



# Performance in CT

SOMATOM Sensation

[www.siemens.com/medical](http://www.siemens.com/medical)

**SIEMENS**  
medical



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# SOMATOM Sensation

**The difference between the first and its followers? SOMATOM Sensation.  
Always one step ahead.**

In 1974, Siemens proved to be one step ahead of the entire industry with the introduction of the world's first computer tomograph from a medical equipment manufacturer. The goal to always be not only at the cutting edge of medical technology but to actually be one step ahead assured the Siemens position as the undisputed leader in CT innovation. Over the years, these innovations have reached from the first spiral CT scanner over STRATON®, the industry's only 0 MHU X-ray tube, to the first Web Enabled CT in 2006 and many other impressive firsts. It is then no surprise that Siemens spends more than twice as much on research than any other CT scanner manufacturer with predictable results: The largest installed base in high-end CT proves that Siemens CT scanners are the preferred solution not only for the clinical routine, but also for research purposes. More than 80 % of all academic papers published regarding 64-slice CT are researched and developed on a SOMATOM Sensation.

When you take delivery of your SOMATOM Sensation, you will be joining a family of thousands of satisfied, enthusiastic medical professionals who perform millions of patient exams per year. High definition image quality, efficient work flow and up-time are the keywords that add up to improved health care for your patients and an improved bottom line for your clinic, practice or organization.

Your advantages with the SOMATOM Sensation are many: consistent high image quality for diagnostic precision, streamlined workflow for shortest time to diagnosis, intelligent applications that are easy to use for more confidence in less time and finally, keeping you, your staff and your SOMATOM Sensation up-to-date today and in the future.

Enjoy the difference that keeps you one step ahead in your profession.



Alec Megibow, MD,  
New York University  
Medical Center,  
New York, USA

“SOMATOM Sensation  
allows for maximal  
diagnostic detail at the  
fastest acquisition speed  
and the lowest possible  
radiation dose.”



# Speed, Resolution, and Coverage without Compromise

An accurate, reliable, and fast diagnosis is the only outcome that counts in the CT world and the only way it can be realized is with exceptional image quality. Conventional scanners struggle to achieve the high speed and resolution required to meet today's demands. With these scanners, time consuming compromises are often required to achieve usable results. Such compromises are unnecessary with the SOMATOM Sensation. We have made a lasting commitment to continue an upward spiral of image quality by combining highest speed, resolution and coverage with the lowest patient exposure possible at the same time. These factors are crucial to accomplish previously unknown sharpness, diagnostic detail, and clarity. No matter what your field of expertise is, you will be stunned by the sensational images.

In cardiology for instance, you will especially appreciate images of exceptional quality for quantitative coronary analysis and accurate stenosis measurement. Oncologists will profit mostly from high precision scanning vital for highly sensitive tumor staging and follow-up. In neurology, you can expect artifact-free imaging with high spatial and temporal resolution for fast and accurate visualization of complex neurological disorders of head, neck, and spine as well as injuries and stroke.

The advantages that make a significant difference for you and especially for your patients are obvious: better health care through reliable differential diagnosis in the clinical routine and specialized examinations.

**The best of all** image quality parameters in combination brings our CT scanners' image quality to a level that is hard to outperform. Visualization of finest detail within the entire scan field without increase in dose, robust cardiac imaging as well as visualization of inner ear structures, and spiral artifact free imaging is possible because we simply excel in resolution, coverage, and speed.



## Clinical Benefits

- Visualization of finest detail within the entire scan field with no increase in dose.
- Robust cardiac imaging with highest rotation time of 0.33 s.
- Visualization of inner ear structures with highest isotropic spacial resolution of 0.24 mm.
- Spiral artifact free imaging.
- Pure arterial imaging of smallest vessels by combining 0.33 mm, 0.33 s, and industry's fastest sub-mm coverage of 87 mm/s in daily clinical routine.

## Economic Benefits

- Expansion of clinical applications.
- Increase of patient referrals.

## Technical Benefits

- Exceptional image quality with STRATON high performance CT X-ray tube.
- Industry's highest isotropic resolution with z-Sharp™ Technology.
- Dose savings at point of acquisition with UFC™ Detector.

# Speed, Resolution, and Coverage without Compromise



Conventional CT:  
Focus on resolution.



Conventional CT:  
Focus on coverage.



SOMATOM Sensation:  
All at once: speed, resolution, and coverage.

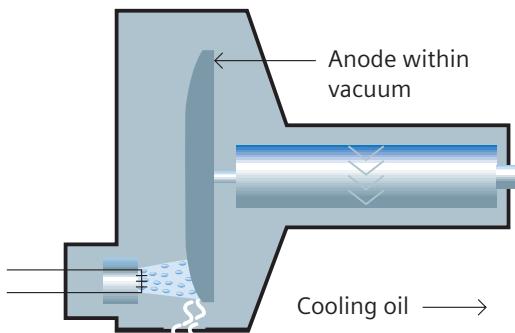
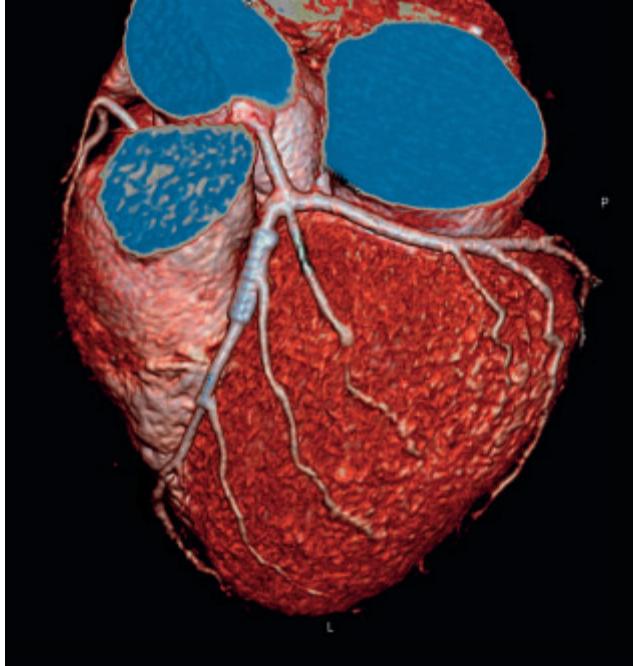
# Fastest Speed

Taking our role as innovation leader seriously, we aim to revolutionize CT in every aspect. Our goal is to give you the latest and most advanced technology enabling you to significantly improve patient care, no matter what your medical specialty is. For example, in cardiac imaging, where the ability to freeze motion is mission critical, SOMATOM Sensation provides you with the industry's fastest rotation time, making non-invasive cardiac diagnosis routinely available.

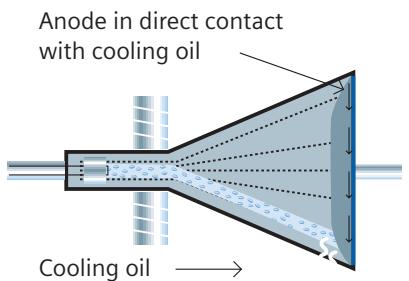
To increase temporal resolution, the proprietary STRATON X-ray tube enables the market's fastest gantry rotation time of 0.33 s, resulting in 160 ms temporal resolution for motion-artifact-free imaging of the heart. Our unparalleled 0 MHU STRATON X-ray tube has caused a paradigm shift in CT imaging. The tube's direct anode cooling eliminates the need for heat storage, permitting a compact design and fastest CT gantry rotation for all applications.

Together with highest spatial resolution, SOMATOM Sensation has the capability to visualize finest anatomical details in crisp-clear images. Even the smallest coronary vessels and plaques appear distinct and stents are highly delineated for outstanding precision in your diagnosis.

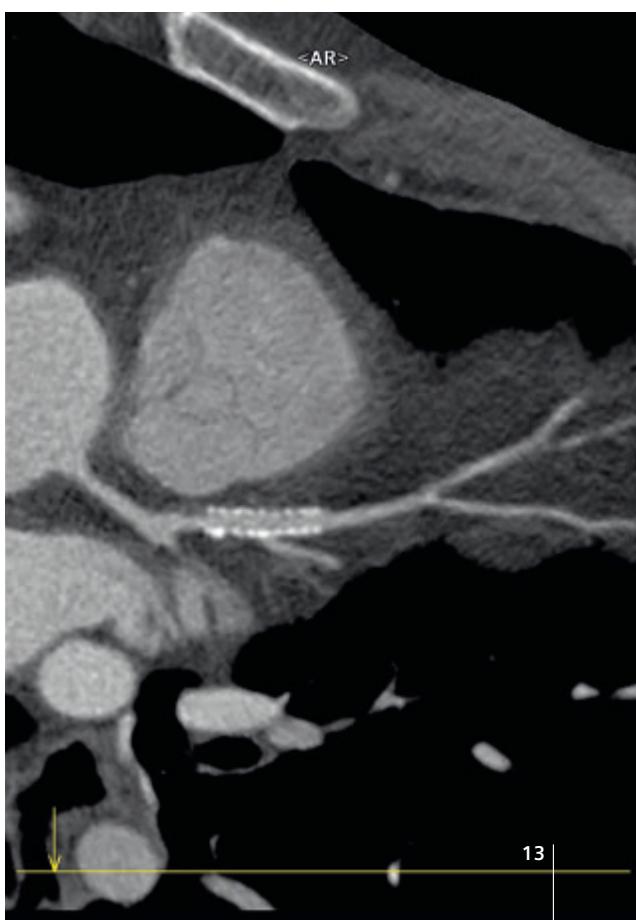
**Coronary CT Angio**  
0.33 mm isotropic resolution  
for clear visualization of  
in-stent lumen with z-Sharp  
Technology and 0.33 s  
rotation speed.



Conventional anode heats up during exposure.



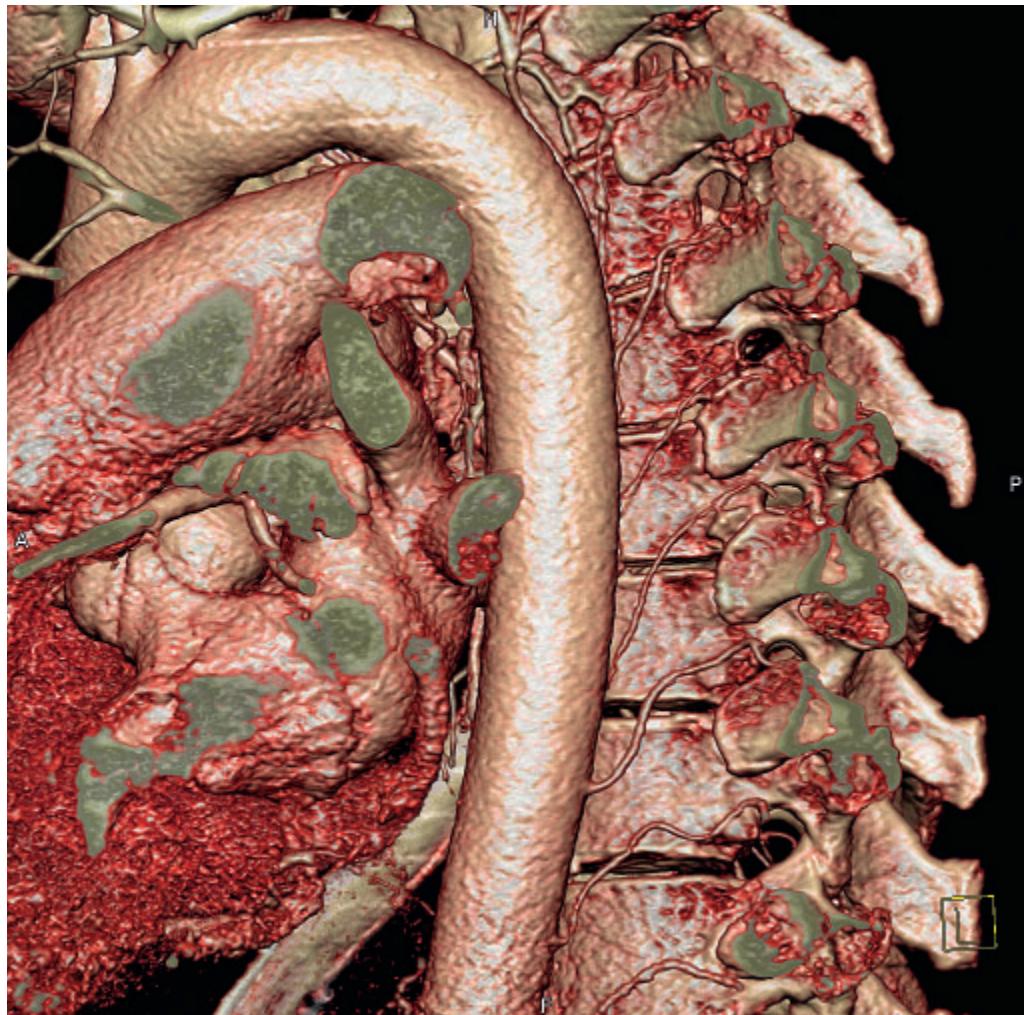
STRATON never accumulates heat during exposure.



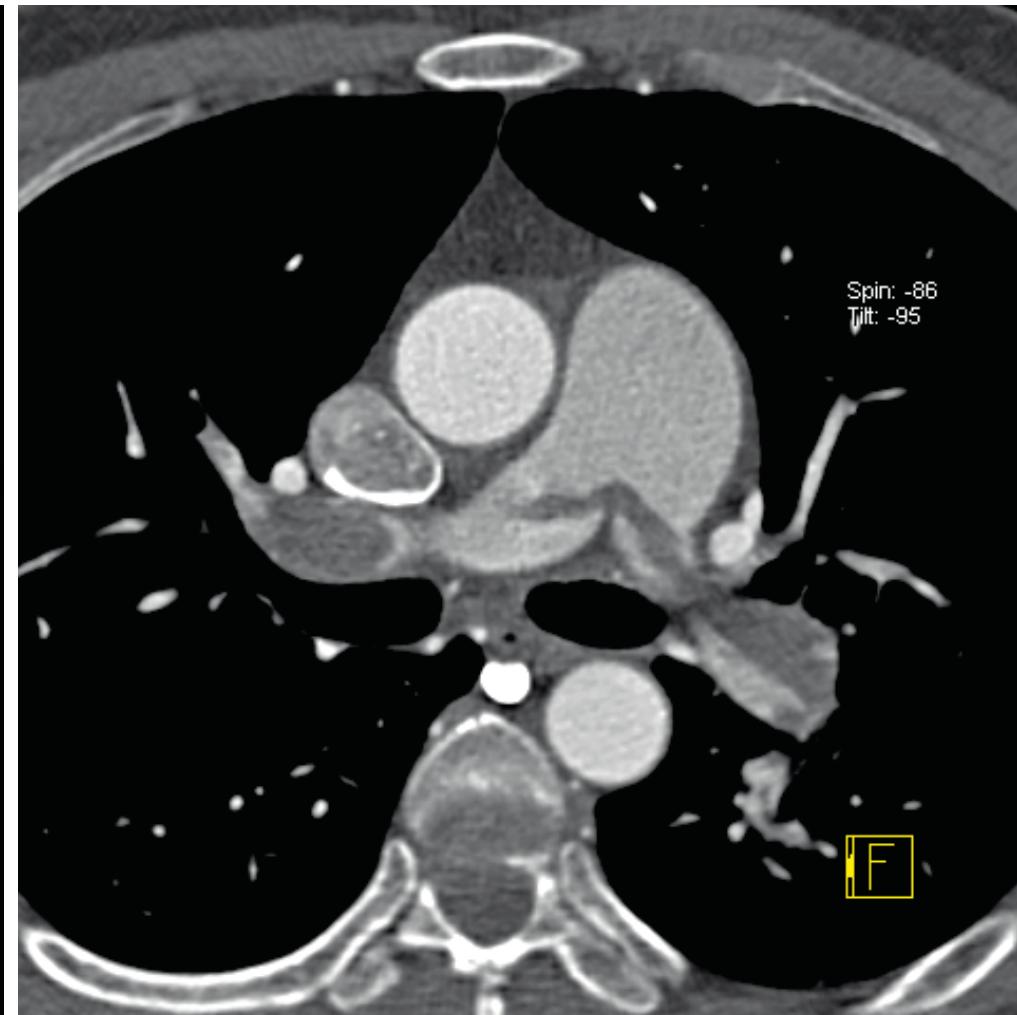
# Fastest Speed



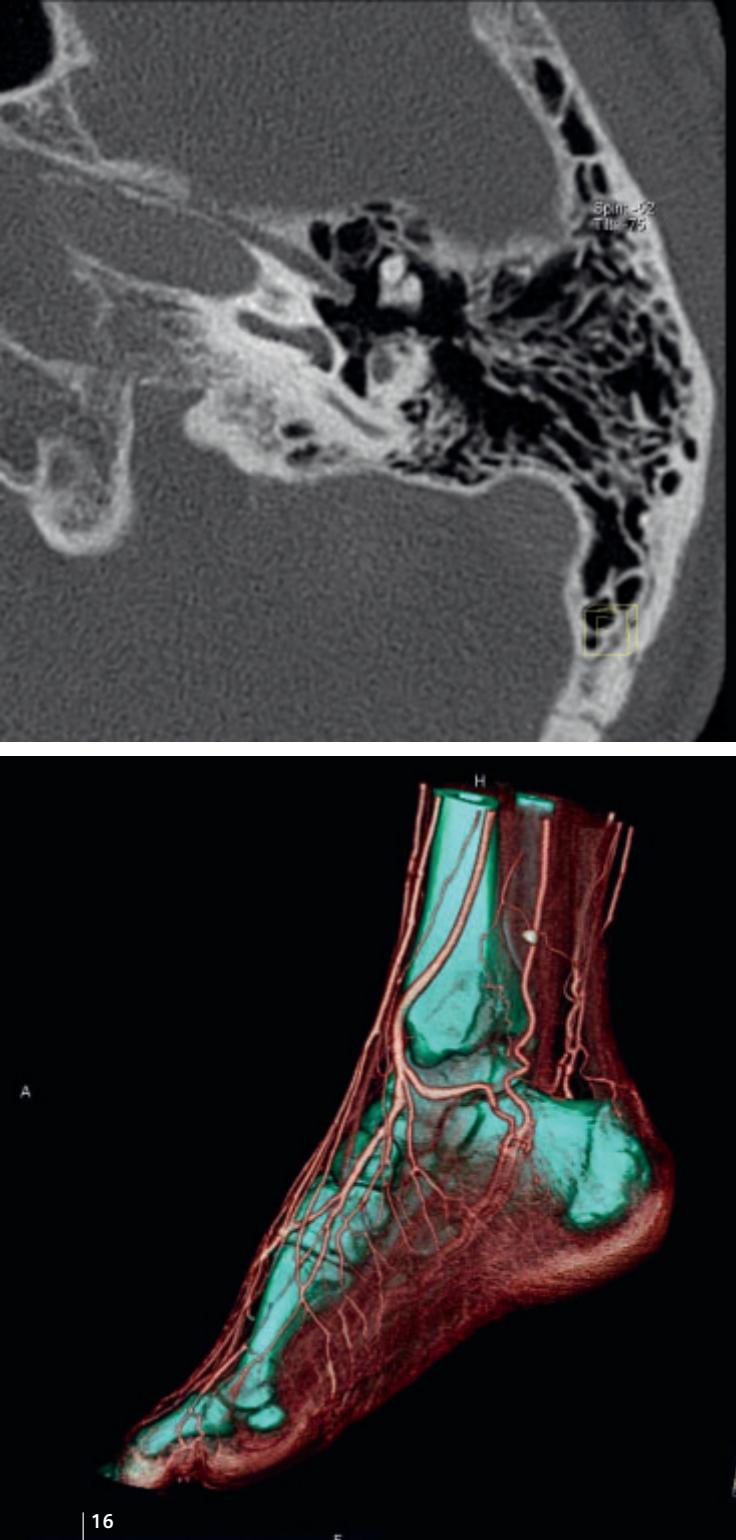
Triple Rule Out: Visualization of coronary arteries, rule out myocardial infarction.



Triple Rule Out: Excellent display of aorta  
with exclusion of aortic dissection.



Triple Rule Out: Showing bilateral  
pulmonary embolism.



# Highest Resolution

A significant improvement in visualization of the finest details – pushing the boundaries of spatial resolution to a new level – is what physicians expect from the latest CT technology.

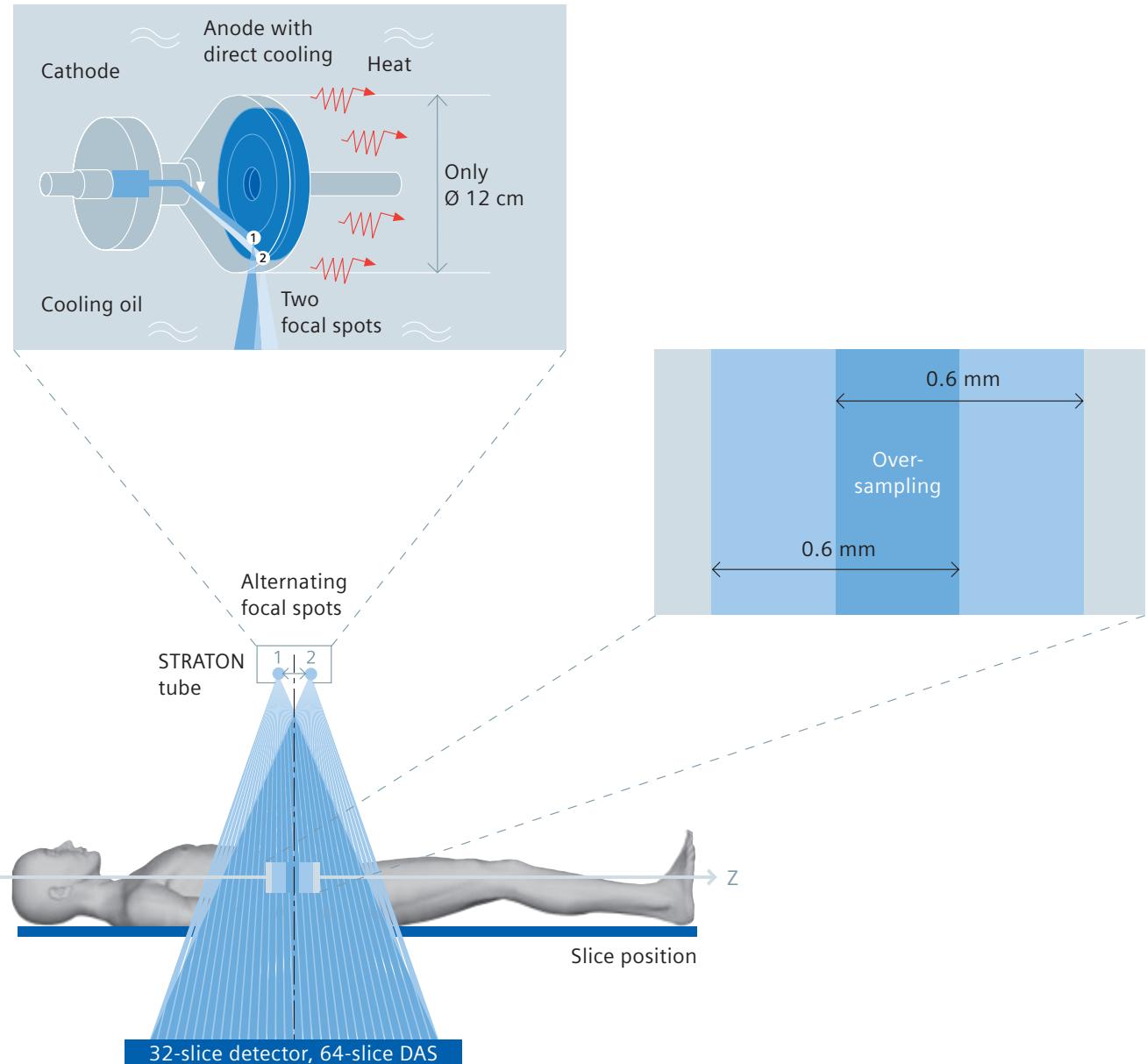
Our award winning SOMATOM Sensation, in all its configurations, offers the industry's highest routine isotropic resolution of 0.33 mm, visualizing the smallest pathology and finest anatomical structures with exceptional accuracy for reproducible quantifiable diagnosis. Highest definition of complex inner-ear bones or tiny joints can be achieved with the z-UHR resolution of 0.24 mm, the ultimate in today's spatial resolution in Multislice CT.

Instead of decreasing the detector elements' size to improve spatial resolution, z-Sharp Technology utilizes two overlapping X-ray beams, resulting in significantly increased resolution without a corresponding increase in dose. This provides you with the industry's highest isotropic resolution of 0.33 mm routinely at any scan and rotation speed and at any position within the scan field.

Additionally, z-Sharp Technology accomplishes previously unknown sharpness and clarity with complete elimination of visible spiral artifacts, giving you a higher clinical confidence especially in neuro imaging. The smallest anatomical details – such as the entire coronary artery tree or the finest vascular structures – are now shown with highly defined detail without compromise.

With our proprietary z-UHR Technology, we push the boundaries of spatial resolution even further. For ultra-high resolution bone imaging, such as wrist, joint or inner ear studies, z-UHR provides unparalleled 0.24 mm isotropic resolution – until now seen only with research flat-panel and Micro CT technology.

By selecting SOMATOM Sensation, you will constantly see the difference, image by image, speedily, and without compromise.



z-Sharp Technology provides the industry's highest isotropic resolution of 0.33 mm at any scan and rotation speed, and at any position within the scan field.

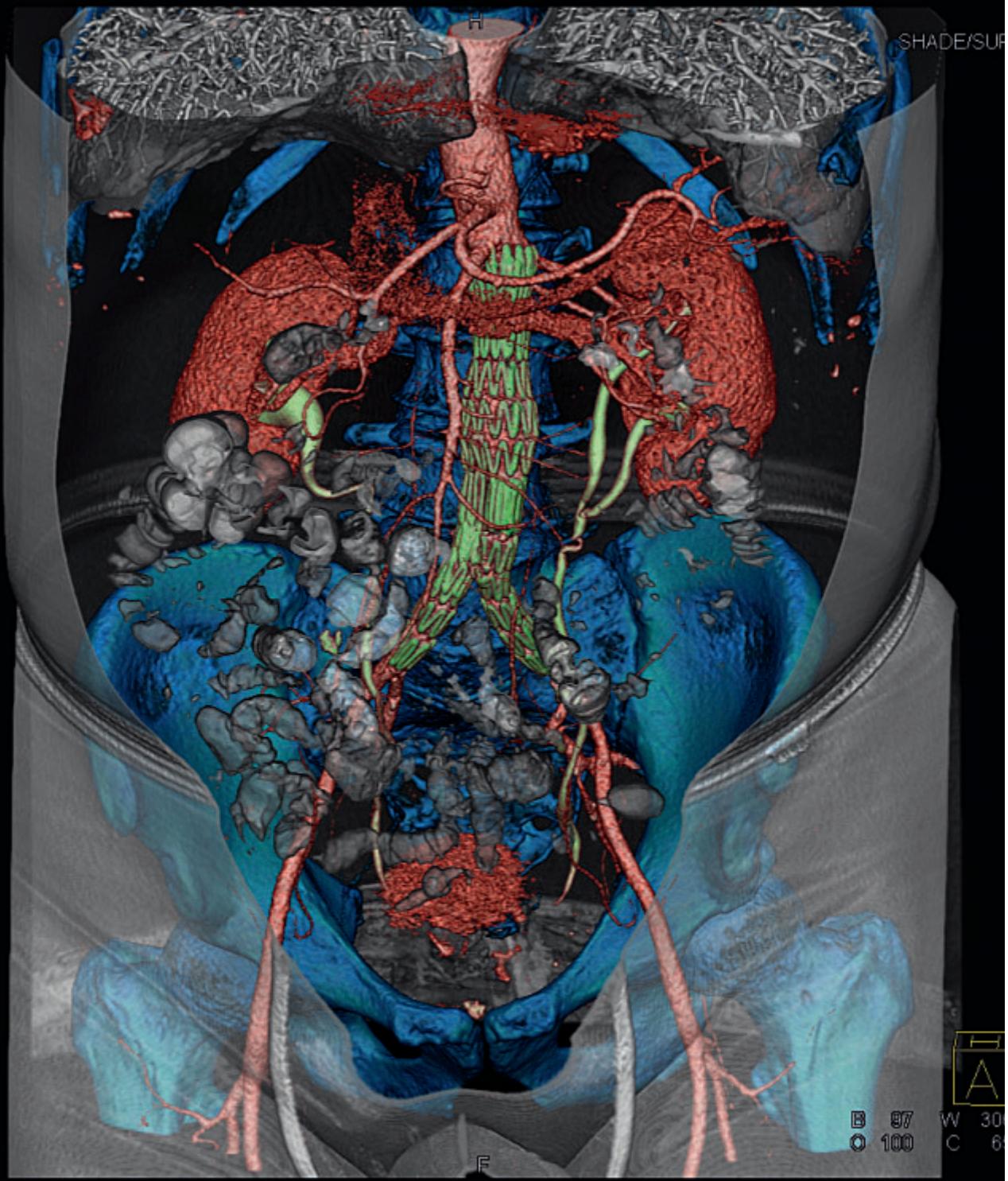
# Highest Resolution

Visualization of smallest nodules with  
0.33 mm isotropic resolution.



Sharp delineation of trabecular structures  
with 0.24 mm isotropic resolution (z-UHR).





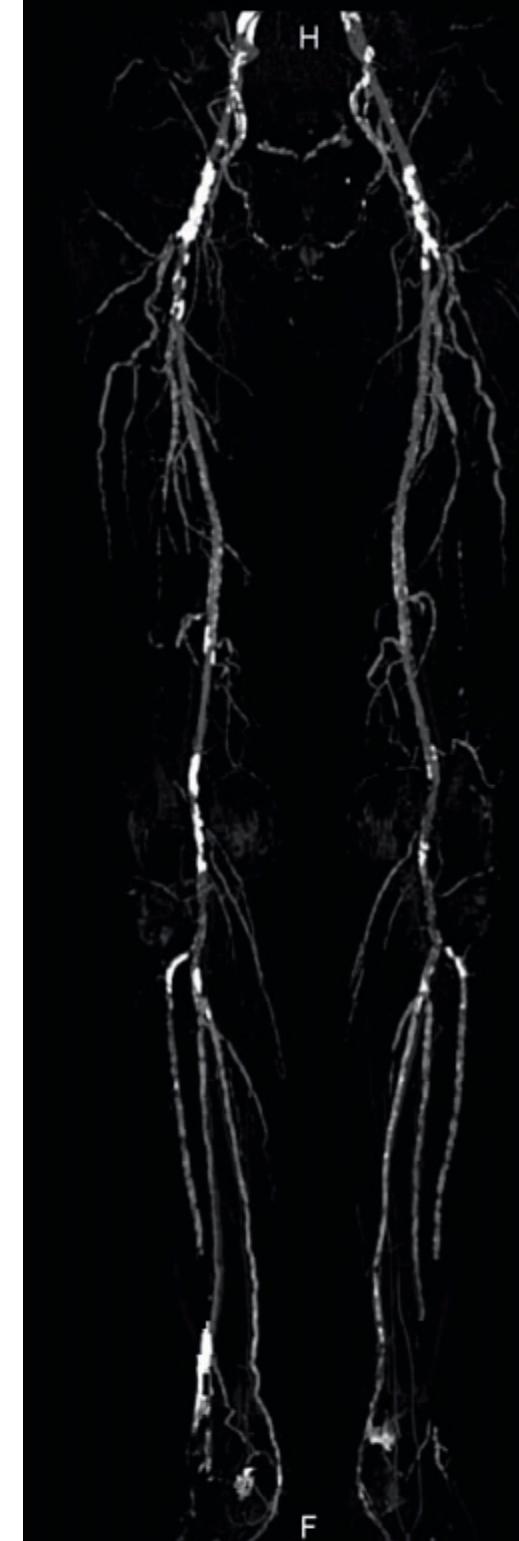
Abdominal scan for stent control.

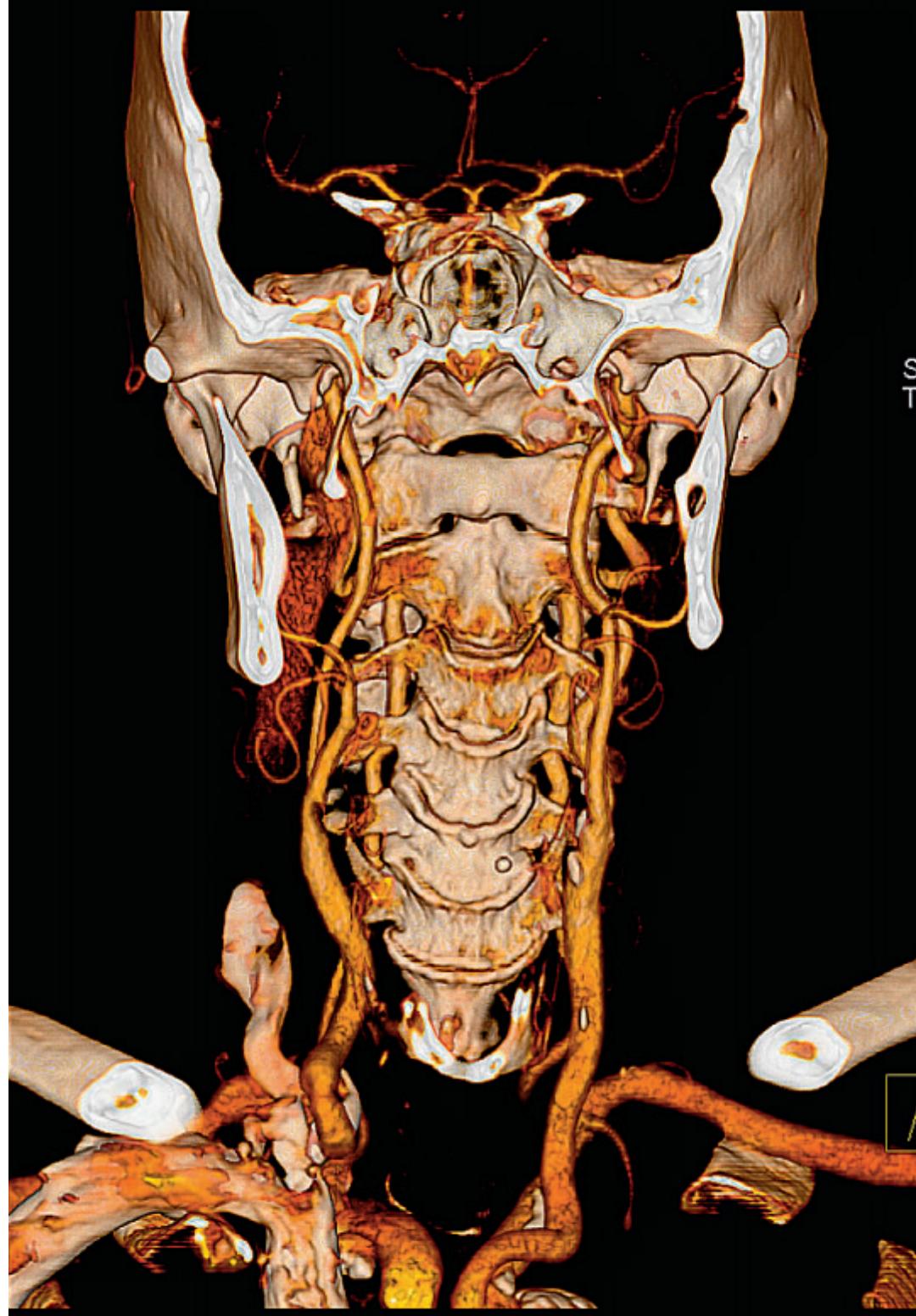
# Largest Sub-mm Coverage

Challenging CT examinations, such as head and neck examination of the carotid arteries, require high volume coverage for quick examination of the arterial phase without venous contamination. For us, the necessity of focusing not only on volume coverage but, at the same time, on highest spatial resolution is obvious and has been raised to a permanent standard in all our efforts. Only this combination will allow visualization of the smallest detail in the fastest time possible.

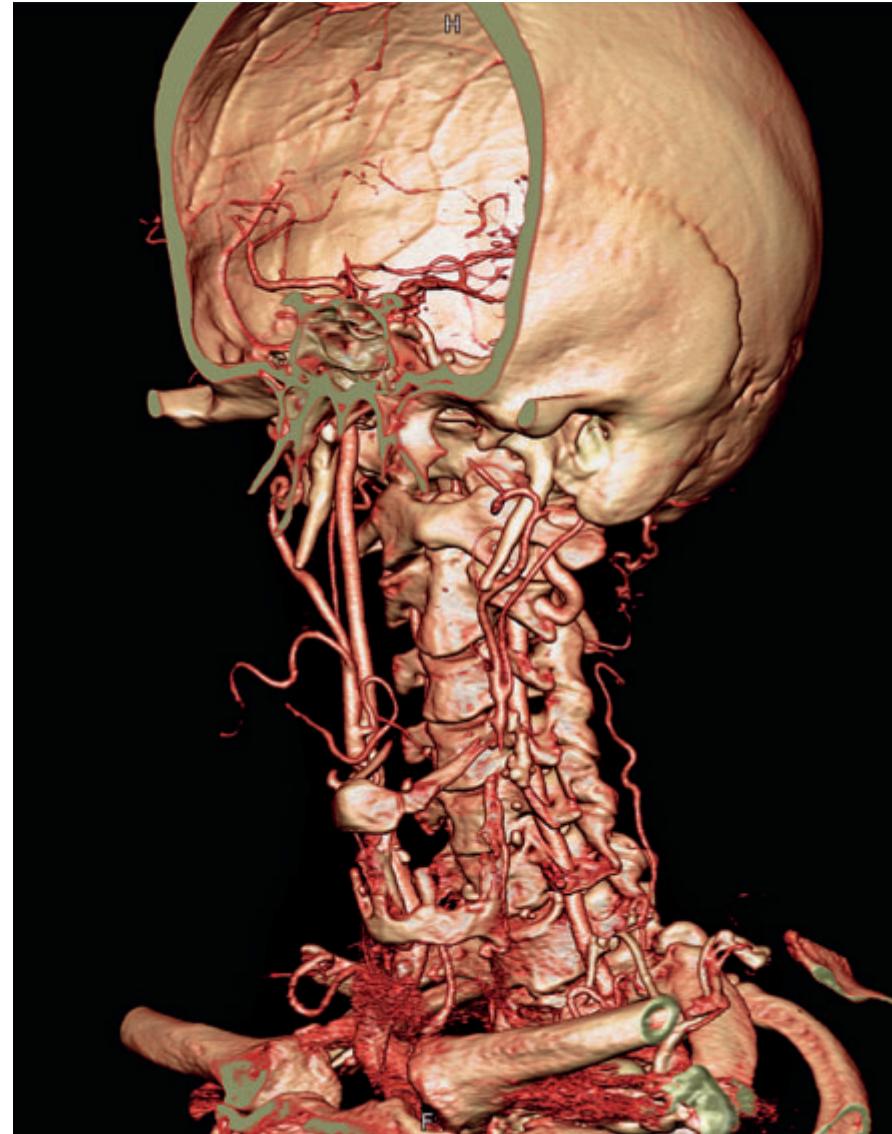
While conventional technology is limited to a reduced pitch in order to increase the spatial resolution, SOMATOM Sensation can scan pitch-independently and therefore reach a much higher sub-mm volume coverage. The combination of SOMATOM Sensation's fastest gantry rotation speed and z-Sharp Technology generates the industry's fastest sub-mm volume acquisition speed of 87 mm per second.

The high volume coverage facilitates, for example, long-range vascular studies or combined thorax-abdomen examinations and, at the same time, delivers the highest spatial resolution to visualize minute structures.

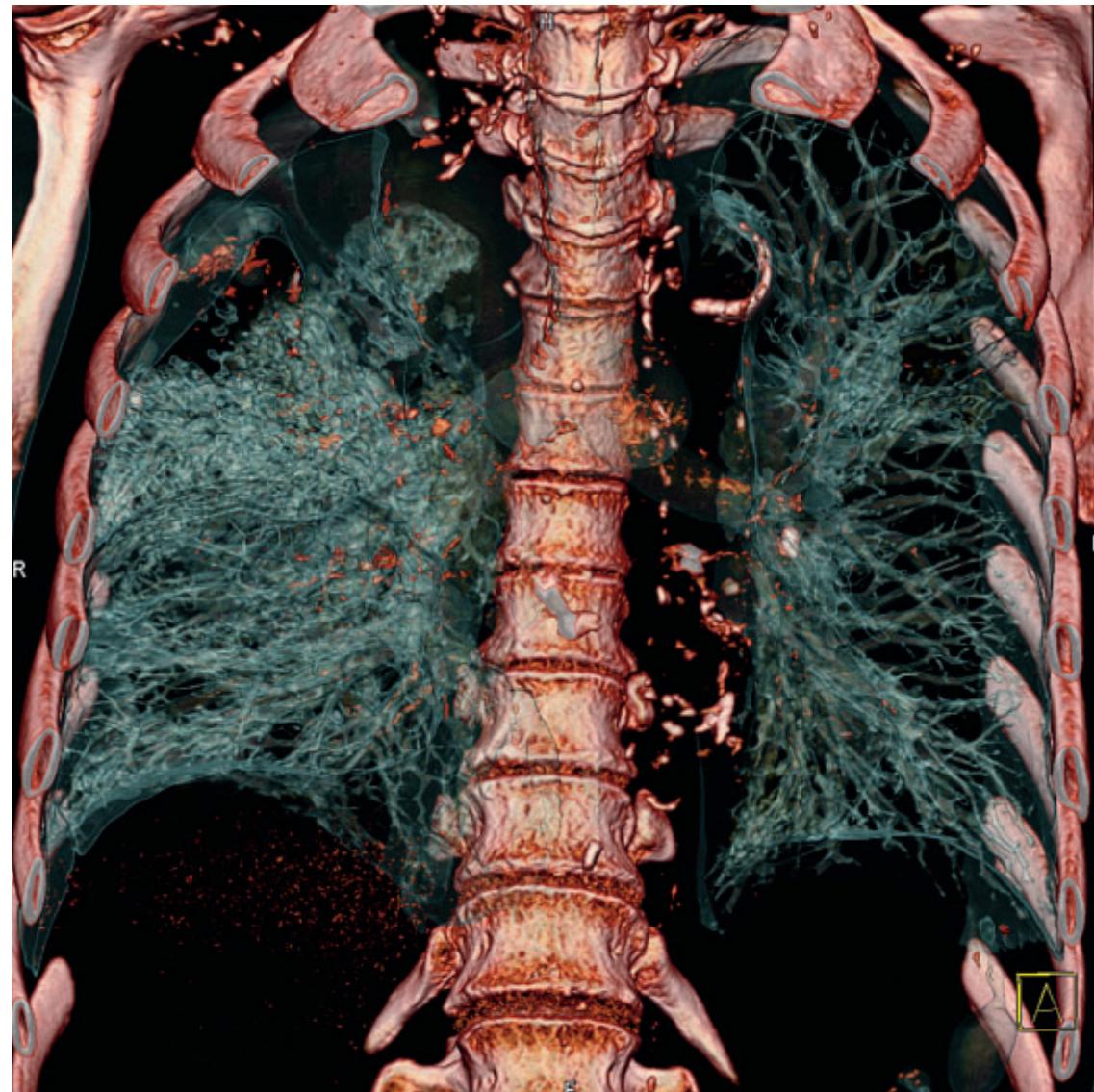




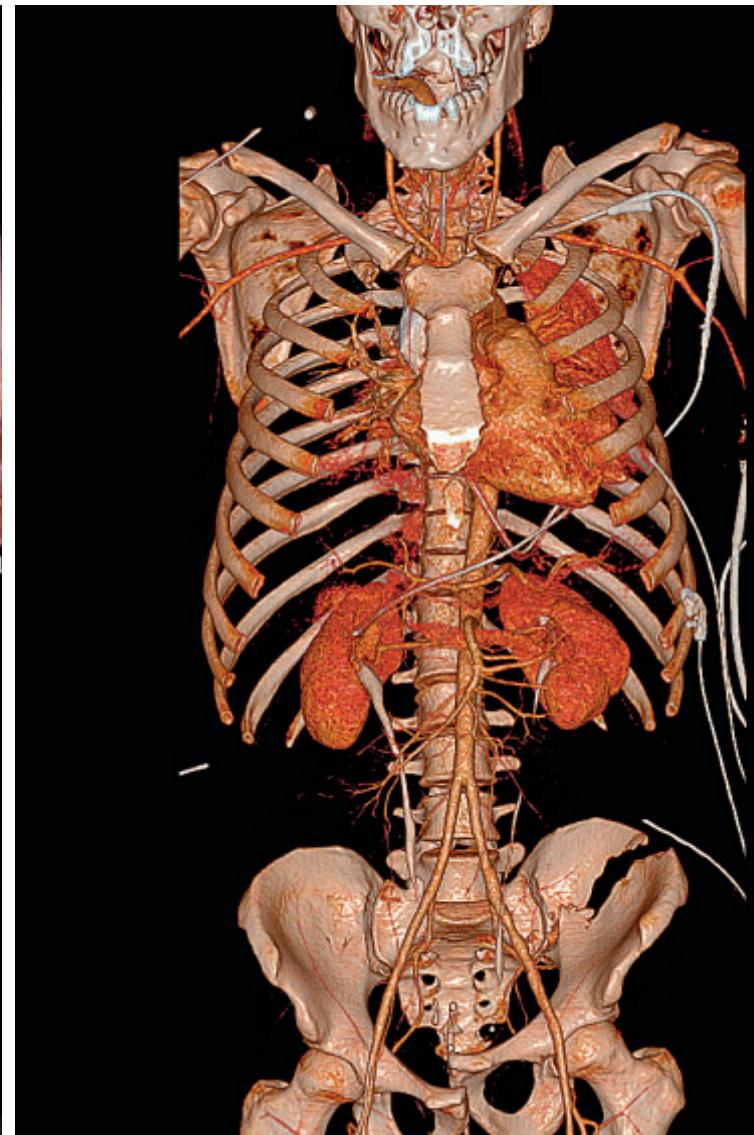
# Largest Sub-mm Coverage



Excellent visualization of the whole cerebro vascular system showing an occlusion of the left carotid artery.



Chest CT-Angiography showing a right-sided pneumothorax and a partial atelectasis of right lung.



Whole body CTA: Polytrauma with pelvic fractures and hematothorax.

# Minimal Dose

The combination of excellence in speed, resolution, and coverage gives you the highest level of image quality possible, but these would have less significance if we did not also keep the dose to a minimum.

The desire for as little radiation exposure as possible lies at the heart of our CARE research and development philosophy. With SOMATOM Sensation, saving dose starts right at the point where image data is acquired – at our Ultra Fast Ceramic (UFC) Detectors, a prime example of our focus on patient safety.

Another impressive example of our focus on CARE is our exclusive CARE Dose4D™, delivering an unequalled combination of maximum image quality at minimum dose. Because every patient is unique in terms of size, weight, and anatomy, CARE Dose4D adapts dose to each individual patient in real time, reducing dose up to 68%\*.

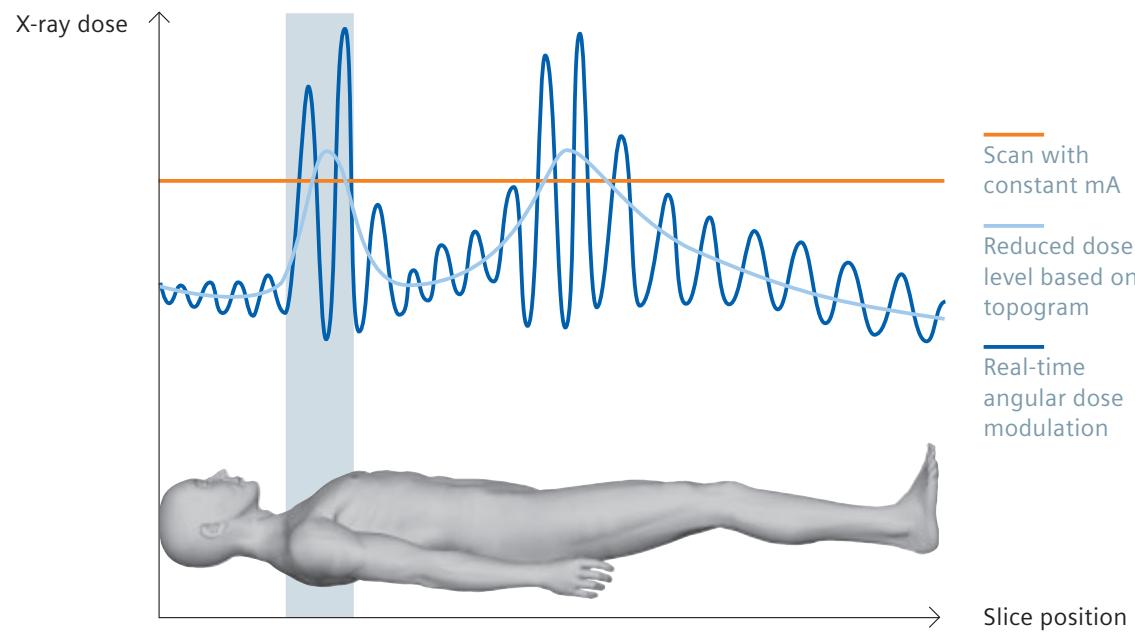
Especially in cardiac imaging, it is our passion to reliably provide you with superior image quality, even during unstable conditions, while maintaining lowest possible dose. With Adaptive ECG-Pulsing™, our innovative heartbeat-controlled dose modulation, we have designed a unique solution that reduces

dose of up to 50%\* in cardiac imaging. At the same time, its real-time monitoring of the ECG automatically and instantly reacts to changes and abnormalities of the heartbeat.

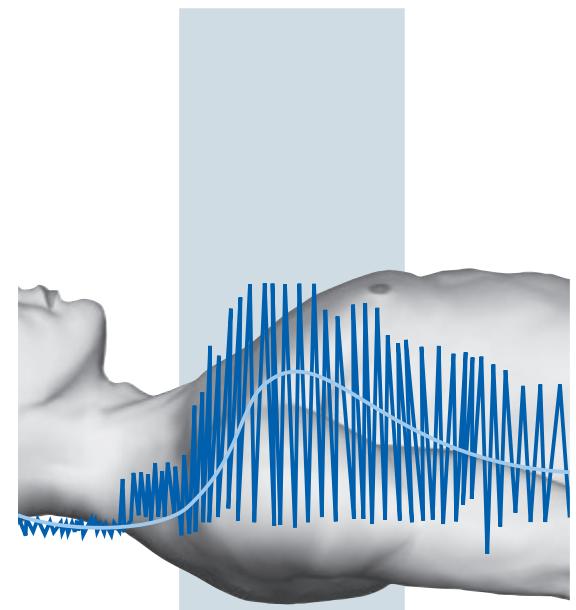
What's more, you also benefit from our CARE solutions. With HandCARE™, for instance, the tube's current is automatically switched off to avoid direct X-ray exposure to your hands during CT-guided interventions.

By offering intelligent radiation management, SOMATOM Sensation realizes a substantial reduction in dose for the patient and for you.

\* Results may vary. Data on file.



CARE Dose4D provides up to 68 %\*  
dose reduction compared to fixed mA  
examinations.

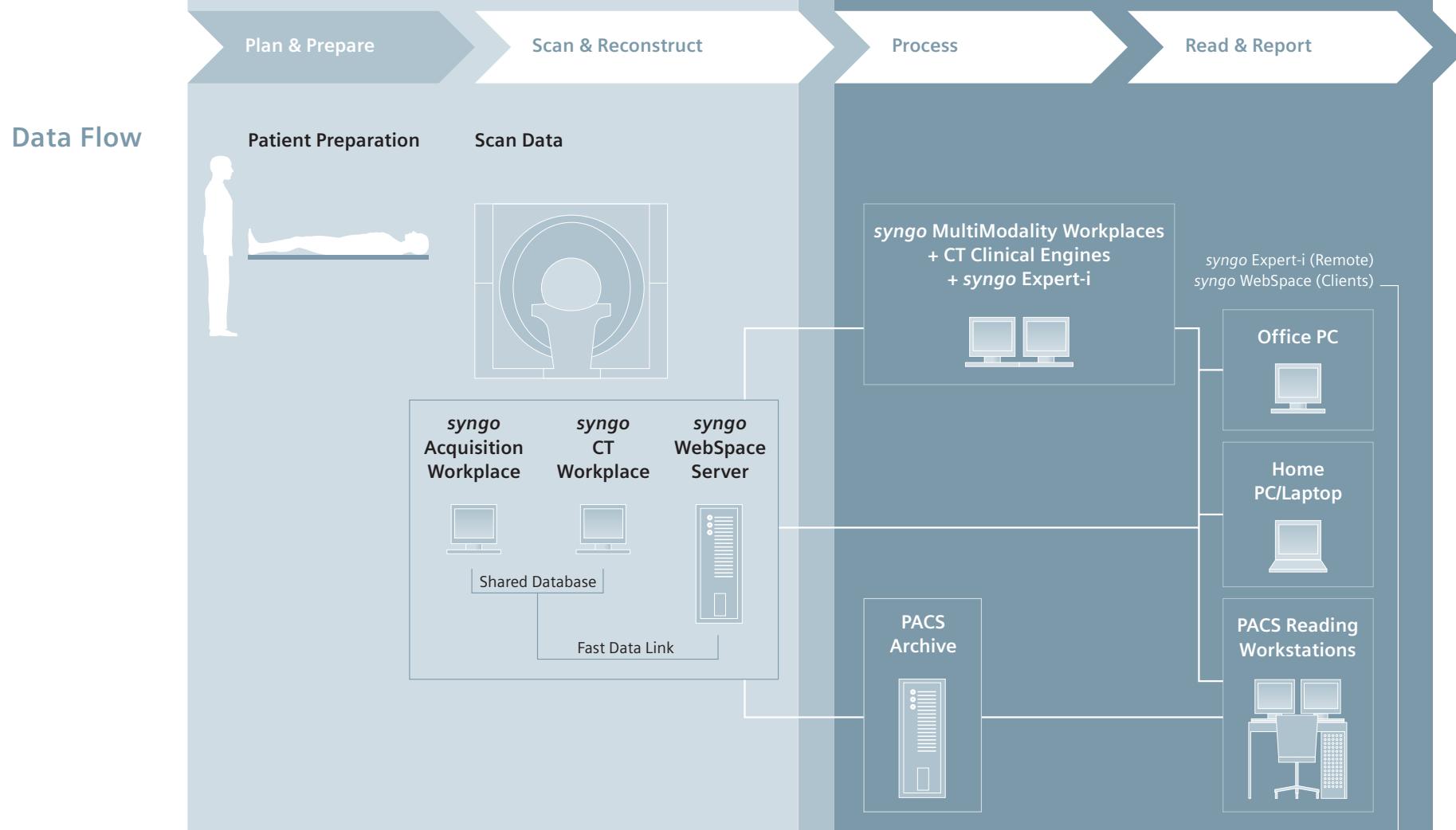


\* Results may vary. Data on file.

Elliot K. Fishman,  
Director Diagnostic  
Radiology and Body CT,  
The Johns Hopkins Hospital,  
Baltimore, USA

“In my opinion, what makes Siemens CT so special, is the seamless integration of high image quality with superb clinical workflow.”





## Benefits

- Planning, Preparation, Scanning and Reconstruction for several patients by two parallel workplaces.
- Immediate data access at *syngo* Acquisition Workplace and *syngo* CT Workplace through shared database.
- Virtually “Zero Delay” availability of thin slice data through Fast Data Link to *syngo* WebSpace Server.

- 3D data where needed with *syngo* WebSpace.
- Get a second opinion with *syngo* Expert-i.
- Parallel 3D Reading by concurrent sessions.

# “Zero Delay” CT Workflow

Excellent image quality is, of course, the main criterion, but there are many necessary steps between patient preparation and a clinically superior image for a reliable diagnosis. Today's healthcare situation poses a challenge for every clinician: a constant increase in imaging quality while reducing time to diagnosis and therefore, correspondingly, costs at the same time. A successful day in CT means fast and uninterrupted workflow, benefiting your organization's profitability while offering the best in medical care for your patients. To this end, and in view of today's increasing need for faster throughput, Siemens has streamlined its entire workflow procedures to specifically eliminate bottlenecks and manual pre- and postprocessing steps.

Our “Zero Delay” concept recognizes the importance of automating and seamlessly integrating the various CT workflow processes in the busy radiology workday. “Zero Delay” begins with simplified patient preparation utilizing CARE Contrast CT to facilitate contrast enhanced CT exams. Scanning and reconstruction follow with, e.g., WorkStream4D™ virtually eliminating the need for time-consuming manual reconstruction steps. The “Zero Delay” philosophy continues to the final reading and distribution of images with *syngo®* WebSpace. Our thin-client server solution brings critical 3D CT data not only to your workstation, but makes it available also wherever you are and wherever else it might be needed.

“Zero Delay” procedures will help you in your daily clinical routine where an optimized workflow can save valuable time, and sometimes even lives.

## Clinical Benefits

- Safe patient preparation with CARE Contrast.
- Automatic 3D reconstructions.
- Simultaneous access to raw data.
- Second opinion for more confidence in difficult cases.
- Instantaneous access to 3D data from any remote location.\*
- Higher confidence in CT reading with 3D and 4D images instead of axial slices.

## Economic Benefits

- Higher patient throughput.
- Increase of patient referrals.
- Added value to existing resources by turning your PC into a CT processing workplace.

## Technical Benefits

- Fast and easy data access with virtually zero delay with *syngo* WebSpace.
- Multiple user access via PACS of any PC.

\* Internet connection required.  
PC or laptop must meet minimal specifications.

A consequent streamlining of all processes throughout the entire CT workflow allows you and your team to work with maximum efficiency and with zero delays. For us, your day-to-day workflow includes much more than just scanning: it starts with patient preparation and doesn't end until your valuable CT data has been made available right where it is needed and a diagnosis – including a second opinion if necessary – is determined.

### Plan and prepare

An optimized "Zero Delay" workflow starts with the patient himself and with simplified, safe patient preparation. CARE Contrast CT, our dedicated solution for safe and easy contrast media management, directly connects CT scanner and injector. This permits CT scan initiation right in the CT room with the push of a single button – directly at the injector, allowing you to continuously watch the patient and the correct I.V.-placement without leaving the room.

### Scan and reconstruct

WorkStream4D virtually eliminates time-consuming manual reconstruction. Oblique and double-oblique reconstructions are available immediately. WorkStream4D is a complete reconstruction solution that does it all for you, quickly and automatically.

Additionally, a second syngo CT Workplace permits instant access to patient data through a database shared with the syngo Acquisition Workplace. This lets you process the first patient's data, while the second patient is being scanned. Thus, simultaneous planning, scanning, and processing is made possible, saving you additional valuable time and increasing your patient throughput.

### Processing

Our "Zero Delay" philosophy continues throughout postprocessing. A broad spectrum of workflow-optimized applications as well as computer assisted detection (CAD) tools is available to you. Moreover, in the event you or your staff might need a second expert opinion, syngo Expert-i allows you to share diagnostic data with a clinician at a remote location. He will be able to simultaneously access your CT or MultiModality Workplace and give you his opinion or diagnosis over the phone. Thus, uncertainties can be clarified with zero delay.

Totally integrated into your hospital's existing network, our thin-client-server solution, syngo WebSpace, allows real-time access to 3D CT data via the Fast Data Link between your scanner and the syngo WebSpace server. This proprietary Fast Data Link makes real-time data streaming possible. Thus, you not only have CT data in real time on the monitor of your syngo Workplace, but you can also access 3D data with virtually zero delay from any other CT Workplace, office or home PC.\* For example, you can instantly view 3D images from a PACS reading station right where you need it for diagnosis. Up to 20 users can be interfaced to the server simultaneously. With syngo WebSpace, you benefit from a new level of clinical workflow efficiency and from maximizing your CT investment by adding value to your existing resources. It makes a noticeable difference by keeping costs down while enhancing diagnostic outcomes.

\* Internet connection required.  
PC or laptop must meet minimal specifications.



Axel Kuettner, MD  
Department of Radiology,  
University of Erlangen-  
Nuremberg,  
Erlangen, Germany

“This spectrum of clinical applications gives me diagnostic confidence and peace of mind in my clinical routine.”

SOMATOM Sensation



# A Leader in Clinical Applications

## **syngo** It's All About You.

**syngo®**, our unique solution for diagnostic and therapeutic cycles, knows how you work and what you need. What's most important, fast, easy, and intuitive **syngo** brings together the solutions critical to you – and to your patients. Uniquely role-based for your workflow, **syngo** completely integrates your day, your department and beyond, leading to a whole new level of clinical excellence. And a partnership you can grow with. It's the beginning of a virtual, "always on, anywhere" world of healthcare.

The time to **syngo** is now.

Like most radiologists today, you probably demand a great deal of yourself to serve your patients with the best possible medical care through accurate and fast diagnosis. For this purpose, efficient, intelligent, and intuitive clinical applications are essential. We want to make your diagnoses as confident and your day as comfortable as possible. Therefore, we have developed the **syngo** software, a common user interface that brings together the solutions critical to you and your patients.

And because the user interface remains essentially the same from application to application, it soon becomes transparently familiar. And with familiarity, you are able to concentrate on diagnoses and leave the technical considerations to **syngo**. **syngo** based applications that help the physician improve diagnostic accuracy and automate manual processing, are for instance **syngo** Circulation and **syngo** CT Oncology.

**syngo** Circulation combines and integrates all cardiac applications in one software solution. It covers everything from quantitative coronary assessment to left ventricular analysis, ultimately fusing all your diagnostic findings into a single comprehensive report.

**syngo** CT Oncology is the world's only software designed to enhance diagnostic outcomes across your entire oncology imaging workflow. From tumor segmentation and measurement to follow-up, **syngo** CT Oncology will help you to literally take the guesswork out of your day.

In cutting edge CT imaging, it is essential to have perfect integration of best scanner hardware, delivering high standards in image quality, and the leading software applications that turn your high definition images into reliable and comprehensive diagnoses. This is exactly what our CT clinical engines offer – streamlining and optimizing your diagnostic process in four key clinical areas.

#### **syngo CT Applications**

- [syngo Circulation with PE](#)
- [syngo Colonography CT with PEV](#)
- [syngo Dual Energy Viewer](#)
- [syngo Expert-i](#)
- [syngo HeartView CT](#)
- [syngo Image Fusion](#)
- [syngo InSpace4D™](#)
- [syngo InSpace4D with AVA](#)
- [syngo LungCAD](#)
- [syngo Neuro DSA CT](#)
- [syngo Neuro PBV](#)
- [syngo Neuro PWM](#)
- [syngo Neuro Perfusion CT](#)
- [syngo Body Perfusion CT](#)
- [syngo Best Cardio](#)
- [syngo Calcium Scoring](#)
- [CARE Contrast CT](#)
- [WorkStream4D](#)

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## **Clinical Benefits**

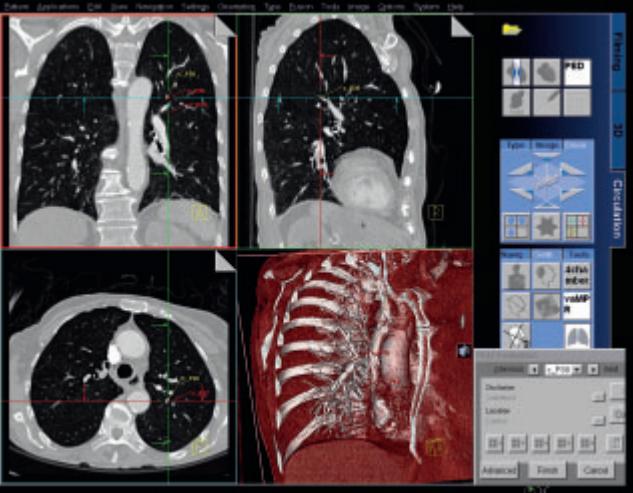
- Common *syngo* user interface for ease of use.
- Access to non-invasive cardiac diagnosis in clinical routine.
- Enhanced therapeutic decision in stroke management.
- "Tissue at risk" evaluation for differential diagnosis – maximize therapeutic window.
- Excellent visualization of complete intracranial vasculature.

## **Economic Benefits**

- Full access to all clinical applications.
- Increase of patient referrals.
- Increased reimbursement.
- Reduced diagnostic time and length of stay.
- Fast stroke assessment within 15 min.

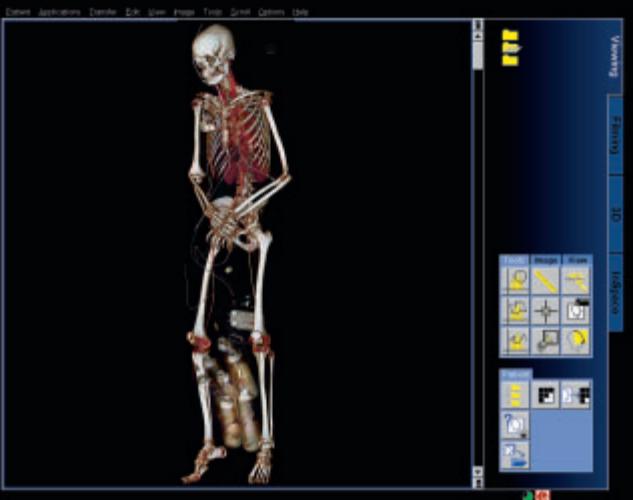
## **Technical Benefits**

- Direct data transfer via our proprietary fast data link to *syngo* WebSpace.
- Multiple user interface via PACS of any PC.



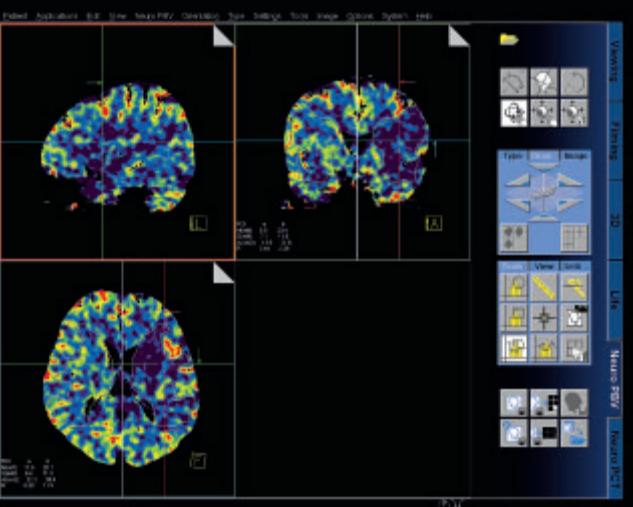
### Chest Pain

Streamlined chest pain analysis from dedicated scanning protocols to a combined report.



### Trauma

From bones to vessels – a complete emergency status for any patient in any condition.



### Stroke

Complete diagnosis of ischemic stroke – looking at the whole brain and all feeding vessels.

With CT Clinical Engines, you benefit from synergy across your entire clinical workflow – with everything you need for optimal image acquisition and quality, exceptional visualization, comprehensive evaluation, robust quantification, and flexible reporting, all in one intuitive syngo environment.

# CT Clinical Engines

## CT Acute Care Engine

In acute care, the requirements for CT imaging are challenging and diverse – from acute chest pain patients to complex poly-trauma to stroke assessment, every second counts. The CT Acute Care Engine delivers the comprehensive solution needed to make fast and confident decisions. By combining state-of-the-art functionality for cardiac, vascular, and neuro CT imaging, and adding innovative workflow features to high-resolution acquisition, the CT Acute Care Engine provides the complete clinical portfolio for imaging emergency patients from head to toe. Using fast, direct 3D reconstruction, you will be reviewing the images before the patient is off the table. syngo will streamline your clinical workflow for cardiac, vascular, musculoskeletal, and stroke evaluation, turning data into diagnostic outcomes within minutes.

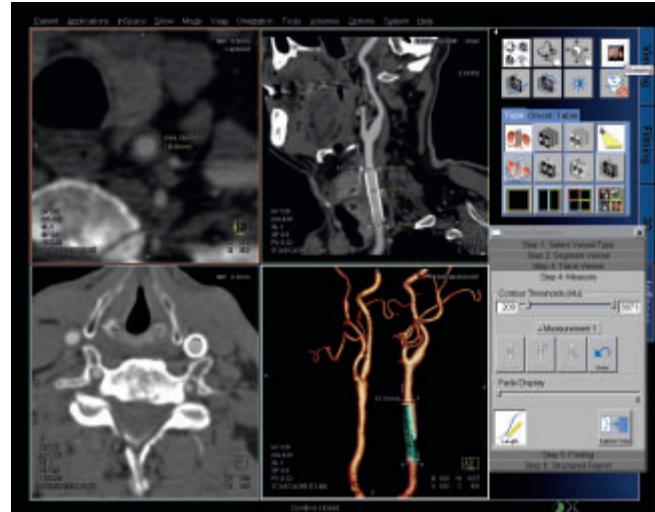
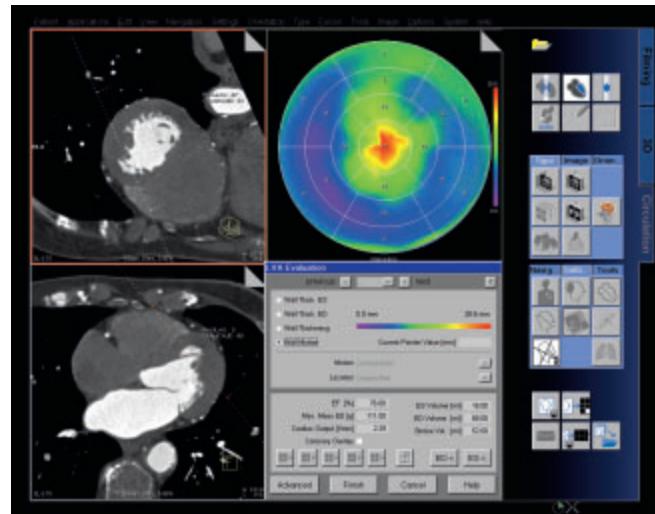
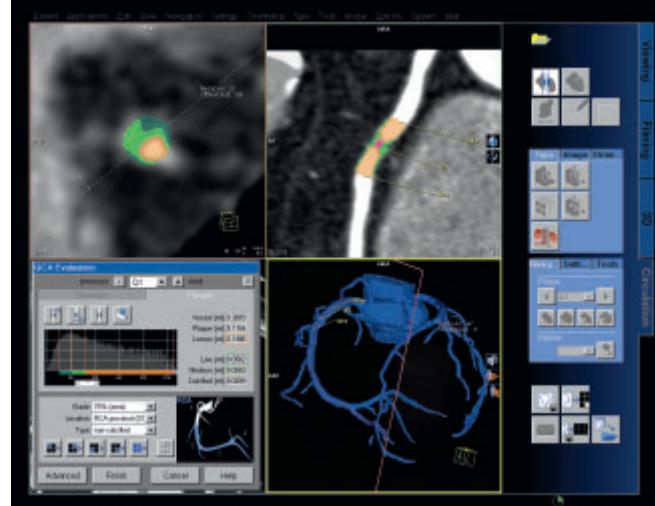
## CT Cardiac Engine

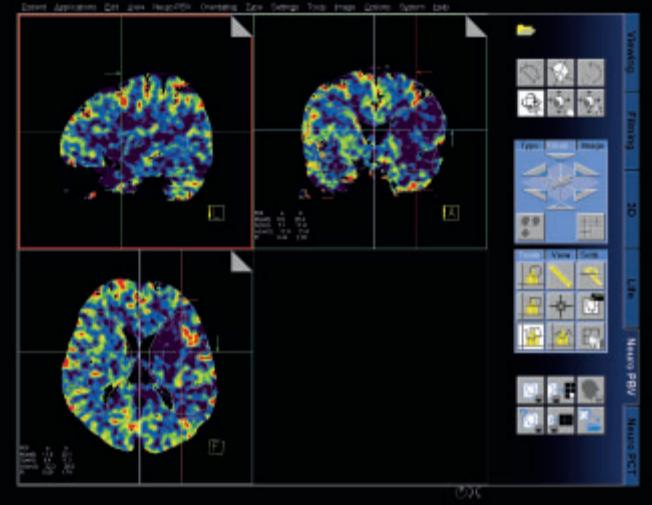
From scan to diagnosis, your CT Cardiac Engine provides everything you need to achieve a streamlined cardiovascular workflow. State-of-the-art ECG-synchronized acquisition, image reconstruction techniques and intuitive ECG-editing to adapt for arrhythmia before image reconstruction ensuring optimal image quality. For your patients' safety, the lowest possible dose is assured with intelligent Adaptive ECG-Pulsing. An innovative, dedicated cardiovascular imaging user interface simplifies your daily workflow and ensures highest throughput. syngo will help you deliver excellent diagnostic outcomes with dedicated software solutions that cover the field of cardiovascular imaging: from vascular analysis with accurate stenosis measurement to stent planning, from cardiac morphology to coronary artery stenosis measurement, to functional analysis resulting in a comprehensive report that turns data into diagnostic outcomes within minutes.

**Cardiac**  
Single task-card cardiac evaluation from quantitative coronary analysis to ventricular function.

**Vascular**  
Easy and fast whole-body vascular examination with automatic bone removal.

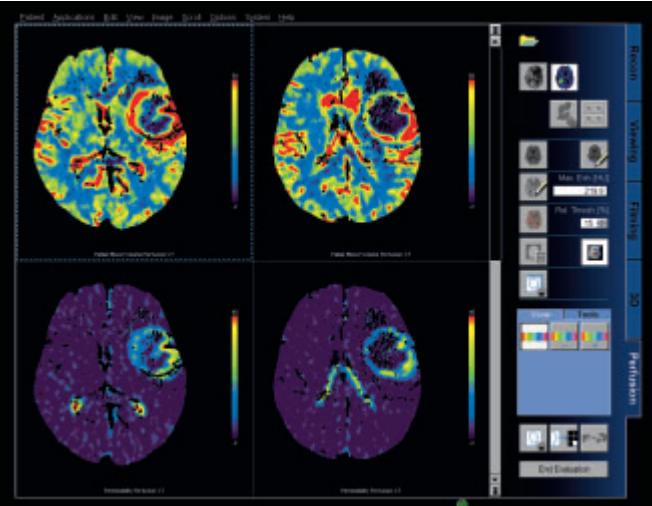
**Risk Assessment**  
Determination of cardiac risk – from calcium score to coronary plaques.





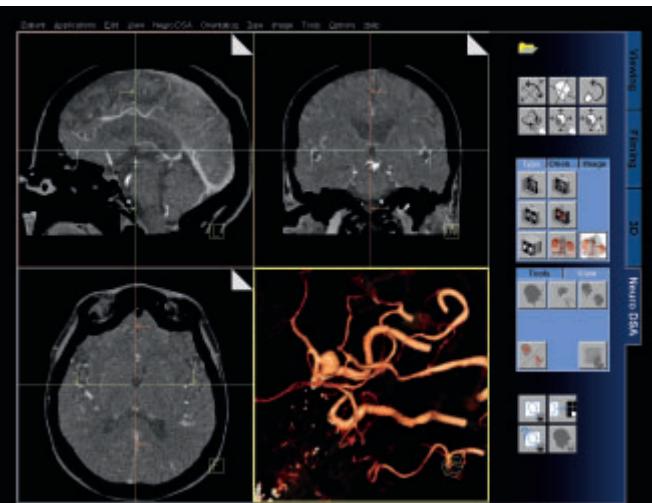
### Stroke

Complete diagnosis of ischemic stroke – looking at the whole brain and all feeding vessels.



### Tumor

Fully automated perfusion protocols for quantitative evaluation of brain tumors.



### Vascular

Complete assessment of vascular structures of the head and neck through a unique CT Digital Subtraction Angio (DSA) technique.

### CT Neuro Engine

The CT Neuro Engine delivers the technology required to perform artifact-free imaging with the high spatial and temporal resolution you need for fast and accurate visualization of complex neurological disorders of head, neck, and spine as well as injuries and stroke. Our unique portfolio of syngo automated software tools for Neuro CT will help you deliver excellent diagnostic outcomes – preprocessed bone subtraction in Neuro DSA CT studies for direct evaluation of complex vascular structures, fast brain perfusion for stroke patients, and differentiation of brain tumors.

Fully automated syngo Neuro Perfusion CT facilitates quantitative dynamic evaluation for the differential diagnosis of ischemic stroke in time critical emergency settings. In combination with syngo Neuro Perfusion Blood Volume CT, the 3-dimensional infarcted area can be visualized over the whole brain for optimized therapy planning –without additional dose and examinations.

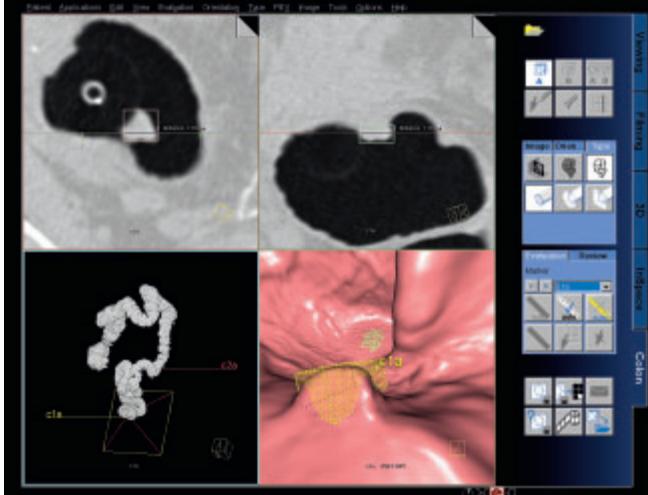
## CT Oncology Engine

The CT Oncology Engine offers you a unique combination of the most innovative scanner and *syngo* solutions for diagnostic imaging, evaluation, and follow-up in your diagnostic oncology setting. It incorporates *syngo* CT Oncology, our newest software, designed to take the guesswork out of your day. It offers automated lesion evaluation including 3D segmentation and auto-measurement of RECIST, WHO, maximum diameter, and total tumor burden. One click auto-lesion matching speeds up follow-up and provides percentage tumor growth data and doubling time. *syngo* CT Oncology also incorporates clinically proven *syngo* LungCAD for computer assisted detection of lung lesions.\*

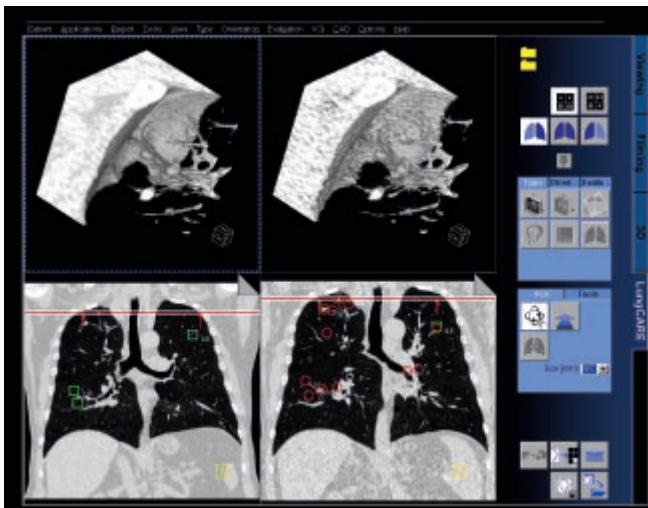
*syngo* Colonography CT with PEV offers state-of-the-art colon evaluation including second reader functionality for enhanced diagnostic confidence. The CT Oncology Engine also offers you the latest solutions for CT guided intervention, facilitating precision non-fluoroscopic or fluoroscopic interventions with an intelligent dose management, intuitive image viewing, and a high level of in-room control.

\* *syngo* LungCAD is not designed to be used as first reader.

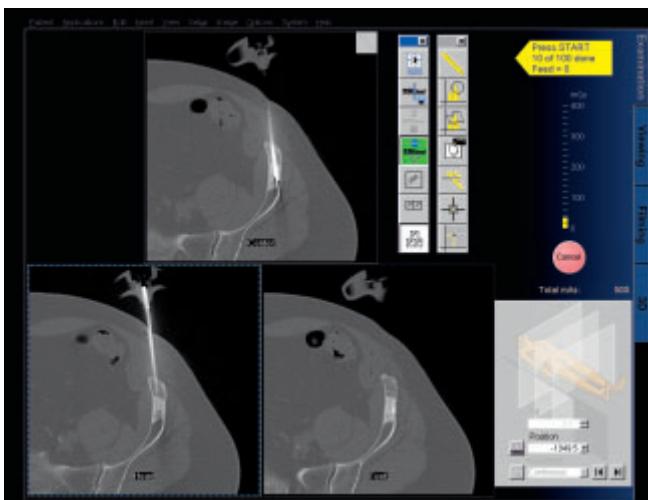
**Detection**  
Clinically proven CAD and second reader software aids detection of all clinically relevant lesions – and with auto preprocessing the results are ready when you are!



**Follow-up**  
Match the right nodule first time, every time with fully automated nodule matching and lesion evaluation.



**Intervention**  
Precision patient positioning at the click of a button for high accuracy needle placement.



Prof. Dr. Willi A. Kalender, PhD  
Director Institute of Medical Physics  
Friedrich-Alexander-University  
Erlangen-Nürnberg  
Erlangen, Germany

“The partnership I have experienced with Siemens is not something you encounter every day. A very close team work over many years with this leader in CT innovation has gotten our institution to where it is today.”



# Partnership Beyond the Scanner

You are responsible for your patients and we feel that it is our obligation to help you meet that responsibility – today, tomorrow, and in the future. The SOMATOM Sensation is the essential step in this direction today. Its broad and advanced range of applications enables you to provide top medical care. Your patients deserve your full attention and therefore we ensure your peace of mind in every aspect utilizing the SOMATOM Sensation.

You are investing in a long lasting partnership and not just in a short term investment. We take the word partnership quite seriously. You will benefit from all the services for which Siemens is justifiably famous for, including Life, our customer care program. Life focuses on continuous development of your skills, productivity, and technology.

To sharpen your skills, Life offers for example specific education with leading experts in your clinical specialty at some of the most advanced medical institutions in the world.

With the Guardian Program™ we ensure the highest possible uptime of your system by proactively monitoring your system parameters. On-site service calls can thus be planned or even avoided. This proactive service leads to even higher system availability.

Life allows you to stay at the technological and clinical cutting edge and to continuously participate in the latest developments.

*syngo* WebSpace is a trendsetting technology that will change your post-processing workflow. *syngo* WebSpace will give you the freedom to access your clinical images, postprocessing functionalities, and tools from almost any location. Our investment protection program "e-Tune" keeps your CT Clinical Engine software and *syngo* WebSpace software up-to-date – from day to day, from year to year. As the functionality of our CT Clinical Engines will be continuously improved and enhanced, you will participate in these innovations. By changing key hardware components and the complete server we even offer an investment protection for your *syngo* WebSpace hardware platform.

Your partnership with Siemens is the ticket to today's top CT performance as well as an open door to participate in new generation technology and developing medical fields.



## Clinical Benefits

- Become part of a large network of experts.
- Access to "Best Practice" usage.
- Access to latest clinical innovations.
- Education services to ensure the optimal usage of the system.

## Economic Benefits

- Competitive advantage, increasing attractiveness of customer's facility for both patients and referring physicians.
- Expansion of clinical applications for increased patient referrals.
- Investment protection & security for total cost of ownership – your investment being always at the technological and clinical cutting edge. No unplanned maintenance expenses.
- Try before you buy – trial licenses to test new software.

## Technical Benefits

- Various service contracts to ensure uptime, hardware and software upgrades, and updates.



## Configurations



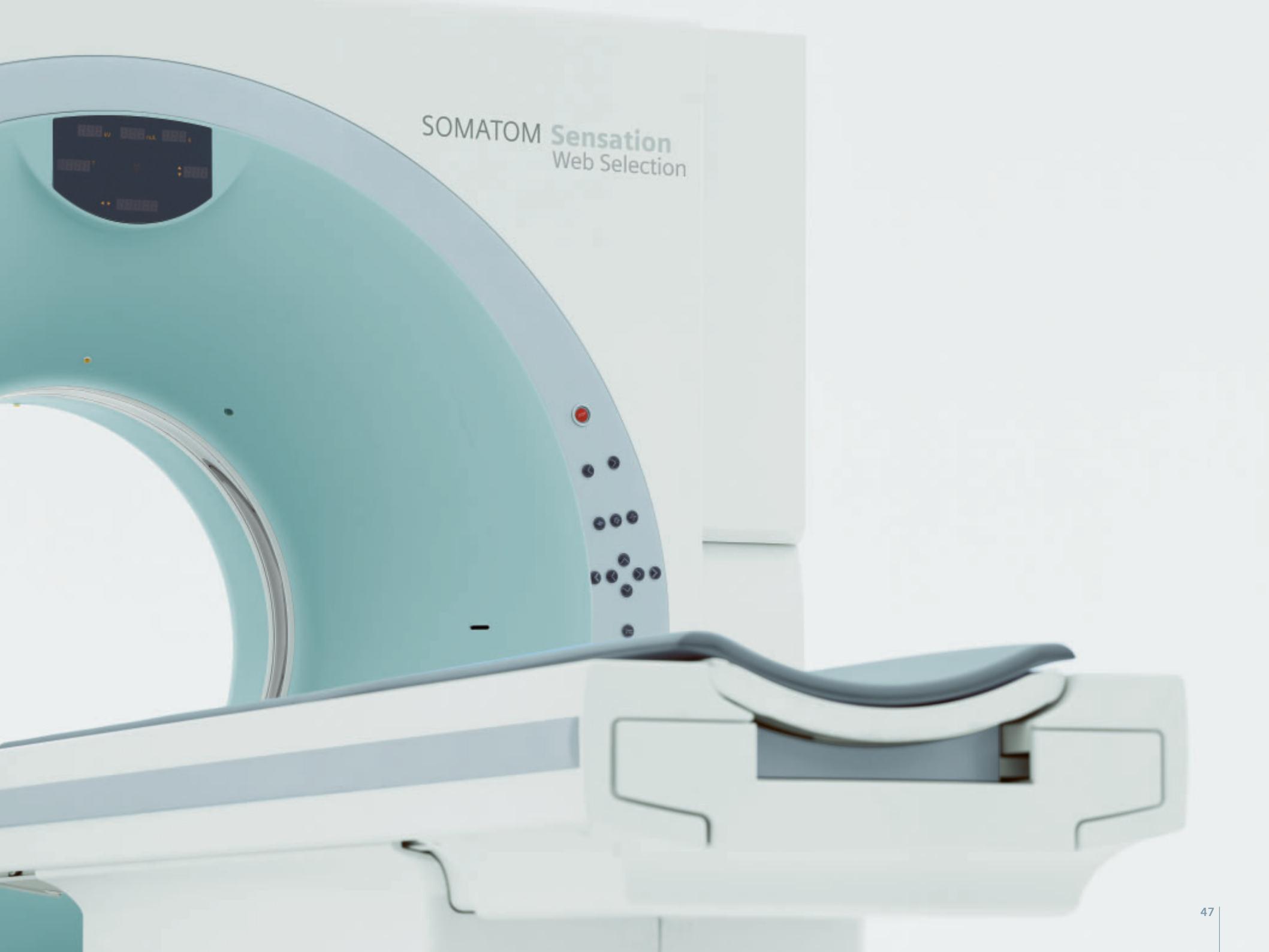
# The Premium Configuration – SOMATOM Sensation Web Selection

SOMATOM Sensation Web Selection is based on the impressive clinical performance of the SOMATOM Sensation 64-slice configuration and reflects the peak of clinical and workflow performance today.

With the SOMATOM Sensation, image quality has been raised to a new standard, a standard made possible by the perfect combination of speed, resolution, and coverage. The powerful CT Cardiac Engine ensures a fast, accurate, and reliable diagnosis even in cardiovascular CT, one of the most demanding applications.

Our newest contribution to the precise tuning of your clinical workflow is the first web enabled CT scanner SOMATOM Sensation Web Selection. It has been designed to provide you with "Zero Delay" CT workflow from acquiring through reconstructing to processing of clinical data. The integration of *syngo WebSpace* makes 3D data available everywhere\*, giving you instantaneously an unprecedented level of flexibility.

\* Internet connection required.  
PC or laptop must meet minimal specifications.



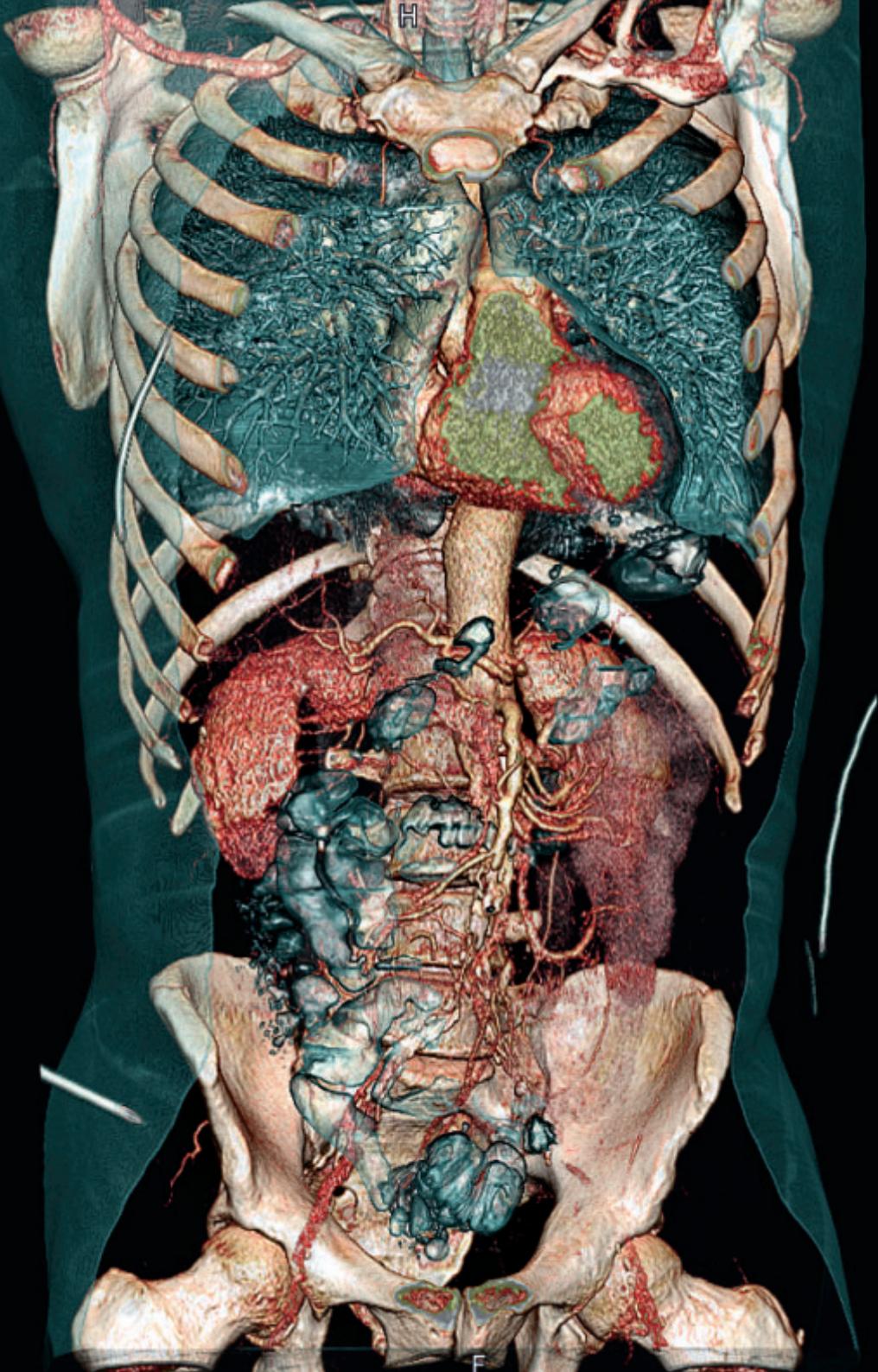
SOMATOM **Sensation**  
Web Selection

# The Right Performance – 40-Slice or 64-Slice Configuration

Both the 40- and 64-slice configurations of our award-winning SOMATOM Sensation offer the industry's highest routine isotropic resolution of 0.33 mm, visualizing the smallest pathology and finest anatomical structures with exceptional quality, such as the finest vessels of the coronary tree. Pushing the boundaries of spatial resolution even further, our Sensation 64-slice configuration and its z-UHR option permits unmatched 0.24 mm isotropic resolution for clear visualization of complex inner ear bones or joints. At the same time, with the industry's fastest gantry rotation speed of 0.33 seconds and the highest sub-mm volume coverage, SOMATOM Sensation 64-slice configuration allows you to not only examine the entire vascular system without venous contamination, but also to obtain robustly precise images of the heart and coronary arteries in only a few seconds.

Common to all our SOMATOM Sensation configurations is the dedication to consistent dose reduction with our CARE solutions. With the SOMATOM Sensation you will feel the pulse of innovation and you will experience first-hand the meaning of high performance in CT.

Feel the pulse of innovation and experience the meaning of being one step ahead first-hand with high performance in CT.





# Large-Bore CT – Open Your View with SOMATOM Sensation Open

Combining the advantages of a large bore with advanced Multislice CT technology, SOMATOM Sensation Open harmonizes patient accessibility; volume coverage and acquisition speed assuring optimal care for virtually all patients.

With excellent performance in routine and advanced CT examinations, SOMATOM Sensation Open is your scanner of choice for diagnostic support in radiation therapy planning, CT-based trauma application, interventional procedures, and imaging of bariatric patients. This configuration offers unprecedented image quality and detail in large-bore CT. In therapy planning, the

large 82 cm gantry opening offers the flexibility to virtually position every patient with the appropriate positioning devices. Moreover, you have access to the latest applications like respiratory gated CT imaging, taking your RT planning precision to a whole new level. The large bore, in combination with our advanced interventional functionalities, facilitates patient access and minimizes procedure time for CT guided interventions.

A wide range of dedicated imaging applications make SOMATOM Sensation Open a complete solution with maximum flexibility.

# Configuration Overview

|  | SOMATOM Sensation Web Selection<br>64-slice configuration | SOMATOM Sensation<br>64-slice configuration |
|--|---|---|
| <b>Technical specification</b>   |   |   |
| z-Sharp Technology   | ●   | ●   |
| Industry's highest routine isotropic resolution at any scan speed and any position within the scan field | 0.33 mm   | 0.33 mm                                     |
| Ultra high isotropic resolution  | 0.24 mm   | 0.24 mm*                                    |
| Fastest rotation time  | 0.33 s  | 0.33 s*                                     |
| Highest sub-millimeter coverage  | 87 mm/s   | 87 mm/s                                     |
| Data acquisition (slices/rotation)   | 64  | 64  |
| O MHU X-ray tube   | STRATON with 5 MHU/min cooling rate                       | STRATON with 5 MHU/min cooling rate         |
| Generator peak power   | 80 kW   | 80 kW                                       |
| <b>Workflow solutions</b>  |   |   |
| syngo WebSpace   | ●   | ○   |
| syngo Expert-i   | ●   | ○   |
| 2 <sup>nd</sup> CT Workplace with Shared Database  | ●   | ○   |
| <b>CT Clinical Engines</b>   |   |   |
| syngo CT.3D  | ●   | ○   |
| CT Cardiac Engine  | ●   | ○   |
| CT Acute Care Engine   | ○   | ○   |
| CT Neuro Engine  | ○   | ○   |
| CT Oncology Engine   | ○   | ○   |
| Wide application portfolio   | ○   | ○   |
| <b>CARE solutions</b>  |   |   |
| CARE Contrast  | ●   | ○   |
| CARE Dose4D  | ●   | ●   |
| <b>Services and programs</b>   |   |   |
| e-Tune   | ○   | ○   |
| Evolve   | ○   | ○   |
| Guardian   | ○   | ○   |
| Utilization Management   | ○   | ○   |

**SOMATOM Sensation  
40-slice configuration**

**SOMATOM Sensation Open  
24/40-slice configuration**

●  
0.33 mm

○  
0.33 mm\*

—  
0.37 s

—  
0.5 s\*

48 mm/s

48 mm/s\*

40

24/40\*

STRATON with 5 MHU/min cooling rate

STRATON with 5 MHU/min cooling rate

70 kW

50 kW

○

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- Standard feature
- Optional feature
- Not available for this configuration

\* Optional





Clinical cases by courtesy of:

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Peking Union Medical College Hospital, Beijing, China  
Hôpital Georges Clemenceau, France  
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