

The Role of CT in Today's Radiology

Join Us in the Excitement of Innovations – CT in Radiology Today

What a dazzling development we have been living through in the past few years! Computed Tomography (CT) was regarded as a standard radiological application in the mid 90's. It was common sense that there wasn't much left to improve in CT, since the introduction of spiral CT in 1988.

All of a sudden, in 1998, a breathtaking series of clinical and technological innovations was started with Multislice CT. And that was just the first spark. New applications like Cardiac CT, CT-Colonography and low dose lung assessment are integral parts of the arsenal available for radiologists today. Advances like active dose reduction techniques and low dose pediatric clinical protocols make CT even more friendly to patients and users.

But all these wonderful innovations would mean nothing for our customers if we were not able to transform CT into an easy to use imaging tool – *syngo*[®], our highly awarded multi-modality User Interface (UI), together with the WorkStream[™] workflow solutions make it easy for you to increase your patient throughput.

Join us in this journey through the world of Computed Tomography and discover how Siemens, the recognized innovations leader in CT, can work for you.

Siemens – The creative power in CT.



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Case 1: Diagnosis of Pituitary Tumor

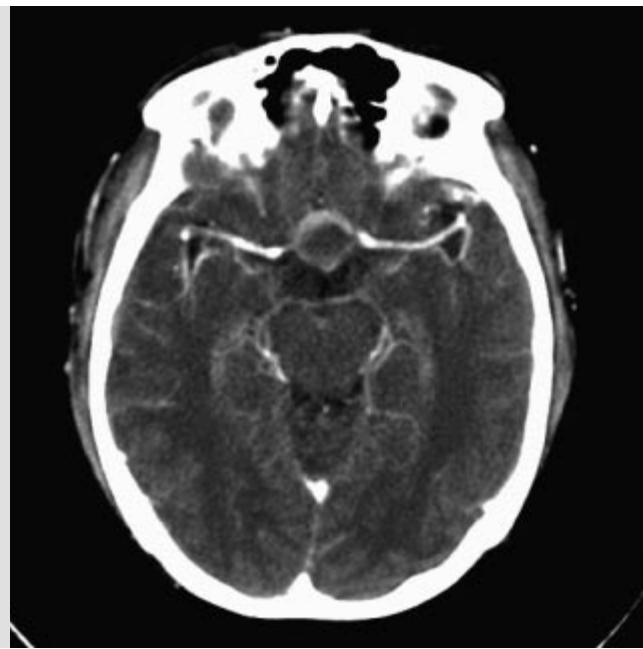
Patient History

A 49-year-old male patient suffered from a 3-month persistent headache was referred to the CT department for further examination.

Examination Protocols

Scanner	SOMATOM Smile		
Scans	Native, sequence	Contrast, spiral	Delayed contrast, sequence
kV	120 kV	120 kV	120 kV
mAs	160 mAs	160 mAs	160 mAs
Rotation time	2.0 s	2.0 s	2.0 s
Slice collimation	10 mm	5 mm	5 mm
Pitch	–	1.0	–
Kernel	H30b	H31b	H30b

Contrast	Non ionic contrast media (300 mg iodine/ml)
Volume	70 ml
Flow rate	3 ml/s
Start delay	50 s/6 minutes



[1] Contrast scan

Results and Comments

A round, well-defined isodense lesion was depicted in the region of the enlarged sella in the native scan. A strong peripheral enhancement pattern of the lesion was clearly shown 50 seconds after intravenous administration of contrast medium [1]. The peripheral enhancement was better delineated after six minutes delay and the central part of the lesion remained isodensed and unenhanced [2].

The CT diagnosis of pituitary tumor was confirmed by surgery and pathological diagnosis.

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[2] Delayed contrast scan

Case 2: Diagnosis of Osteosarcoma with Pulmonary Metastases

Patient History

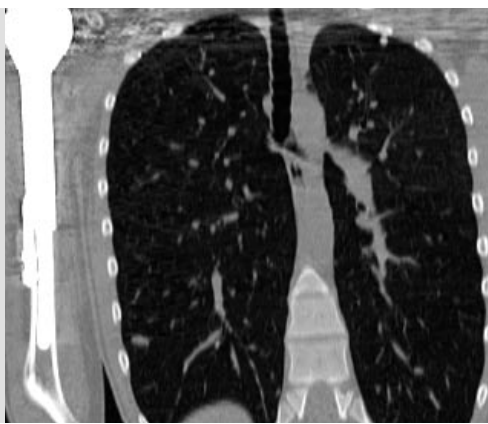
A 14-year-old boy with osteosarcoma of the right arm and pulmonary metastases underwent surgical resection of the tumor and a total replacement of the upper humerus with prosthesis [1] in September 2001. He was put on a regimen of chemotherapy after the surgery. A low dose, non-contrast spiral CT scan of the lungs was performed for follow-up.

Examination Protocols

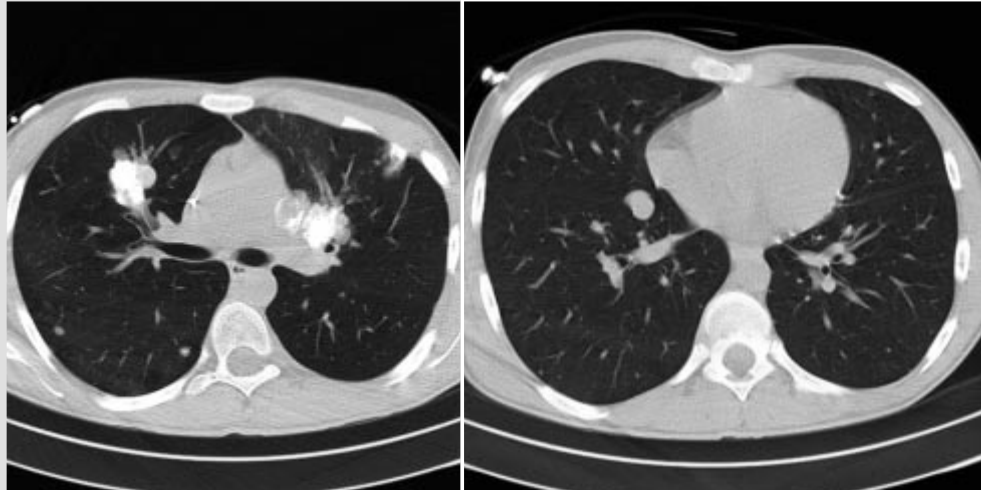
Scanner	SOMATOM Emotion Duo
Scan range	325 mm
Scan time	27 s
kV	110 kV
Eff. mAs	30 mAs (with CARE Dose*)
CTDI _w	2.01 mGy
Slice collimation	2/2.5 mm
Slice width	3.0 mm
Rotation time	0.8 s
Feed per rotation	10.0 mm
Increment	1.0 mm
Kernel	B70 for evaluation of the lung parenchyma B20 for 3D post processing

*real-time dose modulation

[1] Coronal reformat of the whole chest including the right arm. Note the lack of significant artifacts even with the presence of metallic implant in the humerus



[2] 3 mm axial images acquired with only 30 mAs showing multiple pulmonary metastases in both lungs. Streak artifacts present due to the metal implant



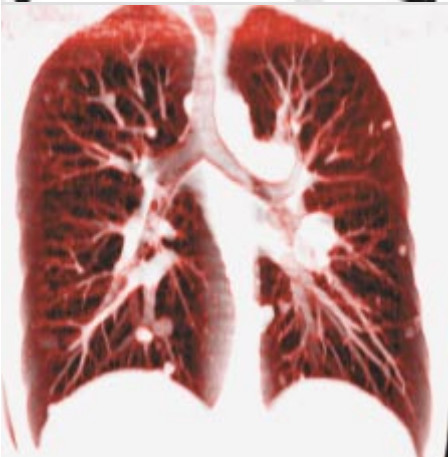
[3] Coronal reformat through the central airway showing lesions (arrows) wrapping around the trachea and right lower lobe bronchus



Results and Comments

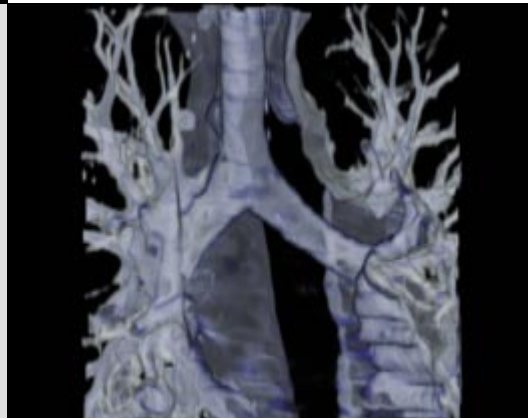
The CT examination of the thorax showed multiple metastases in both lungs [2–5]. A significant portion of the nodules is small and lies fairly close to the pleural surface. However many of them lie deep within the parenchyma, particularly those in the right lower lobe. There are also several lesions wrapping around the trachea and main bronchi [3–5].

In spite of the low dose technique and the significant amount of metallic prosthesis in the vicinity of the lungs, the examination yields excellent diagnostic information and 3D results.



[4] Colored VRT showing the nodules lying deep within the parenchyma in the right lower lobe. Note the presence of a lesion attached to the posterior aspect of the trachea (arrow)

[5] VRT mapping the relation of the nodules to the trachea and main bronchi



Case 3: Follow-up Study of Aortic Stent



Patient History

A 72-year-old male patient suffering from an infrarenal abdominal aortic aneurysm was treated with an endovascular aortic stent-graft. A follow-up abdominal CTA was performed one year after the implantation.

Examination Protocols

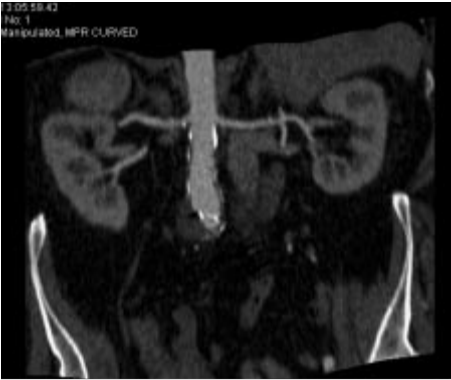
Scanner	SOMATOM Emotion Duo
Scan area	From diaphragm to mid-pelvis
Scan direction	Cranio-caudal
kV	110 kV
Effective mAs	65 mAs
Rotation time	0.8 s
Slice collimation	2 x 2.5 mm
Slice width	3/5 mm
Table feed/rotation	10 mm
Pitch	4
Reconstruction increment	1.5 mm
Kernel	B30s

Contrast	Non ionic contrast media (Iopamindol)
Volume	120 ml
Flow rate	3 ml/s
Start delay	CARE Bolus was utilized. Monitoring slice was placed over the descending aorta. The scan was triggered 22 s after contrast initiation automatically when the contrast (in the descending aorta) attained 100 HU above the baseline

Oblique thin slab MIP images show the cranio-caudal extension of the stent graft without kinking or stenosis



Axial thin slab MIP demonstrates the proximal fixation of the stent graft with good perfusion of both renal arteries



Curved MPR demonstrates the correct infrarenal attachment of the proximal stent portion



Results and Comments

The CTA images demonstrated a normal infrarenal aortic stent extending into the distal part of both common iliac arteries. No contrast enhancement was shown inside the aneurysm, which excluded the endoleakage. Neither thrombi nor stenosis could be detected in the stent lumen. Both renal arteries were well opacified and both kidneys were normally perfused.

Author:

Martin Krauss, MD

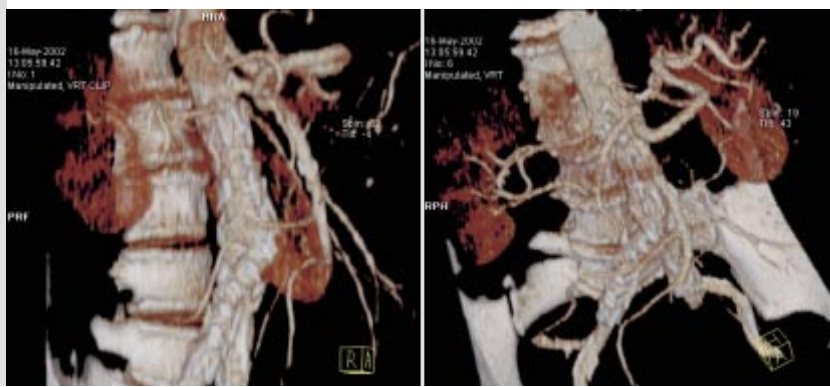
*Institute for Diagnostic and
Interventional Radiology Nuremberg,
Germany*

The aortic branches are remarkably well demonstrated in the secondary reformation by using 2 x 2.5 mm slice collimation and 1.5 mm reconstruction increment. The MIP images, especially, present very high quality.

For the follow-up studies of aortic stent-grafts, CTA with the dual slice CT scanner SOMATOM Emotion Duo, has proven its worth in our hospital.

Oblique thin slab MIP image shows good perfusion of visceral arteries after stent implantation

VRT images created with the Emotion Duo 3D software clearly show the position of the stent graft in the aorta and aortic branches



Case 4: Follow-up Examination with CT-Colonography

Patient History

This is a 60-year-old male patient with a family history of colon cancer. He had a conventional colonoscopic examination a year ago. A polyp was found during the previous colonoscopy. A sample was taken which proved to be a benign lesion.

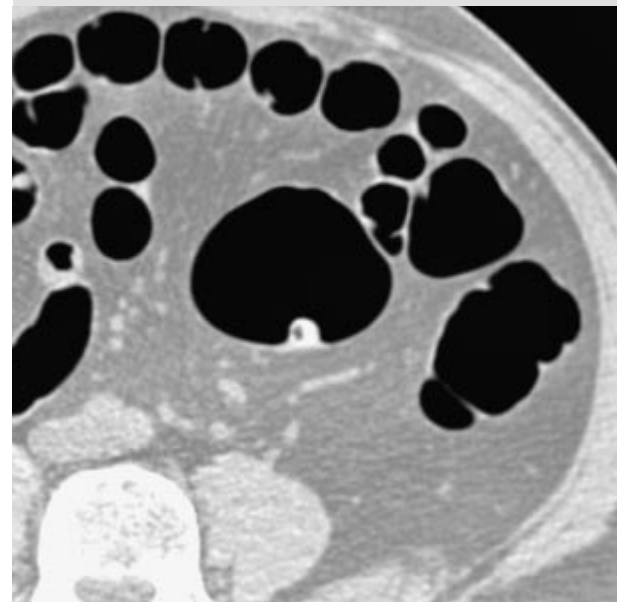
When due for a follow-up the patient opted for a CT examination for CT-Colonography instead. He had found the conventional procedure a very uncomfortable experience.

The patient underwent bowel cleansing and a low-fiber diet for two days prior to the examination. The bowels were inflated with air and a non-contrast, spiral acquisition was performed for the whole abdomen.

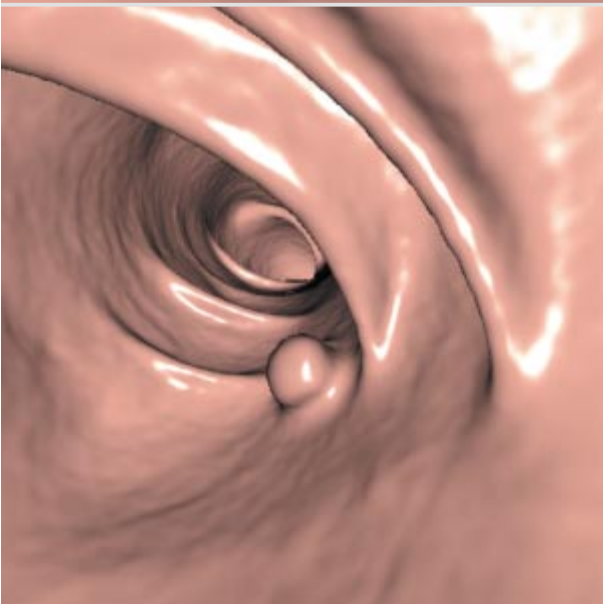
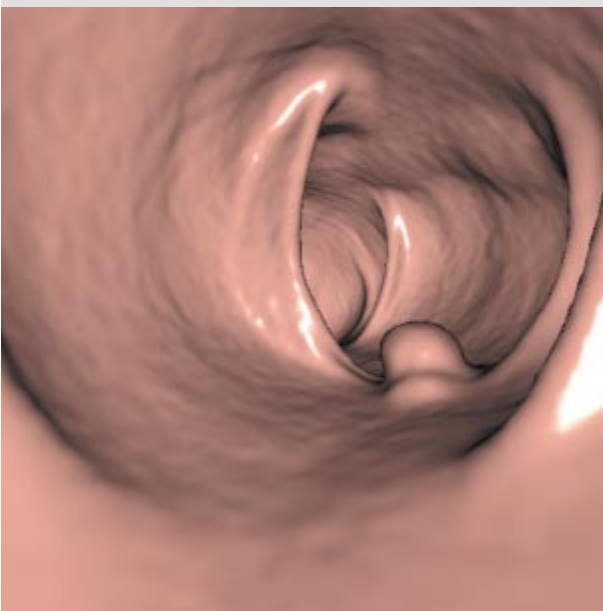
Examination Protocols

Scanner	SOMATOM Sensation 16
Collimation	16 x 0.75 mm
Slice width	0.75 mm
Increment	0.7 mm
Rotation time	0.5 s
Feed per rotation	12 mm
kV	120 kV
Eff. mAs	80 mAs

0.75 mm axial image showing a polyp-like lesion with a dark center



*Virtual endoscopic snapshot
in the conventional forward
viewing direction. Benign
polyp in the descending colon*



*Retrospective view
of the polyp, reverse
from the endoscope
direction*

Results and Comments

The examination revealed a polyp-like lesion, which had been discovered in the previous conventional procedure, in the descending colon. The lesion had a dark low-density center which was probably due to residual scarring after the endoscopic biopsy. No other polyps were found, which had been the intention of this follow-up examination.

Hence, the patient was saved the trauma and discomfort of going through a second conventional colonoscopy.

Author:

Christoph Becker, MD

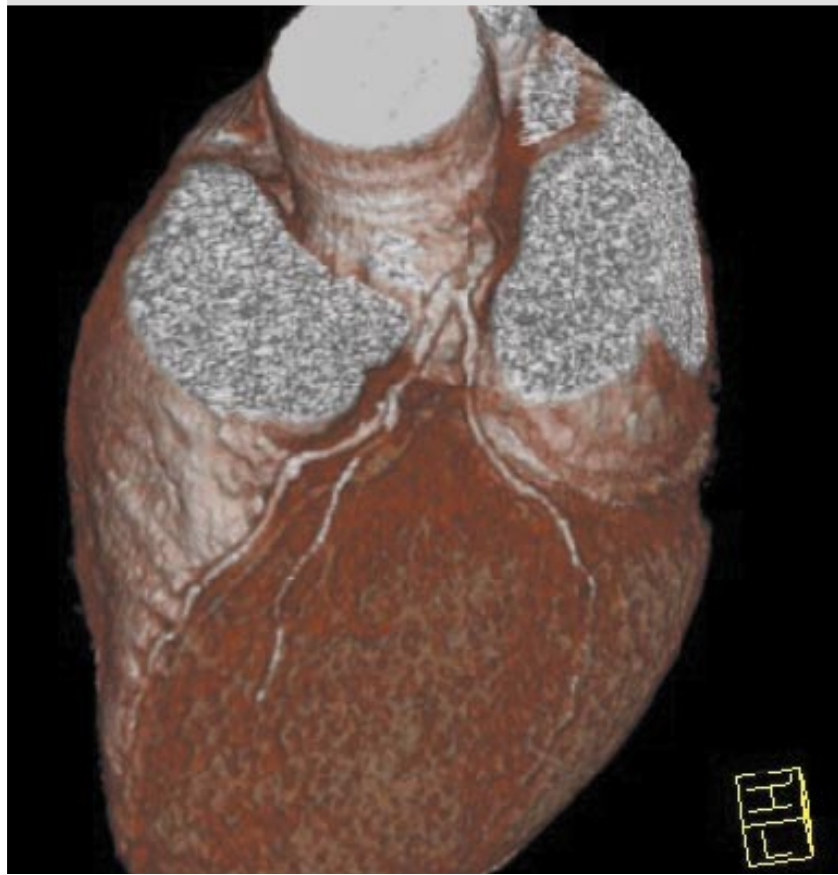
*Grosshadern University Hospital,
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Case 5: Calcified Plaque in the LM and Non-calcified Plaque in the LAD

Patient History

This is a 54-year-old male patient without any personal history of coronary artery disease. As risk factors the patient showed nicotine abuse and hypercholesterolaemia. He contacted our department with complaints that had been classified as NYHA III. The exercise test showed negative results.

VRT image showing a prox. stenosis of the LAD



Examination Protocols

The patient underwent coronary Calcium Scoring and Coronary CTA in order to exclude a significant CAD. The high resolution Coronary CTA was performed using the following scan parameters:

Scanner	SOMATOM Sensation 16
Collimation	0.75 mm
Slice width	1 mm (reconstructed)
Increment	0.6 mm
Rotation time	0.42 s
Feed per rotation	2.8 mm
kV	140 kV
Eff. mAs	400 mAs
Contrast	140 ml triggered at + 100 HU in aorta ascendens

VRT image showing a calcified lesion in the LM and a stenotic non-calcified plaque in the prox. LAD



Presence of the stenosis in the prox. LAD confirmed by conventional angiogram

Results and Comments

A large calcified plaque in the left main with a sub-significant lumen narrowing had been found. Additionally the patient showed a predominantly non-calcified stenotic plaque in the proximal LAD. The stenotic plaque was confirmed by a conventional angiogram.

Authors:

Koen Nieman, MD

Filippo Cademartiri, MD

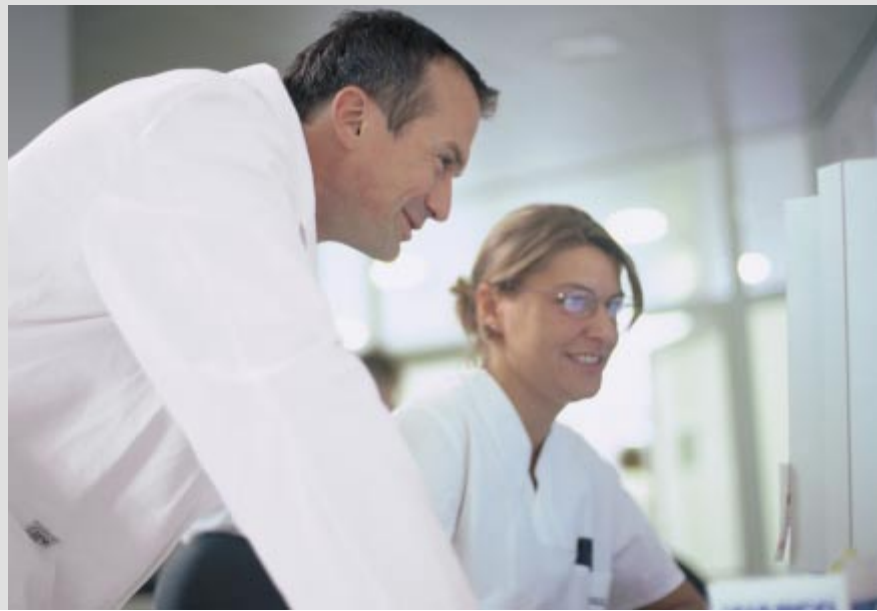
Roelf Raaijmakers, RT

Thoraxcenter Rotterdam, Netherlands

The Creative Power in CT

Engineering excellence for the well-being of people – the power and creativity that govern our actions couldn't be put in better words. As the solution provider we constantly strive for the refinement of our current standards. The development of new, innovative solutions for the well-being of patients and users is our goal and challenge. We firmly believe that this is why Siemens has become an outstanding market leader and innovator in the sector of CT technology.

CT technology offers the possibility of creating real progress for people using intelligent technology – that is what's so fascinating about it. Our efforts are guided by customer benefits, the promotion of innovations, and the increase of productivity. Taking the leads from our customers' success is our basis for everything. This includes our determination to continue bringing groundbreaking innovations to market.





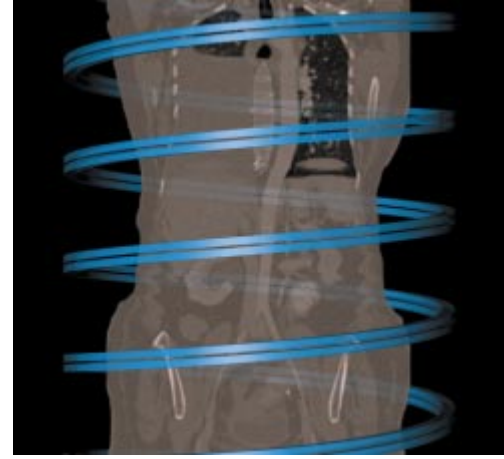
Well-grounded knowledge combined with creativity develops true progress in the field of medicine. We want to be partners to our clients, and that is how our customers view us. As partners that are rooted in a decades-long high tech tradition and always search for improvements that will eclipse all previous developments.

As a global organization we find it especially exciting to cross boundaries and incorporate the creativity of an international team of experts into our work. However, working internationally within the company is only one side of the story. For us, globalization also means cooperation with leading manufacturers of components and application software – and always keeping our customers in mind.

And engineering excellence goes further still. Complete products and services supplement our professionalism. Progress is visible for instance in our SOMATOM Smile which has been designed to be the smartest and smallest spiral CT in the world. It combines sophisticated technology with cost saving potentials. As another example the SOMATOM Sensation 16 – the first 16-slice scanner in the world. Or *syngo* – our comprehensive software solution for all tasks, applications and systems in medical imaging multiplies the use you can get out of our CT scanning systems. And with our high speed logistics we guarantee short delivery times and precise delivery dates.

All of this combined is the creative power in CT.

Multislice – The Future is Now!



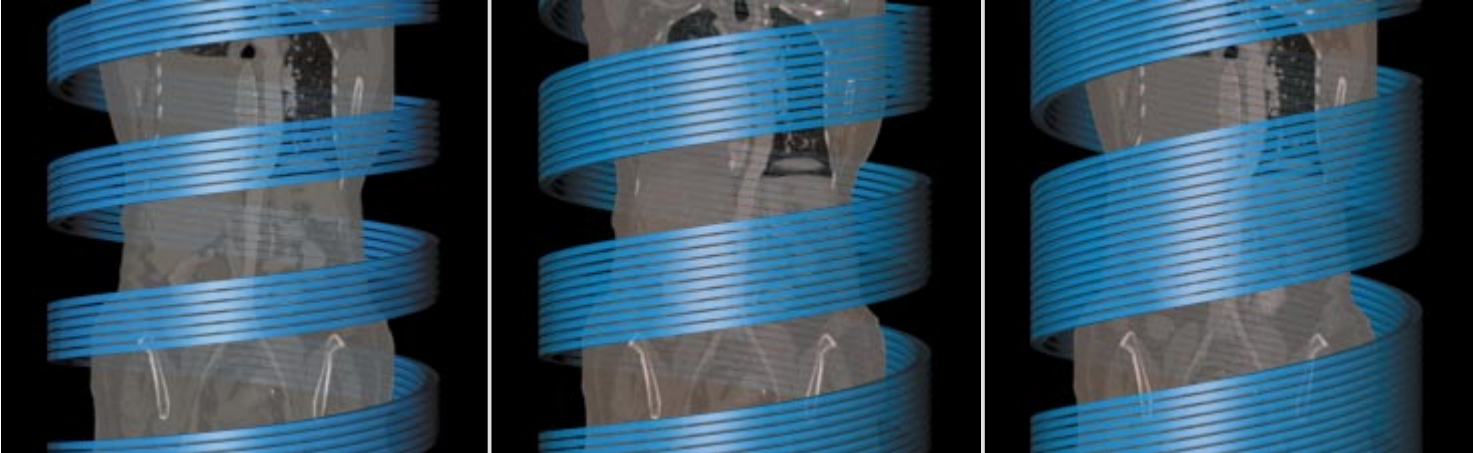
Imagine a perfect combination of volume coverage, thin slices, and top image quality; wouldn't that truly be progress in CT scanning? Well, outstanding technological developments have greatly enhanced the scope of all CT related clinical applications and at the same time changed the way radiologists think about CT imaging. Today's Siemens SOMATOM Multislice CT systems are able to acquire 2, 6, 10 or even 16 slices simultaneously, coupled with rotation times down to 0.4 s. This results in temporal resolution of down to 105 ms and isotropic resolution of 0.5 mm.

Patented volume reconstruction techniques

With SOMATOM Multislice CT systems there is no more compromise between volume coverage, thin slices and image quality, thanks to a patented volume reconstruction technique that has been brought forth by our expertise.

- **SureView™ – Multislice Spiral Image Reconstruction**

Being the first and sole multislice reconstruction system that does not depend on pitch, SureView has revolutionized CT. The image quality is sustained during the complete multislice scan pitch range. In addition, compared to sequence scanning, SureView can reduce the dose of radiation up to 20%. Forget about individual pitch settings, with SureView you'll get what you want in terms of diagnostic image quality. Also, SureView completely eliminates the influence of the "cone angle" effect on diagnostic image quality which may occur when 8 slices or more are acquired simultaneously.



- **HeartView™ – Dedicated Cardiac Image Reconstruction**

Truly one of the most exciting new applications of Multislice CT: the ability to image the heart. It is the increased rotation speed (down to 0.4 s) combined with HeartView that effectively allows to freeze the heart motion. HeartView is a dedicated ECG-synchronized reconstruction algorithm which includes robust heart beat synchronization by using an integrated ECG device with reliable and exact prospective ECG trigger timing and retrospective ECG-viewing and interaction as well as computer assisted heart phase definition for optimal reconstruction.

Go for outstanding clinical results instead of clinical compromises!

3D examinations with “axial” image quality are no longer a dream with the increased performance of Multislice CT scanners. Scanning a given volume in a given time with considerably thinner slices to approach the ideal of isotropic resolution becomes routine and will lead to high-quality image data for volume visualization, evaluation and quantification.

All CT related applications will thus gain in value! Some examples for extraordinary clinical results:

- **Cardiac exams** – high temporal resolution due to extremely short rotation times (down to 0.4 s); isotropic volume imaging due to 16 slices acquired simultaneously; and for the patient: increased comfort thanks to very short scan times e.g. 20 s for a gated cardiac exam
- **Peripheral angiography** – more detailed and faster run-off
- **Trauma** – evaluation of the whole body in isotropic detail within seconds
- **Arterial studies** – extremely short scan times (cerebral angiography for example) avoid the venous phase
- **Breath-hold studies** – short breath-hold times lead to better patient comfort, e.g. scanning the whole lung in submillimeter slices is now possible even for elderly patients who cannot hold the breath for a long time

CARE Solutions – Minimizing the Dose

Our ambition to develop CT technology even further is not solely concerned with the examination method. Making CT scanning safer for both, users and patients is just as important for the Siemens engineers. Therefore, minimizing the radiation dose is one major effort we are concerned with. And we are successful at it: radiation exposure in a lung CT today is lower than it was in a conventional lung X-ray about 10 years ago.

CT products from Siemens are always a step ahead; excellent imaging results, shorter examination times, and the lowest possible radiation exposure are the cornerstones we can be assessed by.

The Siemens program that focuses on active dose reduction is spelled CARE – Combined Applications to Reduce Exposure – that means research and product development which puts the reduction of radiation exposure in CT examinations into the center of attention.

In detail CARE stands for:

UFC™ (Ultra Fast Ceramic) Detector

As early as 1997 Ultra Fast Ceramic technology was first used in a Siemens detector – and has become a standard in all SOMATOM CT units. UFC Detector technology helps to reduce radiation exposure by 30% compared to other detector materials.

CARE Dose

Advanced computer technology precisely “observes” the patient’s body during the entire scanning process. Radiation attenuation is continuously measured and the tube’s radiation dose regulated in real time.

With CARE Dose it is thus possible to vary the radiation dose depending on the patient’s anatomy and to reduce it by up to 50%.

CARE Filter

Radiation pre-filtering reduces low-energy X-rays that would add little to the image quality.

CARE Vision CT with HandCARE™

CARE Vision is a low dose continuous examination of the body with real-time imaging (CT-Fluoroscopy) for online diagnosis during an intervention – such as abscess drainage, tissue biopsy or pain therapy.

HandCARE supports the surgeon very intelligently during the whole process: It allows switching off radiation while the tube is positioned over the surgeon’s hand – and switching it on again for the remainder of the rotation cycle. The result is a reduction of radiation dose for the physician of up to 70% and up to 30% reduction of radiation dose for the patient.

Low dose clinical protocols

Reducing radiation exposure to a minimum level has always been a goal of highest priority for us. Therefore Siemens CT systems provide different low dose protocols with an optimal balance between image quality and patient dose.

- **Low dose pediatric protocols**

Just as in medicine, CT scanning can pose a significant risk to children when they are exposed to the same levels as an adult. Siemens took this into account when developing a comprehensive set of low dose pediatric protocols specifically adapted to age and body size. These protocols are standard in the SOMATOM CT scanners

- **Low Dose CT-Colonography protocols**

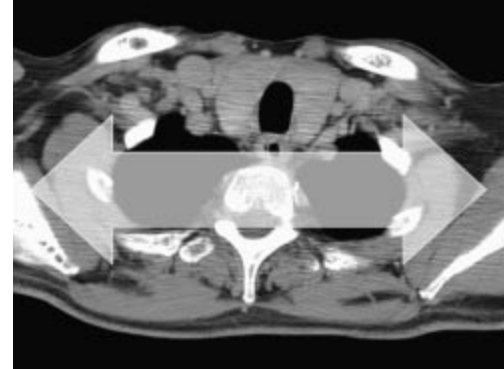
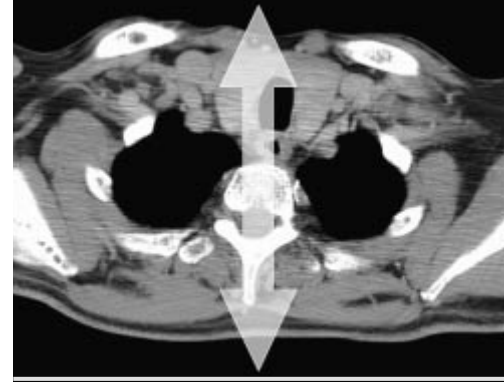
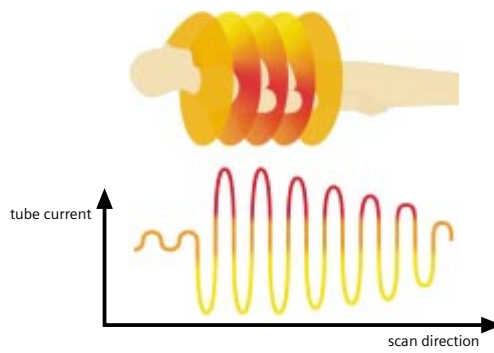
Virtual endoscopic viewing of the entire Colon is an attractive extension of your clinical CT spectrum. The required data is based on high resolution low dose protocols with only 50 mAs

- **Low Dose Lung Protocols**

The early visualization of suspicious nodules in the lung may lead to a more effective treatment of early stage lung cancer. Dedicated low dose lung protocols with down to 20 mAs enable high resolution scans with lowest dose but still highest accuracy

ECG Pulsing

ECG Pulsing is an integrated part of HeartView CT and is unique in the CT market. This new technology based on ECG-controlled, dose modulated Cardio spiral scanning leads to dose savings between 40–50% without any negative effect on image quality.

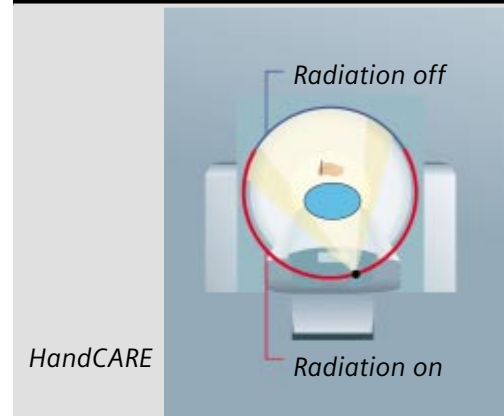


CARE Dose

A screenshot of the Siemens CT console showing protocol settings. The settings include:

Topogram	<input type="checkbox"/>	Eff. mAs	15
Chest<15kg	<input type="checkbox"/>	kV	120
15-24kg	20 mAs	Scan time	6.97 s
25-34kg	30 mAs	Delay	4 s
35-44kg	50 mAs		
45-54kg	70 mAs		

Clinical protocols



HandCARE



syngo – The Revolutionary Software for Medical Imaging

The comprehensive software solution for virtually all medical imaging tasks, applications and systems sets a standard – for Siemens and for the industry.



Easy to use

The *syngo* user interface is extremely intuitive and common to all applications. *syngo* provides a uniform working environment throughout clinical networks and beyond.

Result: Your daily routine gets done easier and quicker.

Straightforward to connect

syngo integrates medical imaging seamlessly into the complete clinical workflow from registration to billing. *syngo* puts a universe of information at your fingertips.

Result: Your efficiency reaches beyond a single workplace.

Prepared for the future

syngo speaking systems will remain state-of-the-art because new *syngo* applications can easily be integrated into the unique *syngo* architecture.

Result: Your workplace grows with your clinical needs.

syngo is a registered trademark of Siemens AG.





**Simplicity and speed –
from patient registration to billing**

Today's CT scanners have to be embedded in optimized and customized workflow concepts for outstanding productivity and high patient throughput. That's what we call WorkStream™.

A fully customized CT WorkStream has to cover a certain range of prerequisites such as:

Application platform –
easy and intuitive operation, common look and feel.

Patient Registration – seamless efficiency from registration to billing
including all relevant patient demographic and examination data. And closing the loop back to hospital/radiology information systems for billing, utilization management and procedure tracking.

Examination – the way from scan to exam protocols

Scan protocols extend to exam protocols with the integration of Filming, Archiving and 3D (MPR, MIP, SSD, VRT) for tailored WorkStream requirements.

Processing – the way from slice viewing to volume viewing

Rapid 3D-based automated and standardized viewing, analysis, quantification and customizable documentation, available for all typical clinical applications.

Leadership in Clinical Applications



HeartView CT



SOMATOM CT Scanners for all Clinical Applications

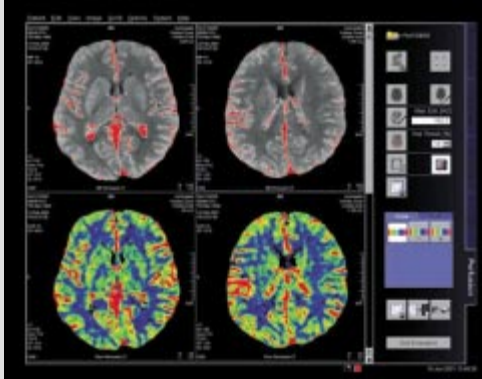
The positive clinical outcomes that yield from CT scanning are no longer limited to a certain number and kind of patients – major technological advances in recent years have made it possible to open CT examination to a diversity of patients. Never before have so many applications been available to enhance human health and well-being.

This includes general-purpose applications like volume rendering or image fusion as well as specific examination procedures like HeartView CT for scanning the beating heart or *syngo* Perfusion CT for functional brain imaging.

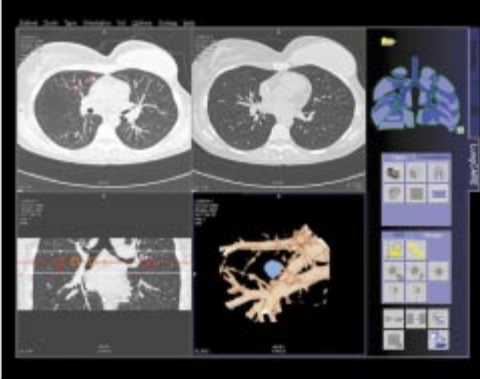
On the other hand applications like *syngo* LungCARE CT and CT-Colonography support the diagnostic process of a dedicated clinical problem by the fast evaluation of a complete organ system from lesion visualization and localization to follow-up and clinical documentation.

Today we are proud to say that a complete range of clinical applications as one of the broadest possible application spectrums is available in the Siemens SOMATOM Family.

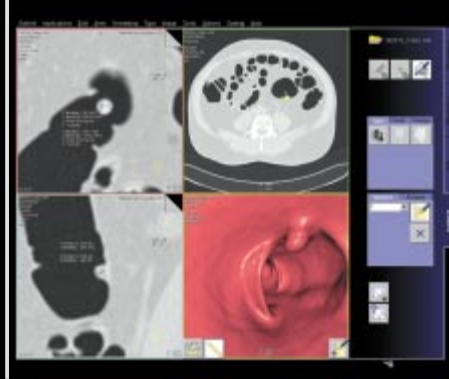
Whatever will be needed in CT scanning – you will find it in Siemens SOMATOM CT scanners. Please have a look at some of our most exciting achievements:



syngo Perfusion CT



syngo LungCARE CT



CT-Colonography

- **HeartView CT**

Noninvasive imaging of coronary arteries is ready for clinical routine. Fast rotating CTs (down to 0.4 s rotation time), robust acquisition and reconstruction techniques and a clinically oriented user interface make the examination of the beating heart a routinely performable task. Completed with ECG-controlled tube current modulation (ECG Pulsing) the HeartView CT solution provides premium image quality with minimal dose. The results are fascinating images of the heart and the surrounding structures as the basis for detailed morphological or functional analysis.

- **syngo Perfusion CT**

In the diagnostic process of acute stroke, when "time is brain", *syngo Perfusion CT* adds valuable functional information to the cranial CT examination. Based on a dedicated contrast examination *syngo Perfusion CT* provides easy interpretable functional images for the quantitative assessment of cerebral perfusion.

- **syngo LungCARE CT**

Assessing the lung for pulmonary nodules may lead to a breakthrough in the early detection of lung cancer. *syngo LungCARE CT* is a software package, which supports the visualization and evaluation of pulmonary nodules in a low dose lung study. This includes computer-guided localization, segmentation and quantitative evaluation of nodules as well as documentation and support of follow-up studies.

- **CT-Colonography**

As in all types of cancer, the early detection of the disease is decisive for the success of therapy. CT-Colonography is a clinical application based on real-time virtual endoscopic viewing techniques, that makes colon polyps visible at a very early stage. Diverse semi-automated functions are employed in order to ease the evaluation of the complex colon anatomy and the final documentation.

SOMATOM *life* – Our Integrated Customer Care Solution

life begins when you choose a Siemens CT ...

SOMATOM CT scanners are more than just a product line, together with SOMATOM *life*, the solutions turn into a successful partnership.

And our partnership begins the moment you choose a SOMATOM CT scanner from Siemens Medical Solutions.

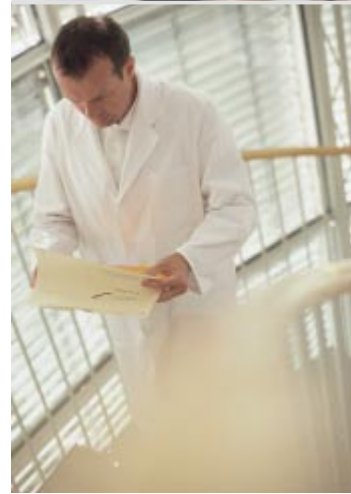


SOMATOM *life*

... and continues from installation ...

Applications training and support is what you will be provided with from our highly qualified applications specialists. We want you to get on the fast track to effective and efficient use of your new scanner.

To maintain the availability of the system, service solutions are tailored according to your needs. Modular performance plans ensure flexibility and have been developed to meet both your and your system requirements. Your system will be regularly maintained and monitored in order to optimize availability.





... through ongoing development programs ...

SOMATOM *life* invites you to join our clinical information services, clinical training and workshops, fellowships, community sites, and user groups. As part of a global network of CT users and experts, you will be kept up to date with the latest innovations and clinical advances. The SOMATOM *life* program will help you to constantly improve your clinical workflow!

We also want your scanner to be kept up to date with the latest software updates to help you improve your competitiveness. Our *syngo* EVOLVE Package™ will keep your scanner on the cutting edge enabling you to further enhance your clinical and diagnostic portfolio.

... bringing you to the next dimension in CT.

Let's take the next step ahead together! Whenever you are ready for it, SOMATOM Elevate will ease migration to your new CT solution. Tailored clinical information and training with access to our reference sites will be brought to you by our team of highly trained sales professionals who understand you and your plans. SOMATOM Elevate will make your SOMATOM CT scanner come full circle.

At Siemens Medical Solutions, we believe that successful partnership is what *life* is all about – and that is the essence of SOMATOM *life*.

The SOMATOM Family – You Have Got the Choice



SOMATOM Sensation

Isotropic imaging such as axial image quality in all imaging planes and advanced preventive care such as excellent coverage and temporal resolution for cardiac imaging is not anymore a dream – it has become reality with the SOMATOM Sensation scanners. This development isn't just an incident – it is simply logic due to the extraordinary successful SOMATOM CT history in the past 25 years which is a synonym for

technological firsts, clinical leadership, customer satisfaction and investment protection.

Join a club of selected users – the status represented by the ownership of a SOMATOM Sensation scanner. The SOMATOM Sensation is the ultimate benchmark in Multislice CT. Forget about clinical compromises and technical limits in CT – it is now history. Whether you want to be ahead in clinical research or whether you need the highest patient

throughput, whether you want to go for coronary CTA or whether you are looking for low dose lung imaging, whatever will be demanded in CT today or tomorrow with SOMATOM Sensation you always will be at the forefront. SOMATOM Sensation provides the latest technical capabilities, the widest range of clinical applications and streamlined workflow solutions – leading to brilliant images and outstanding results within a few mouse clicks.





SOMATOM Emotion

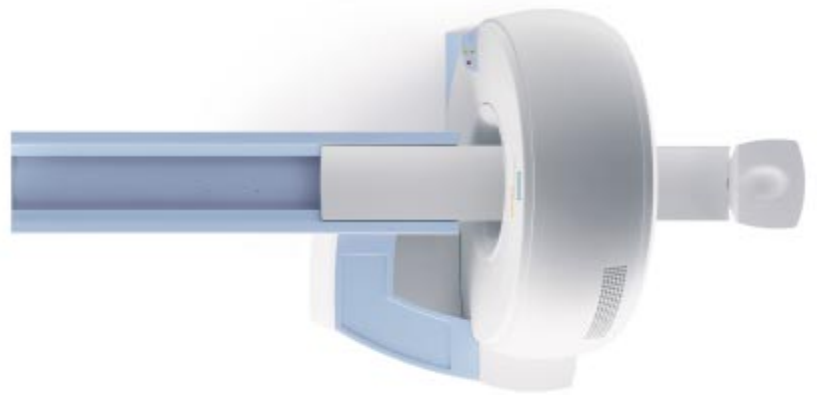
If you are looking for a fast CT scanner that will reliably perform routine and advanced applications, while keeping your peace of mind with an open platform for further improvements and technologies, SOMATOM Emotion will be the right choice.

Your patients will appreciate our slim and wide open gantry, combined with a multitude of dose reduction technologies – e.g. CARE Dose – developed for the Siemens SOMATOM Family.

Different configurations of the SOMATOM Emotion are available – SOMATOM Emotion, Emotion Duo and Emotion 6.

Take a closer look at the SOMATOM Emotion, simply combine it with the clinical applications of your choice and you will find the right system to fit your budgetary and clinical needs.





SOMATOM Smile

SOMATOM Smile is designed to be the smartest, smallest, and most affordable spiral CT. It brings the benefits of latest CT innovations within your reach – the easiest start into routine radiology. SOMATOM Smile is different, it is fully packed with innovations and surprises. And best of all, it produces high quality routine images.

By making cost-effectiveness a top priority from the start you will

never be out of pocket with your SOMATOM Smile. It's astonishingly good value for your money – it will pay for itself, even if you use it only for a few exams per day! No other comparable system provides you such good value for your money.

SOMATOM Smile is a complete system – accessories and camera are included. With an intuitive interface that speaks your language so that you will understand it immediately. Learning to operate SOMATOM Smile

is fast and effortless – with the interactive User's Training CD-ROM provided, you decide what, when and where you want to learn.

There's never been a CT that's so easy to install – you simply plug it in wherever you want. Its reliable, simple, modular construction is not just robust, it's virtually indestructible in normal use. What's more, it needs very little servicing and runs its own diagnostic – so smart, that it even shows you how to fix it yourself.





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- Options
- Upgrades & Updates
- Accessories
- Refurbished Systems

- <http://www.siemensmedical.com/SOMATOMlife>

- Application Guides
- Upgrades & Updates
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- Interactivity
- Clinical Studies

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

The information presented in this case report is for illustration only and is not intended to be relied upon by the reader for instruction as to the practice of medicine. Any health care practitioner reading this information is reminded that he/she must use his/her own learning, training and expertise in dealing with his/her individual patients. This material does not substitute for that duty and is not intended by Siemens Medical Solutions Inc., to be used for any purpose in that regard.

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