EQR2025-003

RECEIVED
Dec 10 2024
STATE HEALTH PLANNING AND DEVELOPMENT AGENCY

Southeast HEALTH

1108 Ross Clark Circle
Dothan, AL 36301
334-793-8111

Equipment Replacement Form – Cover Letter
Outpatient Center CT Replacement – Southern Clinic
ATTN: Alabama State Health Planning and Development Agency

To Whom It May Concern,

Southeast Health is submitting an Equipment Replacement Form with intent to replace the CT equipment in our Outpatient Imaging Center located withing Southern Clinic. Southeast Health, owned by Houston County Healthcare Authority, is located at 1108 Ross Clark Circle Dothan, Alabama 36301. Southern Clinic (not owned by Southeast Health or Houston County Healthcare Authority) is located at 201 Doctors Drive Dothan, Alabama 36301. This project includes removing the old CT equipment and replacing it with newer equipment.

Thank You,
Brittney Pethel
Assistant Project Manager – Support Services
Administration
Southeast Health

Request No. _____
Date Received _____
Received By _____

STATE HEALTH PLANNING AND DEVELOPMENT AGENCY

100 NORTH UNION STREET, SUITE 870MONTGOMERY,
ALABAMA 36104

REQUEST FOR DETERMINATION OF EXEMPTION STATUS FOR REPLACEMENT OF EXISTING EQUIPMENT

A filing fee in the amount of $1282.00 has been submitted with this application.

Requestor Identification (Check one)

☑ Hospital ☐ Nursing Home ☐ Other (Specify) _____

A. Southeast Health Medical Center
Name of Requestor

1108 Ross Clark Circle | Dothan | Houston
Address | City | County

Alabama | 36301 | 334-793-8701
State | Zip | Phone Number

B. _____
Name of Facility/Organization (if different from A)

Address | City | County

State | Zip | Phone Number

C. _____
Name of Legal Owner (if different from A or B)

Address | City | County

State | Zip | Phone Number

D. Jennifer Gaines
Name and Title of Person Representing Proposal and With Whom SHPDA Should Communicate

1108 Ross Clark Circle | Dothan | Houston
Address | City | County

Alabama | 36301 | 334-793-8701
State | Zip | Phone Number

DESCRIPTION OF EQUIPMENT TO BE REPLACED

A. Manufacturer:

Siemens

B. Serial Number:

9283

C. Model:

Emotion 16

D. Name of Equipment:

Emotion 16

E. Fair Market Value of Equipment at Present:
n/a

E. Cost of Equipment (include written price quote):

$641,000

F. Describe Use of Current Equipment:

Outpatient CT Exams

G. Describe Use of Proposed Equipment:

Outpatient CT Exams

H. List any attachments or additional procedures associated with this new equipment not performed by old equipment:

The new equipment will be able to better support Low Dose Lung Cancer screening.

DESCRIPTION OF PROPOSED NEW EQUIPMENT

Siemens

TBD

Somatom go.Top Excel

Somatom go.Top Excel

H. Can any procedures be performed with the proposed new equipment that cannot be performed with the replaced equipment? If yes, describe in detail:

The current equipment is not able to effectively support Low-Dose Lung CT screening. The current equipment is too slow and tough for people to hold their breath for the duration of the scan. The new scanner will be much faster.

I. Location of Existing Equipment (Include Room Number):

Outpatient Imaging at the Southern Clinic CT

J. List specially trained or qualified Personnel necessary for operation of equipment:

2 CT/Xray technologists

K. What use will be made of old equipment when replaced? (Trade in on new equipment, used as back up, parts, etc.)

Trade in on new equipment

L. List job titles of any additional Personnel that will be required to operate the new equipment.

None

M. Describe any renovation or new construction that will be necessary for the installation of the replacement equipment and cost.

This project includes removing the old CT equipment from Southeast Healths Outpatient Imaging Center located within Southern Clinic (not owned by Houston County Healthcare Authority) at 201 Doctors Drive, Dothan, Alabama 36301 and replacing it with newer CT equipment. The new equipment will require more power than what is present, so the necessary modifications will be made to accommodate the new unit. We will replace existing vinyl flooring with new LVT plank flooring, we will repaint walls, doors and trim & we will replace any damaged acoustical ceiling tiles. All of this work will be done within Southeast Healths Outpatient Imaging Center located within Southern Clinic at 201 Doctors Drive, Dothan, Alabama 36301. This work will cost $155,000.00.

N. Describe any new annual operating cost associated with this project such as maintenance contracts, salaries of new employees hired due to equipment, etc.

There will be a replacement maintenance agreement that will go into effect after the first full year of warranty.

COST

A. Equipment Costs Cost of equipment ONLY; do not list lease cost. (Costs must be supported by price quote on manufacturer's stationary/letterhead).	$ 641,000
B. Less Trade-In of Old Equipment	-$ TBD
C. Total Cost of Equipment	$ 641,000

Calculation of fee for this Determination:

Multiply dollar amount in COST section (C. Total Cost of Equipment) by one percent (1%) (the application fee for a Certificate of Need);

- Non-Rural Hospitals:
  Twenty percent (20%) of the calculation obtained above.
- Rural Hospitals:
  Twenty-five percent (25%) of the calculation obtained above.

Include manufacturer's literature on old equipment, if available, and on the new equipment.

Include any other information pertinent to the determination.

The Executive Director may request any other information which is relevant to their decision.

CERTIFICATION

I certify that the information provided herein is true and correct and that there is no additional information which would be pertinent to this application which has not been provided. Further, I understand that any misrepresentation on this application or failure to include relevant information may void any favorable determination secured by such misrepresentation or omission.

Signature of Applicant

Jennifer Gaines
Printed Name of Applicant

VP - Support Services
Title of Applicant

Sworn to and subscribed before me this

5th day of November, 2024.

Notary Public (SEAL)

My Commission Expires 05/17/2027

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355

SIEMENS REPRESENTATIVE
Rob Harrison
robert.harrison@siemens-healthineers.com

PRELIMINARY PROPOSAL

Customer Number: 0000010023 Date: 03/25/2024

SOUTHEAST HEALTH
1108 ROSS CLARK CIR
DOTHAN, AL 36301

Siemens Medical Solutions USA, Inc. is pleased to submit the following quotation for the products and services described herein at the stated prices and terms, subject to your acceptance of the terms and conditions on the face and back hereof, and on any attachment hereto.

Table of Contents **Page**

Contract Total: $ 641,000
(total does not include any Optional or Alternate components which may be selected)

Proposal valid until 05/09/2024

SOMATOM go-TOP EXCEL 128-Slice CT System

Key Features Included Are:
- Advanced Workflow Automation with Somaris X platform
- Exclusive In-Room Tablet Operation
- Exclusive my Exam Companion Protocol Assistant
- High Capacity [676 lb] table
- 0.33 sec rotation
- iMAR Metal Artifact Reduction Package
- CT Injector
- CT Injector Interface

NOTE:

Delivery dates and other contractual obligations of Seller may change due to the effects of the COVID-19 epidemic or other epidemic, including delays and disruptions in the supply chain, manufacturing, or execution as well orders by authorities and prioritization of (new and existing) orders of customers which are essential for the public healthcare. The magnitude of such changes cannot be predicted and might be substantial because it depends on the development of the COVID-19 epidemic or other epidemic.

This quote is based upon standard delivery terms and conditions (e.g., standard work hours, first floor delivery, etc.), basic rigging, mechanical installation and calibration. Siemens Medical Solutions USA Inc., Project Management shall perform a site-specific assessment to ascertain any variations that are out of scope and not covered by the standard terms (examples such as, but not limited to: larger crane, nonstandard work hours, removal of existing equipment, etc.). Any noted variations identified by Siemens Project Management shall remain the responsibility of the customer and will be subject to additional fees.

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PRELIMINARY PROPOSAL

This proposal requires purchase of a Point-of-Sale extended service agreement.

This proposal assumes NO system trade-in. If an operating CT system is made available for trade-in, along with required system information, a revised proposal will be supplied.

NOTE: This Quotation contains information which is confidential and proprietary to Siemens, including but not limited to discounts and pricing. The Customer may not distribute or disclose this quotation or any portion hereof to, or discuss any of the information (including pricing) contained herein with, any other customer or consultant, buying group, or other third party.

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PRELIMINARY PROPOSAL

Quote Nr:	**CPQ-521099 Rev. 3**
Terms of Payment:	**00% Down, 80% Delivery, 20% Installation** **Free On Board: Destination**
Purchasing Agreement:	VIZIENT SUPPLY LLC VIZIENT SUPPLY LLC terms and conditions apply to Quote Nr CPQ-521099 Customer certifies, and Siemens relies upon such certification, that : (a) VIZIENT CT - XR0323 is the sole GPO for the purchases described in this Quotation, and (b) the person signing this Quotation is fully authorized under the Customer's policies to choose and indicate for Customer such appropriate GPO.

SOMATOM go.Top Excel

All items listed below are included for this system:

Qty	Part No.	Item Description
1	14472473	**SOMATOM go.Top Excel** As a member of the SOMATOM go. platform, SOMATOM go.Top Excel supports all users to provide the best scan for every type of patient – no matter the clinical demands and challenges. SOMATOM go.Top Excel features a 64-row Stellar detector with 64-slice acquisition technology. Built for personalization of processes and care, it allows every operator to optimally adapt to individual patient and indication while interacting with patients in more personalized way than ever before. Scanner features unique tablet-based mobile workflow, user guidance with our GO technologies, and exclusive innovations such as Tin Filter low-dose technology. myExam Companion starts the era of Intelligent imaging, leverages the full potential of all technologies by performing all advanced CT examinations as if they were routine. Produce excellent results for full clinical spectrum including Cardiac imaging, and offer what others cannot – for a successful CT business Stellar Detector - fully integrated electronic components for lower image noise in every scan, while advanced iterative reconstruction from SAFIRE delivers superb image quality at very low doses. The Stellar Detector improves image quality with a new geometry and 840 channels in the scan plane Athlon Tube powered by a robust 75 kW generator permits personalized dose optimization due to tube's ability to offer high mA at low kV setting, such as 70, 80, & 90 Tin Filter cuts out lower energies to reduce dose and optimize image quality at the interface between soft tissue and air. This has direct benefits for imaging areas such as the lungs, colon, and sinuses. Clinical experience also shows that Tin Filter technology reduces beam-hardening artifacts and improves image quality in bony structures, making it extremely useful in orthopedic examinations Halo (incl. camera, visual countdown, mood lighting) Ultra-FAST IRS Excellent performance for higher recon rates and more robust performance (75fps for FBP and 55fps for IR)

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1	14460600	**Identifier SRS** Smart Remote Service (SRS) is a secured data link that connects your medical system to Siemens service experts. Via SRS, the performance and condition of your equipment can be monitored in real time. SRS makes a broad range of proactive and interactive services available. A VPN connection is to be provided by Customer. The Customer agrees to allow connection to Siemens' remote service diagnostic equipment to the secured telecommunications link at his own expenses. The Customer bears the cost of any technical requirements for any such connection over and beyond the actual product (e.g. establish a broadband connection).
1	14472863	**SW Base Extension VA40** Check&GO Metal Detection Check&GO Metal Detection helps to prevent mistakes and rescans by alerting the user when metallic objects such as belts, chains, keys, earrings or other are not removed and present on the scan area after the topogram is done. It informs the user both on the tablet and the console for their presence before the spiral or the sequential scan. Flex Dose Profile For long scan ranges, Flex Dose Profile works in combination with CARE Dose4D and FAST Planning to allow a more optimal modulation of the dose. In longer scans, some organs require more dose than the rest of the scan, i.e. there are different target dose levels needed for different anatomical regions, e.g. in regular thoracoabdominal examinations or in chest pain or TAVI procedures. FAST Planning automatically detects individual patient landmarks and anatomies, while Flex Dose Profile adjusts the tube currents for more personalized and accurate dose handling. Flex Dose Profile is displayed on the AWP and the Scan&GO tablet with the same visual logic as any other procedure, so users of any level of experience can utilize it right away. Tilted spiral Tilted spiral scan mode for additional clinical flexibility.
1	14468563	**myExam Compass** myExam Companion enhances consistency of CT procedures, independent of operator skills. It helps reduce the number of protocols and complexity of advanced examinations, by suggesting which settings are more appropriate for every patient. Based on the procedure and patient characteristics it guides users to find the optimal combination of acquisition and reconstruction parameters, standardized results, and always the right dose.Being a part of myExam Companion, myExam Compass is based on the condensed knowledge of thousands of scans and protocols from our installed base whichhave been recognized and aggregated into clinical decision trees provided ex-factory.
1	14472474	**Excel SW Base Package** Scan&GO mobile workflow, including tablet, remote control, camera, and a new workplace design Check&GO flags problems with scan coverage or contrast distribution as they occur Recon&GO reduces post-processing to just one click, with Inline Anatomical Ranges, Inline Table and Bone Removal, Inline Vessel Ranges and Multi Recon- performing multiple reconstructions in one step SAFIRE Iterative Reconstruction achieve higher efficiency with dose reduction while maintaining image quality. SAFIRE enhances spatial resolution, reduces image noise and increases sharpness FAST CARE incl CARE Dose4D, CARE kV, 10 kV Steps, CARE Child Personalized dose control tools allows you to increase consistency of low dose CT scanning techniques. CARE kV automatically tailors tube voltage to each patient and clinical indication. 10 kV Steps help tailor voltage to your patient. SOMATOM go.Top Excel can offer the highest tube current in its class (standard 625mA, optional 825mA) –

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		while CARE Dose4D™ optimizes dose distribution and offers special modulation curves HD FoV Enables a field of view up to 70 cm optimal for visualization of obese patients and those positioned outside the CT isocenter WorkStream4D offers direct generation of sagittal, coronal, oblique or double-oblique reconstructed images directly from CT raw data as part of the CT protocol Adaptive Signal Boost amplifies low signals when high attenuation is present FAST ROI automatically identifies regions of interest and calculates HU values in bolus-tracking examinations CT View&GO provides a large variety of clinical applications and tools for smooth reading SureView helps produce pitch-independent, first-rate images even at higher scan speeds. SureView ensures scanner selects right pitch value for defined coverage and scan time, while retaining slice thickness and image integrity Vessel Extension automated tools for evaluation and quantification of any vessel syngo System Security embedded in the scanner software
1	14460606	**Scan&GO wireless edition** Includes Scan&GO Tablet and Remote Scan Control. Built around a new mobile workflow, the SOMATOM go. platform features a line-up of innovative solutions – tablet, remote control, camera, and a new workplace design – that bring an unparalleled level of flexibility and mobility to daily CT routines. The solutions also enhance patient comfort for potentially higher levels of patient satisfaction. The lightweight, high-resolution tablet gives our customers total freedom over how they work: only a few steps for the entire scan.
1	14472322	**UPS** UPS. An uninterrupted power supply, for the syngo Acquisition Workplace in the event of network fluctuations and brief power failures.
1	14460885	**307 kg Patient Table** Patient table with 676 lb / 300 kg weight limit designed to accommodate virtually all patients with a long scan range of 2000 mm.
1	14460613	**Foot Switch for Pat.Table control** Additional flexibility with a foot switch that controls patient table movements only.
1	14460637	**2nd Control-room Monitor** 2nd Control-room Monitor
1	14468564	**myExam Cockpit** The clinical decision trees utilized by myExam Compass are fully transparent. Users can tailor clinical decision trees to the need of their institution with myExam Cockpit, the central user interface for fast and intuitive clinical decision tree configuration.
1	14468676	**Patient Restraint 400 mm** 400 mm wide restraint strap for the safe positioning of even obese patients on the patient table.
1	14460643	**Table Accessories Set** More table accessories for further flexibility based on the clinical needs. Includes table side rails, storage box and infusion holder.
1	14460614	**Table Extension**

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		Comfortable table accessory to extend the maximum scan range.
1	14461418	**Tiltable Head Holder** Tiltable Head Holder for the fixation of the patient's head. Tilt range between +30 till – 15 degree.
1	14472475	**Excel Performance Package** High Power 70 Mode for exceptionally high currents at low kV selectable in 10kV steps for enhanced iodine contrast, which is especially useful for very small vessels. High Power 70 and the Athlon X-ray tube allow you to scan at 70 kV or 80 kV for virtually all types of patients (adults and pediatrics) with the highest tube current of this CT class, up to 825 mA. High-speed 0.33 s provides a rotation speed of down to 0.33 sec per rotation, for outstanding image quality and very high scan speeds. Fast gantry rotation times are the prerequisite for highest temporal resolution and are therefore essential for brilliant, motion free cardiovascular imaging. With the temporal resolution of 165ms, this CT is especially suitable for cardiac examinations and fast scanning iMAR metal artifact reduction algorithm combines three successful approaches (beam hardening correction, normalized sinogram inpainting and frequency split). This makes it possible to reduce metal artifacts caused by metal implants such as coils, metal screws and plates, dental fillings or implants. Along with the algorithm comes the simple user interface of iMAR enabling easy reconstruction of clinical images with reduced metal artifacts. iMAR can be combined with iterative reconstruction methods Beyond the typical reconstruction parameters, iMAR can be further personalized to the specific type of metal implant with a simple selection from a dropdown menu which contains the following type of implants: dental fillings, neuro coil, thoracic coil, hip implants, extremity implants, pacemakers, spine implants or shoulder implants.
1	14468579	**CARE Contrast III** CARE Contrast III is an integrated solution for a simplified bolus injector coupling due to synchronized scanning and contrast injection.
1	14482574	**Positioning & Fixation Set** Item includes - Arm Support - Patient fixation with slider
1	PSPD250480Y3K	**Surge Protective Device (SPD)**
1	BFLEXOCS_S	**BAYER MEDRAD Stellant Flex - ceiling** Stellant Flex ceiling mounted injector with workstation, NO Informatics, but is Informatics ready. Includes Stellant Flex ceiling mounted injector w/short post (580 mm) and ceiling plate; workstation; installation and warranty through Bayer. This post length is recommended for rooms with a floor to structural ceiling height of approximately 9 or 9.5 feet.
1	CTSDEF01	**CT Slicker** Thermoseal seams and flaps deflect fluids, reducing contaminant penetration into the cushion and table. Contaminants are retained on the tabletop or shunted to the floor. Cleanup is faster, more thorough, and contaminant build-up is reduced. Built using heavy, clear, micro matte vinyl, and top grade hook and loop fastening

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		strips (Velcro) to better fit the specified table. Custom vinyl resists tears and minimizes radiologic interference. Latex free. Set includes CT Skirts. Shipped with main cover, a catheter bag holder, and 3 restraining belts unless otherwise noted. Includes warranty from RADSCAN Medical.
1	4SPAS014	**Low Contrast CT Phantom & Holder**
1	CT_LUNGIMAGINGGO	**Lung Imaging** Lung Imaging Go: For well over a decade, CT has been recognized and used as the standard of care for lung nodule visualization and sizing. This is due to CT's spatial resolution, geometric accuracy, and ability to create various reconstructions and 3D views. The high contrast environment in the chest between the lungs and the nodules makes for a relatively easy visualization task for clinicians using CT images. Recent advances in CT technology have allowed these scans to be effectively performed at lower doses, higher resolutions, and faster scan times. The SOMATOM go.Platform leverages Tin Filter Technology to further enhance the delivery of low dose lung cancer screening for high risk populations*. The SOMATOM go scanners are delivered with specific scan protocols to provide low dose lung cancer screening exams that use Siemens-exclusive Tin Filter Technology to reduce unnecessary radiation. These default protocols also utilize Siemens proprietary dose reducing features such as CARE Dose4D™, automatic exposure control technology, that further modulates and adapts dose for every patient, for high image quality at low dose. The SOMATOM go scanners come with default low dose lung imaging protocols below 1 mSv. *As defined by professional medical societies.
1	ACCESS_PROTECT	**Access Protection** Scan Protocols are password protected allowing only authorized staff members to access and permanently change protocols
1	CARE_DOSE4D	**CARE Dose4D** CARE Dose4D delivers the highest possible image quality at the lowest possible dose for patients - maximum detail, minimum dose. Adaptive dose modulation for up to 60% dose reduction
1	CARE_DOSE_CONFIG	**CARE Dose Configurator** CARE Dose Configurator: Enhancement of Siemens' renowned real-time dose modulation CARE Dose4D, introducing new reference curves for each body region and for each body habitus allowing to adjust the configuration even more precisely to the patient's anatomy.
1	CARE_BOLUS	**CARE Bolus** Operating mode for CM-enhancement-triggered data acquisition.
1	DICOM_SR	**DICOM SR Dose Reports** DICOM structured file allows for the extraction of dose values (CDTIvol, DLP)
1	DOSELOGS	**DoseLogs** Whenever a dose limit exceeds the established reference dose levels (Dose Notification and Dose Alert) a report is automatically created on the system, enhancing your ability to track radiation dose.
1	DOSE_ALERT	**Dose Alert**

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		Dose Alert: Dose Alert automatically adds CTDIvol and DLP values depending on z-position (scan axis). The Dose Alert window appears, if either of these cumulative values exceeds a user-defined threshold.
1	DOSE_NOTIFICATION	**Dose Notification** Dose Notification: Dose Notification provides the ability to set dose reference values (CTDIvol, DLP) for each scan range. If these reference values are exceeded the Dose Notification window informs the user.
1	NEMA_XR-29	**NEMA_XR-29 Standard** This system is in compliance with NEMA XR-29 Standard Attributes on CT Equipment Related to Dose Optimization and Management, also known as Smart Dose.
1	SURE_VIEW	**SureView** Provides exceptional image quality at any pitch setting, enabling you to scan faster because you can scan at any pitch without degrading image quality
1	UFC_DETECTOR	**UFC Detector** Ultra Fast Ceramics (UFC) technology is a unique type of scintillation technology material that quickly and efficiently transforms radiation from the X-ray tube into light signals. Its superb overall quantum efficiency and unique short afterglow enable time-critical X-ray detection at low doses and extremely fast data collection.
1	CT_GO_STELLAR	**Stellar Low Noise Technology Detector** The Stellar detector's high-end technology includes fully integrated components. As a result, Stellar detector technology keeps electronic noise low, increases dose efficiency and improves spatial resolution. The smart configuration of the detector elements simplifies access, eases maintenance, and increases scanner uptime. For SOMATOM go scanners, the Stellar detector features a 3D anti-scatter collimator for even more efficient optimization of X-ray energy.
1	SYNGO_VRT	**syngo VRT** Advanced 3D functionality as an extension to the basic 3D viewer, containing volume rendering technique (VRT) and advanced editing functions.
1	SYNGO_BONE_REMOVAL	**syngo Bone Removal** Simple, automated bone removal functionality for the syngo 3D application. Preconfigured algorithms for angiography and hip/pelvis fracture scenarios are included to facilitate fast removal of bone structure for three dimensional presentation and analysis of CT data.
1	WORKSTREAM 4D	**Workstream4D** WorkStream 4D further enhances the already superb workflow of SOMATOM CT scanners by offering direct generation of sagittal, coronal, oblique or double-oblique reconstructed images directly from CT raw data as part of the CT protocol.
1	CT_FLEX_DOSE_PROFI	**Flex Dose Profile** In combination with CARE Dose 4D and FAST Planning, Flex Dose Profile allows a more optimal modulation of the dose in long scans ranges where different quality references might be needed. It is displayed at the AWP and at the Scan&GO tablet.
1	HD_FOV_70CM	**HD FOV**

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Qty	Part No.	Item Description
		Designed to enable visualization of the human body parts and skin line located outside of the 50cm standard field of view up to the bore size.
1	CT_TIN_FILTER	**SOMATOM go. Tin Filter** Tin Filters block unnecessary low energy photons for non-contrast exams optimizing the X-ray spectrum increasing dose efficiency especially for applications with high air (or bone)-to-soft tissue contrast.
1	CT_128_CONFIG	**SOMATOM go.Top Excel 128 slice Config** Interleaved Volume Reconstruction (IVR) is a method to use the measured data as efficiently as possible to improve spatial resolution in z-direction reconstructing 128 slices for all spiral scans independent of pitch.
1	BISI2_POS	**Bayer ISI2 interface, POS** Bayer ISI2 Interface enables CAN III networking between Siemens CT system and Bayer Stellant injector. Requires appropriate Siemens' CT system functionality (i.e. CareContrast). Installation included if ISI2 Interface is purchased with an injector. Otherwise, installation is to be quoted separately.
1	CT_PM	**CT Project Management** A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemen's equipment. The assigned PM will work with the customer's facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.
1	CT_BTL_INSTALL	**CT Standard Rigging and Installation**
1	CT_BD_LV2	**Essential Education Level 2 (CT)** This Essential Education Bundle provides system training in a blended learning environment using training modules (typically 1 hour): - Clinical Education Specialist led online education consult and education planning. - Siemens PEPconnect online learning platform based education plan deployment/management. - Online protocol development and training up to 50 protocols using CT SmartSimulator. - Classroom training up to 24 modules at Siemens Training and Development Center. - Online Seamless transition workshop for education of up to 6 users using SmartSimulators. - Essential Onsite Training Part 1 - Up to 24 hours of onsite education for up to 8 users. - Essential Onsite Training Part 2 - Up to 16 hours of onsite education for up to 8 users. - Ongoing online instructor-led training subscription using SmartSimulators or Smart Remote Services for one year. This Educational offering must be completed by the later of (12) months from install end date or purchase date. If training is not completed within the applicable time period, Siemens Healthineers obligation to provide the training will expire without refund.

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description		
			System Total	**$ 641,000**

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PRELIMINARY PROPOSAL

OPTIONS on Quote Nr : CPQ-521099 Rev. 3

OPTIONS for SOMATOM go.Top Excel

All items listed below are OPTIONS and will be included on this system ONLY if initialed: *(See Detailed Technical Specifications at end of Proposal.)*

Qty	Part No.	Item Description	Extended Price
		Optional parts	
1	14481835	**CaScoring & Gated Spiral Package** Item includes Physiological Measurement Module ECG cable syngo.CT CaScoring Recon&GO CaScoring Any kV CaScoring Cardio Spiral	**+ $ 15,300**
1	14472476	**Excel Cardio Package** This bundle of software and hardware delivers a robust set of cardiac scanning functionality that takes advantage of the fast 0.33s rotation speed of the scanner. It includes: Adaptive Cardio Sequence supports adaptive prospective ECG-triggered sequence scanning to obtain CT images of the heart in defined phased of the cardiac cycle at a minimum rotation time of 0.33s. With prospective ECG-triggered sequence scanning quick scans are triggered by ECG signals. A temporal resolution of up to 165ms can be achieved Cardio Spiral supports adaptive retrospective ECG-gated spiral scanning to obtain CT images of the heart in defined phases of the cardiac cycle Cardio Quick Sequence Prospective ECG triggered quick cardiac scan mode for coronary CaScoring imaging. Bi-Segment Cardio Spiral improves temporal resolution in case of higher heart rates BestPhase software dedicated to automatically detect the optimal phase for motionless coronary visualization Any kV CaScoring enables you to choose any kV setting for your calcium scoring scan. Previously the setting was limited to 120 kV only Recon&GO CaScoring- Inline CaScoring makes the Calcium Score available as zero-click reconstruction syngo.CT CaScoring supports volumetric processing of the data and treats individual calcified lesions as 3D objects. For effective visualization the Calcium Scoring application allows axial images to be displayed together with fast, interactive MIPs. On each image the user can mark calcified regions in up to four coronary arteries. The tabular display showing the score of the four arteries is updated automaticallySupports all the usual quantification algorithms: Agatston scoring, volumetric scoring and calcium mass quantification Physiological Measurement Module allows the user to connect a 3 Channel ECG cable for ECG controlled cardiac acquisition ECG cable includes 3 channel ECG cable All features are supported by an integrated electrocardiography (ECG) signal displayed on the tablet	**+ $ 31,824**
1	14468680	**FAST 3D Camera** AI-powered 3D camera integrated in a CT positioning workflow is available as an option and allows automatic patient positioning in the examination room. The FAST 3D camera captures the patient's shape, position, and height in three dimensions, recongnizing:	**+ $ 31,824**

- The body regions in z-direction
- The patient's direction – "head-first versus feet-first" as well as "prone or supine"
- The table height and patient thickness

Using infrared measurement, it even recognizes body contours: for example, when people are wearing masking clothes or blankets

Specialized applications support accurate and reproducible positioning:
- FAST Isocentering, at the push of a button, provides the correct isocenter position, enabling the right dose modulation and consistent images.
- FAST Range supports scanning the correct body region in the topogram with no cut-off – by aligning the automatically identified anatomical position with the protocol.
- FAST Direction helps safeguard the right scan direction of the topogram, which is crucial when moving the table with infused patients

1	14468682	**Computer Desk height adjust 110v** The height adjustable table (710 mm to 1100 mm) supports optimal ergonomic working positions at the CT consoles. It allows users to switch between the dynamism of a standing desk and the comfort of a traditional desk.	**+ $ 2,387**
1	14460629	**Integrated Injector Arm** The unique gantry-mounted injector arm lets you position the injector where you need it, when you need it. While a traditional injector cart is often in the way, the injector arm makes for a neat and organized working environment and still lets you flexibly arrange the injector. With the new injector arm, installation costs for ceiling mounting of the injector are also a thing of the past. This means you don't have to adapt your infrastructure to the scanner – SOMATOM go. adapts to you, so installation costs stay low.	**+ $ 4,243**

Optional parts

1	CT_EP1_16	**Essential Training PH 1 (Onsite-16) CT** Up to (16) hours of on-site clinical Education training, scheduled consecutively (Monday – Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable. This Educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.	**+ $ 6,864**
1	CT_EP1_24	**Essential Training PH 1 (Onsite-24) CT** Up to (24) hours of on-site clinical education training, scheduled consecutively (Monday – Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.	**+ $ 8,840**
1	CT_EP1_28	**Essential Training PH 1 (Onsite-28) CT** Up to (28) hours of on-site clinical education training, scheduled consecutively (Monday – Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.	**+ $ 10,920**

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SIEMENS REPRESENTATIVE
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PRELIMINARY PROPOSAL

FINANCING: The equipment listed above may be financed through one of our financing partners. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

Siemens Healthineers is pleased to submit this Preliminary Pricing Proposal. A Preliminary Pricing Proposal is provided for planning purposes only; it is not contractually binding. To receive a contractually binding proposal for the Products listed above, inclusive of Terms, Conditions, and Warranty coverage, please contact your Siemens Healthineers Sales Representative.

Siemens Healthineers
Rob Harrison

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SOMATOM go.Now, SOMATOM go.Up, SOMATOM go.All, and SOMATOM go.Top are not commercially available in all countries. Due to regulatory reasons, their future availability cannot be guaranteed. The SOMATOM go. platform *syngo* CT VB10 is pending 510(k) clearance, and is not yet commercially available in the United States. Please contact your local Siemens Healthineers organization for further details.

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

On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products/services/features included in this brochure are available through the Siemens Healthineers sales organization worldwide. Availability and packaging may vary by country and are subject to change without prior notice.

The information in this document contains general descriptions of the technical options available and may not always apply in individual cases.

Siemens Healthineers reserves the right to modify the design and specifications contained herein without prior notice. Please contact your local Siemens Healthineers sales representative for the most current information.

In the interest of complying with legal requirements concerning the environmental compatibility of our products (protection of natural resources and waste conservation), we may recycle certain components where legally permissible. For recycled components we use the same extensive quality assurance measures as for factory-new components. Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

References

1 *Aymes S (2020): Physician burnout: Running on an empty tank.*
2 *Frost & Sullivan (2021): Global Computed Tomography growth opportunities.*
3 *OECD Health Statistics 2021.*
4 *Figures compared with conventional workflow. Wetzl M, et al (2018): Mobile workflow in Computed Tomography of the chest.*
5 *Data on file.*
6 *Optional.*
7 *Scanning with low kV has the potential to lower the dose. Scanning with low kV makes it possible to reduce contrast media. Users should follow the recommended dosage protocols as seen on the contrast media label.*
8 *White paper SOMATOM go. platform, Imaging chain Innovations and technologies, From generation to detection; Dr. Marcus Brehm; Published by Siemens Healthcare GmbH, 2021.*
9 *High Power 70 & 80 available for SOMATOM go.All and SOMATOM go.Top. High Power 80 available for SOMATOM go.Now and SOMATOM go.Up.*
10 *Athlon® X-ray tube available for SOMATOM go.All and SOMATOM go.Top. Chronon® X-ray tube available for SOMATOM go.Now and SOMATOM go.Up.*
11 *Mozaffary, A. (2019). Comparison of Tin Filter-based spectral shaping CT and low-dose protocol for detection of urinary calculi; AJR 212: 808–814.*
12 *Surface covered by gantry and moving table top.*
13 *The shielded niche concept depends on local regulations and it is not available in all countries.*

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Made to match

The SOMATOM go. platform with myExam Companion

siemens-healthineers.com/somatom-go-platform

SIEMENS Healthineers

Made to match

Clinical trends and guidelines change. Your needs evolve.
Our solutions evolve. In the SOMATOM® go. platform, both come together.

Whether you are just starting out in CT or you are looking to offer advanced procedures, the SOMATOM go. platform offers the right scanner for your clinical tasks and beyond.

Major trends challenging CT departments

46%
radiologists report burnout[1]

3–4%
worldwide annual increase in CT procedures[2]

6 CT scanners
per mill population in Colombia
(while the OECD recommends 45 CTs per mill[3])

Smart – intelligent tools to match your workflows

Even as CT staff numbers fall, the demands on them are rising. To support users in their daily work and help them meet radiologists' expectations, the SOMATOM go. platform features myExam Companion, providing AI-supported guidance to patients and operators throughout the workflow and driving consistency in exam setup and image quality.

62%

increase in positive patient experience.[4]

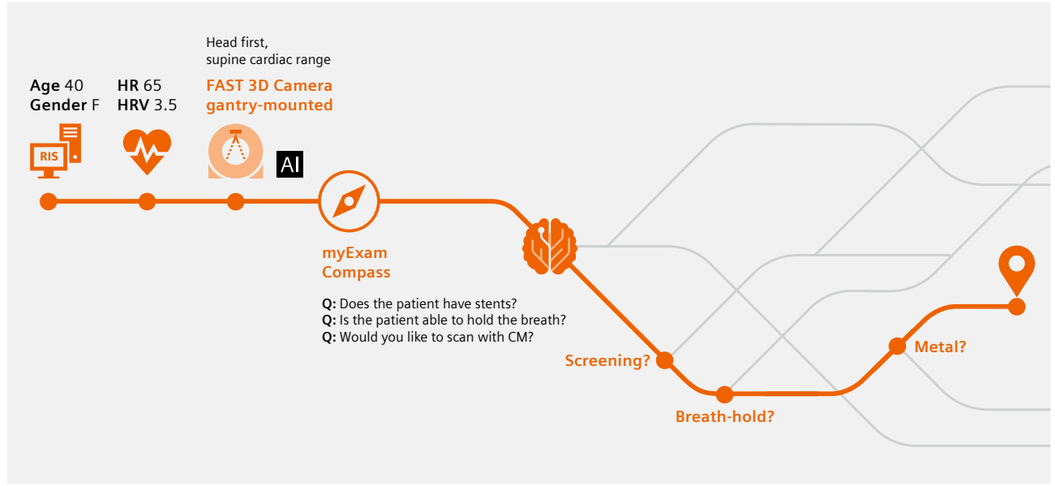
84%

time saving in preparation of abdomen procedures with contrast medium, when using myExam Companion intelligent workflow.[5]

AI-supported end-to-end workflow automation

Benefit from customizable protocols and automated support from preparation through data distribution. Intelligent guidance works with users to reduce workloads and make advanced procedures routine.

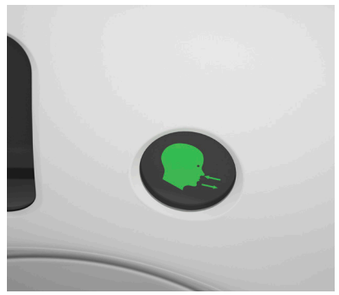
The **FAST 3D Camera gantry-mounted**[6] offers patient positioning with AI-support for dose modulation, body region, and scan direction.
The SOMATOM go. platform also features **myExam Compass,** which automates scanner operation by optimizing parameters for every patient.



Smart features focusing on patients' well-being

Put your patients' well-being in the center and improve their experience: The SOMATOM go. platform features **myExam Care,** which combines smart solutions that help you keep radiation dose low and your patients at ease.

CARE 2D Camera helps you monitor your patients throughout procedures.



CARE Breathe[6] offers intuitive color-coded guidance for breath-hold.

CARE Moodlight[6] is integrated ambient lighting. In addition, it provides smart light indications for visual guidance.

Flexible – performance to match your clinical needs

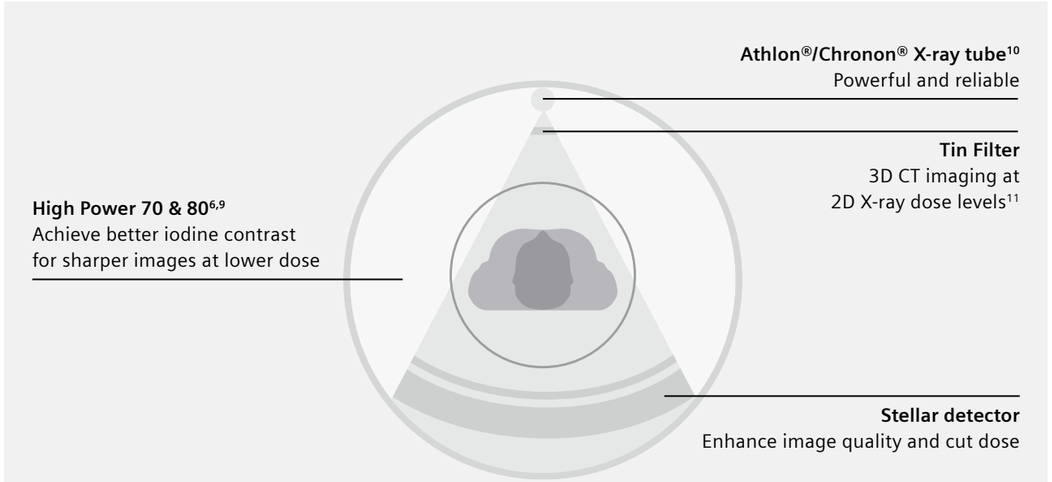
As CT becomes ever more relevant, institutions must be able to handle a broad variety of tasks and patients – including those requiring complex and specialized procedures. The scanners of the SOMATOM go. platform help you tackle your specific clinical setup and tasks, so you can optimally adapt to each patient and produce consistent results for a diverse patient mix.

"A positive effect is that we need considerably less contrast medium than with other systems. We're talking about a dose reduction of 20% in a standard case."[5,7]

Niels Hellige, MD
Radiology specialist at MVZ Langenhagen, Langenhagen, Germany

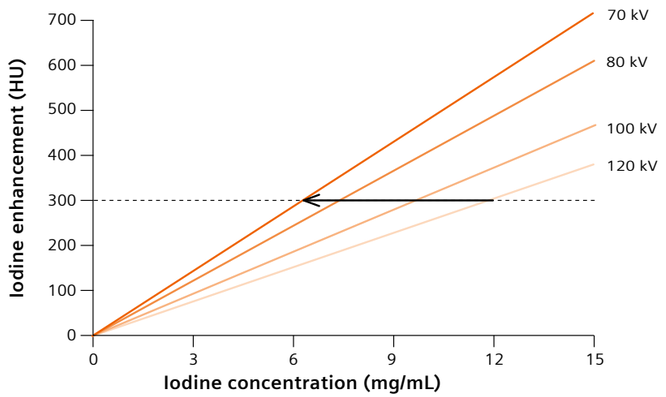
Best-in-its-class imaging chain[8]

Powerful components deliver standardized images in unprecedented quality. AI-supported workflows ensure the whole imaging chain operates in perfect harmony. From the X-ray tube to the detector, it is optimized for image quality and dose.



Low kV imaging in clinical routine

The powerful Athlon® and Chronon® tubes achieve high tube currents. This enables low-kV imaging at faster scan speeds, which is for example important in pediatric, vascular, and thorax imaging.



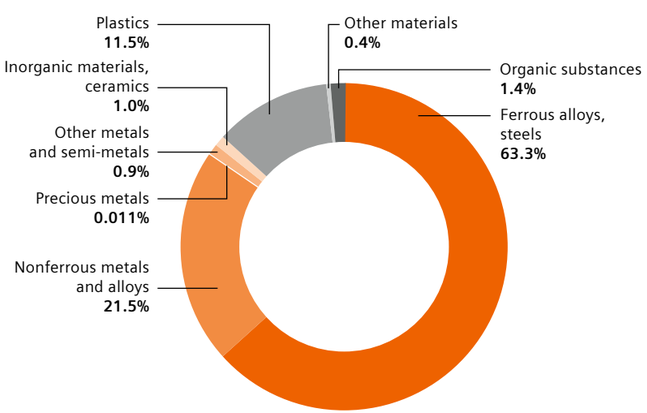
Intelligent parameter selection for each patient size and clinical task allows optimized iodine contrast.

Learn more about the imaging chain of the SOMATOM go. platform and its low-kV capabilities:

This QR code is also clickable.

Productive – a smart investment to match your goals

When purchasing a CT scanner, there is more than just the equipment cost to consider. With the SOMATOM go. platform, you benefit from reduced lifecycle costs, new reimbursement opportunities, and a connected fleet.



98%

recyclable substances.

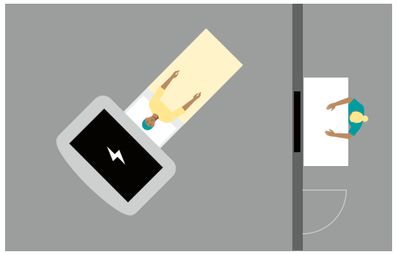
The SOMATOM go. platform is primarily constructed from metals, ensuring a high degree of recyclability. The remaining 2% can be used for thermal energy recovery.

Maximized versatility of existing facilities

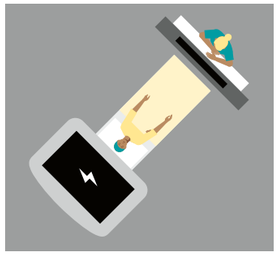
With a scanner footprint[12] of just 4 m^2, no need for additional ceiling infrastructure for the **FAST 3D Camera gantry-mounted[6],** gantry-integrated generator and computers, and improved energy efficiency, the SOMATOM go. platform helps you make the most of your existing space and reduce costs.

Smooth patient positioning powered by AI with FAST 3D camera gantry-mounted[6]

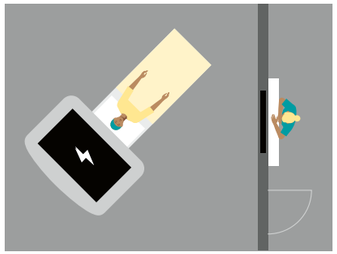
Flexible, cost-efficient room concept



Setup without a third room



Shielded niche concept[13]



Lean control room concept

Improvements in energy efficiency and sustainability

To actively manage the environmental footprint, the SOMATOM go. platform significantly reduces power consumption compared to previous-generation CT scanners.

33%

power consumption reduction[5]

More connectedness and increased standardization[6]

Keep your systems running smoothly, avoid unplanned downtime, and manage your Siemens Healthineers CT scanner fleet 24/7 from any browser-capable device.

- **Hybrid learning**
  personalize learning tools to boost staff competence
- **teamplay Protocols**
  share protocols across your CT fleet
- **Advance Plans**
  solutions for optimum service and future-readiness

Find your match

Clinical highlights

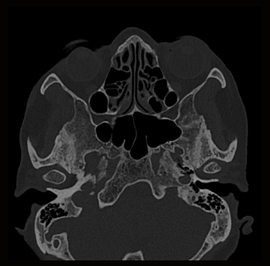
SOMATOM go.Now

is a robust and reliable system
that provides access to CT imaging.

- Head and neck
- Thorax
- Abdomen – multiphase imaging

- Skull base/sinus imaging with Tin Filter
- 0.6 mm reconstructions thanks to Stellar detector technology

Scan parameters: **110 kV / 125 mAs**
$CTDI_{vol}$: **8.05 mGy**



Courtesy of Shanghai Public Health Center, Cao Lang, Shanghai Jinshan, P.R. China

Slices: 16 (32 with IVR)
Rotation time: Up to 0.5 s[6]
kV: 80, 110, 130 kV
Max mA: 240 mA (400 mA[6])
Power: 32 kW

SOMATOM go.Up

is a scanner designed for daily routine
that helps you adhere to clinical guidelines.

- Head and neck
- Thorax
- Abdomen – multiphase imaging
- Vasuclar imaging

- Pulmonary embolism evaluation in emergency setting
- High pitch and fast rotation for optimizing scan time

Scan parameters: **110 kV**
$CTDI_{vol}$: **1.67 mGy**

Courtesy of MVZ Langenhagen, Langenhagen, Germany

Slices: 32 (64 with IVR)
Rotation time: Up to 0.5 s[6]
kV: 80, 110, 130 kV
Max mA: 240 mA (400 mA[6])
Power: 32 kW

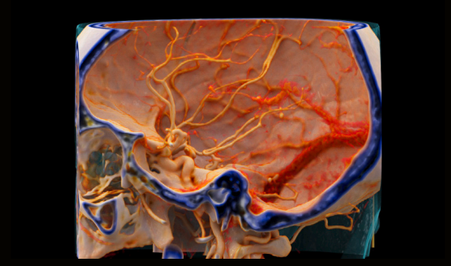
SOMATOM go.All

is a scanner that covers daily procedures and
prepares you for more advanced procedures when needed.

- Neuro imaging
- Vascular imaging
- Oncology
- Cardiovascular imaging

- Intra-cranial CTA
- Powerful low-kV imaging

Scan parameters: **120 / 80 kV**
$CTDI_{vol}$: **38.4 / 6.3 mGy**



Courtesy of Centro Hospitalar e Universitario de Coimbra, Coimbra, Portugal
Cinematic VRT performed with syngo.via

Slices: 32 (64 with IVR)
Rotation time: Up to 0.33 s[6]
kV: 70, 80, 90, 100, 110, 120, 130, 140 kV
Max mA: 625 mA (825 mA[6])
Power: 75 kW

SOMATOM go.Top

is a clinical allrounder
that gives you full flexibility in your clinical tasks.

- Cardiovascular imaging
- Neuro & trauma imaging
- Spectral imaging
- Oncology

- Stenosis evaluation of the coronaries
- CARE kV adapts individually to each patient in 10 kV steps

Scan parameters: **110 kV**
$CTDI_{vol}$: **10.3 mGy**

Courtesy of University Hospital of Erlangen, Erlangen, Germany
Cinematic VRT performed with syngo.via

Slices: 64 (128 with IVR)
Rotation time: Up to 0.33 s[6]
kV: 70, 80, 90, 100, 110, 120, 130, 140 kV
Max mA: 625 mA (825 mA[6])
Power: 75 kW

SIEMENS

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The Most Popular CT in the World*

SOMATOM Emotion
Excel Edition

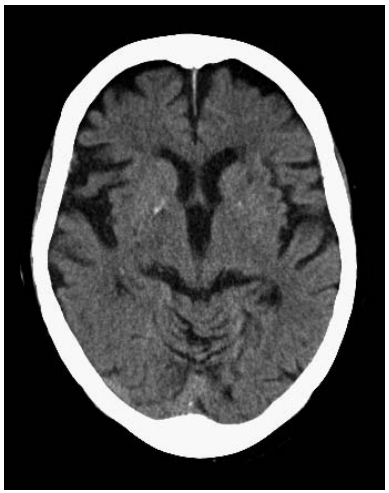
*Based on the number of systems sold worldwide.

Answers for life.


SIEMENS
SOMATOM Emotion

SOMATOM Emotion

Excel Edition


Siemens CT Vision

Today's reality

The justification for the existence of the entire medical industry is, of course, better healthcare for all patients. But the realities of clinical practice often make this simple-to-understand goal quite difficult to realize: stay within budgets, reduce hospital stays, speed up time to diagnosis, and deal with personnel issues while maintaining high clinical standards and volume/throughput. At the same time, patients demand better and faster results.

Our approach

In order to meet our share of responsibility in addressing these challenges, Siemens, from the earliest stages of research, product development and design, relies upon the advice and recommendations of external medical experts to determine our focus – and this focus has been on the needs and demands of our end users. Over the year this focus has been sharpened to four key areas:

- to lead technological and medical advancement
- to maximize workflow efficiency
- to make state-of-the-art CT affordable
- to set the standard in customer care.

Our vision

As a partner of our customers, we create CT innovations, that lift clinical practice to a next level of excellence and enable wide access to better patient care. We believe that even the farthest technical horizons are temporary and can be surpassed with consistent dedication to improved health care. This visionary

approach, backed up by the, by far, largest R&D budgets in the healthcare industry, has made Siemens the undisputed innovation leader in CT over the last 35 years. And our ambitious global team continuous to set the trend in an always changing environment, providing *Answers for Life*.

Leading patient care

Siemens' customer-focused philosophy has always been to continually integrate cutting-edge imaging applications into the daily clinical routine, providing high quality patient care while simultaneously lowering costs. This philosophy is easily recognized in the SOMATOM® Emotion where the very latest Siemens technologies that improve image quality and patient care are implemented in the SOMATOM Emotion family. The same leading detector material and dose control systems offered in the market leading SOMATOM Definition Flash are also central to the SOMATOM Emotion. This is another example of the Siemens research and development investment improving patient care throughout all CT segments.

The most popular CT in the world*

The success of Siemens' philosophy of innovation leadership is also easily recognized with over 7,000 satisfied and knowledgable customers who have purchased the SOMATOM Emotion – making the SOMATOM Emotion the most popular CT in the world.* This amazing success comes as no surprise to medical professionals. After all, Siemens has been a leader in CT innovation since 1974.

*Based on the number of systems sold worldwide

The success story continues

The unparalleled success story of over 7,000 SOMATOM Emotion installations continues in an increasingly competitive and rapidly changing healthcare market. While patients continue to expect higher diagnostic accuracy, healthcare institutions and physicians are being forced to reduce time to diagnosis and unnecessary hospitalization. To meet these and tomorrow's demands for higher quality and cost-efficient healthcare, Siemens developed the SOMATOM Emotion. With both 6-slice and 16-slice configurations offering Siemens' newest technology advances, CT scanning has never before been so efficient. The SOMATOM Emotion achieves the image quality for which Siemens is known through the application of many of the same market leading technologies offered in our unrivalled super high-end systems.

High-end imaging with a compact scanner

You can expect, and will receive, high-end imaging performance from an unbelievably compact scanner that can continuously protect your investment.

The modern design and efficiency of the SOMATOM Emotion means an old style inefficient generator is no longer required. The SOMATOM Emotion produces clinically excellent results, while reducing ongoing costs, and protecting your business through superb system reliability. Siemens also continues to offer a consistent software platform, *syngo*®, throughout all product lines to make training faster, more efficient, and less expensive to your facility. If you are a radiologist, technologist, or financial administrator, you will also enjoy the knowledge that you own the world's most popular CT scanner.*

* Based on the number of systems sold worldwide

SOMATOM Emotion

Excel Edition

"The SOMATOM Emotion delivers high-end image quality and detail. And the intelligent programs offered allow me to concentrate my efforts on diagnosis and on my patients. Simply amazing."

G. Mostbeck, MD
Otto Wagner Spital, Vienna, Austria

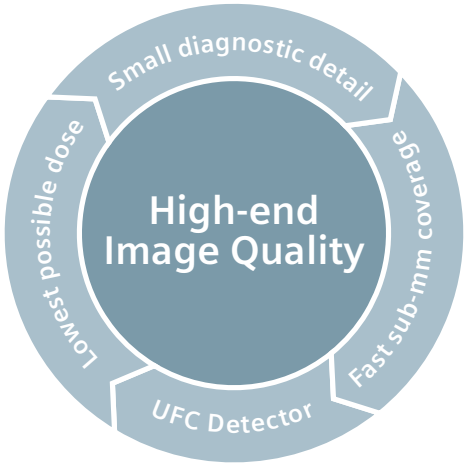
Perfection in Image Detail

From the very beginning of CT technology, image quality has been the first priority. This is still true today and was a constant focus during development of the new SOMATOM Emotion Excel Edition. This focus, along with over three decades of CT experience, is clearly demonstrated in every image from the SOMATOM Emotion. Perfection in image detail is achieved through a superbly designed imaging chain that precisely balances the tube, detector and supporting electronic technologies, and the compact system geometry for constant, optimal image detail. The unsurpassed image quality is one of the key reasons that makes the SOMATOM Emotion the world's most popular CT system.*

* Based on the number of systems sold worldwide.

Clinical

Perfection in Image Detail



Ultra Fast Ceramic Detector – exceptional image detail at minimum dose

As the leading innovator for high-end CT systems, Siemens continually pushes CT technology beyond generally accepted technical boundaries of previous CT generations. One example of this innovation is our leading Ultra Fast Ceramic (UFC)™ Detector. The UFC detector included with the SOMATOM Emotion Excel Edition is identical to the material and technology that underpins the quality of our super high-end system, the SOMATOM Definition Flash. UFC detector material is designed to deliver exceptional images while maintaining minimum dose and is a key factor in the image quality you can expect of all Siemens SOMATOM CT systems.

See the small diagnostic detail

Having the industry's leading detector material is only one important step towards perfection in image detail. Siemens take this leadership further with the SOMATOM Emotion Excel by offering the segment leading 1,476 active effective detector channels. With the smallest focal spot size in its class and fine detector collimation of 16 x 0.6 mm, the SOMATOM Emotion Excel Edition provides the clarity and sharpness you require for accurate diagnoses.

Your Benefits

Visualization of smallest diagnostic detail with a combination of:

- Smallest focal spot
- UFC detector
- Higher number of effective detector channels
- Small gantry geometry
- Up to 68% dose reduction with CARE Dose4D
- Significant dose reduction or image quality improvement with IRIS**

High speed without compromises

Perfection in image detail is further underpinned with Siemens' proprietary SureView™ concept, a dedicated spiral image reconstruction algorithm that makes challenging long scans routine. The key to the success of the SureView algorithm is elimination of the traditional trade-off between scan speed and image quality that is a limitation of all conventional multi-slice reconstruction algorithms. For example, SureView enables you to scan at high speed with high pitch settings and obtain superb, sub-mm lung scans without reduced axial image quality.

Reducing dose to a minimum

A further key to improving the outcomes for our patients comes from Siemens' leadership position in reducing dose. With the introduction of Iterative Reconstruction in Image Space (IRIS)* in 2011 for SOMATOM Emotion, the Most Popular CT in the World is set to further reduce noise, deliver increased image quality as well as significant dose savings for a wide range of clinical applications.**

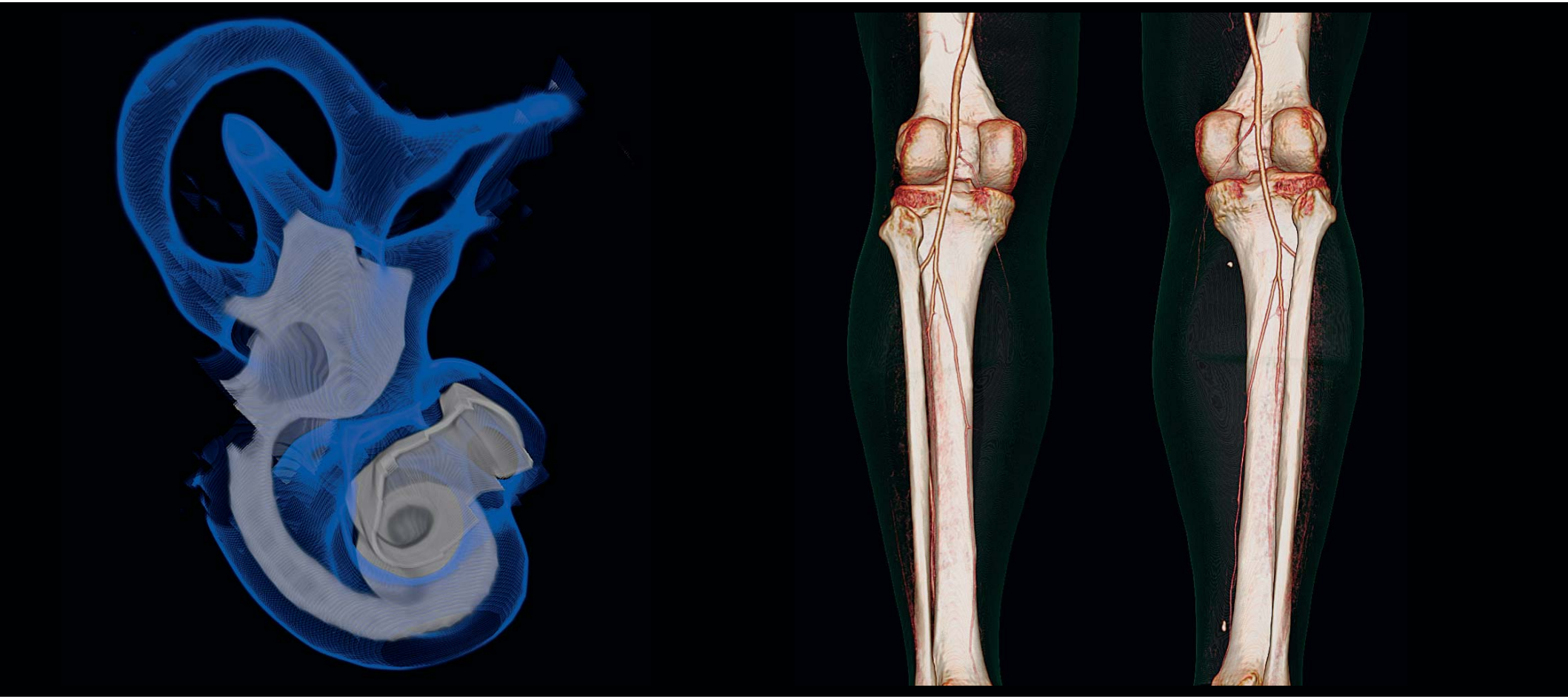
In addition, CARE Dose4D™ – Siemens' fully automated, real-time dose management – continues to reduce dose to a minimum while ensuring that the required image quality is always met. Unlike other dose modulation attempts, CARE Dose4D achieves this through a truly real-time modulation of the tube current during patient scanning enabling dose reduction of up to 68%.

* Optional. Planned availability summer 2011.

** In clinical practice, the use of IRIS 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 task.

Clinical

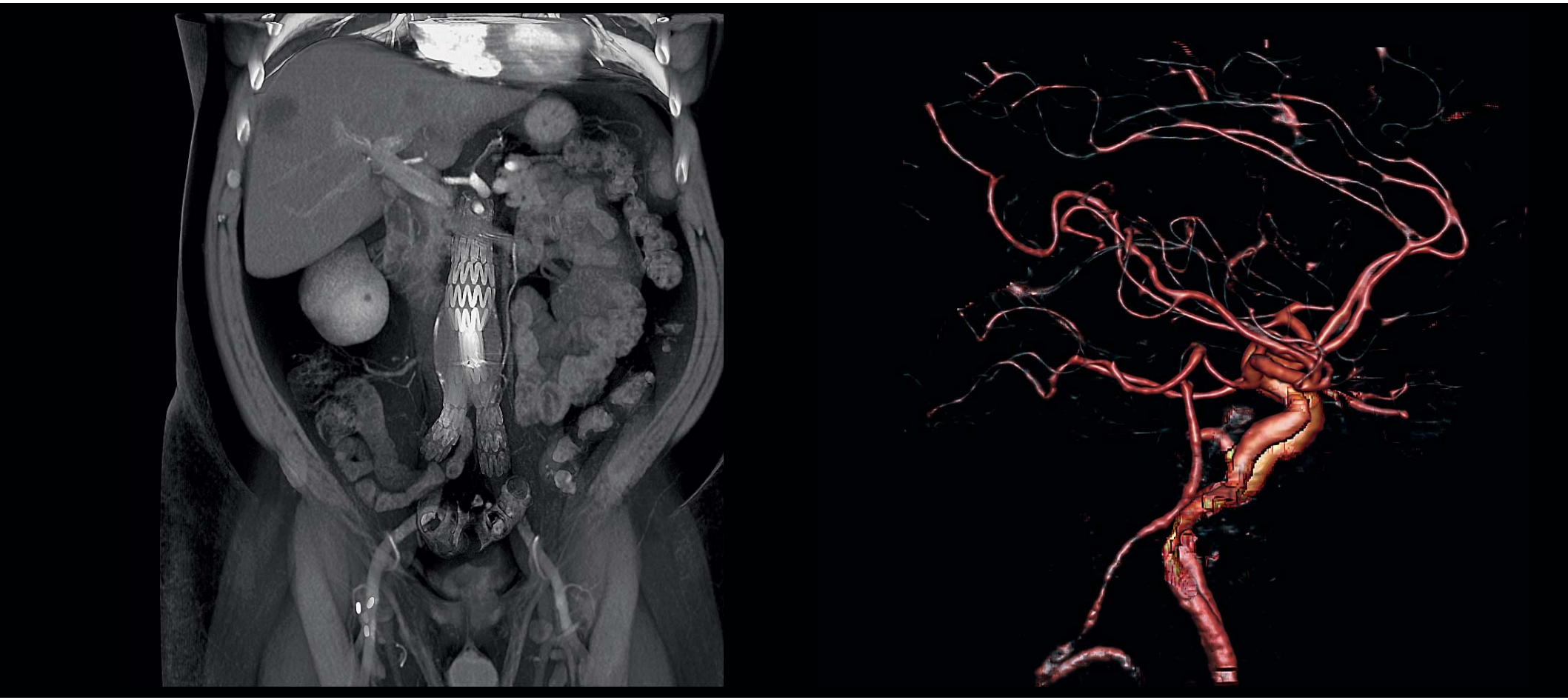
Perfection in Image Detail



Sharpness and astonishing detail,
illustrated by this ductus semicirculares

Brilliant visualization of small vessels

Phenomenal stent imaging even on larger patients



Excellent visualization of intra- and extracranial vessels with automated bone subtraction algorithms of *syngo* Neuro DSA CT


MENS

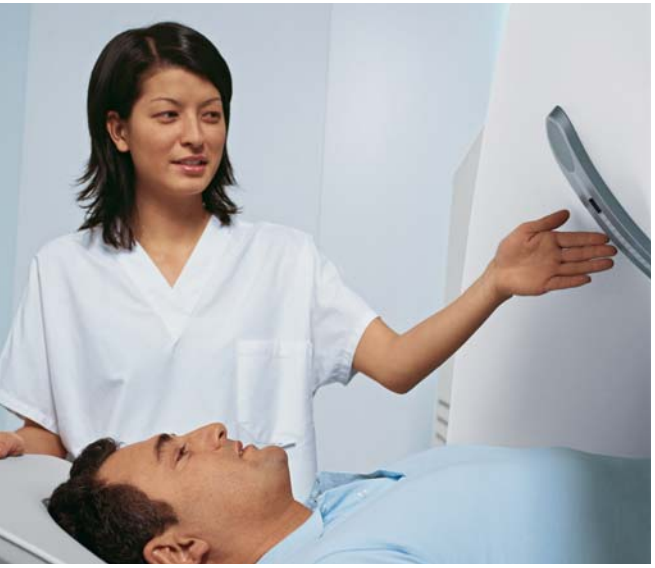
"As an outpatient center, we work in a very competitive environment. With our SOMATOM Emotion we can offer full clinical performance within the smallest space. I know I've made the right decision."

J. F. Casoria, Business Manager
Hartsdale Imaging, Hartsdale, New York, USA

Clinical Efficiency Simplified

As the demand for faster and more certain diagnosis increases, workflow concepts and clinical applications become increasingly important. The SOMATOM Emotion beautifully illustrates Siemens' attention to even the smallest details of your CT day. Through this constant commitment to detail, we are able to offer developments that make your workday easier and clinically more successful. The new SOMATOM Emotion Excel Edition offers optimum workflow enhancements, from patient preparation and scanning, through to post-processing and reporting.

Workflow
Clinical Efficiency Simplified



Excellent image quality is, of course, the main criterion for every CT system, however, a successful workday in CT is also made up of dozens of highly important factors that increase efficiency and throughput. In the preparation phase of the CT examination, for example, the simple but practical CT storage box that holds all basic CT positioning accessories within easy reach greatly facilitates the ease of patient positioning. The certainty of image quality for lung examinations is also improved with the visual breath-hold indicator on the gantry that reduces breathing artifacts and the necessity for repeat scans. Another valuable workflow improvement is the automatic e-Logbook that makes often-illegible handwritten entries obsolete.

Streamlined workflow for intervention

Dedicated biopsy and intervention modes will significantly enhance your workflow in these often time-consuming procedures. A simple in-room joystick control allows you to quickly and easily move to the site of the last scan or a saved table position without the need for constant support from the CT control room.

An additional giant step in comfort for you, your staff, and your patients is the excellent access permitted by the gantry's flared opening and the industry's smallest gantry depth of 69 cm (27 in). With only 26.4 cm (10.4 in) between the front of the gantry and the scan plane, the new SOMATOM Emotion Excel offers not only a new level of patient comfort, but also adequate freedom of movement during interventional procedures. A less frequent requirement to remove the patient from the gantry during intervention increases your speed and accuracy in these exacting procedures.

Simultaneous planning, scanning, and post-processing

The addition of a second, dedicated *syngo* CT Workplace permits instant access to patient data through a shared database with the *syngo* Acquisition Workplace without the need to send images through the network. This allows you to process the data from the first patient, while a second patient is being scanned which keeps your acquisition workplace free for increased patient throughput. In addition, the optional inclusion of WorkStream4D™, combined with up to 16 images per second reconstruction, virtually eliminates the need for time-consuming, manual reconstruction steps. Oblique and double-oblique reconstructions are immediately available, enabling faster examinations and the complete elimination of traditional processing methods with a 3D task-card.

Confidence in diagnosis – extend your clinical capabilities

But speed alone is not sufficient. We want to make your diagnoses as confident, and your workday as comfortable as possible. With oncology related examinations making up approximately 60 % of CT examinations, increasing speed and accuracy has always been a major consideration of CT development at Siemens. Therefore, we offer a broad spectrum of dedicated applications such as *syngo* CT Oncology, *syngo* Colonography CT, and *syngo* Neuro DSA that offer superb post-processing capabilities as well as new marketing opportunities for your CT service for increasing revenue.

Finally, in the event you or your CT technologists require a second opinion from a colleague when scanning or post-processing, *syngo* Expert-i allows you to view and manipulate diagnostic data with a clinician sitting in a different room or different department. Remote access and control through *syngo* Expert-i is available for all *syngo* CT Workplaces, including the scanning console, to further streamline your CT workflow for higher throughput and better financial returns.

Your Benefits

- Patient breathing indicator for improved patient breath-hold
- Streamlined workflow with CT storage box
- Remote access with *syngo* Expert-i
- Freedom of movement for faster intervention
- Increased efficiency with linked database and WorkStream4D

"With the SOMATOM Emotion CT we are able to scan 90 patients per day on average. Moreover we optimized our hospital workflow with the fast scan protocols of SOMATOM Emotion."

Dr. Yurdasiper
Yunus Emre State Hospital, Eskişehir, Turkey

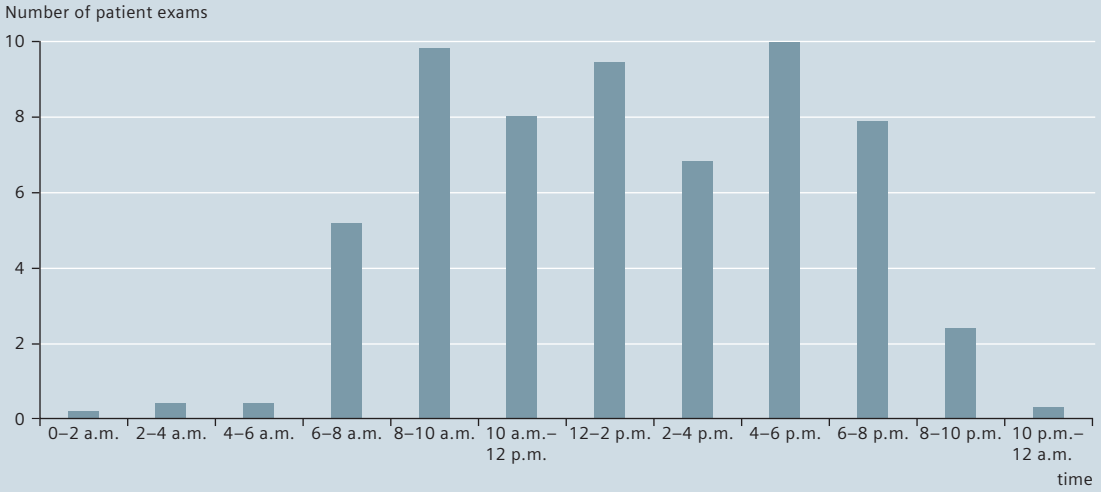
Savings in Every Scan

The new SOMATOM Emotion Excel Edition brings the known quality and workflow of the SOMATOM Emotion 16 in a cost-effective package allowing increased access to this level of medical imaging. From the time of installation, even before you have made your first scan, the SOMATOM Emotion Excel makes the first step in savings. The modern, compact design permits easy and efficient installation and requires very little of your expensive floor space. Requiring a total of only 18 square meters – including a scan room as small as 15 square meters – the SOMATOM Emotion Excel Edition has the potential to save you money over the entire life of your CT system.

Financial

Savings in Every Scan

Average number of patient exams per time frame



Example report from the Utilization Management Software

Compact system for giant steps in cost reduction

Due to its very small footprint, the scanner fits into rooms that are often too small for conventional CT scanners. You will immediately realize giant steps in cost reduction and appreciate the minimal disruption to your busy schedule. And this is just the beginning of the savings story. Due to lowest power requirements and cooling demands, you will achieve savings in every scan.

Uptime is the only time you can afford

Preventive maintenance is a standard requirement for any CT system but can be a frustration when patient access to the system is restricted due to scheduled downtime. In this regard, the SOMATOM Emotion Excel also has the potential to save you additional money with a lower requirement for preventive maintenance, meaning greater uptime and higher productivity. The newly designed, modern, high-quality construction of the new SOMATOM Emotion Excel Edition is more than robust, it is virtually indestructible.

But at Siemens, uptime means more than just a perfectly functioning scanner. Siemens also offers you the tools such as Utilization Management to track your CT performance and utilization data to help you maximize uptime, increase patient throughput, and optimize financial results.

You profit from Siemens' unique service offerings

The savings with the SOMATOM Emotion Excel are further enhanced with Siemens' unique service offerings. As an optional part of your service contract, *syngo* Evolve increases the functionality of your existing software applications and allows you convenient, cost-effective access to improved features as they are developed. This factory-backed program gives you the peace of mind of knowing that your system will remain up-to-date and keep you competitive for many years to come. *syngo* Evolve offers certainty in budget planning, feature enhancements, access to new applications, and lower cost upgrades to your system. In addition Siemens offers innovative service solutions based on Siemens Remote Service (SRS) technology. The unique Guardian Program further reduces your costs for unscheduled downtime through proactive monitoring of your CT system to detect potential problems before they affect your CT service. This detection allows you to schedule service visits for proactive maintenance outside of normal operational hours, meaning your system continues to serve patients and earn revenue without interruption.

Reduce costs for increased return on investment

Now Siemens is proud to offer the most popular CT in the world* in a cost-effective 16-slice Edition. The SOMATOM Emotion Excel was designed to reduce both the capital costs of your CT equipment, but also to reduce the ongoing costs of CT and to increase your returns through maximum uptime. Your confidence in the system is assured by the known quality of Siemens' engineering and the unique Siemens service offerings. The amalgamation of these factors offers you savings in every scan.

* Based on the number of systems sold worldwide.

Your Benefits

- 16-slice technology now available to more institutions through the cost-effective SOMATOM Emotion Excel Edition
- Less down-time with fast installation and reduced scheduled maintenance requirements
- Smallest installation space for reduced rent
- Lower ongoing costs – reduced power and air-conditioning requirements


SIEMENS

"Siemens is a technology leader in CT, and has been so for a long time. The way they integrate innovations into my clinical routine is simply fantastic."

G. Mostbeck, MD
Otto Wagner Spital, Vienna, Austria

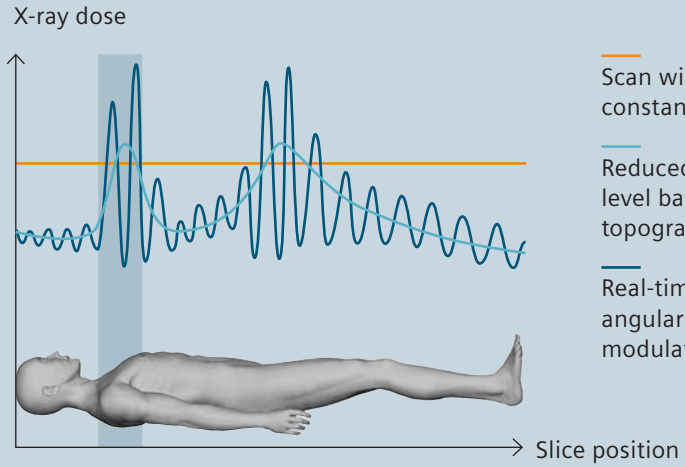
The Underlying Technology

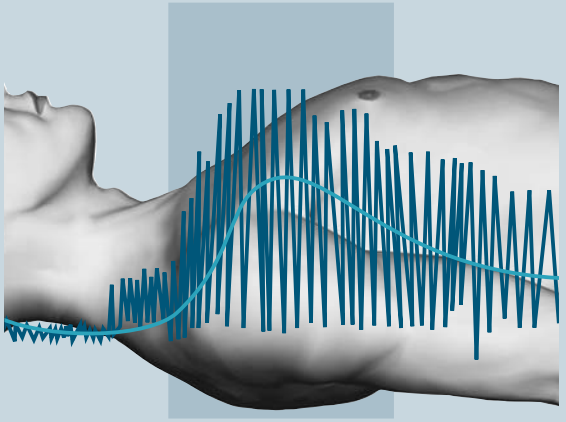
It has always been the philosophy of Siemens Healthcare that innovations that lead to increased image quality and decreased patient dose should be included throughout the Siemens CT portfolio. For this reason many of the leading concepts that have maintained Siemens' leadership at the cutting edge of high-end CT technology are offered also on our entry-level and mid-range systems. Examples of such technology include our leading detector material, Ultra Fast Ceramic (UFC), true real-time dose modulation with CARE Dose4D, and reconstruction techniques that remove the traditional trade off between speed and image quality that are a standard limitation of other systems in the market place today.

How it works

CARE Dose4D

CARE Dose4D, an unparalleled combination of maximum image quality at minimum dose, is an example of our philosophy to provide a wide range of dose-reduction solutions. Because every patient is unique in terms of size, weight, and anatomy, we developed a fully automated dose management system. The tube current is adapted in real-time and according to the anatomy of each individual patient's organ.





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

* Results may vary. Data on file.

How it works

UFC Detector

Siemens has a long history of unrivalled expertise regarding detector technology – from scintillators and photodiodes to electronics – where only a few thousandths of a millimeter make the difference. The Ultra Fast Ceramic (UFC) detector system is the central part of all Siemens' CT scanners and part of the technology that make innovations such as the SOMATOM Definition Flash possible. Due to this component alone, many clinical innovations have been achieved. Speed, image quality, and low dose are what Siemens UFC detectors make possible.

Speed

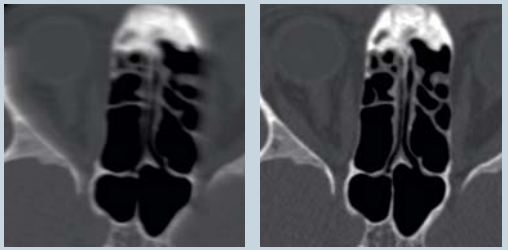
Conventional ceramic scintillator material has a long afterglow effect. Siemens' ceramic UFC scintillators excel in fast decay behavior and an extremely short afterglow time.

Image quality

As CT systems become faster, the role of image quality becomes more important. Siemens' UFC scintillators acquire large patient volumes quickly and provides high image resolution.

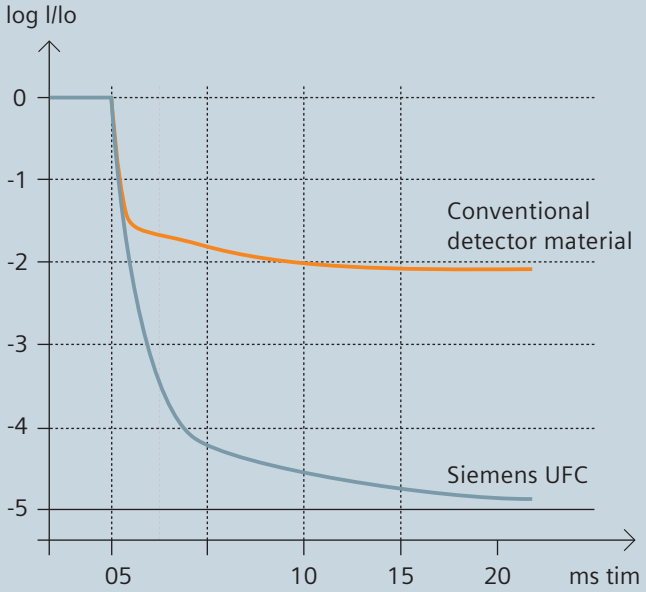
Low dose

UFC ceramic scintillators allow for the lowest possible dose. Due to their luminous efficiency with an optimized wavelength, the detectors allow for the applied X-ray dose to be optionally evaluated according to the patient's anatomy.



Conventional detector material

Siemens UFC



Comparison of decay time and afterglow (for different detector materials).

How it works
SureView

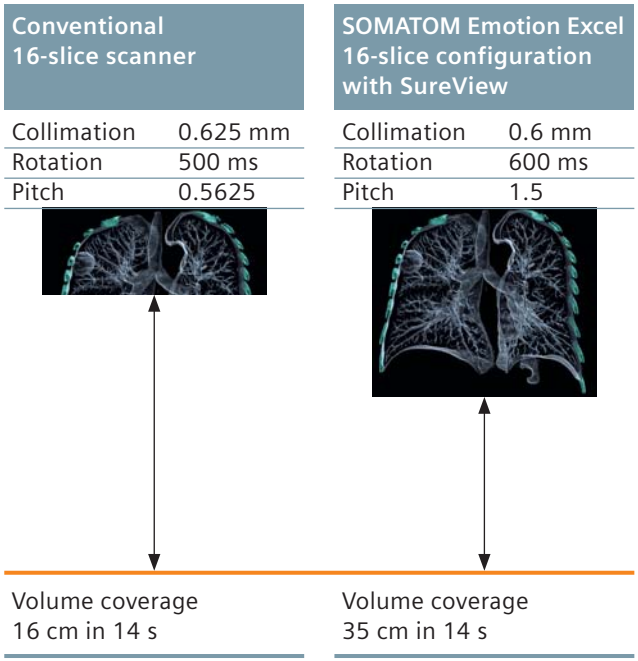
The introduction of Multislice CT has opened the door to a new era of clinical applications. However, it also introduced certain limitations resulting from the increased complexity in image acquisition, reconstruction procedures, and algorithms. But there are innovative ways to overcome such pitfalls.

The solution Siemens offers is the fast spiral image reconstruction software SureView. With SureView, Siemens CT users do not need to make a selection either to scan at a high speed or at a high quality. With the SureView reconstruction algorithm you can have remove this trade off and achieve both speed and quality in every scan.

High-quality imaging at low dose

To facilitate consistent image quality at any pitch even for long scans, Siemens invented SureView – the dedicated spiral image reconstruction algorithm. SureView features easy-to-use scan protocols, where the user only needs to select the scan range, mAs, scan time, and slice width.

All other parameters are automatically calculated by the scanner. The result is consistent image quality and simple, easy to learn dose selection techniques. In addition, high power reserves are there when required and allow for up to 100 seconds of uninterrupted spiral acquisition.



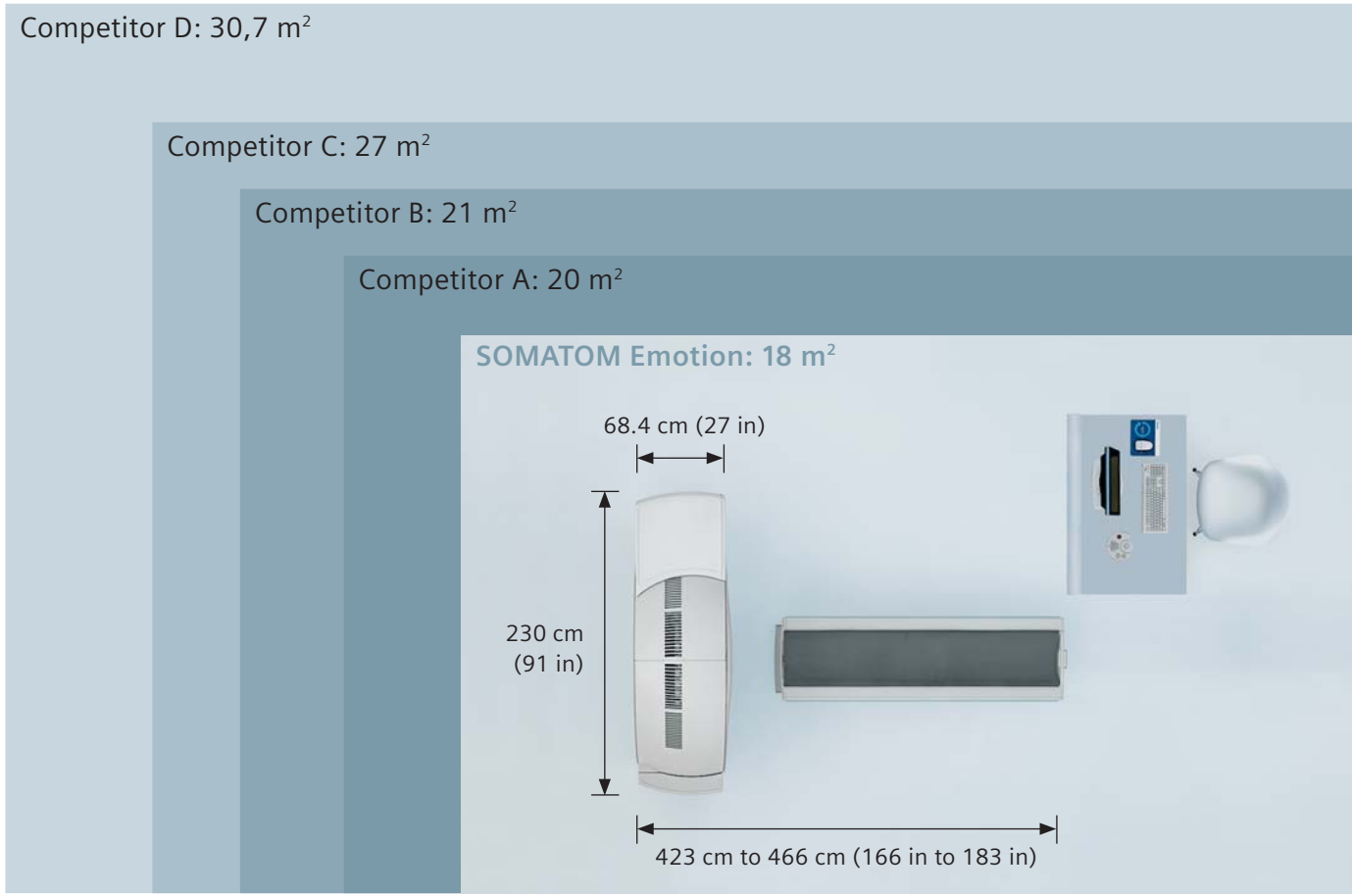
Comparison of volume coverage at highest image quality

Design

Compact, Modern System Design

The introduction of a modern efficient system into the 16-slice market has changed this market segment. With the introduction of the SOMATOM Emotion Excel Siemens has removed the need for larger and larger high voltage generators to overcome the limitations of oversized, outdated gantry designs and inefficient detector materials. The combination of the Ultra Fast Ceramic detector material, real-time dose modulation, and a generator and tube specifically designed for a compact, modern gantry is another reason why the SOMATOM Emotion is the most popular CT in the world.*

In addition to image quality, the modern efficient gantry also leads to lower power costs, and lower air-conditioning requirements due to reduced mAs requirements and reduced heat output.



* Based on the number of systems sold worldwide

How it works IRIS

Iterative Reconstruction in Image Space

Dose reduction with CT has been limited by the currently used filtered back projection reconstruction algorithm as displayed on the left. When using this conventional reconstruction of acquired raw data into image data, a trade-off between spatial resolution and image noise has to be considered. Higher spatial resolution increases the ability to see the smallest detail; however, it is directly correlated with increased image noise. In an iterative reconstruction, a correction loop is introduced into the image generation process as shown on the right. To avoid long reconstruction times the new Iterative Reconstruction in Image Space (IRIS)* first applies a raw data reconstruction only once. During this initial raw data reconstruction, a so-called and newly developed master image is generated that contains the full amount of raw data information, but at the expense of significant image noise. During the following iterative corrections the image noise is removed without degrading image sharpness. The new technique results in increased image quality or significant dose savings for a wide range of clinical applications.**

* Optional. Planned availability summer 2011.

** In clinical practice, the use of IRIS 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 task.

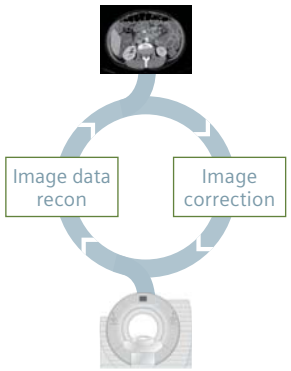
Your Benefits

- Dose reduction up to 60% or image quality improvement*
- Fast reconstruction in image space
- Well-established image impression

Standard Filtered Back Projection

- ✚ Ultra-fast reconstruction without iterations
- ✚ Well-established image impression
- ▬ Limited dose reduction

IRIS



- ✚ Dose reduction up to 60% or image quality improvement*
- ✚ Fast recon in image space
- ✚ Well-established images impression

* Dose reduction potential was determined by lowering dose by 60% and reconstructing with IRIS. Noise, CT numbers, homogenity, low-contast resolution and high contrast resolution were assessed in a Gammex 438 phantom. Low dose data reconstructed with IRIS showed the same image quality compared to full dose data based on this test. Data on file.

Additional Benefits with *syngo*.via

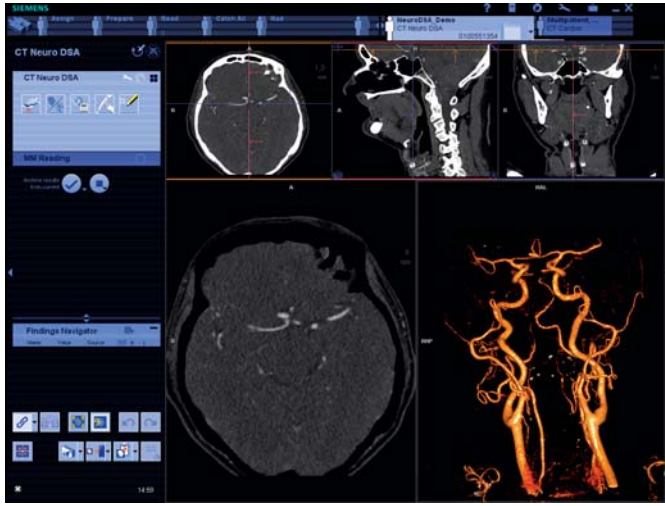
syngo.via

syngo.via* – the new imaging software, creating an exciting experience in efficiency and ease of use – anywhere**. Every *syngo*.via already includes standard CT applications that provide an extensive range of functions and tools for the most frequent clinical tasks. To complement the standard *syngo*.via configuration of applications, clinically-tailored Engines with an impressive range of advanced applications are also available.

CT Neuro Engine

From scan to diagnosis in under 10 minutes

CT Neuro imaging is very often a matter of life-and-death therapeutic decision-making. From infarctions caused by stroke and extensive bleeding, to subarachnoid hemorrhage and a ruptured aneurysm. The new CT Neuro Engine provides tools and workflows that to help deliver a complete and accurate status of the vascular structures and the brain tissue for these patients – from scanning to diagnosis in less than 10 minutes.



* *syngo*.via can be used as a standalone device or together with a variety of *syngo*.via-based software options, which are medical devices in their own rights.

** Prerequisites include: internet connection to clinical network, DICOM compliance, meeting of minimum hardware requirements, and adherence to local data security regulations.

CT Oncology Engine

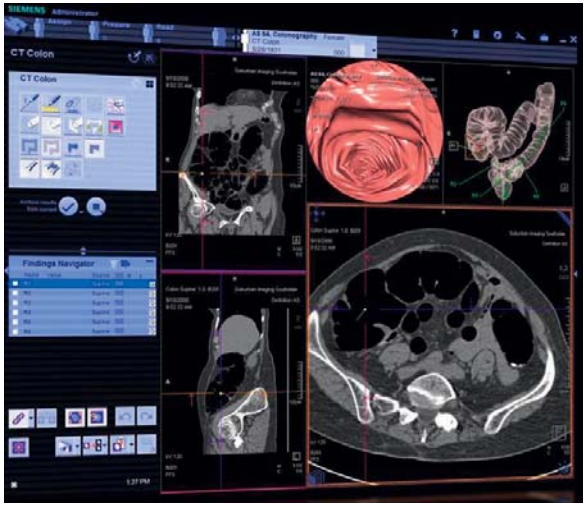
Holistic Oncology Imaging

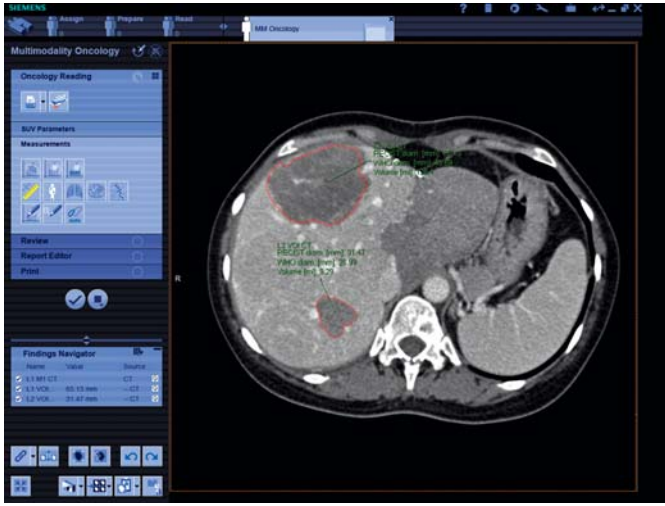
Cancer threatens the entire body. Irrespective of whether potential lesions are found in lung, liver, lymph nodes or other organs, and regardless of whether the chest or the abdominal radiologist makes findings, or whether lesions are discovered in CT, MRI or PET: Everybody involved in early detection, diagnostics and the treatment of cancer can retrieve the most complete information.

CT Oncology Engine Pro

Increase Oncology advantages further with computer assisted detection

You easily can upgrade your CT Oncology Engine's features to the "Pro" edition that provides additional tools for computer assisted detection such as the LungCAD and the Colon PEV algorithms. The CT Oncology Engine Pro will not only help you achieve the most accurate results in just a few moments. The Oncology Engine Pro also provides a marketing advantage for your practice to differentiate your Oncology CT capabilities from your competitors.





UPTIME Services

A partner at your side

With Siemens, systems and services go hand in hand. High system availability, diagnostic confidence and optimized workflow are crucial for the success of your CT.

To meet your performance expectations, we systematically focus on being pro-active. That's why we developed our pro-active service solutions that help you increase system availability, reliability, and workflow efficiency. We also support you with different types of training and provide support for existing applications and functionalities, even remotely.

A smart investment and seamless support

As a pro-active service provider, Siemens UPTIME Services focuses on real-time remote monitoring and preventive maintenance of medical hard- and software. That's how we solve problems before they even occur, thus enabling increased system availability, optimized performance and workflow efficiency.

Offering our innovative service portfolio we will keep you on track:

- Siemens Performance Plans
- Siemens Guardian Program™
- Siemens Virus Protection
- Siemens Utilization Management

Siemens Performance Plans – tailored to meet your specific needs

Service and maintenance are highly important to prevent unscheduled downtimes and thus to improve your workflow. Siemens Performance Plans are designed to help you run your operations smoothly – with predictable costs, lower risks and higher efficiency. Modules can be combined together with your Performance Plan Pro, Plus or Top and an individual solution with substantial benefits for you can be achieved. E.g. our Siemens Virus Protection offers top-level defense in safeguarding your CT against viruses, providing exclusive and reliable support in getting your system back online again fast.

Education – broaden your knowledge and expertise

Know-how is your key to success. With our extensive portfolio of education and training programs, you can deepen your knowledge and clinical expertise.

Depending on the training type you select, you can benefit most from the wide range of choices in our portfolio:

- Individual on-site training
- Classroom training
- Web based training
- Fellowships
- Remote assistance

Training that matches your needs

We offer routine application training and beyond to answer your clinical questions. For example, stroke imaging with latest applications and much more. We show you how to maximize the benefits that can be achieved with our advanced technology helping you to optimize your workflows so you can offer an even higher quality of care for your patients and faster and more efficient throughput for your clinic.

SOMATOM Emotion Excel Edition

Configuration Overview

	SOMATOM Emotion Excel Edition
Technical specification	
High-quality CT at low costs	yes
Number of slices	16 x 0.6 mm / 16 x 1.2 mm
Rotation time	0.6 s
Reconstruction speed	8 images per second
Highest number of effective detector channels	1,472
Smallest footprint	18 m^2 (194 ft^2) including control room
Slimmest gantry	69 cm (27 in)
Smallest focal spot size	0.8 x 0.5 / 0.8 x 0.7
High-end detector material	yes
Practical storage box	yes
2nd CT Workplace with shared database	yes*
syngo.via	yes*
Software options	
Wide application portfolio	yes*
CAD tools	yes*
SureView	yes
CARE Dose4D	yes
WorkStream4D™	yes*
e-Logbook	yes*
syngo Expert-i	yes*
IRIS (Iterative Reconstruction in Image Space)	yes**
CT Clinical Engines	
CT Oncology Engine	yes*
CT Neuro Engine	yes*
Services and programs	
Guardian	yes*
Utilization Management	yes*

* Optional
** Optional. Planned availability summer 2011.

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