North Carolina Department of Health and Human Services
Division of Health Service Regulation

Pat McCrory
Governor

Richard O. Brajer
Secretary DHHS

Mark Payne
Assistant Secretary for Audit and
Health Service Regulation

March 23, 2016

Elizabeth V. Kirkman
Assistant Vice President
CHS Management Company
2709 Water Ridge Parkway, Suite 200
Charlotte, North Carolina 28217

Exempt from Review – Replacement Equipment

Record #:	**1902**
Facility Name:	Carolinas HealthCare System (CHS) University
FID #:	923516
Business Name:	The Charlotte-Mecklenburg Hospital Authority
Business #:	1772
Project Description:	Replace CT scanner located on the 1st floor in Room #01T114
County:	Mecklenburg

Dear Ms. Kirkman:

The Healthcare Planning and Certificate of Need Section, Division of Health Service Regulation (Agency), determined that based on your letter of March 11, 2016, the above referenced proposal is exempt from certificate of need review in accordance with G.S 131E-184(a)(7). Therefore, you may proceed to replace the existing General Electric Lightspeed 16 CT scanner, located on the 1st floor in room #01T114 of CHS University's main campus in Charlotte, with a comparable CT scanner. This determination is based on your representation that the existing unit will be removed from North Carolina and will not be used again in the State without first obtaining a certificate of need.

Moreover, you need to contact the Agency's Construction, Acute and Home Care Licensure and Certification, and Radiation Protection Sections to determine if they have any requirements for development of the proposed project.

It should be noted that the Agency's position is based solely on the facts represented by you and that any change in facts as represented would require further consideration by this office and a

separate determination. If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

Gloria C. Hale

Gloria C. Hale
Project Analyst

Martha J. Frisone

Martha J. Frisone,
Assistant Chief, Certificate of Need

cc: Construction Section, DHSR
Acute and Home Care Licensure and Certification Section, DHSR
Radiation Protection Section, DHSR
Kelli Fisk, Program Assistant, Healthcare Planning, DHSR

Hale, Gloria

From: Kirkman, Elizabeth <Elizabeth.Kirkman@carolinashealthcare.org>
Sent: Tuesday, March 22, 2016 9:53 AM
To: Hale, Gloria
Cc: Kinrade, Hannah
Subject: RE: Re. CHS University exemption request

Gloria,
The CT is located on the first floor at CHS University in room number 01T114.
Please let me know if you need anything else.
Thanks,
EK

From: Hale, Gloria [mailto:gloria.hale@dhhs.nc.gov]
Sent: Monday, March 21, 2016 4:02 PM
To: Kirkman, Elizabeth <Elizabeth.Kirkman@carolinashealthcare.org>
Subject: Re. CHS University exemption request

CAUTION: External Email

Hi Elizabeth. I am reviewing your request for an exemption to replace a CT scanner at CHS University. Could you please let me know the floor and room number where the CT unit is located in the hospital? Thank you.

Gloria C. Hale, MPH
Project Analyst Certificate of Need
Division of Health Service Regulation, Healthcare Planning and Certificate of Need Section
North Carolina Department of Health and Human Services

919-855-3873 office
Gloria.Hale@dhhs.nc.gov

809 Ruggles Drive
2704 Mail Service Center
Raleigh, NC 27699-2704

Nothing Compares

Carolinas HealthCare System

March 11, 2016

Ms. Martha Frisone, Assistant Section Chief
Healthcare Planning and Certificate of Need Section
Division of Health Service Regulation
N.C. Department of Health & Human Services
809 Ruggles Drive
Raleigh, NC 27603

RE: Replacement of CT Scanner licensed under The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas HealthCare System University.

Dear Ms. Frisone:

Carolinas HealthCare System University (CHS University) is planning to replace one of its existing CT scanners with new, technologically comparable equipment. CHS University intends to purchase a Siemens SOMATOM Definition AS CT scanner to replace a used General Electric Lightspeed 16 CT scanner that was installed in December 2012 that is currently located at CHS University. The existing equipment is near the end of its useful life and is at risk for service interruptions due to downtime.

The Siemens SOMATOM Definition AS unit will be used for the same types of procedures as the existing equipment and it will not be used to provide a new health service. A chart comparing the existing equipment and the replacement equipment is included in Attachment A along with supporting documentation. The equipment is currently in use and documentation provided in Attachment B indicates 17,370 procedures were performed from February 2015 through January 2016.

The total cost to acquire, install and make operational the replacement equipment is $1,020,201 which includes construction costs of $182,450, consultant fees of $47,000, other fees of $28,500, the Replacement Equipment of $708,500 ($648,980 for the CT scanner, $16,020 for freight, and $43,500 for sales tax) and the Injector $53,751 ($52,150 for the Injector, $133 for freight, and $1,468 for sales tax). Attachment C provides the quote for the CT scanner from Siemens and the Injector from Bayer HealthCare with equipment costs. Please see Attachment D (and the Trade-In Addendum to the Quote in Attachment C) for a letter documenting the equipment will be taken out of service and removed from North Carolina. The total capital cost schedule and certified cost estimate of the renovation required to install the new equipment are provided in Attachment E.

The North Carolina Certificate of Need statutes provide a definition of replacement equipment in N.C.G.S. 131E-176(22a). The definition requires the replacement equipment be comparable to the existing medical equipment and cost less than $2.0 million when installed. The statutes further provide in 131E-184(a)(7) an exemption from certificate of need review for replacement equipment projects if prior notice is provided to the CON Section.

This letter serves as prior notification of our intent to proceed with this project. We would appreciate your written concurrence that this project is exempt from CON review. If you have any questions or require further information regarding this project, please contact me at 704-446-8475.

Sincerely,

Elizabeth Kirkman

Elizabeth Kirkman, Assistant Vice-President
CHS Management Company

Attachments

Attachment A

Comparison of Existing and Replacement Equipment

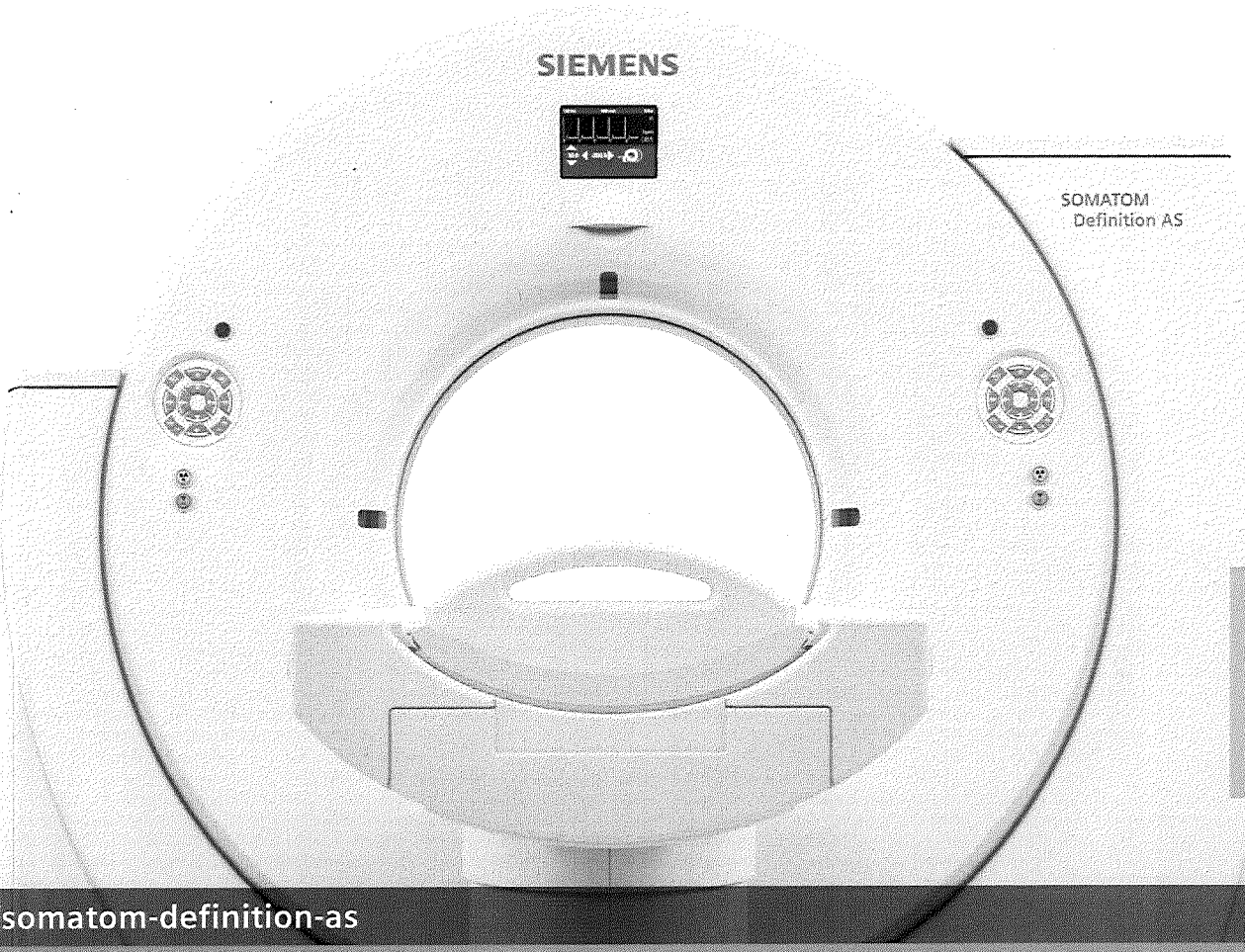
EQUIPMENT COMPARISON

	Existing Equipment	Replacement Equipment
Type of Equipment (List each component)	GE Lightspeed 16	SOMATOM Definition AS
Manufacturer of Equipment	General Electric	Siemens
Tesla Rating for MRIs	N/A	N/A
Model Number	16 4.x	14444263
Serial Number	79197TY0	Not Available Until Installed
Provider's Method of Identifying Equipment	CHS Asset # / Serial #	CHS Asset # / Serial #
Specify if Mobile or Fixed	Fixed	Fixed
Mobile Trailer Serial Number/VIN #	N/A	N/A
Mobile Tractor Serial Number/VIN #	N/A	N/A
Date of Acquisition of Each Component	December 2012	Spring 2016
Does Provider Hold Title to Equipment or Have a Capital Lease?	Title	Title
Specify if Equipment Was/Is New or Used When Acquired	Used	New
Total Capital Cost of Project (Including Construction, etc.) <Use Attached Form>	$149,834	$1,020,201
Total Cost of Equipment	$70,209	$762,118
Fair Market Value of Equipment	$65,000	N/A
Net Purchase Price of Equipment	$70,209	$762,118
Locations Where Operated	8800 N Tryon St Charlotte, NC 28262	8800 N Tryon St Charlotte, NC 28262
Number Days in Use/To Be Used in N.C. per Year	365	365
Percent of Change in Patient Charges (by procedure)	None	None
Percent of Change in Per Procedure Operating Expenses (by procedure)	None	None
Type of Procedures Currently Performed on Existing Equipment	Abdomen/Pelvis Chest Neuro Biopsy	N/A
Type of Procedures New Equipment is Capable of Performing	N/A	Abdomen/Pelvis, Vascular, Chest, Neuro, MSK Biopsy Low Dose Lung screening and overall radiation dose reduction in all exams performed.

CMC-UH Basic Function/Technology

Siemens AS 64 (NEW)	GE Lightspeed (OLD)
· One x-ray tube	· One x-ray tube
· fast aquisition time with Z-axis wobble (upgradable onsite)	· fast scan time with 1.375 pitch maximum
· Table capacity (500lbs)	· Table capacity (500lbs)
· Robust iterative reconstruction algorithm (SAFIRE) for low dose scanning	· **Does not** contain iterative reconstruction for low dose scanning
· Maximum mAs capacity >500	· **mA capacity 440mA**
· Better temporal resolution	· Subpar temporal resolution
· Radial multi-plannar software with 8 recon capability	· **Not capable of direct multi-plannar (3 recon capability)**
·	·

SIEMENS



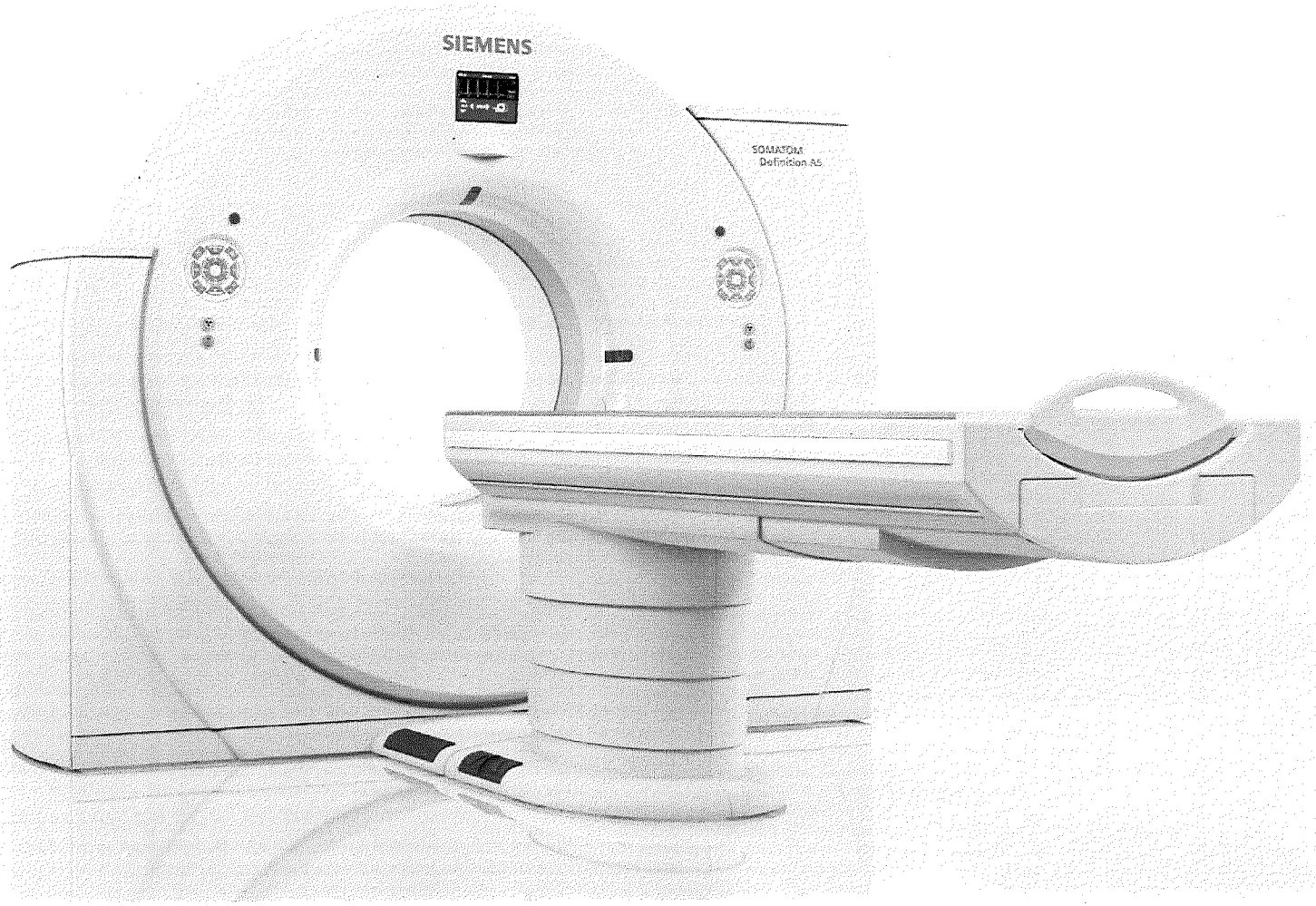
Now with
Single Source
Dual Energy

www.siemens.com/somatom-definition-as

Maximize Outcome. Minimize Dose.

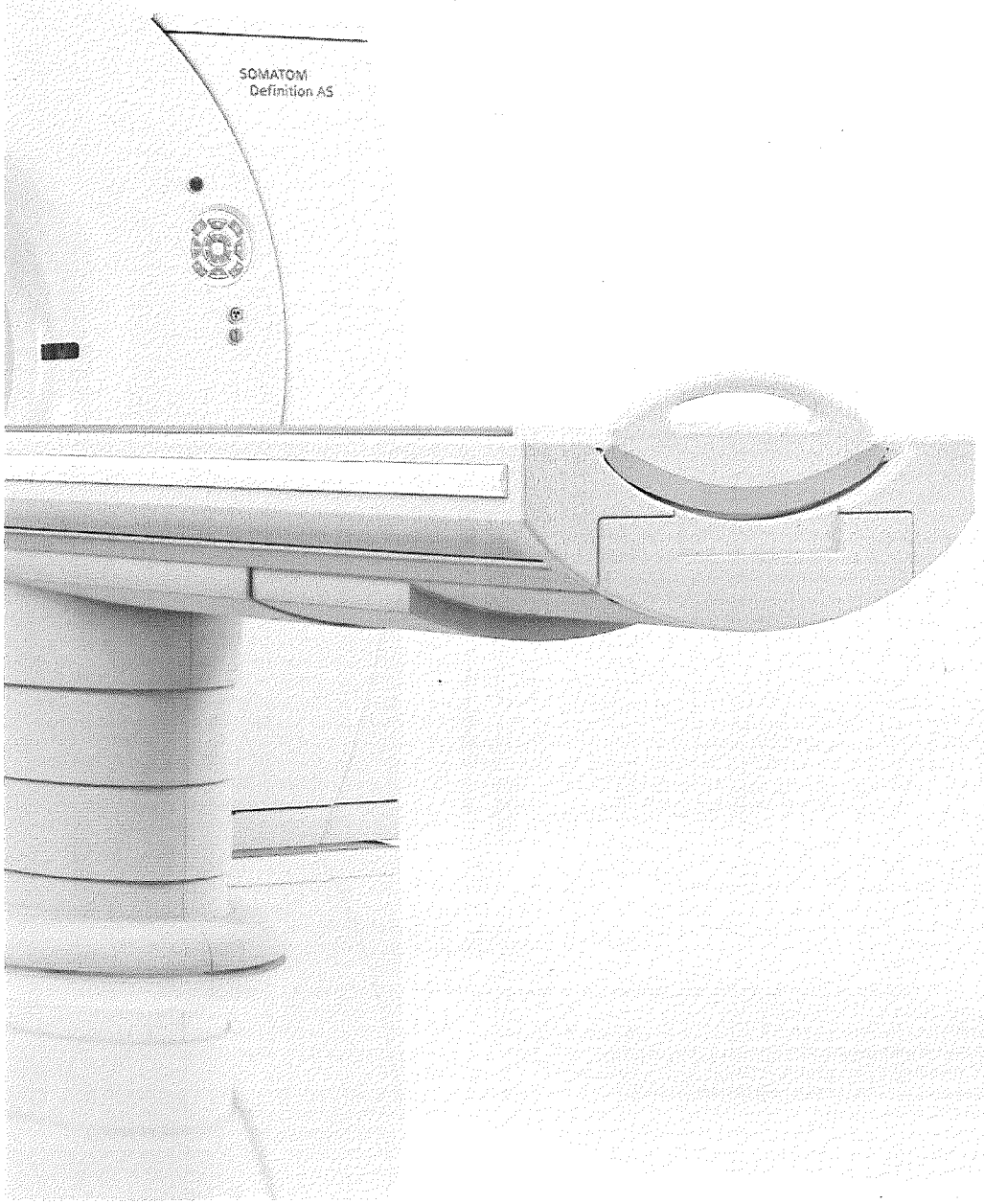
SOMATOM Definition AS

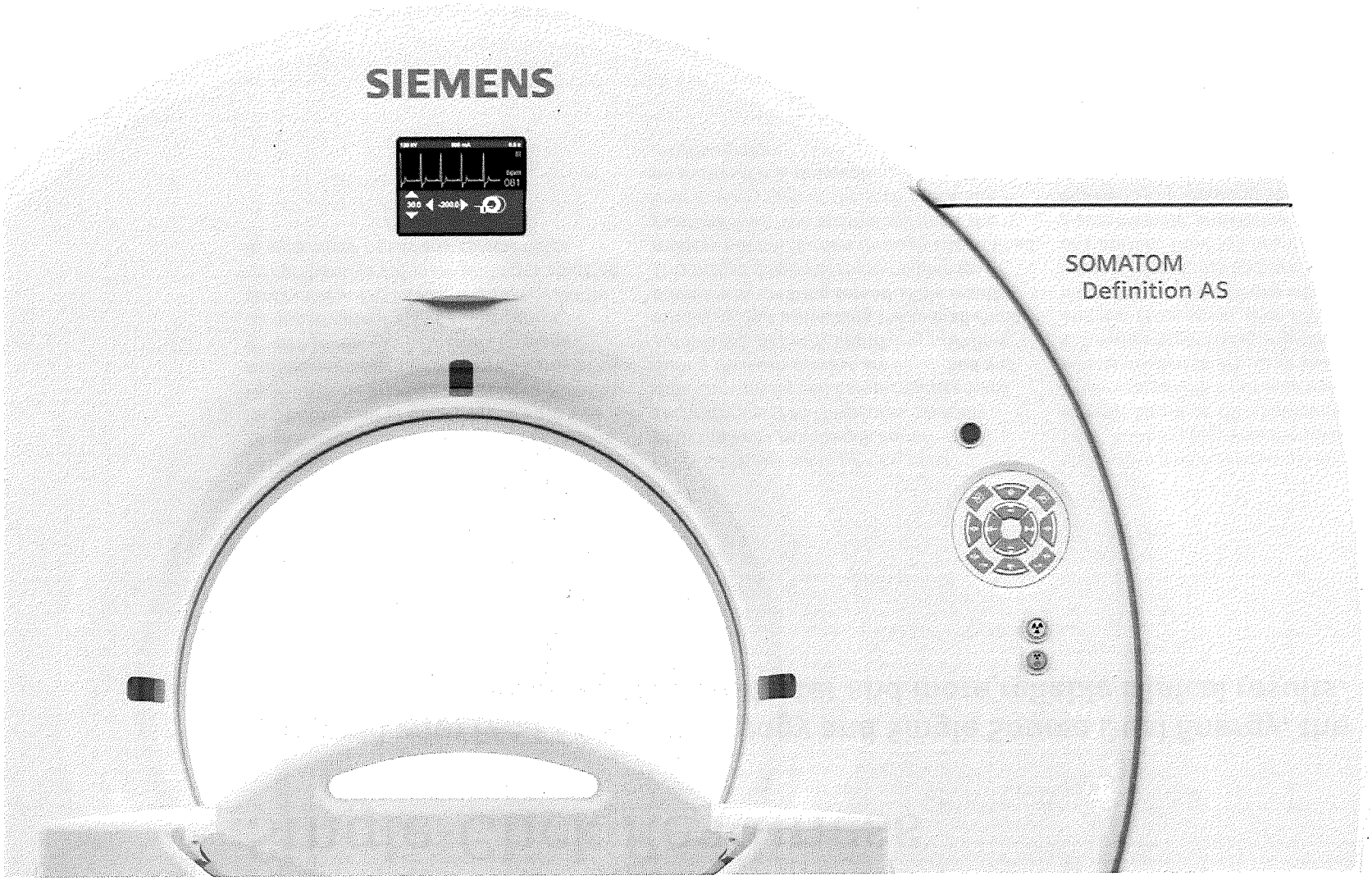
Answers for life.



SOMATOM Definition AS

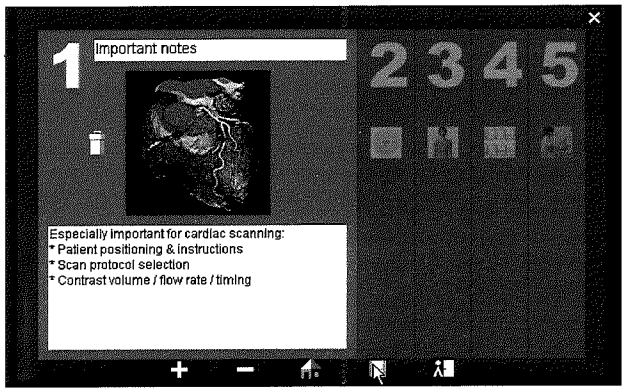
Maximize Outcome. Minimize Dose.

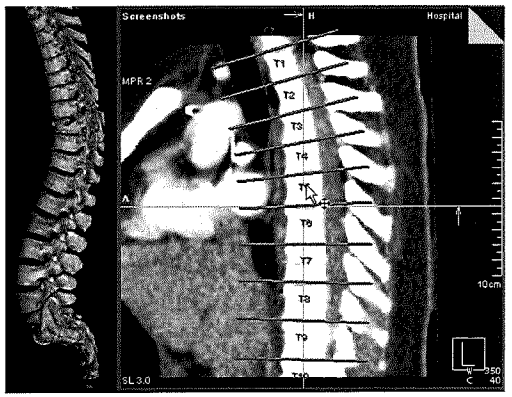




Product Benefits

FAST Cardio Wizard guides the user intuitively through the preparation of cardiac examinations with easy to follow step-by-step explanations.





Anatomically correct spine reconstructions are typically very time consuming procedures, as every spinal vertebrae and disc needs to have its own recon layer depending on its individual position. With FAST Spine, these manual steps can be simplified to just a single click.

Guided routine in cardiac CT

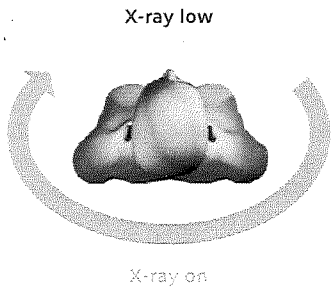
One of the most sophisticated examinations is cardiac CT. The SOMATOM Definition AS provides ideal specifications for cardiac CT with a rotation speed as low as 0.30 s and dedicated scan modes like Adaptive ECG Pulsing or the Adaptive Cardio Sequence. Additionally, FAST CARE technology offers a unique feature to support this particular workflow. The FAST Cardio Wizard uses a step-by-step approach showing how to achieve an optimal cardiac scan, either for training purposes or in a real-life situation, thus helping to set institutional standards and uniform quality.

Focus on the patient, not the system

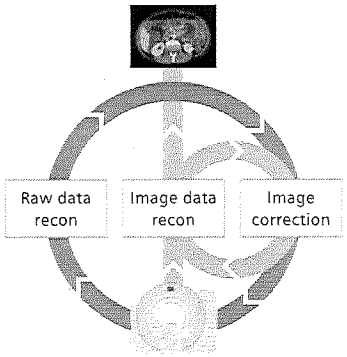
Unfortunately, complexity can become a source of inefficiency or, even worse, errors. Typical examples are spine exams. With conventional CT scanners, this means a lot of cumbersome, manual preparation steps, which make spine recon especially time-consuming. This is simplified to ideally just a single click with FAST Spine, saving not only valuable time, but making these tasks more reliable. At the end of the day, the SOMATOM Definition AS with FAST CARE technology helps to save highly valuable time, so that it can be spent on diagnosis and the interaction with patients.

Single Source Dual Energy as easy as a spiral scan

Dual energy makes it possible to add functional and material information to morphology. Now the combination of a routine-ready scan mode and enhanced low-kV image quality is available on every SOMATOM Definition AS. This offers new applications and opportunities to expand both the clinical and the research portfolio in everyday practice. And even better, the Dual Energy scan mode is as easy as a spiral scan.



X-CARE reduces the tube current close to zero within a certain range of projections, minimizing direct exposure for highly dose sensitive body regions.



SAFIRE

- More powerful dose reduction than image-based methods
- Well-established image impression
- Superior image quality
- Fast reconstruction in image and raw-data space and improved workflow with variable settings

Organ-sensitive dose protection

Previous attempts at dose reduction were very successful but did not specifically take into consideration highly dose sensitive areas such as women's breasts or the heart. Here, the SOMATOM Definition AS can selectively reduce exposure in sensitive areas with X-CARE. Furthermore, the gantry tilt protects dose sensitive organs like the eyes or the thyroid gland by moving them out of the x-ray beam in sequential or spiral scans. And finally, the Adaptive Dose Shield protects patients from unnecessary spiral over-radiation, which is crucial, for example, in cardiac examinations.

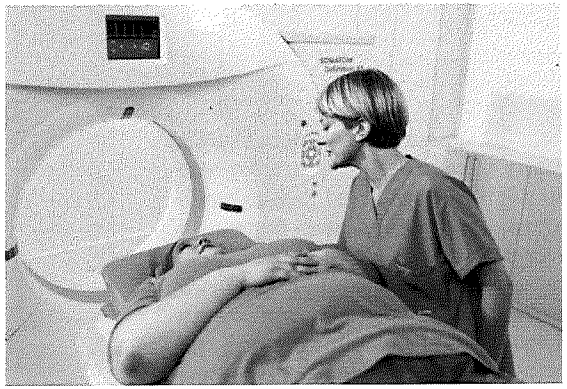
Iterative reconstruction with SAFIRE

Iterative reconstruction can achieve significantly increased image quality with reduced dose. The further integration of raw data beyond the initial reconstruction process, however, posed considerable restrains regarding the computational power available – up to now: with Sinogram Affirmed Iterative Reconstruction – SAFIRE* – Siemens introduced a new and unique approach to iterative reconstruction. Raw data information is utilized to enhance the image quality or reduce dose. This is made possible by a new reconstruction algorithm, as well as an image reconstruction system, delivering the required reconstruction power.

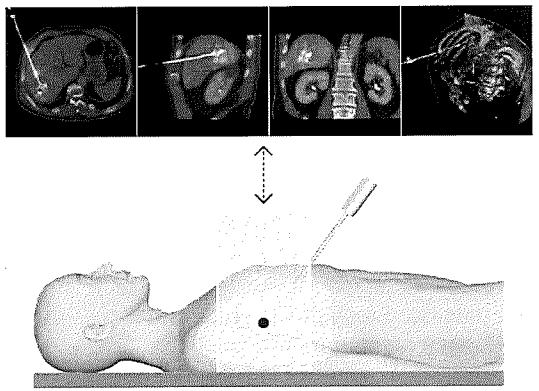
Dose-optimized Dual Energy scan

In order to avoid doubling the dose, both scans of the Dual Energy scan are performed at approximately half the dose utilizing all dose reduction functionalities: e.g. CARE Dose4D, SAFIRE, and Adaptive Dose Shield. The result is a dose-optimized Dual Energy scan that helps to add functional and material information to morphology.

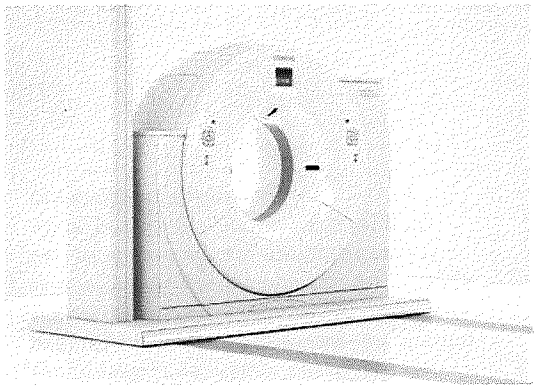
*In clinical practice, the use of SAFIRE may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. The following test method was used to determine a 4 to 60% dose reduction when using the SAFIRE reconstruction software: noise, CT numbers, homogeneity, low-contrast resolution, and high contrast resolution were assessed in a Gammex 438 phantom. Low dose data reconstructed with SAFIRE showed the same image quality compared to full dose data based on this test. Data on file.



The SOMATOM Definition AS delivers clinical excellence and opens CT for all patients - regardless of the given conditions.



Adaptive 3D Interventions offers real time 3D during intervention procedures.



The Sliding Gantry solution can serve two rooms with one CT

Open for intervention

Intervention in CT has established itself in recent years. Over 30% of existing SOMATOM Definition AS customers use the Siemens' unique intervention solution. It puts users in full control in any plane with 3D-guided interventions. Additionally, it delivers a more accurate overview of needle position and surrounding organs during difficult procedures. All this can be done without leaving the patient's side, managing the entire procedure with just the touch of a button with i-Control. With 3D guided guidance for minimally invasive procedures, the system makes interventions more accurate, thus safer and, in the end, more efficient.

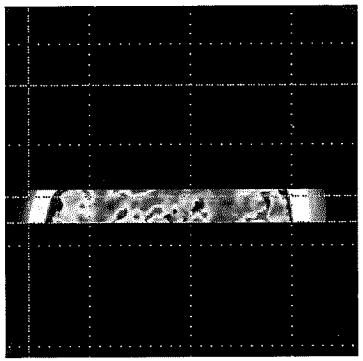
Open for radiation therapy

Over recent years, computed tomography has become the preferred choice for virtual simulation. Radiation therapy is evolving towards more precise and more powerful treatment delivery techniques. With the SOMATOM Definition AS, Siemens offers an outstanding versatile large bore that fulfills the needs both of radiation therapy and general diagnostics. With the RT Pro Edition, dedicated features have been developed for high-end radiation therapy planning. On the other hand, the system can serve as a perfect back-up system for radiology if needed.

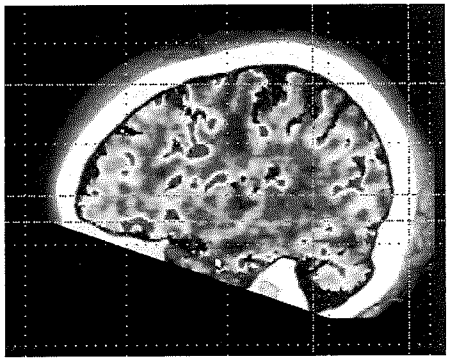
Open for specialized clinical settings

Nevertheless, there are clinical settings where a regular CT reaches barriers that seem to be insuperable. Not the SOMATOM Definition AS. The system can even be mounted as a Sliding Gantry, offering access to solutions such as two rooms being served with one gantry. Dedicated high-end surgery settings in combination with surgery tables can be realized, opening new paths into completely new directions. It enables high-resolution CT imaging to be utilized during surgical procedures without the need to move the anaesthetized patient.

syngo Volume Perfusion CT Neuro



Conventional Perfusion



Adaptive 4D Spiral Perfusion

Fast answers

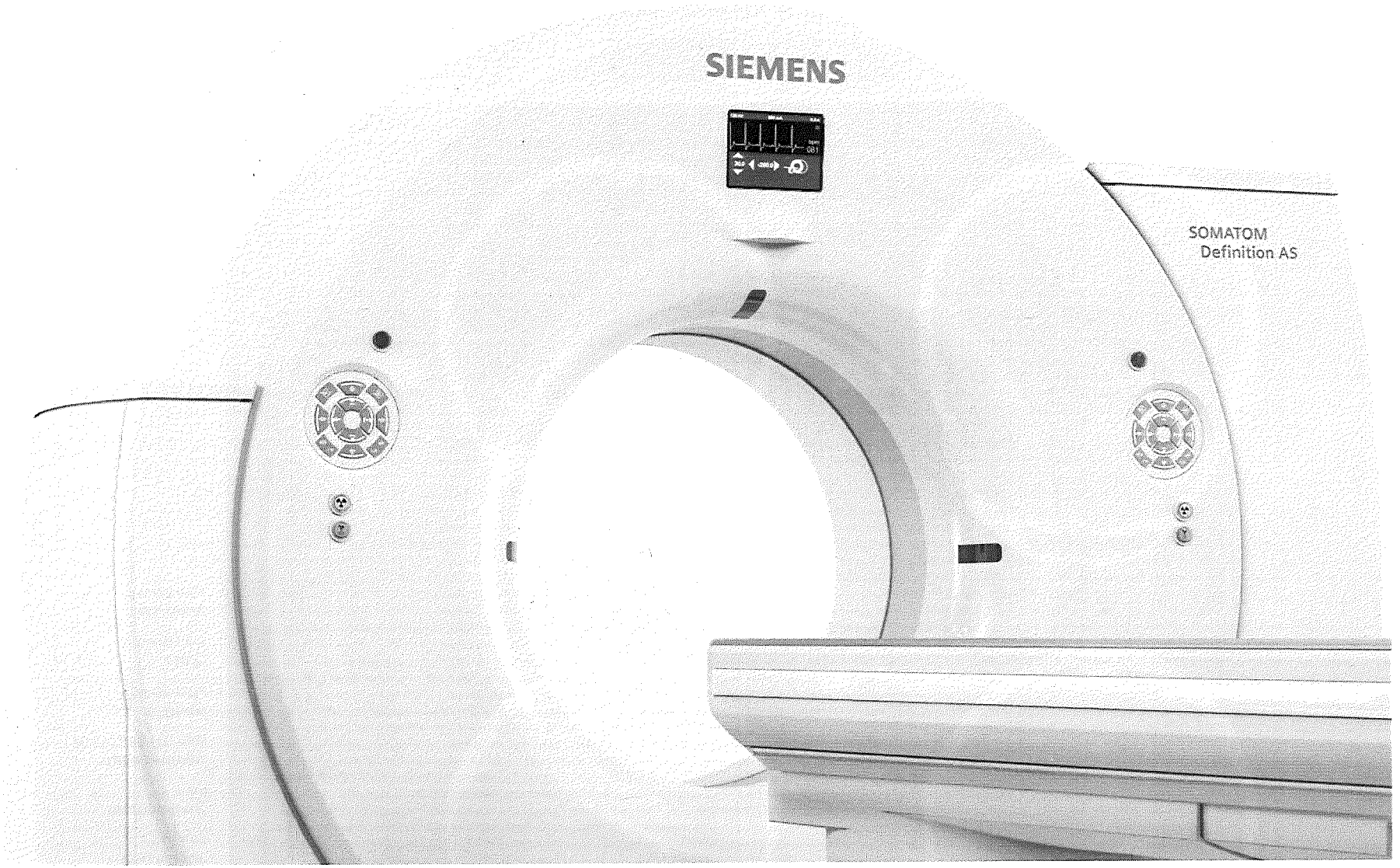
Using the SOMATOM Definition AS together with the CT Neuro Engine leads to unsurpassed workflow efficiency delivering fast answers to fundamental questions in stroke. These questions in stroke assessment vary: Is it caused by bleeding, what size and location has a possible clot, how big is the infarct and what does the blood flow look like in a dynamic way? The CT Neuro Engine offers a complete diagnostic stroke solution.

High precision and speed

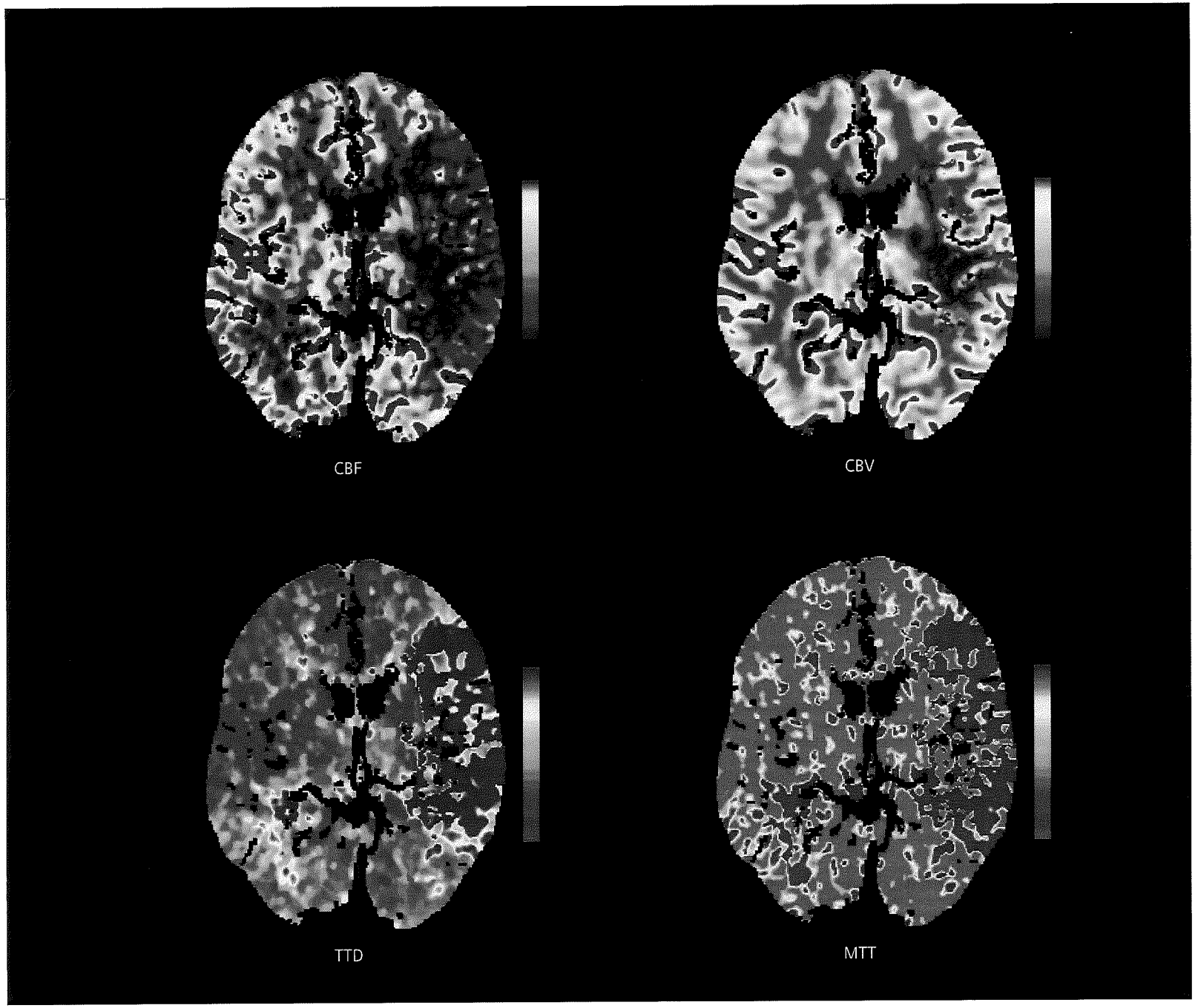
Innovations such as whole brain CT Perfusion, Neuro BestContrast, or Dual Energy applications have dramatically changed the diagnostic approach for reading physicians by enabling new indications and improved times in the examination of patients with acute neurological diseases. In stroke evaluation, "time is brain." The CT Neuro Engine helps users answer the key questions so they can decide on optimal treatment – with high precision and speed.

* *syngo*.via can be used as a stand-alone device or together with a variety of *syngo*.via-based software options, which are medical devices on their own rights. These products are pending regulatory clearance in some countries and therefore not yet commercially available in all countries. Usage of *syngo*.via in an operating room or for an emergency case requires customers to provide respective emergency measures in case of non-availability of system or network.

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



Clinical Images



University of Goettingen, Goettingen, Germany

system:
SOMATOM Definition AS+

collimation:
32 x 1.2 mm

scan time:
45.0 s

scan length:
84 mm

rotation time:
0.6 s

tube settings:
80 kV, 200 eff. mAs

CTDIvol:
218.99 mGy

DLP:
2505 mGy cm

eff. dose:
5.3 mSv

Volume Perfusion CT –
VPCT images show significantly reduced blood flow, along with a prolonged time to drain and a mean transit time with partially reduced blood volume in the left MCA territory.

system:
SOMATOM Definition AS+

collimation:
128 x 0.6 mm

scan time:
7.0 s

scan length:
677 mm

rotation time:
0.5 s

tube settings:
120 kV, 186 eff. mAs

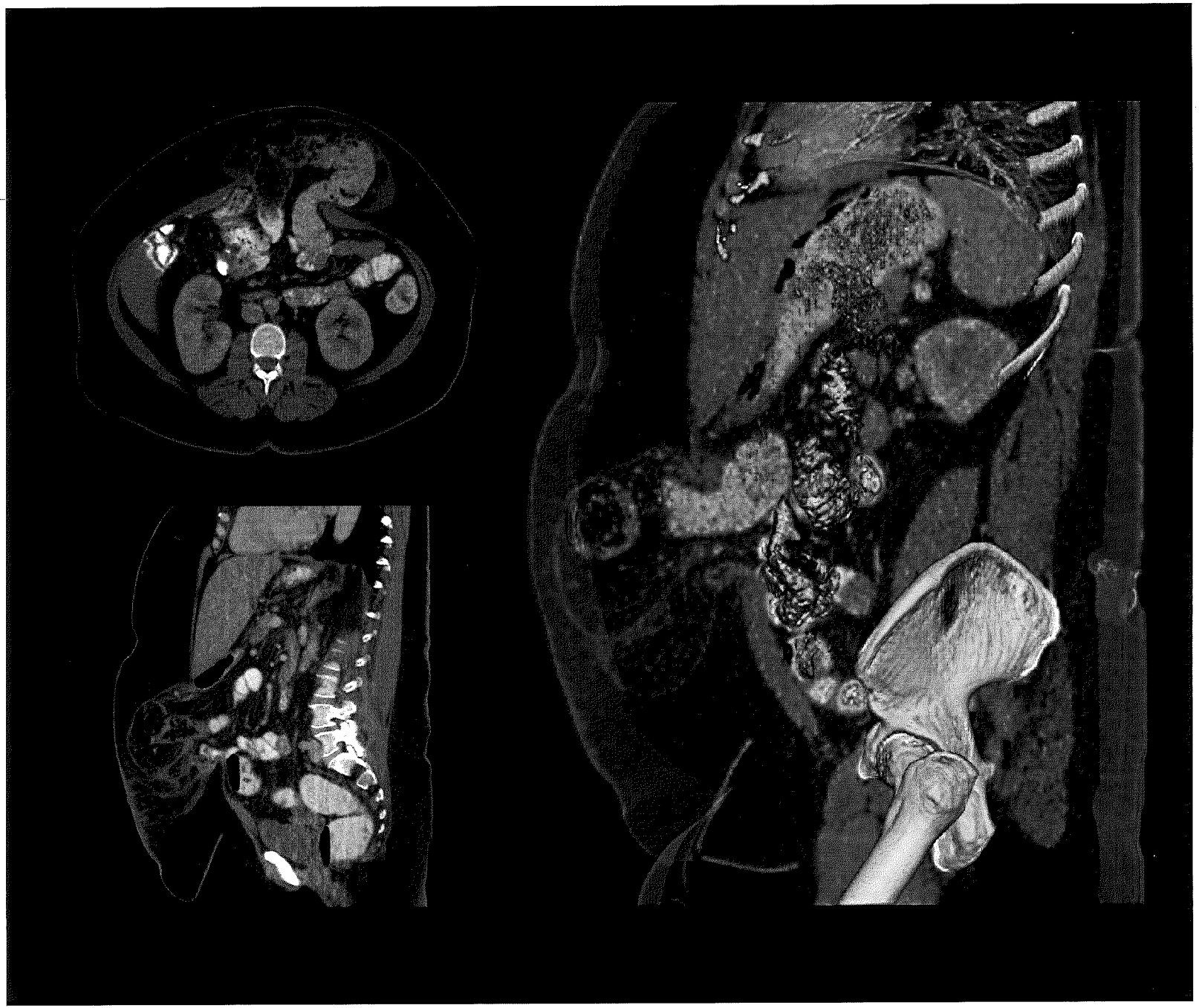
CTDIvol:
12.59 mGy

DLP:
889 mGy cm

eff. dose:
13.34 mSv

Polytrauma CT –
MPR images present multiple costal and spinal fractures with vertebral subluxation, a C2- fracture , and a right-sided pleural effusion with pulmonary atelectasis.

University of Radiology Diagnostic, Salzburg, Austria



system:
SOMATOM Definition AS+

collimation:
128 x 0.6 mm

scan time:
9.0 s

scan length:
506 mm

rotation time:
0.5 s

tube settings:
120 kV, 361 eff. mAs

CTDIvol:
23.83 mGy

DLP:
1304 mGy cm

eff. dose:
19.56 mSv

CT for Obesity –
MPR images show an abdominal hernia in an obese patient.

University Erlangen Radiologie, Erlangen, Germany

system:
SOMATOM Definition AS+

collimation:
128 x 0.6 mm

scan time:
3.0 s

scan length:
103 mm

rotation time:
0.22 s

tube settings:
100 kV, 123 eff. mAs

CTDIvol:
4.02 mGy

DLP:
42 mGy cm

eff. dose:
0.56 mSv

Cardiac CT –
VRT & Curved MPR images reveal a stenosis in the mid-LAD.

University Erlangen Radiologie, Erlangen, Germany

system:
SOMATOM Definition AS 64

collimation:
64 x 0.6 mm

scan time:
6.02 s

scan length:
277.5 mm

rotation time:
0.5 s

tube settings:
70 kV, 141 eff. mAs

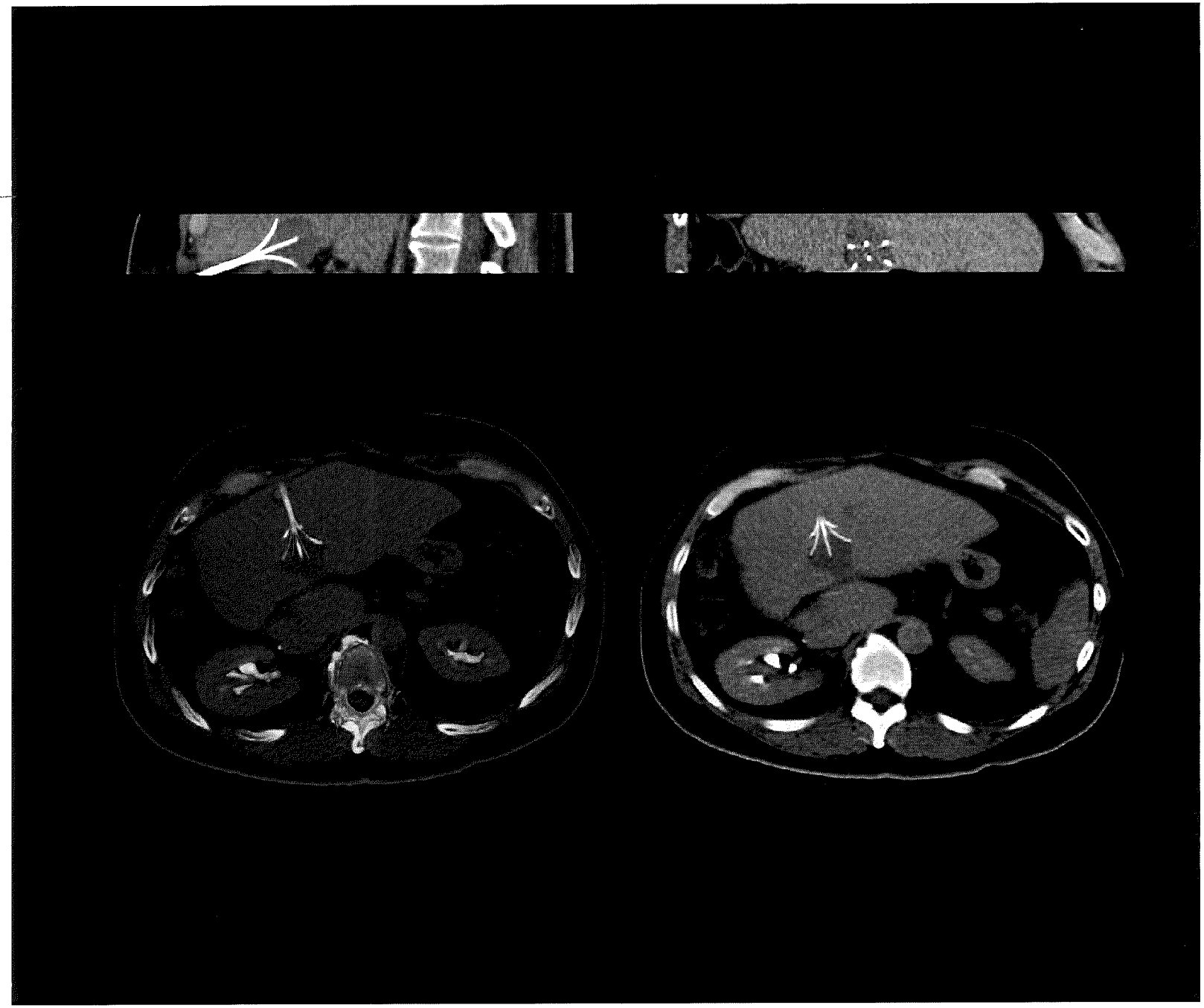
CTDIvol:
1.85 mGy

DLP:
55 mGy cm

eff. dose:
0.77 mSv

CARE kV CT –
Excellently enhanced images, using 70 kV and SAFIRE, allow reliable exclusion of a PE, although only 60 mL contrast was applied.

Department of Diagnostic and Interventional Radiology, Goethe University Frankfurt, Germany



system:
SOMATOM Definition AS 20

collimation:
16 x 1.2 mm

scan time:
1.0 s

scan length:
31.5 mm

rotation time:
0.5 s

tube settings:
120 kV, 143 eff. mAs

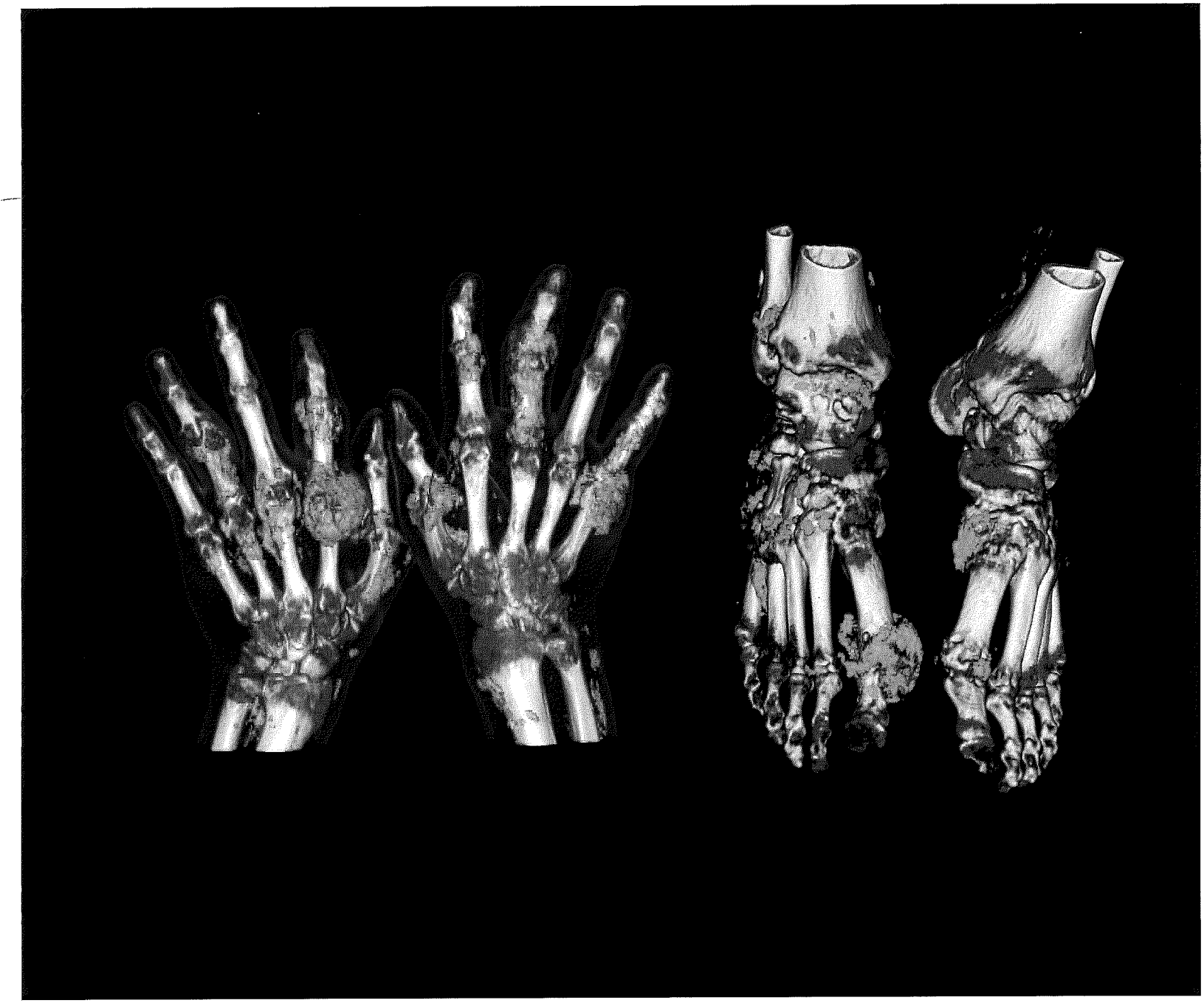
CTDIvol:
10.46 mGy

DLP:
84 mGy cm

eff. dose:
1.26 mSv

3D Interventional CT –
VRT & MPR images demonstrate the RFA needle electrode in three dimensions, as it is accurately positioned into a liver tumor.

University Erlangen Radiologie, Erlangen, Germany



Nan Xi Shan Hospital, Guilin, P.R. China

system:
SOMATOM Definition AS+

collimation:
128 x 0.6 mm

scan time:
5.0 s

scan length:
220.5 mm

rotation time:
1.0 s

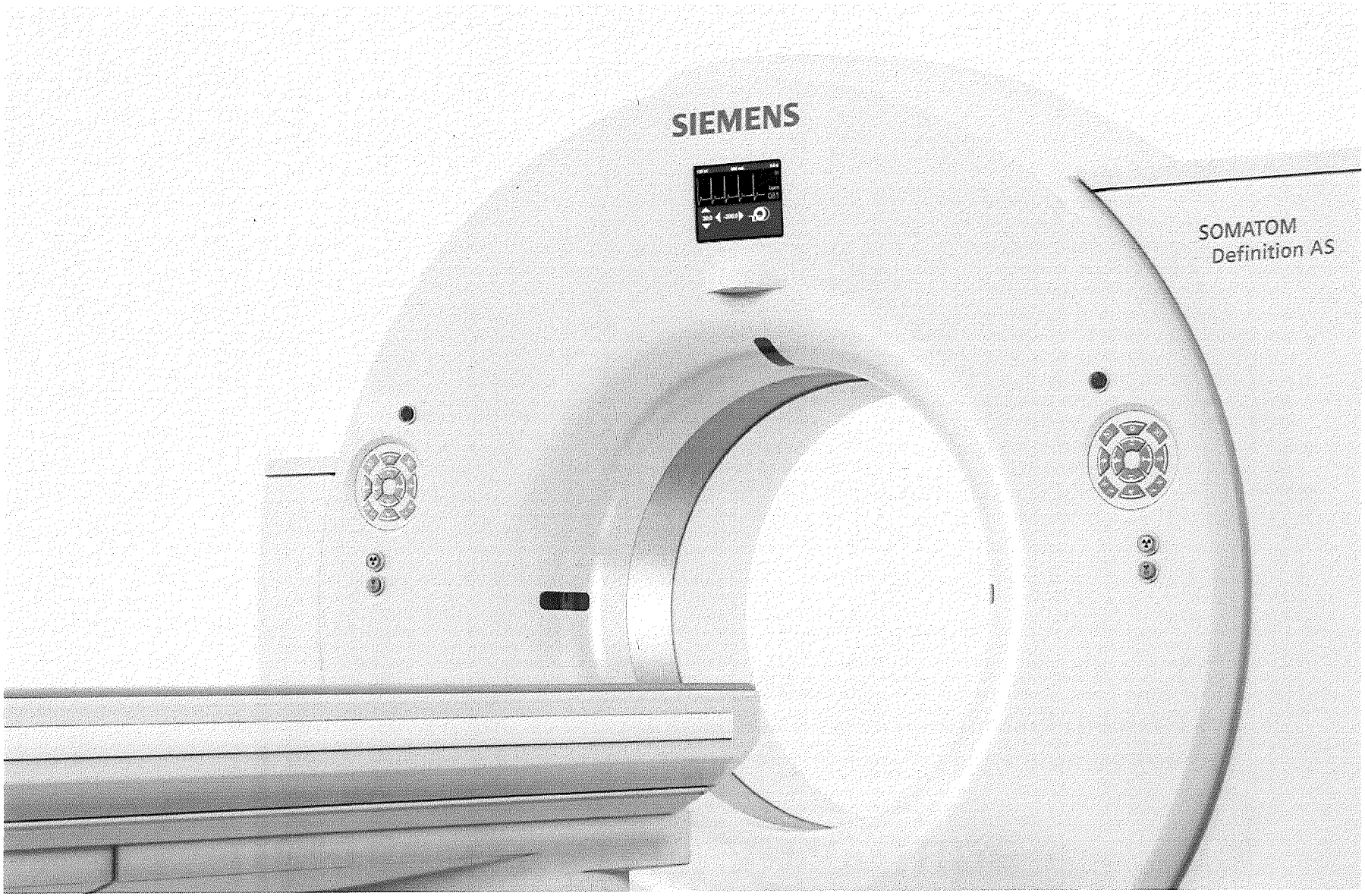
tube settings:
80 kV / Sn 140 kV
178 / 43 eff. mAs

CTDIvol:
3.32 / 4.46 mGy

DLP:
71 / 95 mGy cm

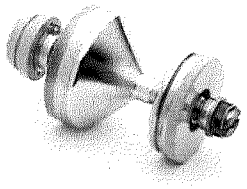
eff. dose:
0.06 / 0.08 mSv

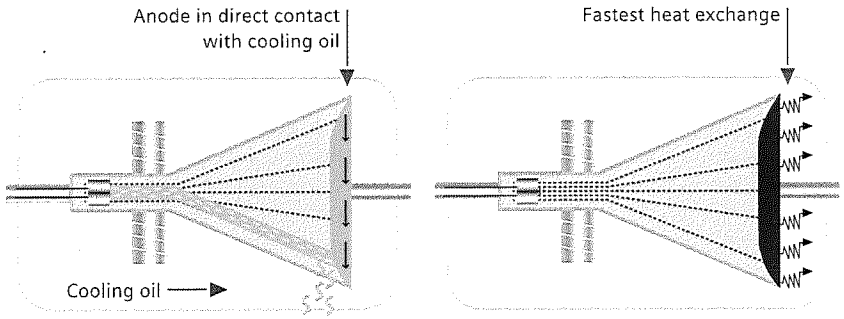
Dual Energy CT –
3D images of hands and feet, of a patient with chronic gout demonstrate extensive tophaceous deposits.



Core Technology

The STRATON tube enables long high-power scans without cooling delays.





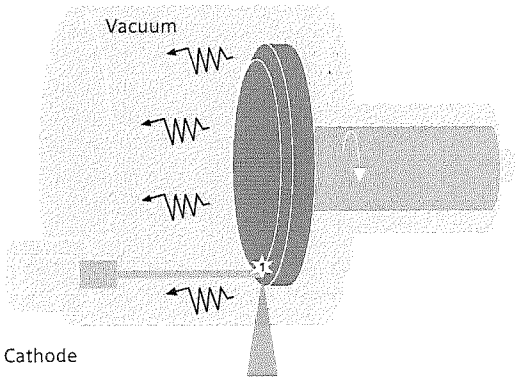
STRATON tube design. The backside of the anode can be cooled directly. Therefore, large heat storage capacity is not necessary, which allows for a very compact design.

No cooling delays

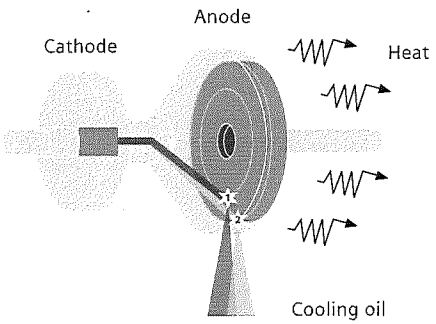
The specific construction of the anode plate constitutes an outer wall of the rotating tube housing; it is therefore in direct contact with the cooling oil and can be efficiently cooled. This way, very high power of up to 100 kW and a very high heat dissipation rate of 7.3 MHU/min are achieved. This eliminates the need for heat storage in the anode, which consequently has a heat storage capacity close to zero (0.6 MHU). Thanks to the fast cooling, the system can perform long high-power scans in rapid succession without cooling delays. The STRATON tube completely cools down to its original state within 20 seconds.

Wide spectrum of selectable tube voltages – 70 kV

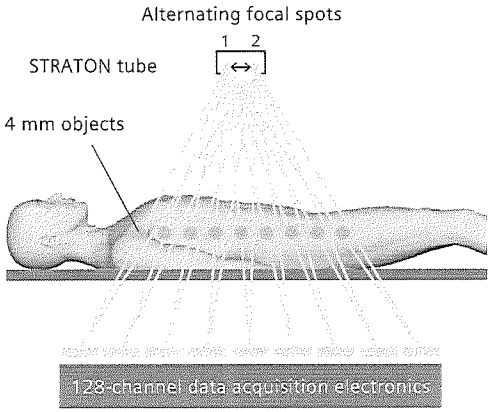
The STRATON tube offers a spectrum of selectable tube voltages from 70 kV up to 140 kV. With 70 kV, Siemens has introduced a tube voltage for optimized X-ray spectra also in the smallest patients. Low tube voltages are especially beneficial for saving dose in small patients and children who are most sensitive to radiation. It ideally partners with CARE kV, another core technology of the system.



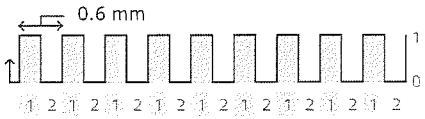
Conventional tube technology.



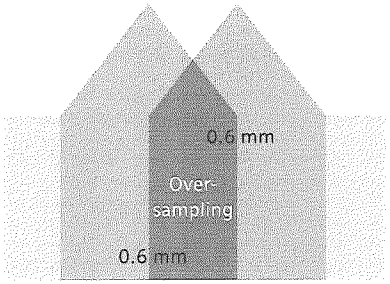
STRATON X-ray tube with z-Sharp generating two distinct X-ray projections.



Measured signal per detector element



Resulting resolution



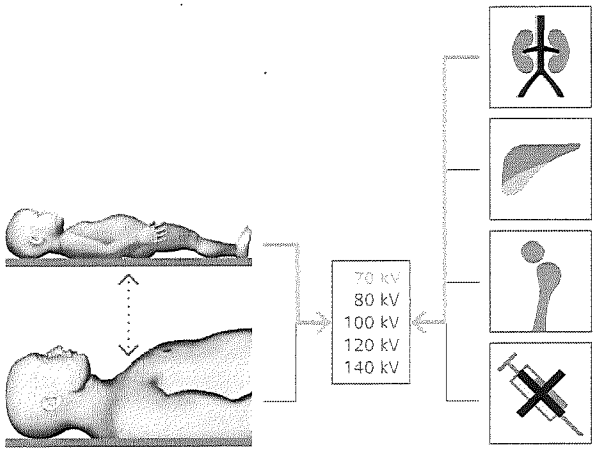
Oversampling

Higher resolution and reduction of artifacts

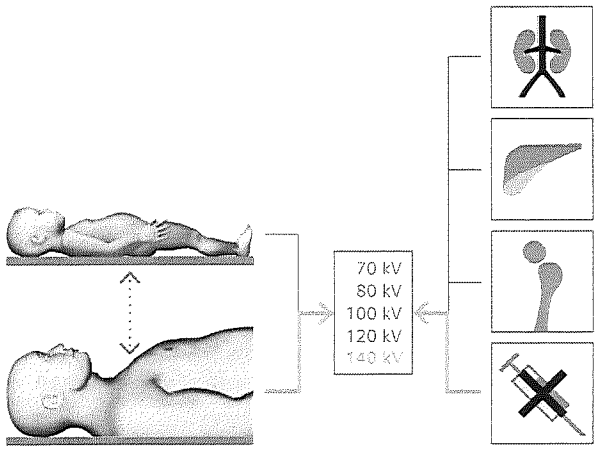
The simultaneous acquisition leads to twice the number of overlapping slices, which makes possible an increase of longitudinal resolution and reduction of spiral artifacts independent of the selected pitch. Besides being more effective in increasing the resolution in z-direction, this approach is also much more flexible, since it can be utilized in virtually all scan modes. The result is the acquisition of twice the number of slices with less artifacts and higher resolution.

Eliminating windmill-artifacts

Prevention of artifacts by z-Sharp's double z-sampling technology also facilitates neurology examinations. Up to now, windmill-artifacts often occurred in spiral CT examinations of the head, for example in CT angiography examinations for aneurysms, of the neck, and of the thorax. Whithout imposing restrictions to pitch, z-Sharp technology eliminates windmill-artifacts that originate when the X-ray beam penetrates the edges of bones. CTAs of the carotid arteries and the circle of Willis can now be routinely performed at a high pitch.



Example 1: For a contrast media enhanced vessel examination of a small patient CARE kV suggests a scan with 70 kV and sets the other values accordingly.



Example 2: For a non-contrast examination of a large patient, CARE kV suggests a scan with 140 kV and sets the other values accordingly.

Automated kV setting for best image quality

The system's proposal is based on the attenuation as measured in the topogram and the user-defined acquisition type (non-contrast, bone, soft tissue, vascular). The main goal is to keep the CNR, the key parameter for image quality, the same. For each patient exam, the topogram and the corresponding attenuation information are used to determine the optimal kV. Even in bariatric patients, CARE kV sets the parameters to make full use of the system's reserves to optimize CNR and acquire the best image quality possible for the patients.

Dedicated pediatric scanner settings

Reducing the tube voltage helps to reduce radiation exposure to patients. While other tubes are limited to a minimum voltage setting of 80 kV, with the STRATON tube the voltage range is extended as low as 70 kV. This helps to further reduce radiation dose to small pediatric or neonate patients. These dedicated pediatric scan modes, bundled with CARE kV and specific pediatric CARE Dose4D curves and protocols, take care of the well-being of our youngest patients. Overall with these features, an additional dose reduction of up to 60% is possible.

Fully customizable

CARE kV is, of course, fully customizable, meaning that users can not only set their individual quality reference mAs, but can also choose the degree of system assistance between none, semi, and full. As the complete SOMATOM Definition AS system, it offers full flexibility to users and adapts to their specific needs and clinical challenges.

Improved operation with User Services

Personalized education and training are the key to more expertise, greater efficiency, and higher productivity of the system operators. In addition, dedicated consultancy services facilitate further improvement of system usage. Optimize CARE CT, for example, is a comprehensive program to help customers reduce radiation in CT scanning. The program provides expert insights, methods, and tools that help customers develop a customized roadmap towards improving their CT dose.

Optimized utilization with Management Services

Increased workflow optimization and better productivity through process optimization and consulting help improve efficiency, system utilization, and return on investment. Utilization Management Consulting combines quantitative data from the Utilization Management report with technical experience and radiological workflow management. Customers can then learn about their strengths and improvement potential across all professional groups.


SIEMENS
SOMATOM
Definition AS

Attachment B

Equipment Use Documentation

University CT Volume	
15-Feb	1,422
15-Mar	1,407
15-Apr	1,390
15-May	1,445
15-Jun	1,463
15-Jul	1,598
15-Aug	1,556
15-Sep	1,339
15-Oct	1,348
15-Nov	1,338
15-Dec	1,558
16-Jan	1,506
Total	**17,370**

Attachment C

Equipment Vendor Quote

SIEMENS

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (336) 856-9995

SIEMENS REPRESENTATIVE
Edwin Winicki - (336) 688-0978

Customer Number: 0000035965

Date: 1/25/2016

CAROLINAS HEALTHCARE SYSTEM
1000 BLYTHE BLVD
CHARLOTTE, NC 28203

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.

Quote Nr:	**1-D2QKX2 Rev. 1**
Trade:	**GE Lightspeed 16**
Terms of Payment	**00% Down, 80% Delivery, 20% Installation**
	Free On Board: Destination
Purchasing Agreement	**Premier Purchasing Partners**
Terms and Conditions	**Premier terms and conditions apply**
Proposal Valid Until	**9/30/2016**

Somatom Definition AS-64 with Interventional Suite

Qty	Part No.	Item Description
1	14444263	**SOMATOM Definition AS (64slice)** The SOMATOM Definition AS (64-slice configuration) is Siemens' state-of-the-art single source CT that provides the possibility to maximize clinical outcome and to minimize radiation dose. The unique STRATON X-ray source utilizes an electron beam that is accurately and rapidly deflected, creating two precise focal spots alternating 4,608 times per second. This doubles the X-ray projections reaching each detector element. The two overlapping projections result in an oversampling in z-direction. The resulting measurements interleave half a detector slice width, doubling the scan information without a corresponding increase in dose. Siemens' proprietary UFC (Ultra Fast Ceramic) detectors and the corresponding 64-slice detector electronics enable a virtually simultaneous readout of two projections for each detector element - resulting in a full 64-slice acquisition. This sampling scheme is identical to that of a 64 x 0.3 mm allowing for reconstruction of 192 slices using 0.1 mm reconstruction interval increment The fast rotation time of 0.33 seconds (0.3 s optional) delivers excellent temporal resolution. The SOMATOM Definition AS is set to raise the standard of patient-centric productivity with FAST CARE Technology. With Siemens' FAST - Fully Assisting Scanner Technologies - the SOMATOM Definition AS can simplify typically time consuming and complex procedures during a CT examination: the scanning process gets more intuitive and the results become more reproducible. The CARE technology includes many unique features like CARE kV that sets the ideal voltage for every examination and adjusts the respective scan parameters or industry's first Adaptive Dose Shield that prevents clinically irrelevant over radiation in spiral scanning.
1	14420773	**FAST CARE Platform** Siemens' unique FAST CARE platform is set to raise the standard of patient-centric productivity. Utilizing FAST -

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Qty	Part No.	Item Description
		Fully Assisting Scanner Technologies -, typically time-consuming and complex procedures during the scan process are extremely simplified and automated, not only improving workflow efficiency, but optimizing the overall clinical outcome by creating reproducible results, making diagnosis more reliable and reducing patient burden through streamlined examinations. Siemens' desire for as little radiation exposure as possible lies at the heart of the CARE - Combined Applications to Reduce Exposure - research and development philosophy offering a unique portfolio of dose saving features, many of them being introduced as industry's first.
1	14420771	**CARE Child** Dedicated pediatric CT imaging, including 70 kV scan modes and specific CARE Dose4D curves and protocols
1	14433993	**FAST Planning #AWP** Direct, organ-based setting of scan and recon ranges for a faster and more standardized workflow
1	14419142	**Workstream 4D #AWP** WorkStream 4D further enhances the already superb workflow of the SOMATOM Definition AS CT system 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	14419144	**DICOM SR Viewer #AWP** The DICOM SR (structured report) Viewer allows to read reports created with specific applications (e.g. Circulation, Lung Care, Calcium Scoring and Onco) without the application itself being on the respective computer.
1	14420824	**Standard IRS** Reconstruction computer for the preprocessing and reconstruction of the CT raw data. The reconstruction computer contains a cluster of 2 high-performance GPU boards performing the preprocessing and reconstruction of the CT data. The raw data memory is 900 GByte. The peak recon performance is 40 frames/sec.
1	14420766	**SAFIRE #AWP** The Sinogram Affirmed Iterative Reconstruction (SAFIRE) enhances spatial resolution, reduces image noise and increases sharpness by introducing multiple iteration steps in the reconstruction process. The resulting superior image quality enables to reduce dose by up to 60%*. *In clinical practice, the use of SAFIRE may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. The following test method was used to determine a 54 to 60% dose reduction when using the SAFIRE reconstruction software. Noise, CT numbers, homogenity, low-contast resolution and high contrast resolution were assessed in a Gammex 438 phantom. Low dose data reconstructed with SAFIRE showed the same image quality compared to full dose data based on this test. Data on file.
1	14444243	**iMAR #AWP** The iMAR metal artifact reduction algorithm combines three successful approaches (beam hardening correction, normalized sinogram inpainting and frequency split). This allows to reduce metal artifacts caused by metal implants such as coils, metal screws and plates, dental fillings or implants. iMAR is compatible with extended FoV, the extended CT scale as well as the newest dose reduction feature. Along with the new algorithm comes the simple user interface of iMAR enabling easy reconstruction of clinical images with reduced metal artifacts.
1	14408111	**Extended Field of View #AWP** Software program with special reconstruction algorithms that allow for visualization of objects using a FOV up to 78 cm (non-diagnostic image quality). License to use software on a single unit.
1	14408152	**UHR** UHR mode delivers Ultra High resolution in plane of up to 24lp/cm for high defined imaging of small structures such as inner ear, joints or fractures of the bone
1	14408329	**CT Replacement AS** SOMATOM Definition AS base configuration.

Qty	Part No.	Item Description
1	14408032	**Rear cover incl. gantry panels** Rear Cover including gantry control panels with control functionality from the backside.
1	14408094	**Keyboard English** Keyboard in the above-mentioned language.
1	14408023	**Cooling System Water** Water heat exchanger for the dissipation of heat loss generated in the gantry to an environmentally friendly cooling water circulation system. This optimizes system availability independently of the cooling water flow rate and temperature. System operation temperature 4 - 16 degrees C and 500 - 2500 l/h flow rate.
1	14408026	**Hose pipe insulated 30 m** Hose pipes to connect the "Cooling System" with the gantry.
1	14408031	**Cable loom 25 m** Cable loom used to connect the power distribution system (PDS) with the gantry.
1	14420777	**Patient Table 2000 mm** Patient table to support up to 200cm scan range. Motor-driven table height adjustment from min. 48 cm to max. 92 cm, longitudinal movement of the tabletop 200 cm in increments of 0.5 mm, positioning accuracy +/- 0.25 mm from any direction. Horizontal scan range 200 cm. Table height can be controlled alternatively by means of foot switch (2 each on both sides of the patient table). In the case of emergency stop or power failure, the tabletop can also be moved manually in horizontal direction. Max. table load: 227 kg/500 lbs, Table feed speed: 2-200 mm/s, Distance between gantry front and table base 40 cm. Positioning aids: Positioning mattress, mattress protector, head-arm support (inclusive cushion), and non-tiltable head holders with positioning cushion set, patient restraining system for head fixation, restraining-strap set with body fixation strap that can be directly connected to the patient table top, headrest, table extension with positioning mattress, knee-leg support.
1	14420929	**Mattress for Patient Table** For the comfortable positioning of the patient on the CT table.
1	14408101	**Computer Desk #AWP** New CT desk to accommodate the control components and color monitor. Width: 1200 mm, Depth: 800 mm, Height: 720 mm.
1	14408102	**Computer Cabinet #AWP** New cabinet to accommodate the computer system and UPS. Matched to the design of the control console table. Width: 800 mm, Depth: 800 mm, Height: 720 mm
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_STD_RIG_INST	**CT Standard Rigging and Installation** This quotation includes standard rigging and installation of your CT new system. Standard rigging into a room with reasonable access, as determined by Siemens Project Management, during standard working hours (Mon. - Fri./ 8 a.m. to 5 p.m.) It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents. Any special rigging requirements (Crane, stairs, etc.) and/or special site requirements (e.g. removal of existing

Qty	Part No.	Item Description
		systems, etc.) is an incremental cost and the responsibility of the Customer. All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the site assessment and remain the responsibility of the Customer.
1	CT_PR_AS64X_CC_BON	**AS64 Excel Comp Conversion Bonus**
1	CT_INITIAL_32	**Initial onsite training 32 hrs** Up to (32) 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. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. 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.
1	CT_FOLLOWUP_32	**Follow-up training 32 hrs** Up to (32) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. 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.
2	CT_TECH_SYMP	**Siemens Technologists Symposium** This accredited annual imaging professional symposium will provide multi-modality clinical education sessions for (1) attendee. Registration, economy airfare, and lodging are included for (1) attendee. All arrangements must be arranged through Siemens designated travel agency. 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.
1	CT_ADD_16	**Additional onsite training 16 hours** 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.
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 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_LUNGIMAGINGAS64	**Lung Imaging** This SOMATOM Definition scanner offers two specific scan protocols to provide Lung Imaging at 1.5 mGy CTDI or greater and for use with post-processing applications
1	ACCESS_PROTECT	**Access Protection** Scan Protocols are password protected allowing only authorized staff members to access and permanently change protocols
1	ADAPT_DOSE_SHIELD	**Adaptive Dose Shield** Adaptive Dose Shield for spiral acquisition to eliminate pre- and post-spiral over-radiation.
1	CARE_DASHBOARD	**CARE Dashboard** Visualization of activated dose reduction features and technologies for each scan range of an examination to analyze and manage the dose to be applied in the scan
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

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Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (336) 856-9995

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Qty	Part No.	Item Description
1	CARE_KV	**CARE kV** CARE kV: First automated, organ-sensitive voltage setting to improve image quality and contrast-to-noise-ratio while optimizing dose and potentially reducing it by up to 60%.
1	CARE_PROFILE	**CARE Profile** CARE Profile: Visualization of the dose distribution along the topogram prior to the scan
1	DICOM_SR	**DICOM SR Dose Reports** DICOM structured file allows for the extraction of dose values (CDTIvol, DLP)
1	DOSE_ALERT	**Dose Alert** Dose Alert: As requested by the new release of the standard IEC 60601 3rd edition, the SOMATOM Definition automatically adds up CTDIvol and DLP 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: As requested by the new release of the standard IEC 60601 3rd edition, the SOMATOM Definition AS 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	FAST_ADJUST	**FAST Adjust** FAST Adjust: assists the user to handle system settings in a fast and easy way by automatically solving of conflicts within user defined limits by one single click on the FAST Adjust button. The limits for scan time and tube current per scan are defined via the Scan Protocol Assistant. FAST Adjust offers an undo functionality to return to previously set values.
1	FAST_SCAN_ASSIST	**FAST Scan Assistant** FAST Scan Assistant: An intuitive user interface for solving conflicts by changing the scan time, resp. the pitch and/or the maximum tube current manually.
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	PSPD250480Y3K	**Surge Protective Device (SPD)**
1	CT_ADDL_RIGGING	**Additional Rigging CT $7,020**
1	CT_SERV_CONTRACT	**Service Evolve Contract @ $31,200**
1	14408302	**Adapt. 3D Intervent. Suite Wireless** The complete solution for 2D and 3D non fluoroscopic and 2D fluoroscopic minimal invasive volume interventions. The Adaptive 3D Intervention Suite contains Adaptive 3D Intervention for 3D volume intervention. Intervention Pro for spiral and sequential non- fluoroscopic interventional procedures and complete organ coverage with maximal flexibility and with minimal single click effort i-Fluoro CT for CT allows for 2 dimensional interventional fluoroscopic procedures i-Control CT supports interventional procedures as independent remote unit Foot switch for radiation release (x-ray).
1	14420921	**Table Side Rails** Side rails enable the quick and easy attachment of additional accessories such as an infusion bottle holder and i-control intervention module to the standard patient table.
1	14408105	**Dual 19" Monitor #AWP** Second 19-inch monitor for the Acquisition workplace (AWP)

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Qty	Part No.	Item Description
1	14447353	**Dual Monitor Ceiling Support**

The dual monitor solution enables access to images and scan data while interacting with the patient in the scan room. The high resolution, flicker free, 19-inch (48 cm) color flat panel displays are mounted at the ceiling support.

The space-saving ceiling installation along with the large movement range of the support allow maximum operating convenience when positioning the monitor.

19" flat screen monitor (2x)

The 19" monitors support CT interventions and CT fluoroscopy with a display in the examination room.

Dual Monitor Ceiling Support

The Dual Monitor Ceiling support consists of: video transmitter, video receiver, power supply cable and a 30 m fiber-optic cable set for connecting the flat screen monitors. Displays suitable for medical diagnostic applications (room class 1 and 2 acc. To DIN 6868-157).

Ceiling Support Base

Ceiling support for the accommodation and safe installation of one or two flat screen monitors in the examination room.

Sell Price (excluding trade and freight) : $ 648,980
Freight and Rigging : $ 16,020
GE Lightspeed 16 Trade Value : $ ($65,000)
Final Price (including trade): $ 600,000

Estimated Tax (final tax is computed at time of installation): $ 43,500

Bayer HealthCare

Quotation

Quote To:
UNIVERSITY HOSPITAL
8800 N Tryon St
CHARLOTTE NC 28262-3300
UNITED STATES OF AMERICA

Bayer HealthCare LLC
1 Bayer Drive
Indianola, PA 15051

Quotation number: 0020019987
Customer number: 0000172176
Date: 02/12/2016
Page: 1

Valid from: 02/12/2016 to 08/30/2016

Trey Karn
Professional Sales Consultant
864-415-2397
trey.karn@bayer.com

TOTAL TAXES.....1,468.13
TOTAL SHIPPING:
3-Day= $133.67
2-Day= $141.86
Next Day= $312.48
Next Day AM= $624.96

We deliver according to the following terms and conditions: ***Currency:*** USD
Terms of payment: 30 d. w/o discount of inv. net
Terms of delivery: Free carrierFOB SHIPPING POINT

Item	*Part No*	*Qty*	*Unit Price*	*UoM*	*Amount*
1	60726807				
	SCT 322	1 PCE	49,500.00	1 PCE	49,500.00
	DUAL STELLANT W/CERTEGRA WKS OCS				
	Discount (Value)		20,290.00-		20,290.00-
	Discount (Value)		8,960.00-		8,960.00-
	Net value		20,250.00		20,250.00

If pricing and terms of this order are based upon your current Group Purchasing Organization (GPO) affiliation, any change to your current affiliation may require a new quote or updated terms and pricing.

When applicable, State and Local taxes will be calculated on the order. If you are exempt from taxes, contact customer support at 1(800)633-7231. Thank you for your order!

Bayer HealthCare

Quotation

Item	*Part No*	*Qty*	*Unit Price*	*UoM*	*Amount*
2	59943360				
	INS SCT CS	1 PCE	2,650.00	1 PCE	2,650.00
	INSTALLATION - STELLANT WITH OCS				
	Discount (Value)		250.00-		250.00-
	Net value		2,400.00		2,400.00
				Sub Total	22,650.00
				Total	22,650.00

NOTE: If using signed quote as a purchase order please complete the following information:

Print Name: _____

Signature: _____

Title: _____

PO #: _____

Phone #: _____

If pricing and terms of this order are based upon your current Group Purchasing Organization (GPO) affiliation, any change to your current affiliation may require a new quote or updated terms and pricing.

When applicable, State and Local taxes will be calculated on the order. If you are exempt from taxes, contact customer support at 1(800)633-7231. Thank you for your order!

Bayer HealthCare

BAYER PRODUCT TERMS AND CONDITIONS

If Customer is a member of a group purchasing organization ("GPO") who has a contract with Bayer, the terms of that GPO Agreement will supercede the terms herein.

The following terms and conditions will not apply to the license of Bayer's Informatics Software. Both Radiation Dose Management software (sometimes referred to as "RDM") and Contrast Dose Management (sometimes referred to as "CDM") software are subject to a separate license agreement.

1.Modifications. The prices and terms on this Quote are not subject to verbal changes or other agreements unless approved in writing by Bayer.

2. Acceptance. Bayer's products and services are sold only under the terms and conditions stated on this quotation. Acceptance of any Purchase Order is expressly and exclusively made conditional on your assent to these terms and conditions. Any different or additional terms and conditions that may appear in your Purchase Order or any other document sent by you, shall have no effect. Bayer expressly objects to and rejects all inconsistent or additional terms, conditions and limitations contained on any of your forms or other writings. If you do not communicate your objection to these terms and conditions in writing and within a reasonable time, or if you accept the goods covered by this Quote, you will be deemed to have accepted these terms and conditions and they will control in all instances. If the Products include embedded software or if you are purchasing software, BY HAVING THE SOFTWARE INSTALLED AND USING THE SOFTWARE PURCHASED HEREUNDER, YOU AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS QUOTE, DO NOT INSTALL OR USE THE SOFTWARE AND NOTIFY BAYER IMMEDIATELY.

3. Pricing. Prices are based on costs and conditions existing on the date of this Quote and may be changed by Bayer before final acceptance. The pricing for products provided pursuant to this Quote may reflect or be subject to discounts, rebates, or other price reduction programs. Please be advised that you are obligated to: a) fully and accurately disclose the amount of any such discounts, rebates, or other price reductions in your cost reports or claims for reimbursement to Medicare, Medicaid, or health care programs requiring such disclosure and b) provide such documentation to representatives of the Secretary of the Department of Health and Human Services and state agencies upon request. Unless noted otherwise, the value of any product listed as $0.00 on this Quote may constitute a discount that you should evaluate when filing such reports. You may request additional information from Bayer in order to meet your reporting or disclosure obligations, by writing to the address set forth in this Quote. All payments are due net thirty (30) days on the total invoiced amount. For all new customers Bayer requires a thirty percent (30%) pre-payment for all capital equipment orders, unless otherwise agreed to by Bayer. Bayer must approve any payment terms other than net thirty (30) days.

4. Shipping. All shipping dates are tentative. Bayer will make every reasonable effort to meet shipping dates referenced in this Quote. However, Bayer will not be liable for its failure to meet any such date.

5. Installation. The cost of installation is not included in the product price and is your responsibility unless otherwise stated. For details on equipment installation, you should consult with your Bayer Sales Representative or refer to your Products Manual, which is included with your equipment.

If this Quote includes installation of an overhead counterpoise system (OCS) it is your responsibility to ensure a suitable mounting location for the system. The counterpoise ceiling plate is required to be installed prior to Bayer installation of the counterpoise system and installed in accordance with the specifications listed in the installation manual. The OCS ceiling plate should always be installed by a qualified Structural Engineer and/or Architect. In addition, if applicable building codes require the use of a conduit, you are responsible for ensuring that a conduit is available prior to Bayer's installation.

If this Quote includes a Spectris Solaris with an Integrated Continuous Battery Charging System (iCBC), installation will require a standard power outlet in the scan room, or authorization to install a filter through the penetration panel.

6. License. If the Products include embedded software, or if you are purchasing software, Bayer grants to you a non-exclusive license to use such software provided by Bayer, solely in connection with, or to operate, the Products. Use of the software for any other purpose is strictly prohibited. This license is effective on the date you begin using the Products and software and will continue in effect unless you return the Products or software or if the license is terminated because

Please reference the quote number on your PO and fax to 412-406-0952

you breach any provision of these Terms. Upon termination you shall immediately cease use of all software and shall return the Products and software to Bayer. The software copyright is owned by Bayer and is protected by United States copyright laws and international treaty provisions. Bayer does not transfer title to the software to you, but retains the rights to make and license the use of all copies. You shall not copy, translate, disassemble, or decompile nor create or attempt to create, by reverse engineering or otherwise, the source code from the object code of the software. You are not permitted to modify or make derivative works of the software and ownership of any unauthorized modification or derivative work shall vest in Bayer.

7. Warranty. Bayer warrants that all new Bayer products are free from defects in workmanship or material under proper, normal use and service for a period of one year (12 months) from shipment, unless a longer period is provided on the warranty with the products, or as otherwise provided herein.

Bayer warrants that all refurbished Bayer products shall perform in accordance with the documentation provided, under proper, normal use and service for a period of the shorter of a) 90 days from installation or b) six months from shipment, unless a longer period is provided on the warranty with the products, or as otherwise provided herein.

If this Quote includes disposable products, Bayer's warranty shall be limited to repair or replacement of any defective disposable product upon receipt of the defective product and a Bayer Return Goods Authorization. You acknowledge that the disposables and the equipment are a system and your actions regarding your equipment may invalidate your warranty on the disposables.

During the warranty period, there shall be no charge for any action deemed necessary by Bayer, including parts, travel, or labor to fulfill the terms of the warranty, during local business hours of 8:30 a.m. to 5:00 p.m., Monday through Friday, except Bayer holidays.

Your actions may invalidate this warranty. If Bayer determines that an equipment or disposable problem is due to any of the following, you agree to pay Bayer for all labor, travel, material handling and shipping at Bayer's, or Bayer's agents, standard rates:

a) Malfunction or damage due to spillage of any type of fluid in or on the unit.

b) Malfunction due to operator error, including failing to follow specified provisions of the Operations Manual.

c) Malfunction or damage due to unauthorized modification or repair. Unauthorized actions may jeopardize functionality, reliability, or operator and patient safety. Therefore any claim caused by unauthorized modification or repair shall not be covered by this warranty and Bayer is relieved from any further obligation. Bayer must review and authorize all modifications and repairs. This service may be obtained by contacting the Bayer Service Department.

d) Malfunction or damage due to the use of non-Bayer or non-approved accessories. The use of accessories in connection with the equipment may jeopardize functionality, reliability or operator and patient safety. Therefore any claim caused by the use of non-Bayer or non-approved accessories (such as non-Bayer disposables or in the case of any PET/CT product, the use of vials or vial shields that are not approved by Bayer) shall not be covered by this warranty and Bayer is relieved from any further obligation.

e) Damage by fire, floods, or other disaster commonly known as "Acts of God".

f) If the Products include any Counterpoise system, any system malfunction, damage or failures due to improper installation or not meeting Bayer's specific requirements for level and plumb and/or loading as specified in the Bayer manuals.

g) If the Products include any Counterpoise system, any ceiling or wall support structure used to mount or support an Injector Head Counterpoise System is excluded from Bayer's warranty. Bayer does not in any way warrant such structure.

8. Warranty Exclusions. EXCEPT AS PROVIDED IN THE ABOVE WARRANTY SECTION, BAYER EXPRESSLY DISCLAIMS ALL WARRANTIES OR CONDITIONS OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE (WHETHER OR NOT BAYER IS AWARE OF YOUR INTENDED USE OF THE PRODUCT), AND ALL SUCH WARRANTIES ARE EXPRESSLY EXCLUDED. IN NO EVENT SHALL BAYER BE LIABLE FOR ANY LOST PROFITS

OR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OR OPERATION OF BAYER's PRODUCT OR SERVICE. Some states do not allow the exclusions on limitation of incidental or consequential damages, so the above limitations may not apply. This Limited Warranty gives you specific legal rights and you may also have other rights.

9. Software Warranty. If the Products include embedded software or if you are purchasing software, Bayer warrants that the software will substantially conform to the functional specifications contained in the Operations Manual for one year following delivery. This warranty shall not apply if you use the software in a manner that is not authorized or not in accordance with the user instructions or if you modify the Products or the software or if a party other than Bayer provides service to the Products or software. Bayer does not warrant that the software will operate uninterrupted or that it will be free from minor defects or errors that do not materially affect its performance. Your sole and exclusive remedy for any damages or loss in any way connected with the software whether due to Bayer's negligence or breach of any other duty shall be, at Bayer's option: i) to bring the performance of the software into substantial compliance with the functional specifications or ii) return of an appropriate portion of any payment by you with respect to the portion of the software that is not functioning.

10. Indemnification. Bayer agrees to indemnify, defend and hold you harmless from any liability, loss, expense, cost, claim or judgment (including attorneys fees), arising out of any claim for property damage, or personal injury or death where the product is alleged to have caused or contributed to the damage, injury or death, provided that this indemnification does not extend to injuries, damages or death to the extent caused by the negligence, reckless disregard or intentional acts of you or any third party.

11. Force Majeure. Bayer will not be responsible for delays or non-performance directly or indirectly caused by any acts of God, fire, explosion, flood, war, accident, action by governmental authority, inability to procure supplies and raw materials, delays in transportation, work stoppage, court order, and other causes beyond Bayer's reasonable control.

12. Compliance With Laws/Export. In addition to any rights and remedies specifically identified here in this Quote, Bayer shall have all rights and remedies conferred by law. Bayer shall not be required to perform its obligations under this Quote if you have defaulted (e.g. failed to pay) under this Quote or any other contract involving Bayer. This Agreement shall be construed in accordance with the laws of the Commonwealth of Pennsylvania, United States of America. You warrant that you are and will remain in compliance with all export and re-export requirements, laws and regulations of the United States of America and any other applicable export and re-export laws and regulations.

13. HIPAA. Bayer represents that it is not a Business Associate as defined in the Health Insurance Portability and Accountability Act ("HIPAA").The functions Bayer is required to perform hereunder do not require the use or disclosure of Protected Health Information ("PHI"). To the extent any disclosure of PHI does occur, it is incidental and covered under the incidental disclosure rule found in 45 CFR 164.502(a)(1). In addition, to the extent any such incidental disclosure does occur, Bayer agrees to keep all such information confidential.

Please reference the quote number on your PO and fax to 412-406-0952

Bayer HealthCare

Please reference the quote number on your PO and fax to 412-406-0952

Attachment D

Equipment Disposal Letter

SIEMENS

January 25, 2016

Carolinas Healthcare System
Attn: Ms. Lorie Lowder
Associate Vice President
Carolinas Medical Center - Northeast
920 Church Street, North
Concord, NC 28025

Dear Lorie Lowder,

The purpose of this letter is to confirm that Siemens Medical Solutions USA, Inc. (Siemens) will be responsible for removing your existing GE Lightspeed 16 CT with Serial Number 79197TY0 ("existing equipment") as part of your purchase of the Siemens Definition AS-64 for Carolinas Medical Center - University. The cost for the de-installation and removal is included in the price quotation for the replacement equipment, which totals $ 600,000 ($665,000 sale price minus $ 65,000 trade).

The system will be removed from Service by a broker designated by Siemens for either re-sale purposes or parts. The system will not be placed into Service by Siemens in North Carolina without proper state approvals.

Sincerely,

Edwin Winicki
Key Account Executive
Siemens Healthcare, USA

Siemens Healthcare, USA
51 Valley Stream Parkway
Malvern, PA 19351

www.SiemensMedical.com

Attachment E

Capital Cost Schedule and Architect Signature

PROPOSED TOTAL CAPITAL COST OF PROJECT

Project name: CHS University CT 1 Replacement

Provider/Company: Carolinas HealthCare System

A.	**Site Costs**		
(1)	Full purchase price of land		N/A
	Acres Price per Acre $		
(2)	Closing costs		N/A
(3)	Site Inspection and Survey		N/A
(4)	Legal fees and subsoil investigation		N/A
(5)	Site Preparation Costs		
	Soil Borings		
	Clearing-Earthwork		
	Fine Grade for Slab		
	Roads-Paving		
	Concrete Sidewalks		
	Water and Sewer		
	Footing Excavation		
	Footing Backfill		
	Termite Treatment		
	Other (Specify)		
	Sub-Total Site Preparation Costs		N/A
(6)	Other (Specify)		N/A
(7)	**Sub-Total Site Costs**		**N/A**
B.	**Construction Contract**		
(8)	Cost of Materials		
	General Requirements	Included	
	Concrete/Masonary	Included	
	Woods/Doors & Windows/Finishes	Included	
	Thermal & Moisture Protection	Included	
	Equipment/Specialty Items	Included	
	Mechanical/Electrical	Included	
	Other (Specify)	Included	
	Sub-total Cost of Materials		Included
(9)	Cost of Labor		Included
(10)	Other (Specify)		Included
(11)	**Sub-Total Construction Contract**		**$182,450**
C.	**Miscellaneous Project Costs**		
(12)	Building Purchase		N/A
(13)	Fixed Equipment Purchase/Lease		**$762,251**
(14)	Movable Equipment Purchase/Lease		N/A
(15)	Furniture		N/A
(16)	Landscaping		N/A
(17)	Consultant Fees		
	Architect, Int. and Engineering Fees	$42,000	
	Legal Fees	N/A	
	Market Analysis	N/A	
	TAB/DHSR	$5,000	
	Other (Abatement)	N/A	
	Sub-Total Consultant Fees		$47,000
(18)	Financing Costs (e.g., Bond, Loan, etc.)		N/A
(19)	Interest During Construction		N/A
(20)	Other (Security, IS, Contigency)		$28,500
(21)	**Sub-Total Miscellaneous**		**$837,751**
(22)	**Total Capital Cost of Project** (Sum A-C above)		**$1,020,201**

PROPOSED TOTAL CAPITAL COST OF PROJECT

Project Name:
Provider/Company:

I certify that, to the best of my knowledge, the above construction related costs of the proposed project named above are complete and correct.

_____ NC 3963_____
(Signature of Licensed Architect or Engineer)