMATOM go.Up also includes intuitive, AI-powered scan automation and new clinical features – making advanced procedures like preventive care available for daily practice. Of course, the CT scanner comes with the image quality and dose reduction technologies you expect from us, as well as built-in solutions for lower lifecycle costs.

**Discover the enhanced SOMATOM go.Up!**



## Why this CT scanner is your CT scanner

The SOMATOM go. platform originates from the medical community. As a member of this platform, SOMATOM go.Up was co-created with 500 of our customers, from CEOs to the wonderful people who care for patients every single day. After some successful years, we decided to turn more user requirements into solutions. This wouldn't have been possible without you. Thank you.





**Improve patient experience**  
with mobile devices that let you  
focus on your patients

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**Increase standardization**  
with GO technologies powered  
by Artificial Intelligence

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**Transform care delivery**  
with preset patient pathways  
for various clinical applications

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**Enhance efficiency**  
with AI-based patient positioning  
and remote scanning assistance for  
technologists

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**Optimize the diagnostic  
experience**  
with, for example, the ambient  
mood lighting and low noise

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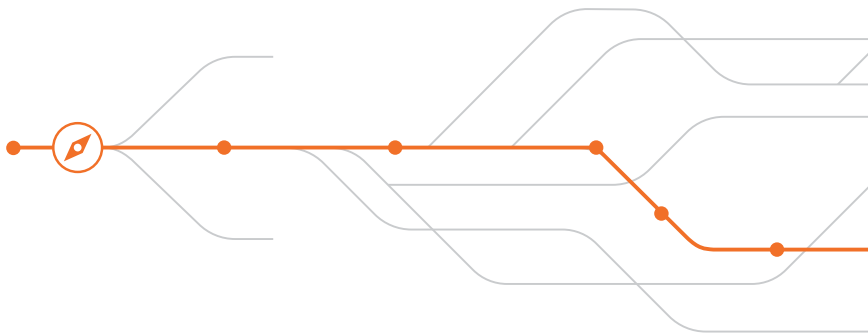
*“Which shoulder is to be reconstructed?”*

*“Does the patient have metal implants?”*

*“Single or spectral imaging?”*

## **myExam Companion takes you to the predefined scan strategy**

Answer a handful of simple questions. And myExam Companion guides you quickly and safely through any procedure. More on page 14.



An obese patient.

Suffering from claustrophobia.

A worklist of 22 further exams ahead.

**Stay cool. Stay mobile. Stay with your patient.  
With our Mobile Workflow.**

Mobile devices, connected data. Giving you more time for those who need you.  
Read the whole story on pages 8-11.





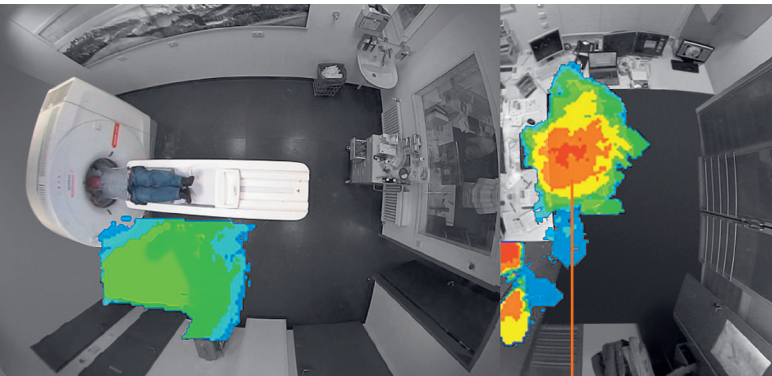
# Improve patient experience with trendsetting workflows

Patient expectations are increasing and patients are becoming more vocal about their healthcare experience. With the Mobile Workflow of SOMATOM go.Up, your patients feel personally attended to and experience their treatment more positively.

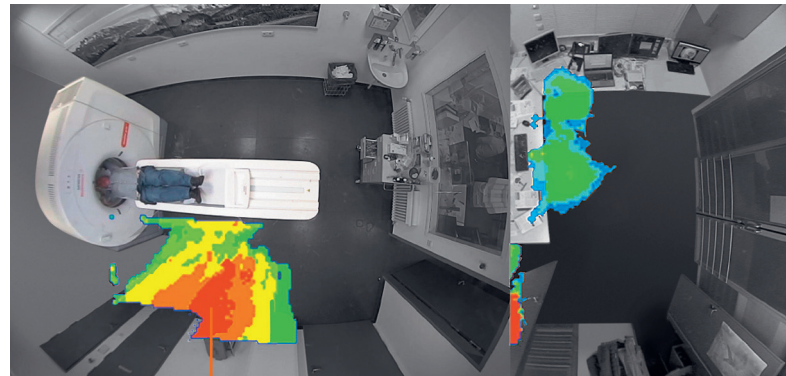
## Workstation – use it where you need it

Thanks to tablet-based operation and gantry-integrated computers, SOMATOM go.Up gives you complete flexibility over where you position the workstation. Depending on your needs and infrastructure, you can choose where to set it up. Find out more on page 24.

## Less time in the control room, more with the patient



A standard workflow – with most of the operator's time spent in the **control room**.



The unique Mobile Workflow with SOMATOM go.Up – a huge shift toward spending most of the time **with the patient**.<sup>4)</sup>

Average time spent on location:



## Higher efficiency, higher patient comfort, fewer motion artifacts

Thanks to mobile devices and connected data, you can stay close to the patients who need attention most, like small children, and put them at ease. This also helps improve image quality and thus diagnostic confidence.

Empirical results show that staying close to patients can substantially improve their examination experience.

### The Mobile Workflow – figures tell the story

**20%**

faster patient preparation<sup>4)</sup>

**62%**

increase in positive patient experience<sup>4)</sup>

**90%**

more time spent in the same room with the patient, plus higher freedom of movement for radiologists<sup>4)</sup>

**39%**

increase in patients who feel more satisfied from the medical service they receive<sup>4)</sup>

Figures compared to conventional workflow.

*“The Mobile Workflow: More than ever, the patient is in the center of the whole examination.”*

**Carla Susana Ribeiro Pinto**

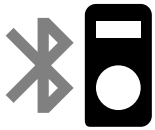
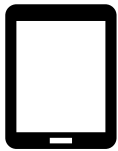
CT radiographer at Centro Hospitalar de São João, Porto, Portugal



# A new workplace design - a new working experience



Focus on your patients and improve not only their experience and satisfaction, but also yours. Here's the technology that puts each patient into the center while making your working experience enjoyable.



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**With the tablet, you can ...**

- have total freedom over how you work
- stay close to the patient at all times:
  - preparing all scans right at the gantry
  - previewing images directly at the tablet
- use up to three tablets simultaneously
- dock and charge the tablets at the docking station

**The remote control helps you to ...**

- simplify patient positioning
- start the scan remotely, complementing the tablet for a true Mobile Workflow



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**The gantry-integrated camera makes it easy to ...**

- keep an eye on the patient
- calm down patients thanks to ambient mood lighting
- visualize the scan duration using the integrated digital countdown for breath-hold



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**The gentle voice and sound design lets you ...**

- increase patient comfort and improve your working environment with a low noise level even during peak operation
- give patients gentle voice guidance of breathing instructions



# Smart helpers that let you go for any pathway

SOMATOM go.Up features smart helpers to standardize and simplify your departmental processes – from patient setup to image distribution, archiving, and reading. Prevent repetitions. Skip routines. And dedicate your energy to patients and results.

## myExam Companion

myExam Companion launches the era of intelligent imaging. Using the new possibilities of digitalization, it turns data into built-in expertise. This helps users efficiently achieve reproducible results – by unlocking your modality's full potential.

myExam Companion guides users through any procedure, so they can interact easily and naturally with both patient and technology. No matter the user, patient, or throughput, it helps generate consistent, comprehensive results.



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## Scan&GO

Anticipate potential breathing artifacts: Train breath-hold with your patients using Scan&GO. It also lets you control scans remotely and check images quickly, right after the scan, on your tablet – so you can spend more time with your patients. What's more: You can enhance your degree of freedom by using up to three tablets in perfect sync.





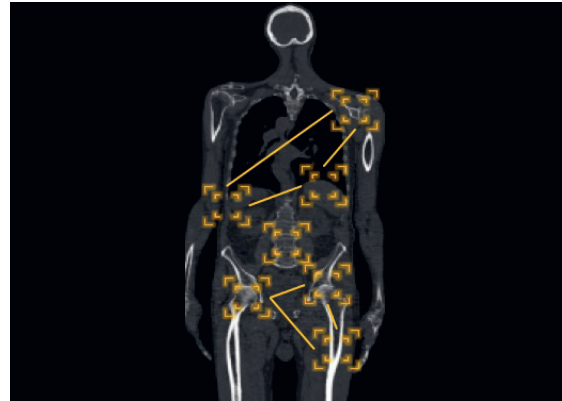
## Check&GO

Based on big data, the intelligent algorithms from Check&GO identify potential errors with organ coverage or contrast media volume and distribution plus the presence of wearable metal objects (e.g., belts, necklaces). This helps you take immediate action or correction.



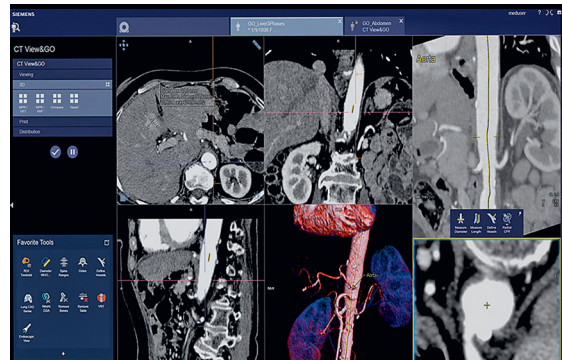
## Recon&GO

Recon&GO delivers fast and standardized results irrespective of the operator. With AI recognizing patient landmarks and anatomies, it automates postprocessing tasks to reduce repetitive workflow steps. Even spectral imaging becomes routine, since Recon&GO automatically creates zero-click results. It offers a fully automated recon process for any organ – including all vascular views for contrast-enhanced CT reporting.



## CT View&GO

CT View&GO enables smooth reading in one workflow right at the scanner. Advanced CAD algorithms and applications boost diagnostic confidence. Communication within your department is easy, since CT View&GO automatically films and distributes images and results according to your settings.

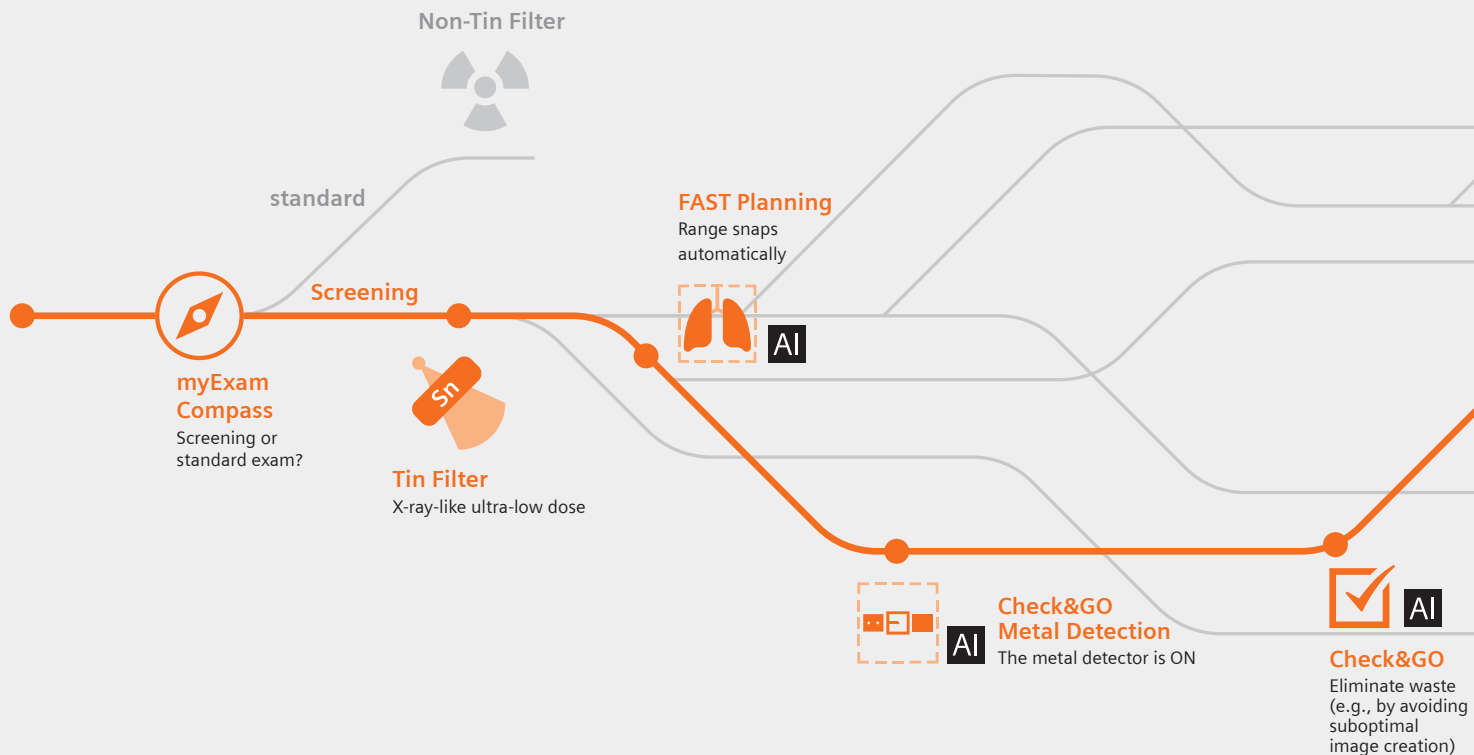


# Transform care delivery with your new patient pathways

Every patient and clinical indication is different. With its patient pathways, SOMATOM go.Up easily takes you beyond routine: Expand your clinical portfolio and confidently perform advanced procedures like preventive care, RT planning, or cardiac assessment via calcium scoring examinations.

On this and the following pages, discover the example of three clinical pathways plus the enabling technologies, most of which were adopted from our high-end scanners.

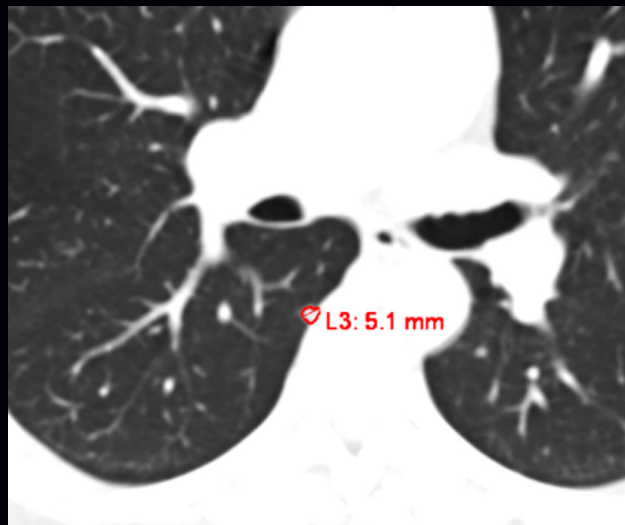
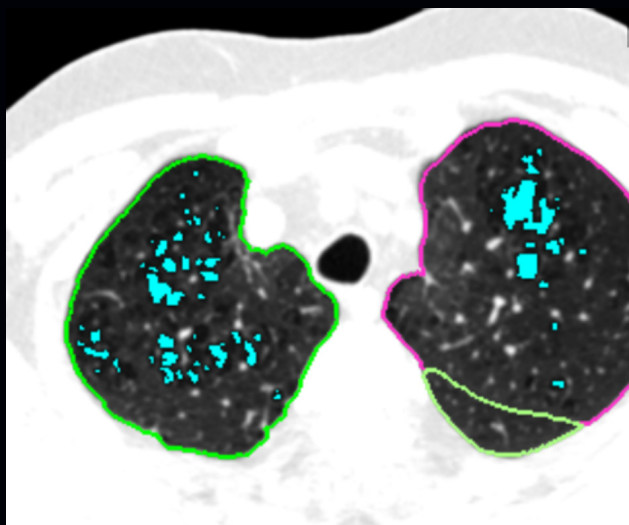
## myExam Companion guides you through your thorax examination



AI Artificial Intelligence inside \*Automatic Landmarking and Parsing of Human Anatomy

Still think that this outcome is difficult for you to get?

The new patient pathway leverages the full potential of technologies automatically and takes you there.



Courtesy of Erlangen University Hospital, Erlangen, Germany

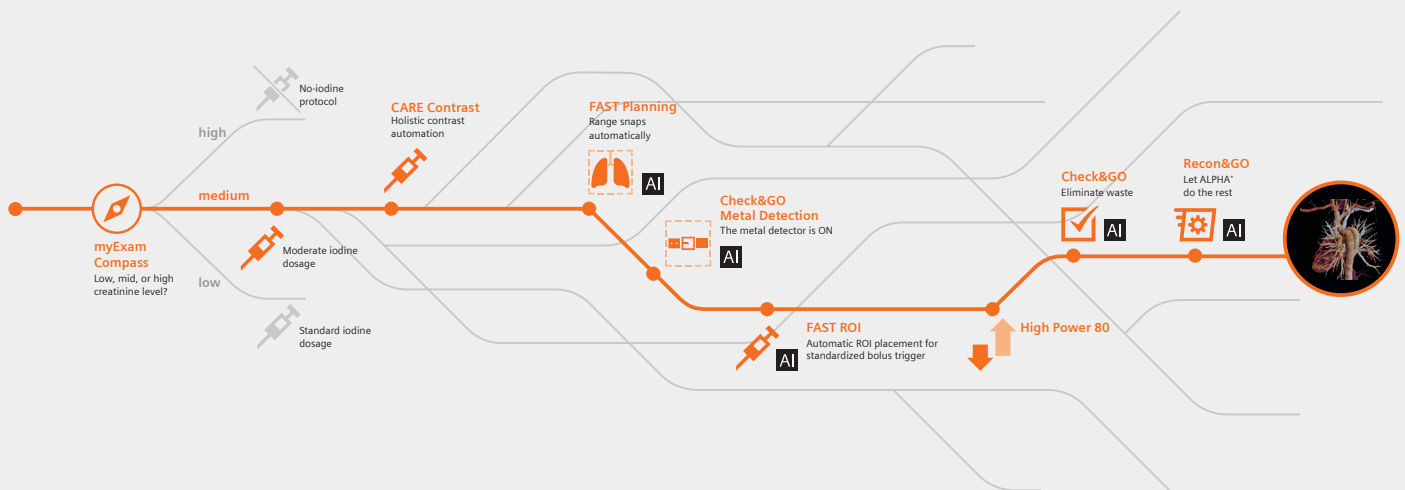


With SOMATOM go.Up you can achieve ultra-low-dose thoracic examinations powered by the Tin Filter.

For more information on the technologies, see pages 20-22.

# What exam do you GO for today?

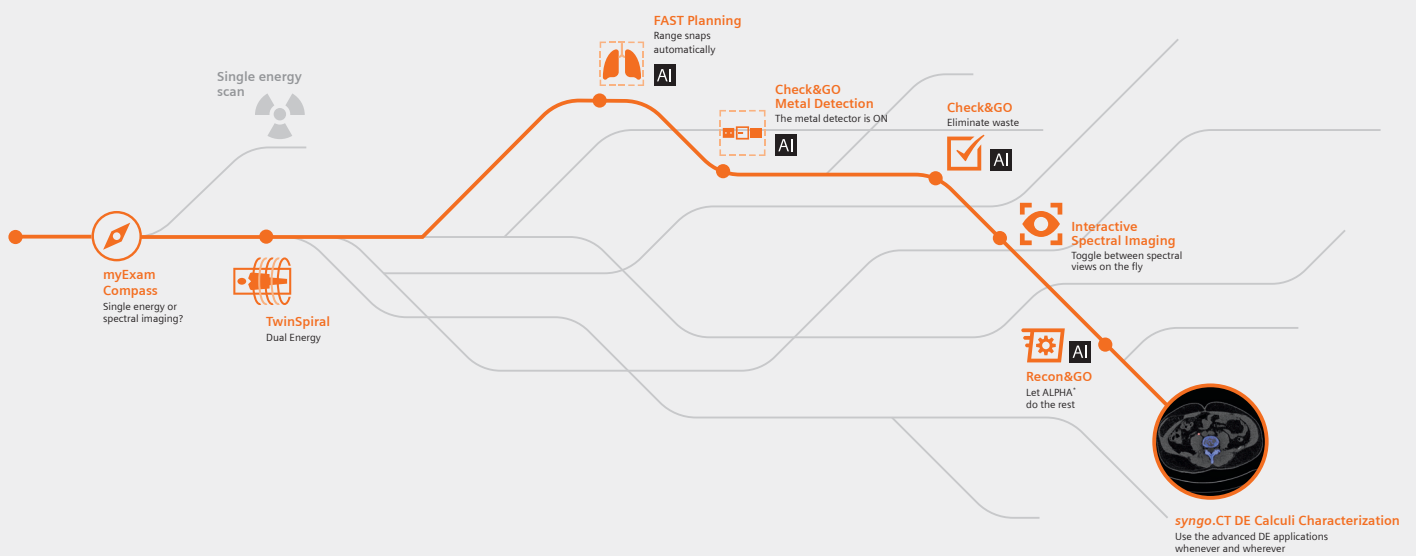
## myExam Companion guides you through your CT angiography



**AI** Artificial Intelligence inside  
\*Automatic Landmarking and Parsing of Human Anatomy

SOMATOM go.Up allows high-quality CT angiography exams with excellent iodine contrast and precise timing.

# myExam Companion guides you through your spectral imaging of calculi



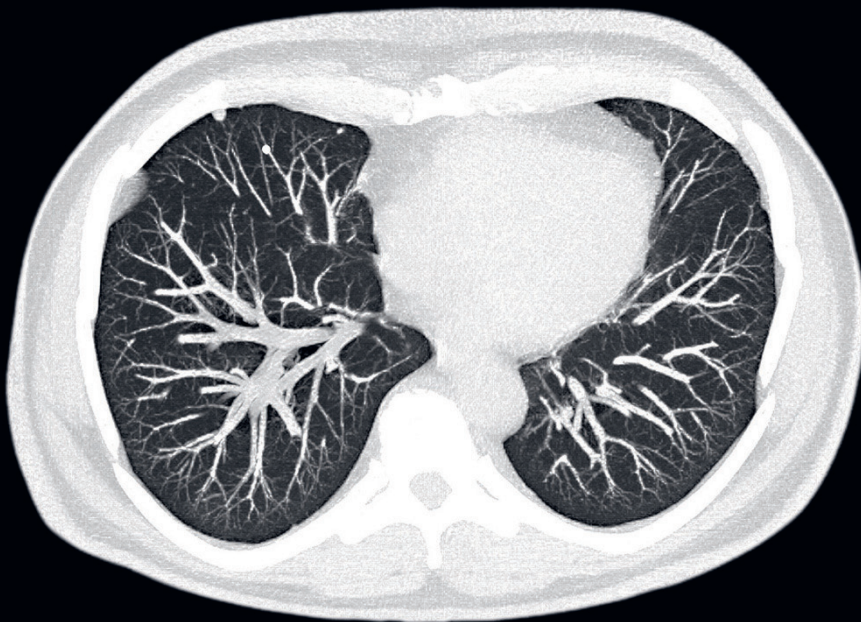
**AI** Artificial Intelligence inside  
\*Automatic Landmarking and Parsing of Human Anatomy

Spectral imaging revisited: Experience the improved spectral separation with the Tin Filter and benefit from various postprocessing capabilities for your color-coded images.

Missing your pathway? Thorax, CT angiography, and spectral imaging of calculi are just three of many. Discover the full clinical spectrum at: [siemens-healthineers.com/somatom-go-up-pathways](https://siemens-healthineers.com/somatom-go-up-pathways)

# See it with your own eyes

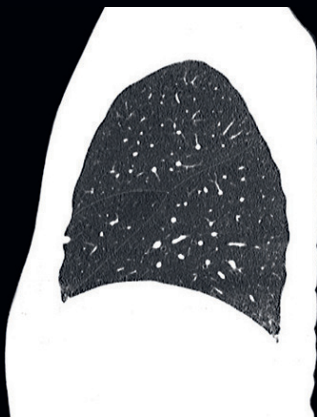
Whether routine imaging like lung cancer screening and angiography or more complex exams: Equipped with premium technologies, SOMATOM go.Up delivers excellent image quality – always on.



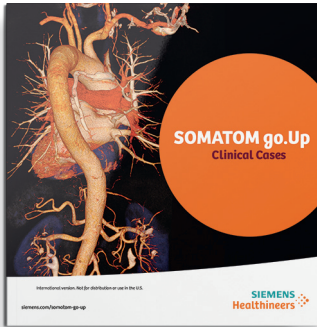
Low-dose lung imaging for nodule visualization

- Thick-slice MIP and coronal and sagittal MPR
- Tube voltage: 110 kV + Tin Filter
- $CTDI_{vol}$ : 1.28 mGy

*Courtesy of Erlangen University Hospital, Erlangen, Germany*

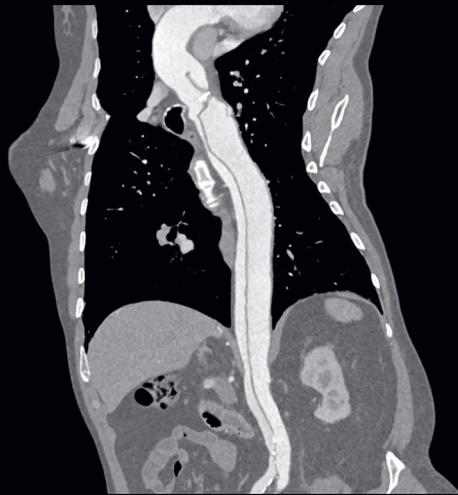


## See more cases in our clinical case booklet



It's impossible to show all the clinical values of SOMATOM go.Up on just two pages. That's why we created a booklet containing a collection of different cases and clinical images – all acquired with SOMATOM go.Up.

Please ask your local Siemens Healthineers Sales Representative for the dedicated booklet and discover for yourself the great clinical outcomes you can achieve with SOMATOM go.Up.

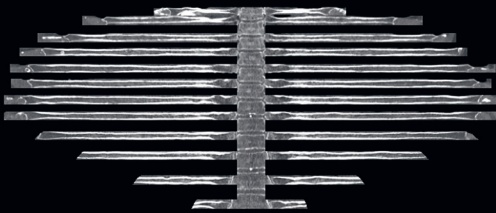


### High-end study of the aorta

- Oblique VRT
- Tube voltage: 110 kV
- $CTDI_{vol}$ : 5.61 mGy

*Courtesy of Centro Hospitalar de São João, Porto, Portugal*

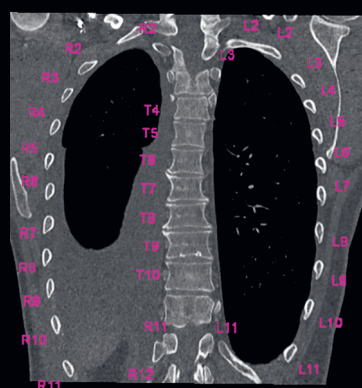
*Cinematic VRT performed with syngo.via*



### Rib unfolding study

- Inline rib ranges
- Tube voltage: 130 kV
- $CTDI_{vol}$ : 4.19 mGy

*Courtesy of Erlangen University Hospital, Erlangen, Germany*



### Simultaneous spine and rib labeling

- Axial and coronal MPRs
- Tube voltage: 130 kV
- $CTDI_{vol}$ : 4.19 mGy

*Courtesy of Erlangen University Hospital, Erlangen, Germany*



# The secrets of low dose and excellent image quality

SOMATOM go.Up helps you integrate complex exams into daily practice. Equipped with premium technologies, it delivers results you would not expect from a routine system.

## Stellar detector

Reduces image noise in every scan, while the advanced iterative reconstruction SAFIRE<sup>5)</sup> delivers excellent image quality at very low dose. Due to an increased channel density and a new geometry, the detector provides excellent and homogenous image quality, even in complex areas.

The Stellar detector:

- Up to **50% less dose** to achieve equivalent image noise compared with conventional detectors
- Up to **45% fewer streak artifacts** through regions of high attenuation (e.g., shoulder)<sup>6)</sup>



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## High Power 80

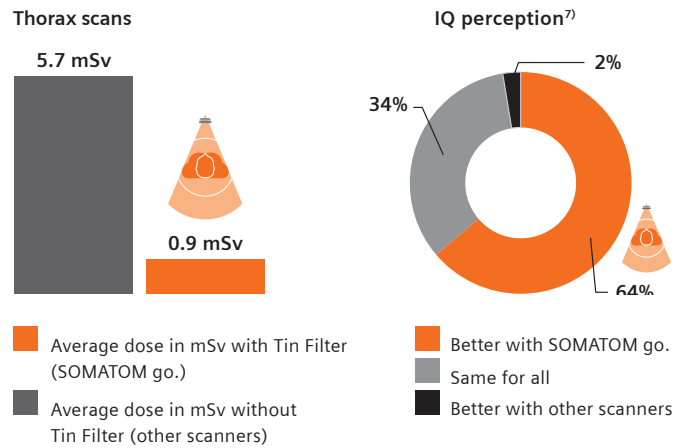
Allows you to scan at the highest tube current in its class: up to 400 mA at 80 kV – thanks to the Chronon™ X-ray tube. This achieves better iodine contrast for sharper images, even in small distal vessels. As a result, you can considerably reduce contrast media and thus scan more patients, deliver better patient care, and reduce examination costs.





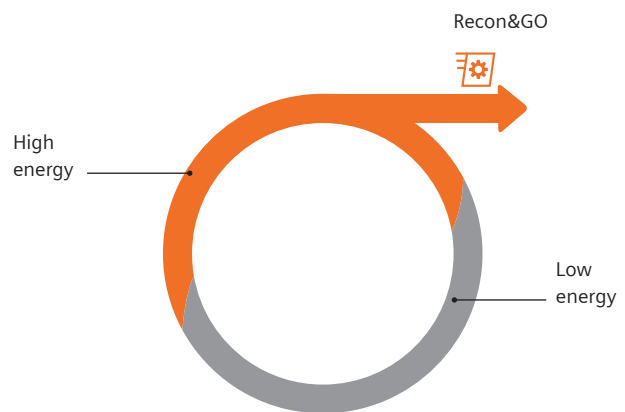
## Tin Filter

Achieves ultra-low dose levels by cutting out lower energies and optimizes image quality at the interface between soft tissue and air. This unique technology from Siemens Healthineers has direct benefits in lung and colon imaging, for example. Clinical experience also shows that the unique Tin Filter technology reduces beam-hardening artifacts and improves image quality in bony structures.



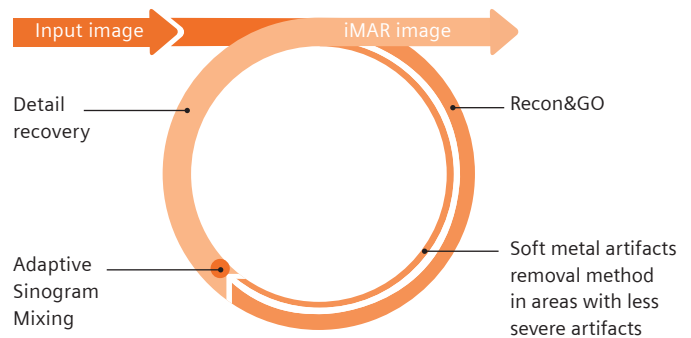
## Spectral imaging

Launches the next generation of Dual Spiral Dual Energy in clinical routine: Get both morphological and functional information in non-contrast exams by acquiring data sets at two different energies. Key factor for the high image quality is the improved spectral separation due to the Tin Filter and better dose distribution – supported by a new workflow concept of two scans integrated into a single acquisition. The well-known GO technologies are now introduced for the first time in spectral imaging for extra advanced automation.



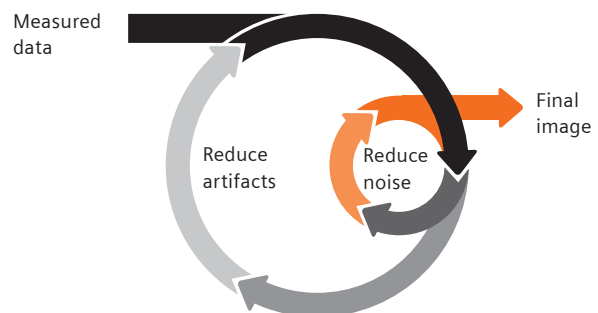
## iMAR

Reduces metal artifacts for better image quality without increase in dose. The high-end algorithm can handle a wide variety of metal implants for smoother, more efficient workflows. iMAR<sup>®)</sup> – iterative metal artifact reduction – helps you handle metal implants such as dental fillings, pacemakers, and extremity implants.



## SAFIRE

SAFIRE (sinogram affirmed iterative reconstruction) is an iterative reconstruction algorithm that delivers excellent image quality at low dose.<sup>5)</sup> It is fast, simple to use, and can be easily implemented into daily routine.



# Rounding out your daily experience

Discover more smart tools that help facilitate your daily routine.

## Guide&GO

The first tablet-based solution for CT-guided interventions. Control and monitor the entire procedure via the tablet and remote control:

- Enjoy a streamlined workflow with a fast, image-based definition of the target position and a flexible patient table move concept.
- Perform accurate measurements and plan a secure needle path with 2D-Needle guidance, using intuitive image manipulation functions.
- Safeguard and monitor needle placement using FAST i-Sequence with fast repetition of multiple low-dose control scans.



# Your product services in the digital era

SOMATOM go.Up's equipment service is based on Siemens Healthineers' matchless service infrastructure around the world:

**>207 billion**  
data points for >5,000  
patterns in neural network

**>40,000**  
updates & upgrades  
per year

**>50%**  
remote  
solving rate

**>27,000**  
active systems and  
>2,000 service engineers

## Advance Plans with AdvanceNow: The service plan in the digital era

The Advance Plans are Siemens Healthineers' service agreements for maximized efficiency and excellent clinical outcome in the digital era. They comprise a wealth of innovative and intelligent services that keep you cutting-edge, connected, and competitive. At the core of every service contract is Siemens Healthineers' continuous update and upgrade service, AdvanceNow. This key component provides frequent software updates and upgrades – including cybersecurity patches – and replacement of computer hardware as required, enabling you to benefit from advancements in intelligent imaging. Keep your imaging equipment up-to-date, constantly and easily.



Based on this exceptional infrastructure and connected through our Smart Remote Services, SOMATOM go.Up offers unique services to continuously ensure system availability:



### Condition-based maintenance

Reduced maintenance downtime through system load-specific maintenance intervals. Key components and parameters of the system are constantly monitored with regards to maintenance tasks.



### Remote technical support

Improved equipment uptime through fast access to technical expertise and usage of advanced tools. Technical experts provide you with fast and efficient support to restore your operations and increase the availability of your equipment remotely.



### PEPconnections

The competency-based online education solution that offers instant access to education, performance support, and expertise. Personalize the education experience of individual employees with customizable learning plans. Assign, create, track, and manage the education of entire groups.

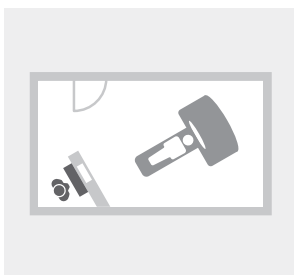


## Improve profitability with a smart investment

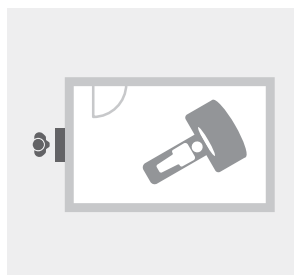
With reimbursements and budgets shrinking, the initial investment and the Total Cost of Ownership (TCO) become key factors of your CT system. That's why SOMATOM go.Up has been designed for clever savings, reduced lifecycle costs, and easy fleet management.

### Initial investment: Outsmarting installation costs

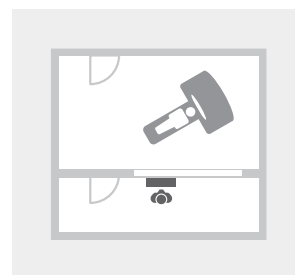
SOMATOM go.Up comes with low installation costs. Thanks to gantry-integrated computers and the flexible room concept, you no longer need to invest in a separate control room. Whatever concept you choose, your operators are fully protected while the X-ray is on:



Niche setup in the examination room



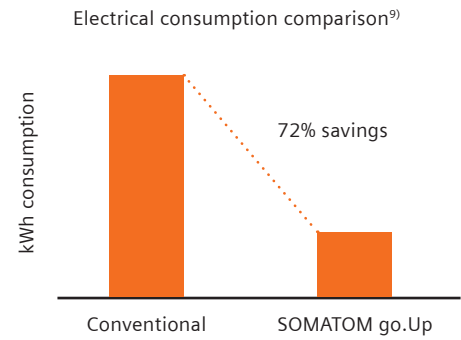
Workstation outside the room, e.g., in the corridor



Traditional two-room setup with separate control room

## Reducing operational costs

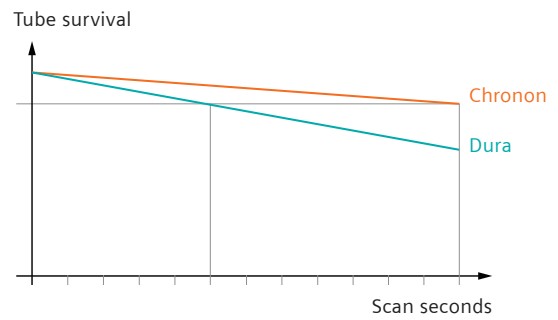
SOMATOM go.Up is designed with an eye to reducing operational costs. A clear focus was put on minimizing standby consumption, which represents 90% of the total electrical consumption costs.



## TCO: Down to new efficiency levels

Keep your running costs low with SOMATOM go.Up and benefit from:

- Longer lifetime of the Chronon tube, cutting replacement costs and minimizing downtime
- Ultra-low energy consumption during scanning and standby



Comparison of tube survival: Dura vs. Chronon<sup>10)</sup>

# Technical specifications

Discover what's inside your SOMATOM go.Up.

## Key data

Slices/Rotation .....	192*
Rotation times .....	up to 0.8 s
Tube .....	3.5 MHU (8.75 MHU equivalent value with SAFIRE <sup>5</sup> )
Tube Cooling.....	915 KHU/min
Power .....	32 kW (80 kW equivalent value with SAFIRE <sup>5</sup> )
High voltage .....	80, 110, 130, Sn110, Sn130 kV
mA .....	up to 400 mA (1,000 mA equivalent value with SAFIRE <sup>5</sup> )
z-coverage .....	32 × 0.7 mm
Max. table load .....	up to 227 kg



\* Based on 0.1 mm/slice increment reconstruction

# Why Siemens Healthineers?

At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, and improving patient experience, all enabled by digitalizing healthcare.

An estimated 5 million patients globally everyday benefit from our innovative technologies and services in the areas of diagnostic and

therapeutic imaging, laboratory diagnostics and molecular medicine, as well as digital health and enterprise services.

We are a leading medical technology company with over 120 years of experience and 18,500 patents globally. With more than 50,000 dedicated colleagues in more than 75 countries, we will continue to innovate and shape the future of healthcare.



On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products included in this brochure are available through the sales organization of Siemens Healthineers worldwide.

Availability and packaging may vary by country and is subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States.

The information in this document contains general technical descriptions of specifications and options as well as standard and optional features which do not always have to be present in individual cases.

The statements by customers of Siemens Healthineers described herein are based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption), there can be no guarantee that other customers will achieve the same results.

The customers cited are employed by an institution that might provide Siemens Healthineers product reference services, R&D collaboration or other relationship for compensation pursuant to a written agreement.

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The products/features and/or service offerings are not commercially available in all countries and/or for all modalities. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

- 1) IMV (2016): 2016 CT market outlook report.
- 2) Smith-Bindmar R, et al., *International variation in radiation dose for computed tomography examinations: prospective cohort study.* *BMJ* 2019;364:k4931.
- 3) <https://techjury.net/stats-about/ai/> (last visited July 26, 2019)
- 4) Wetzl M, et al., *Mobile Workflow in Computed Tomography of the Chest.* *Journal of Medical Systems*:43, November 2018.
- 5) *In clinical practice, the use of SAFIRE 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.*
- 6) Duan X, et al., *Electronic Noise in CT Detectors: Impact on Image Noise and Artifacts.* *AJR*:201, October 2013.
- 7) Arenas-Jimenez J, et al. *Image quality and radiation dose at routine unenhanced chest-CT using a tin filter in a new single-source CT model: Comparison with other chest-CT scans in the same patient. Poster presented at: Joint ESTI – ESCR Annual Scientific Meeting 2018; May 24-26, 2018; Geneva, Switzerland.*
- 8) *iMAR is designed to yield images with a reduced level of metal artifacts compared to conventional reconstruction if the underlying CT data is distorted by metal being present in the scanned object. The exact amount of metal artifact reduction and the corresponding improvement in image quality achievable depends on a number of factors, including composition and size of the metal part within the object, the patient size, anatomical location, and clinical practice. It is recommended to perform iMAR reconstruction in addition to conventional reconstruction.*
- 9) *Multi-vendor standardized COCIR energy consumption for total standby/idle mode measurement based on the self regulatory initiative. Conventional technology refers to previous equivalent scanners. Data on file.*
- 10) *Tube lifetime can vary depending on usage. The graph values are real testing data. Data on file.*

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CIN: U74999MH2015PTC264859

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