



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

Pat McCrory  
Governor

Aldona Z. Wos, M.D.  
Ambassador (Ret.)  
Secretary DHHS

Drexdal Pratt  
Division Director

March 26, 2015

Elizabeth Kirkman  
Assistant Vice President, CHS Management Company  
2709 Water Ridge Parkway, Suite 200  
Charlotte, NC 28217

**Exempt from Review - Replacement Equipment**

Facility: CMC  
Project Description: Acquisition of Replacement CT Scanner  
County: Mecklenburg  
FID #: 943070

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 18, 2015, the above referenced proposal is exempt from certificate of need review in accordance with G.S 131E-184(f). Therefore, you may proceed to acquire, without a certificate of need, the Siemens SOMATOM Force Dual Source CT Scanner to replace the existing Siemens SOMATOM Sensation 64 CT Scanner currently housed and in use in room 109 on the fourth level of CMC's main campus located at 1000 Blythe Boulevard, Charlotte, NC 28203. This determination is based on your representations 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 and Acute and Home Care Licensure and Certification 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,

*Fatimah Wilson*  
Fatimah Wilson,  
Project Analyst

*Martha J. Frisone*  
Martha J. Frisone,  
Assistant Chief, Certificate of Need

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



**Healthcare Planning and Certificate of Need Section**

www.ncdhhs.gov

Telephone: 919-855-3873 • Fax: 919-733-8139

Location: Edgerton Building • 809 Ruggles Drive • Raleigh, NC 27603

Mailing Address: 2704 Mail Service Center • Raleigh, NC 27699-2704

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Carolinus HealthCare System



Edward J. Brown III  
Chairman

Michael C. Tarwater, FACHE  
Chief Executive Officer

Joseph G. Piemont  
President & COO

March 16, 2015

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: The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center –  
Exemption Notice for Acquisition of Replacement CT Scanner Equipment in the Radiology  
Department, Mecklenburg County

Dear Ms. Frisone:

The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center (“CMC”), seeks to acquire a Siemens SOMATOM Force Dual Source CT unit (“Replacement Equipment”). Please see Attachment A for a copy of CMC’s current hospital license. The Replacement Equipment will replace CMC’s current Siemens SOMATOM Sensation 64 CT scanner (“Existing Equipment”). The Existing Equipment is currently housed and in use in room 109 on the fourth level of CMC’s main campus (“CT C”) located at 1000 Blythe Boulevard in Charlotte, NC 28203 (see Attachment B). The Replacement Equipment will be located in the same space.

The purpose of this letter is to provide the Agency with notice and to request a determination that CMC’s purchase of the Replacement Equipment is exempt from Certificate of Need (“CON”) review under the replacement equipment exemption provisions contained in Session Law 2013-360, Section 12G.3(b) and Session Law 2013-363, Section 4.6 (which are codified at N.C. Gen. Stat. 131E-184(f)(1)-(3)).

The General Assembly has chosen to exempt certain, otherwise reviewable events from CON review. Among those exemptions is the acquisition of "replacement equipment," defined as follows in the CON law:

"Replacement equipment" means equipment that costs less than two million dollars (\$2,000,000) and is purchased for the sole purpose of replacing comparable medical equipment currently in use which will be sold or otherwise disposed of when replaced.

See N.C. Gen. Stat. 131E-176(22a). Under the new provisions found at N.C. Gen. Stat. 131E-184(f)(1)-(3), the CON law provides:

- (f) The Department shall exempt from certificate of need review the purchase of any replacement equipment that exceeds the two million dollar (\$2,000,000) threshold set forth in G.S. 131E-176(22) if all of the following conditions are met:
  - (1) The equipment being replaced is located on the main campus.
  - (2) The Department has previously issued a certificate of need for the equipment being replaced. This subdivision does not apply if a certificate of need was not required at the time the equipment being replaced was initially purchased by the licensed health service facility.
  - (3) The licensed health service facility proposing to purchase the replacement equipment shall provide prior written notice to the Department, along with supporting documentation to demonstrate that it meets the exemption criteria of this subsection.

See Session Law 2013-360, Section 12G.3(b) and Session Law 2013-363, Section 4.6. The term "main campus" was defined in Session Law 2013-360, Section 13G.3(a) (codified N.C. Gen. Stat. 131E-176(14n)) as follows:

- (14n) "Main campus" means all of the following for the purposes of G.S. 131E-184(f) and (g) only:
  - a. The site of the main building from which a licensed health service facility provides clinical patient services and exercises financial and administrative control over the entire facility, including the buildings and grounds adjacent to that main building.
  - b. Other areas and structures that are not strictly contiguous to the main building but are located within 250 yards of the main building.

The Existing Equipment is currently located in room 109 on the fourth level of CMC's main campus ("CT C") and the Replacement Equipment will be located within the same space (see Attachment B). The main hospital building from which Carolinas Medical Center exercises financial and administrative control over Carolinas Medical Center services is located at 1000 Blythe Boulevard, Charlotte, NC 28203 (see Attachment B). Carolinas Medical Center's President's office is located on the second floor of the main hospital building.

In addition to the foregoing, to qualify for this exemption, the replacement equipment must be “comparable” to the equipment it replaces and the equipment being replaced must be “sold or otherwise disposed of when replaced.” CMC’s proposal qualifies for this exemption.

**A. Cost of the Replacement Equipment**

The purchase price of the Replacement Equipment is \$2,195,523 (\$2,050,000 CT + \$16,835 Freight + \$128,688 Tax). The purchase price of the Injector is \$53,940 (\$51,900 Injector + \$340 Freight + \$1,700 Tax). Quotes for the CT unit from Siemens and Injector from Bayer HealthCare are provided in Attachment C. The projected total capital cost of the project is \$3,162,963 and includes the removal of the existing equipment and installation of the Replacement Equipment. The total capital cost schedule and the certified cost estimate of the renovation required to install the new equipment are provided in Attachment D.

**B. Equipment Being Replaced is Located on the Main Campus**

The Existing Equipment is currently located in room 109 on the fourth floor of CMC’s main campus (“CT C”) (see Attachment B). The Replacement Equipment will be located in the same space on CMC’s main campus (see Attachment B).

**C. Certificate of Need Issued for Equipment Being Replaced**

This proposal also fits within the new exemption criterion in Section 131E-184(f)(2) because the Department issued an exemption request for the Existing Equipment (see Attachment E). The Existing Equipment was purchased in 2004.

**D. Comparable Equipment**

The CON rule codified as 10A N.C.A.C. 14C.0303 (the “Regulation”) defines “comparable medical equipment” in subsection (c) as follows:

“Comparable medical equipment” means equipment which is functionally similar and which is used for the same diagnostic or treatment purposes.

CMC intends to use the Replacement Equipment for substantially the same CT procedures for which it currently uses the Existing Equipment. The Existing Equipment is a Siemens SOMATOM Sensation 64 that was installed new in 2004. This Existing Equipment has been used for CT procedures since installation.

The Replacement Equipment will perform all procedures currently performed on the Existing Equipment. Although it possesses some expanded capabilities due to technological improvements, the Replacement Equipment will perform the same CT procedures. (see Attachment F for the Equipment Brochure) The Replacement Equipment is therefore “comparable medical equipment” as defined in Subsection (c).

Furthermore, CMC does not intend to increase patient charges or per procedure operating expenses within the first 12 months after equipment acquisition. For further equipment comparison, please refer to Attachment G, the Equipment Comparison Chart.

Subsection (d) of the regulation further provides:

- (1) it has the same technology as the equipment currently in use, although it may possess expanded capabilities due to technological improvements; and
- (2) it is functionally similar and is used for the same diagnostic or treatment purposes as the equipment currently in use and is not used to provide a new health service; and
- (3) the acquisition of the equipment does not result in more than a 10.0 percent increase in patient charges or per procedure operating expenses within the first twelve months after the replacement equipment is acquired.

The Replacement Equipment will meet all three of tests set out in Subsection (d). The Replacement Equipment satisfies the technology and functionality tests in Subsection (1) and (2) as discussed above and identified in the Comparison Chart (Attachment G). Moreover, CMC represents the use of the Replacement Equipment will not result in the types of expense or charge increases described in Subsection (d)(3).

The Existing Equipment is currently in use and documentation provided in Attachment H indicates that 25,291 procedures were performed in 2014.

#### **E. Disposition of Equipment**

Please see Attachment I for a letter documenting the Existing Equipment will be taken out of service and will not be re-sold or re-installed in North Carolina without appropriate certificate of need approval.

**CONCLUSION:**

Based on the foregoing information, CMC hereby requests that the Agency provide a written response confirming that the acquisition of the Replacement Equipment described herein is exempt from CON review. If the Agency needs additional information to assist in its consideration of this request, please let us know.

Thank you for your consideration of this notice.

Sincerely,



Elizabeth V. Kirkman  
Assistant Vice President  
CHS Management Company

Attachments

cc: F. Del Murphy, Jr., CHS Management Company  
W. Spencer Lilly, President, Carolinas Medical Center

# Attachment A

# State of North Carolina

Department of Health and Human Services  
Division of Health Service Regulation

*Effective January 01, 2015, this license is issued to  
The Charlotte-Mecklenburg Hospital Authority*

*to operate a hospital known as  
Carolinas Medical Center/Center for Mental Health  
located in Charlotte, North Carolina, Mecklenburg County.*

*This license is issued subject to the statutes of the  
State of North Carolina, is not transferable and shall remain  
in effect until amended by the issuing agency.*

**Facility ID: 943070**

**License Number: H0071**

**Bed Capacity: 1132**

*General Acute 976, Rehabilitation 13, Psych 132, Substance Abuse 11,*

**Dedicated Inpatient Surgical Operating Rooms: 10**

**Dedicated Ambulatory Surgical Operating Rooms: 11**


**Shared Surgical Operating Rooms: 41**

**Dedicated Endoscopy Rooms: 12**

Authorized by:



Secretary, N.C. Department of Health and  
Human Services



Director, Division of Health Service Regulation



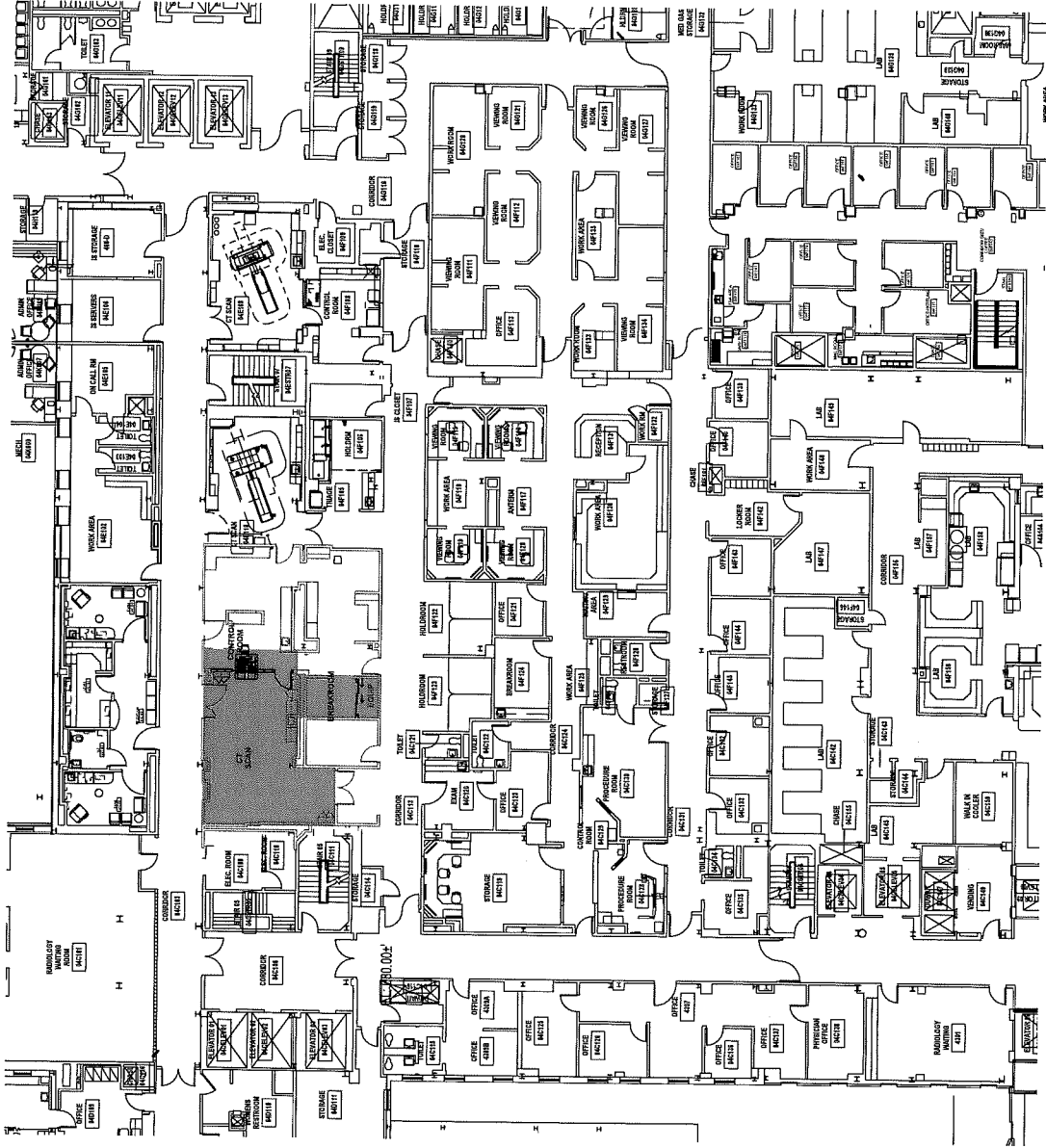
# Attachment B



# ENLARGED FLOOR PLAN

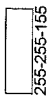
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- 255-255-155 EXISTING BUILDING
- 255-155-000 RENOVATION

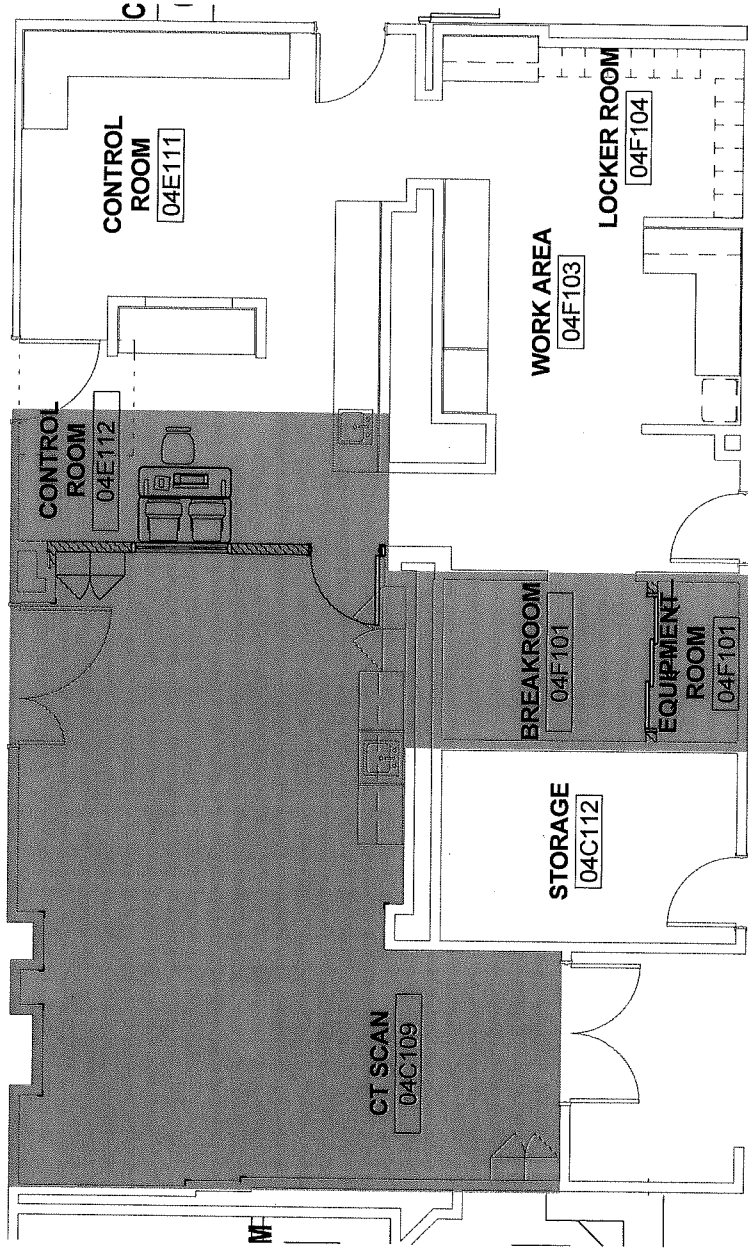


COLOR KEY

EXISTING BUILDING



RENOVATION



A PROPOSED PLAN - LEVEL 04 - NEW  
1/8" = 1'-0"

# PROPOSED FLOOR PLAN

Carolinas HealthCare System

03/15/2015

CMC Main CT C Replacement

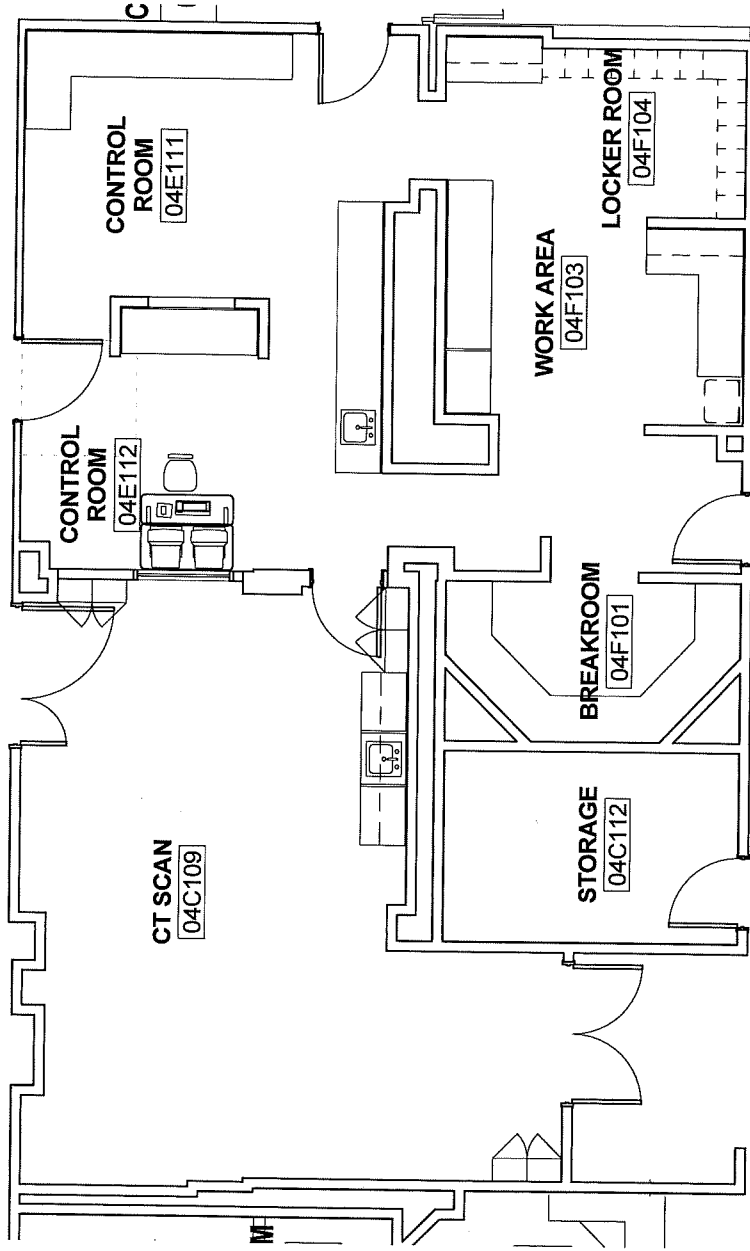


COLOR KEY

EXISTING BUILDING



RENOVATION



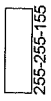
A FLR - LEVEL 04 - EXIST  
1/8" = 1'-0"

# EXISTING FLOOR PLAN

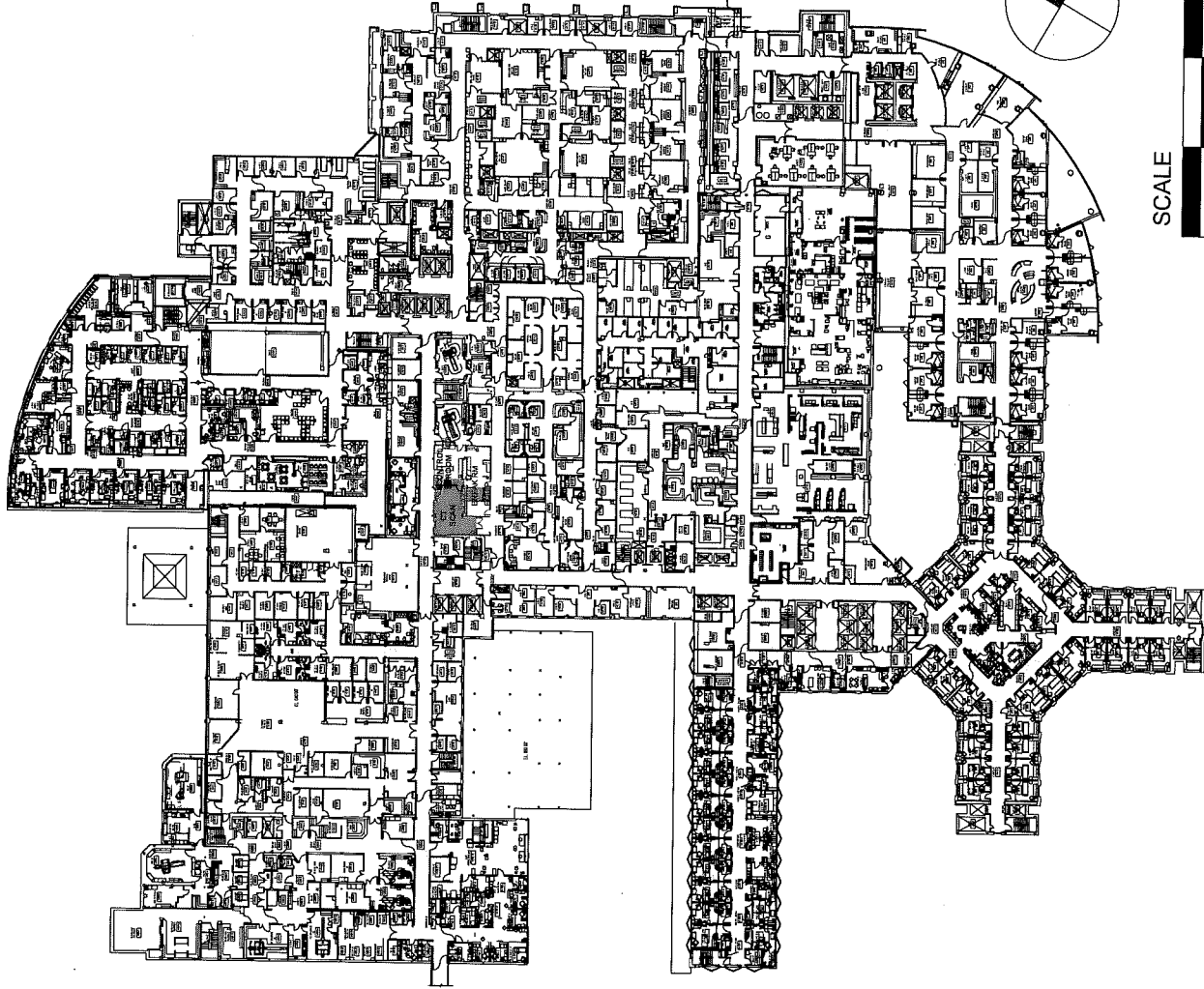
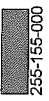


**COLOR KEY**

EXISTING BUILDING



RENOVATION



**OVERALL PLAN**

Carolinas HealthCare System

03/15/2015

CMC Main CT-C Replacement



# Attachment C

# SIEMENS

Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (336) 856-9995

SIEMENS REPRESENTATIVE  
Edwin Winicki - (336) 688-0978

Customer Number: 0000035965

Date: 12/20/2014

**CAROLINAS HEALTHCARE SYSTEM**  
1000 BLYTHE BLVD  
CHARLOTTE, NC 28203

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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.

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<b>Quote Nr:</b>	<b>1-A5FKT1, Rev. 0</b>
<b>Trade:</b>	<b>Siemens Sensation 64</b>
<b>Terms of Payment</b>	<b>00% Down, 80% Delivery, 20% Installation</b>
<b>Purchasing Agreement</b>	<b>Free On Board: Destination Premier Purchasing Partners</b>
<b>Terms and Conditions</b>	<b>Premier terms and conditions apply</b>
<b>Proposal Valid Until</b>	<b>9/30/2015</b>

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### Siemens Definition FORCE

Qty	Part No.	Item Description
1	14440623	<b>SOMATOM Force</b> The all new SOMATOM Force contains two new Vectron X-ray tubes with unprecedented 2 x 1.300 mA tube current at 2 x 120 kW generator power. The new Stellar Infinity detector, including TrueSignal and Edge Technology providing increased in plane resolution (1.840 channels) and ~ 50% increased z-coverage, compared to SOMATOM Definition Flash. SOMATOM Force takes CT imaging where it has never gone before by routinely generating ultra-thin 0.5 mm slices e.g. for most accurate stenosis, plaque and stent analysis and for low-kV imaging without compromises, even in adults or obese patients at scan speeds up to 737 mm/s (opt.). Additionally, the all new measurement system sets the benchmark in low contrast detectability. An object size of 2 mm, at a contrast difference of 3 HU, with a CTDIvol (Ø 32 cm) of only 12.3 mGy (with Phantom CATPhan (20 cm)) can be detected. The all new SOMATOM Force gantry, with its powerful hollow shaft motor achieves maximum rotation speeds of up to 0.25 seconds (optional) resulting in down to 66 ms, heart rate independent temporal resolution to freeze motion. It features the all new Turbo Flash mode, with a dynamic Field of View (FoV) of up to 50 cm, even in ultra-high pitch applications (737 mm/s table speeds, Opt.). Besides, it enables reduction in dose, while it improves overall image quality (both high- and low-contrast resolution) for all scans, resulting, e.g. in dose down to sub-mSv for cardiac imaging and below. In its third generation, Dual Energy with Selective Photon Shield II (~ 30% better energy separation, for more precise Dual Energy quantification), automatically provides a second contrast for the best possible diagnosis without any extra dose at a Dual Energy Field of View (FoV) of up to 35 cm at scan speeds up to 285 mm/s (opt.).
1	14440638	<b>ELEVATE R 40-/64-slice&gt;Force</b> ELEVATE from 40-/64-slice configuration system to SOMATOM Force

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Edwin Winicki - (336) 688-0978

Qty	Part No.	Item Description
1	14440625	<b>SAFIRE #AWP</b> 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 image quality enables to reduce dose by up to 60%.
1	14440672	<b>ADMIRE</b> ADMIRE (Advanced Modeled Iterative REconstruction) is the next generation of Iterative Reconstruction. ADMIRE offers on the fly powerful dose reduction, excellent image quality and everyday suitability. Other unique qualities of ADMIRE are: Superb details, Positive impact on the reconstructed image quality in comparison to SAFIRE, Reader-ready reconstructions deliver the desired image impression on the fly. Due to the computer power of the new Image Reconstruction System (IRS), ADMIRE has a potential to lower radiation, and to offer a routine-ready performance.
1	14410507	<b>X-CARE</b> Partial scanning to reduce direct X-ray exposure for the most dose-sensitive body regions, e.g. the breasts, thyroid gland or eye lens
1	14420827	<b>FAST CARE Platform</b> Siemens' unique FAST CARE platform is set to raise the standard of patient-centric productivity. Utilizing FAST - 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 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	14441180	<b>CARE Child</b> Dedicated pediatric CT imaging, including 70 kV scan modes and specific CARE Dose4D curves and protocols
1	14433987	<b>FAST Planning #AWP</b> Direct, organ-based setting of scan and recon ranges for a faster and more standardized workflow
1	14433988	<b>FAST Spine #AWP</b> Accurate and anatomically aligned preparation of spine recons with just a single click.
1	14440678	<b>FAST 3D Align</b> FAST 3D Align automatically corrects misalignment of anatomic structures, organs of the patient. It aligns those to fit it to the selected reconstruction plane for a highly automated reconstruction workflow. Additionally it minimizes the black area in the image through automatically adjusts recon field of view selection.
1	14441045	<b>Rear cover incl. gantry panels</b> Standard CT gantry back cover, including two gantry panel control units.
1	14406485	<b>Keyboard English</b> Keyboard in the above-mentioned language.
1	14403162	<b>Hose pipe 20 m insulated</b> Hose pipes to connect the "Cooling System" with the gantry.
1	14440676	<b>Cable loom 16 m</b> Cable loom used to connect the power distribution system (PDS) with the gantry.
1	14440671	<b>Earthquake kit prepared</b> The SOMATOM CT Scanner earthquake kit is already built in. It consists of a special floor mounting which is necessary in earthquake-prone countries or areas.
1	14440651	<b>Tunnel Light</b> SOMATOM Force offers a funnel mood light (LED) in different, preset, adjustable colors that are synchronized with the gantry ring light. It makes the gantry bore appearing wider thus making it easier for patients with claustrophobia to undergo their examination.



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Qty	Part No.	Item Description
1	14440652	<b>Ring Light</b> SOMATOM Force offers a gantry ring mood light (LED) in different, preset, adjustable colors that are synchronized with the gantry funnel light. They help creating a relaxing atmosphere for your patients, making a SOMATOM Force examination even more exciting and memorable.
1	14440703	<b>CT Acute Care Engine @via #1</b> The CT Acute Care Engine provides disease oriented workflows which allow lifesaving diagnostics when every second counts. The workflows consist of dedicated scan modes & software modules and cover the wide variety of challenging acute situations, from efficient acute chest pain management to abdominal imaging, as well as stroke imaging. Scanner features - Extended FoV of 78 cm for obese patient imaging - HeartView, including - Prospectively triggered high-pitch Turbo Flash Spiral, e.g. for sub-mSv cardiac scanning - ECG-Gated Spiral for high and irregular heart rates - Cardio Sequence for moderate heart rates - 0.25 s rotation time to freeze any motion (e.g. cardiac motion) - MinDose ECG Pulsing for dose saving in cardiac function - Edge Technology for 0.30 mm spatial resolution - Cardio BestPhase Plus for optimal cardiac phase selection Software modules - syngo.CT CaScoring for quick risk assessment - syngo.CT Coronary Analysis for quantitative assessment of coronary arteries - syngo.CT Cardiac Function for left ventricular functional assessment - syngo.CT Vascular Analysis for assessment of general vascular pathologies, such as AAA - syngo.CT Neuro DSA for bone-free visualization of cerebral vessels - syngo.CT Neuro Perfusion for dynamic 4D quantification of stroke Additional integrated Dual Energy functionality: please refer to E-text.
2	14440728	<b>CT Acute Care Engine @via #1+</b> Additional User for the CT Acute Care Engine
1	14440704	<b>CT Acute Care Engine Pro @via #1</b> The CT Acute Care Engine Pro extends the dynamic range for stroke imaging beyond detector widths. It allows the assessment of even smallest bone details and provides Right Ventricular Assessment for cardiac impairment affecting the right ventricle. The automated segmentation, anatomical labeling and display of the main vessels speed up the reading process for faster diagnosis. For planning of endovascular aortic repair procedures the measurements required are automatically stored in manufacturer-specific graft order forms. Additional Scanner Options: - Adaptive 4D Spiral acquisition for whole organ perfusion - UHR with extra wide comb for high isotropic resolution - Tilttable (adjustable) head holder for optimal positioning of stroke patients Additional Software Modules: - syngo.CT Cardiac Function - Enhancement for visualization of ischemia from early or late enhanced images - syngo.CT Cardiac Function - Right Ventricle for right ventricular functional assessment - syngo.CT Vascular Analysis - Autotracer for automatic identification and anatomical labeling of main vessels - syngo.CT Dynamic Angio for the assessment of time-resolved CT images - syngo.CT Rapid Stent Planning for automatic completion of manufacturer-specific graft order forms
1	14440654	<b>Physiological Monitoring Module</b> The Physiological Monitoring Module allows to connect a 3 Channel ECG cable for ECG controlled cardiac acquisition.
1	14403008	<b>ECG Cable IEC2 #D</b> ECG cable, IEC2 (AHA/US color coding).
1	14440653	<b>Patient Table</b> Patient table to support ultra-fast spiral scanning and up to 200cm scan range. Motor-driven table height adjustment from min. 49 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: 2-737 mm/s. Positioning aids: Positioning mattress, mattress protector, head-arm support (inclusive cushion), non-tiltable and 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	14406461	<b>syngo Expert-I #AWP</b> Expert-i enables the physician to interact with the syngo CT Workplace from virtually anywhere in your hospital.
1	ADAPT_DOSE _SHIELD	<b>Adaptive Dose Shield</b> Adaptive Dose Shield for spiral acquisition to eliminate pre- and post-spiral over-radiation.

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Fax: (336) 856-9995

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Edwin Winicki - (336) 688-0978

Qty	Part No.	Item Description
1	FAST_ADJUST	<b>FAST Adjust</b> 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	<b>FAST Scan Assistant</b> 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	CARE_KV	<b>CARE kV</b> 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_DOSE4D	<b>CARE Dose4D</b> 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	CT_LUNGIMAGASPL	<b>Lung Imaging</b> This SOMATOM Definition scanner offers two specific scan protocols to provide Lung Imaging at 1.3 mGy CTDI or greater and for use with post-processing applications
1	CARE_PROFILE	<b>CARE Profile</b> CARE Profile: Visualization of the dose distribution along the topogram prior to the scan
1	CARE_DASHBOARD	<b>CARE Dashboard</b> 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	ACCESS_PROTECT	<b>Access Protection</b> Scan Protocols are password protected allowing only authorized staff members to access and permanently change protocols
1	DICOM_SR	<b>DICOM SR Dose Reports</b> DICOM structured file allows for the extraction of dose values (CTDIvol, DLP)
1	DOSE_ALERT	<b>Dose Alert</b> 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	<b>Dose Notification</b> 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	NEMA_XR-29	<b>NEMA_XR-29 Standard</b> 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	CT_PM	<b>CT Project Management</b> A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemens 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_BUDGET_ADDITION_OUT_OF_SCOPE_RIGGING	<b>Budgetary Add'l/Out of Scope Rigging</b>

# SIEMENS

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51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (336) 856-9995

SIEMENS REPRESENTATIVE  
Edwin Winicki - (336) 688-0978

Qty	Part No.	Item Description
1	CT_STD_RIG_I NST	<b>CT Standard Rigging and Installation</b> 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 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_STD_DEIN STALL	<b>CT Standard De-Installation</b>
1	4SPAS014	<b>Low Contrast CT Phantom &amp; Holder</b>
1	PSPD250480Y 3K	<b>Surge Protective Device (SPD)</b>
1	CTSDEF01	<b>CT Slicker</b> 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	CT_PRFORC_ ER4064BN	<b>Force Elevate R 40 64 Bonus</b>
1	CT_MISC_MAT ERIAL	<b>Service Offset</b>
1	CT_INITIAL_32	<b>Initial onsite training 32 hrs</b> 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_FOLLOWU P_32	<b>Follow-up training 32 hrs</b> 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.
1	CT_ADD_16	<b>Additional onsite training 16 hours</b> 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	CT_TECH_SY MP	<b>Siemens Technologists Symposium</b> 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	14441510	<b>CT with syngo.via (identifier)</b> CT with syngo.via (Identifier)
1	14432688	<b>syngo.via CT Scanner Bundle</b> CT system bundled with syngo.via

# SIEMENS

Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (336) 856-9995

SIEMENS REPRESENTATIVE  
Edwin Winicki - (336) 688-0978

Qty	Part No.	Item Description
1	14442316	<b>syngo.via XL-Software</b> The syngo.via XL-Software offers 2D, 3D, 4D multi-modality routine reading capabilities and a variety of advanced applications tailored to the XL-Server HW grade. The combination of syngo.via XL-Software and XL-Server Hardware is ideal for 5 - 15 users. The availability of all applications and workflows included in syngo.via XL-SW is virtually unlimited, i.e. the number of opened cases is only constrained by server HW resources. The syngo.via client runs on standard Windows computers in the network and integrates into radiologist's reading workplace (RIS; PACS) for efficient image reading based on a wide range of clinical applications (advanced visualization applications) for different clinical cases. Those applications are available as additional options for syngo.via. The optional advanced visualization applications/Engines follow the flexible concurrent user model (users working at the same time). The service support for syngo.via requires the provision of an administrator with dedicated tasks and a minimum broadband Internet connection bandwidth.
1	14442253	<b>WebViewer User #1 Integrated Server</b> syngo.via WebViewer is a web-based client server add-on to syngo.via. It provides high-speed 2D and 3D image data review and basic manipulation functionality within the healthcare institution's network and through secure VPN connection both over LAN and wireless connections. The integrated server can be used for internal image distribution only (internet access only by VPN infrastructure). The syngo.via WebViewer runs on PC, Mac and laptops equipped with appropriate browsers, on Windows Tablet PC, on Apple iPhone, iPod Touch and iPad.
1	14442258	<b>WebViewer User #2+ Integr. Server</b> syngo.via WebViewer is a web-based client server add-on to syngo.via, for internal radiologists and selected internal referring physicians.
1	14442258	<b>Syngo.via General Engine #1</b>
1	14429311	<b>PACS-Driven Implementation Pkg.</b> This PACS-Driven Implementation Package includes installation and integration services for syngo.via in a radiologic workflow mainly supported by the PACS functionality. This package includes professional services, such as: - Installation of the syngo.via server software on the server hardware - Installation of the syngo.via client software on one clinical workplace for one user - Connection to up to 5 DICOM nodes - Image call-up of syngo.via from the PACS' user interface - Assistance in setting up image call-up of syngo.via from the PACS' user interface. This may require the purchase of software and services from the PACS vendor. - Configuration of basic syngo.via workflows and rules - Integration of one syngo.via client workplace with one syngo MultiModality Workplace. - Basic installation service for the syngo.via at the customer's site. - Integration into the Local Area Network of the customer and to Siemens Remote Service over internet connection. - Installation of WebViewer integrated license (syngo.via SW version VA30 or higher, country restrictions might apply).
1	14429294	<b>Upgrade PACS to RIS Implementation</b> The syngo.via system has been previously installed with the PACS-Driven Implementation. It is now to be upgraded to the RIS-Driven Implementation Package. The RIS-Driven Implementation Package includes installation and integration services for syngo.via in a radiologic workflow mainly supported by the RIS functionality of a DICOM Modality Worklist for preprocessing of images in syngo.via. This upgrade package includes professional services, such as: - Assistance in setting up image call-up of syngo.via from the PACS' or RIS' user interface, if image call-up has not been installed previously. This may require the purchase of software and services from the RIS vendor. - Integration of syngo.via into the IT infrastructure using Active Directory, if it has not been configured in syngo.via previously - Configuration of DICOM Modality Worklist integration in syngo.via.
1	14442074	<b>Server HW Config XL_10TB</b> syngo.via server hardware configuration XL with about 10TB storage. Hewlett Packard rack mount server.
1	14413434	<b>HP Care Pack. 3y 24x7 HW Support</b> Extended Prime HW Support for 3 years
1	14412656L	<b>Server HW Installation Standard</b> Basic installation of the syngo.via server hardware with the operating system at the customer's site by the hardware supplier. Integration into the Local Area Network of the customer and to Siemens Remote Service over internet connection. Please check that the following information is included in the customer quote: correct and complete delivery location, customer's contact person for implementation planning. See also the questions in the Sales Checklist, which supports you in evaluation of the customer's requirements.
1	SY_PR_VIA_X L_HW	<b>Syngo.via Promo XL HW (FMV-\$10,000)</b>

# SIEMENS

Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (336) 856-9995

SIEMENS REPRESENTATIVE  
Edwin Winicki - (336) 688-0978

Qty	Part No.	Item Description
1	SY_VIRINTL_4	<b>Virtual Initial Consultation, syngo.via</b> This virtual initial consultation session, up to 4 hrs in duration, is designed to define the clinical customization of syngo.via specific to radiology workflow. Through direct communication with a clinical education specialist, this session will identify and configure site-specific workflow and imaging storage and retrieval parameters. This educational offering must be conducted no more than 4 weeks before the scheduled system turnover event. This consultation session will be scheduled during standard business hours, Monday through Friday. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	SY8VIAITVC	<b>Virtual syngo.via IT Admin Training</b>
1	SY_INITIAL_24	<b>Initial onsite training 24 hrs syngo.via</b> Up to (24) hours of on-site clinical applications training on syngo.via basic navigation and modality specific clinical workflows, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4)users. Training will focus on the use of syngo.via in clinical routine and customization of systems based on workflow needs. This educational offering must be completed (12) months from turnover date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	SY_FOLLOWU P_16	<b>Follow up training 16 hrs, syngo.via</b> Up to (16) hours of follow-up on-site clinical applications training on syngo.via navigation and modality specific clinical workflows, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4)users. Training will focus on the optimization of syngo.via in clinical routine and customization of systems based on clinical workflow needs. Advanced clinical applications will be covered for users previously attending initial applications training. This educational offering must be completed (12) months from turnover date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

Sell Price (excluding trade):	\$ 2,050,000
Sensation 64 Trade Value:	(\$275,000)
Final Price (including trade):	\$1,775,000

Estimated Tax (final tax is computed at time of installation): \$128,688

# Bayer HealthCare



## Quotation

Quote To:  
 CAROLINAS HEALTHCARE  
 SYSTEM  
 1000 Blythe Blvd  
 CHARLOTTE NC 28203-5812  
 USA

Bayer HealthCare LLC

Quotation number: 0020013536  
 Customer number: 0000174391  
 Date: 01/23/2015  
 Page: 1

Valid from: 01/23/2015 to 03/26/2015

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

**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 carrier FOB SHIPPING POINT

Item	Part No	Qty	Unit Price	UoM	Amount
1	81058881 SCT 322 SYSTEM,DUAL,STELLANT WITH CWKS/OCS	1 PCE	49,500.00	1 PCE	49,500.00
	Discount (Value)		20,290.00-		20,290.00-
	Discount (Value)		8,960.00-		8,960.00-
	Net value		20,250.00		20,250.00
2	59943360 INS SCT CS INSTALLATION - STELLANT WITH OCS	1 PCE	2,400.00	1 PCE	2,400.00
	Net value		2,400.00		2,400.00
<b>Sub Total</b>					22,650.00
<b>Total</b>					22,650.00

**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

**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 Radimetrics or Certegra products. Such products 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 Certo wireless network it is your responsibility to ensure the approval of the Information Technology Department to allow the operation of the wireless network at your site.

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**



# Bayer HealthCare



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 a Monitor, peripheral accessories on the Monitor such as pulse oximeter sensors, extension cables, power cables, fiber optic cables, ECG leads, capnography accessories (excluding patient connections), blood pressure cuffs, batteries, and extension tubing are warranted for a period of 90 days from the date of installation, but not to exceed six months from the date of shipment.

If this Quote includes disposable products or angiographic catheters, Bayer's warranty shall be limited to repair or replacement of any defective disposable product or angiographic catheter 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 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 unauthorized modification or repair shall render this warranty void and relieve Bayer 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 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 render this warranty void and relieve Bayer 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,

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

# Bayer HealthCare



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 reexport requirements, laws and regulations of the United States of America and any other applicable export and reexport 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**

# Attachment D

**PROPOSED TOTAL CAPITAL COST OF PROJECT**

**Project name:** CMC Main CT Room C Replacement  
**Provider/Company:** Carolinas HealthCare System

**A. Site Costs**

(1) Full purchase price of land			<u>N/A</u>
Acres	Price per Acre	\$ _____	
(2) Closing costs			<u>N/A</u>
(3) Site Inspection and Survey			<u>N/A</u>
(4) Legal fees and subsoil investigation			<u>N/A</u>
(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			<u>N/A</u>
(6) Other (Specify)			<u>N/A</u>
(7) <b>Sub-Total Site Costs</b>			<u>N/A</u>

**B. Construction Contract**

(8) Cost of Materials			
General Requirements		<u>included</u>	
Concrete/Masonry		<u>included</u>	
Woods/Doors & Windows/Finishes		<u>included</u>	
Thermal & Moisture Protection		<u>included</u>	
Equipment/Specialty Items		<u>included</u>	
Mechanical/Electrical		<u>included</u>	
Other (Specify)		<u>included</u>	
Sub-total Cost of Materials			<u>included</u>
(9) Cost of Labor			<u>included</u>
(10) Other (Specify)			<u>included</u>
(11) <b>Sub-Total Construction Contract</b>			<u>\$655,400</u>

**C. Miscellaneous Project Costs**

(12) Building Purchase			<u>N/A</u>
(13) Fixed Equipment Purchase/Lease			<u>\$2,195,523</u>
(14) Movable Equipment Purchase/Lease			<u>\$53,940</u>
(15) Furniture			<u>\$3,050</u>
(16) IS/Security			<u>\$10,500</u>
(17) Consultant Fees			
Architect and Engineering Fees		<u>\$110,500</u>	
Legal Fees		<u>N/A</u>	
Market Analysis		<u>N/A</u>	
Other (TB DHSR)		<u>\$7,500</u>	
Other (Admin)		<u>\$61,550</u>	
Sub-Total Consultant Fees			<u>\$179,550</u>
(18) Financing Costs (e.g., Bond, Loan, etc.)			<u>N/A</u>
(19) Interest During Construction			<u>N/A</u>
(20) Other (Project Contingency)			<u>\$65,000</u>
(21) <b>Sub-Total Miscellaneous</b>			<u>\$2,507,563</u>
(22) <b>Total Capital Cost of Project (Sum A-C above)</b>			<u><u>\$3,162,963</u></u>

**PROPOSED TOTAL CAPITAL COST OF PROJECT**

**Project Name:** CMC Main CT Room C Replacement  
**Provider/Company:** Carolinas Healthcare System

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

  
\_\_\_\_\_  
(Signature of Licensed Architect or Engineer)

NC 3963

# Attachment E



North Carolina Department of Health and Human Services  
Division of Facility Services  
Certificate of Need Section

2704 Mail Service Center ■ Raleigh, North Carolina 27699-2704

Michael F. Easley, Governor  
Carmen Hooker Odom, Secretary

<http://facility-services.state.nc.us>

Lee Hoffman, Section Chief  
Phone: 919-855-3873  
Fax: 919-733-8139

October 26, 2004

Greg Bass, Director  
CHS Management Company  
Post Office Box 32861  
Charlotte, NC 28232-2861


RE: Exempt from Review/Carolinas Medical Center/Replace existing GE Lightspeed Plus CT scanner with a Siemens Somatom Sensation 64-slice CT scanner /Mecklenburg County


Dear Mr. Bass:

In response to your letter of October 22, 2004, the above referenced proposal is exempt from certificate of need review in accordance with N.C.G.S 131E-184(a)(7). Therefore, you may proceed to acquire, without a certificate of need, a Siemens Somatom Sensation 64-slice CT scanner to replace the existing GE Lightspeed Plus CT scanner. This determination is based on your representations that the existing medical equipment will be removed from North Carolina and will not be used again in the State without first obtaining a certificate of need. Further please be advised that as soon as the replacement equipment is acquired, you must provide the CON Section and the Medical Facilities Planning Section with the serial number of the new equipment to update the inventory, if not already provided.

It should be noted that this 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 Agency and a separate determination. If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

  
Mary Edwards  
Project Analyst

  
Lee B. Hoffman, Chief  
Certificate of Need Section

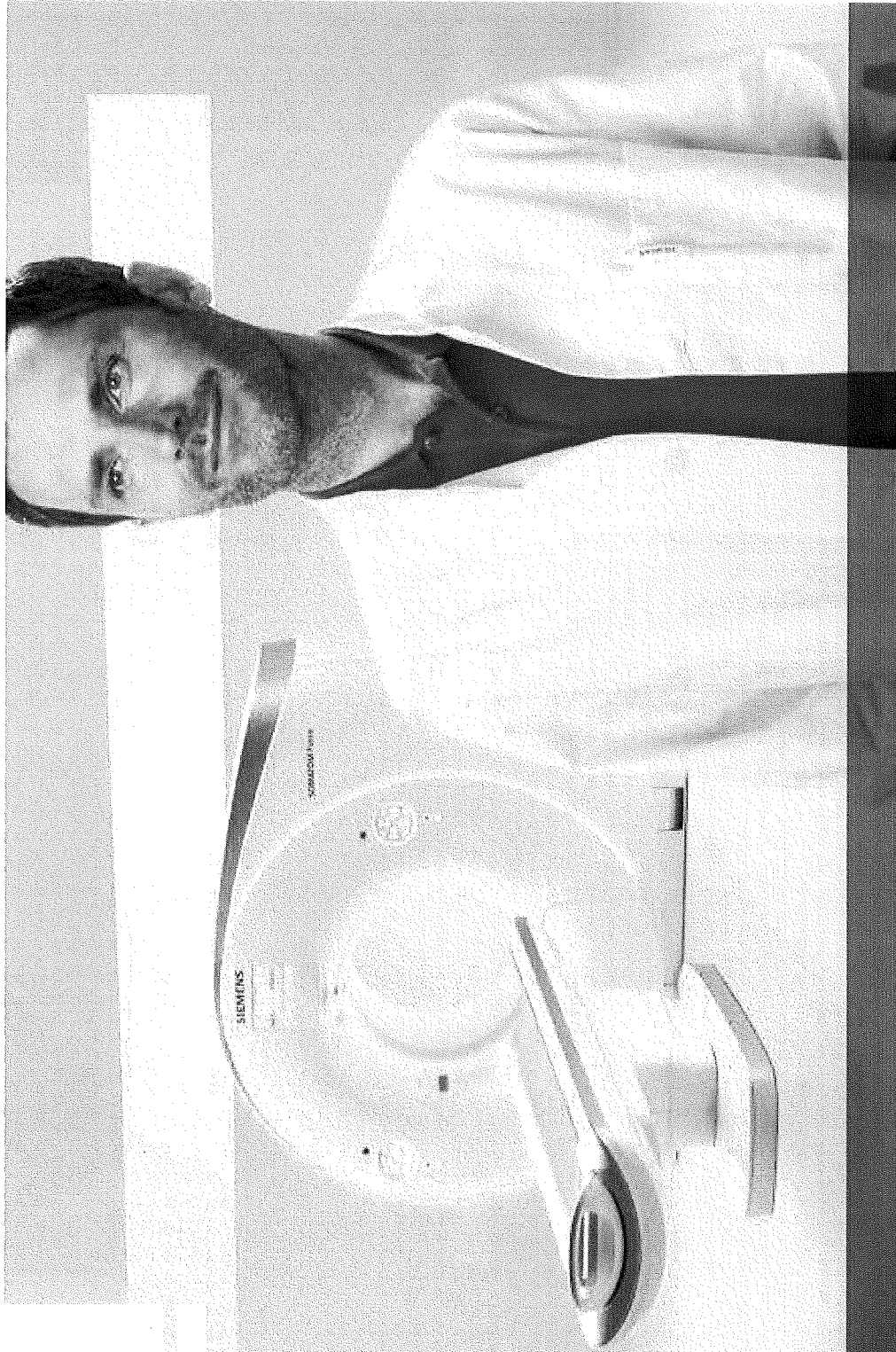
cc: Medical Facilities Planning Section, DFS



# Attachment F



**SIEMENS**



**SOMATOM Force**

**Answers for life.**



**“Two steps ahead” VS. “Trying to keep up”**

**Second best is not an option.**

# SOMATOM Force

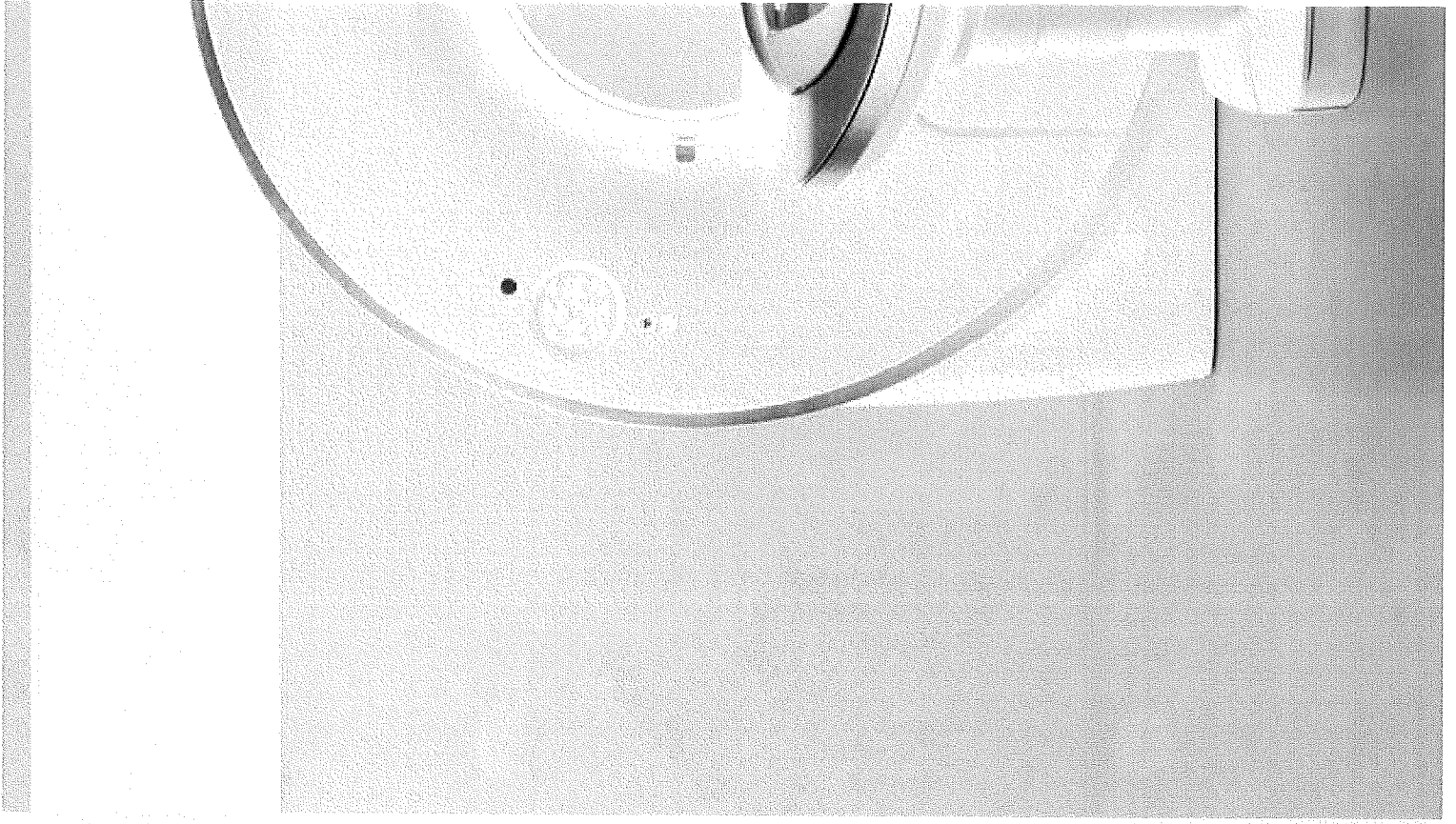
**“Two steps ahead” VS. “Trying to keep up”  
Second best is not an option.**

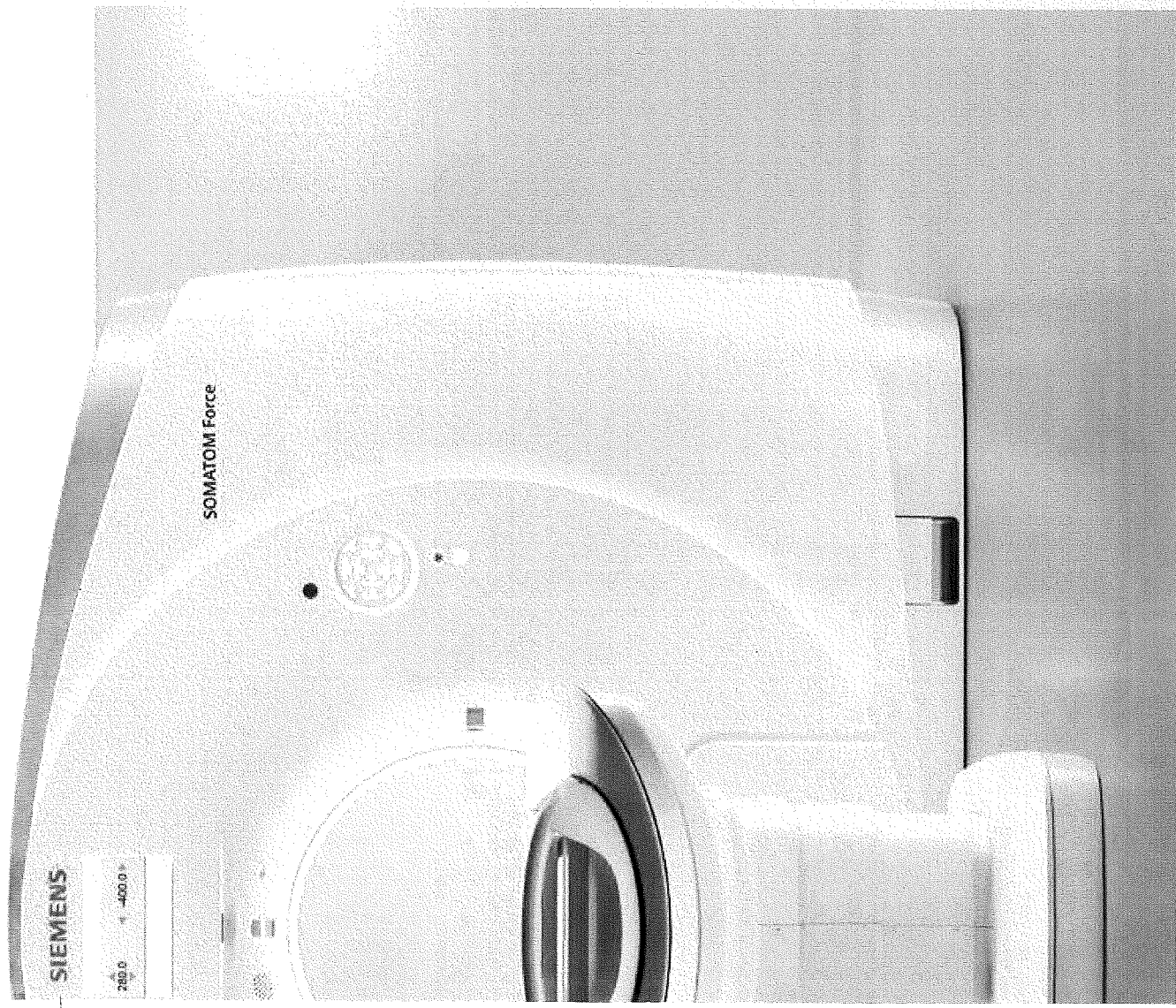
Two steps ahead in **Preventive Care**

Two steps ahead in **Freezing Motion**

Two steps ahead in **Decision Making**

With the new SOMATOM Force, you are two steps ahead in all clinical questions. So stop trying to keep up – get two steps ahead with the new SOMATOM Force.





Benefits

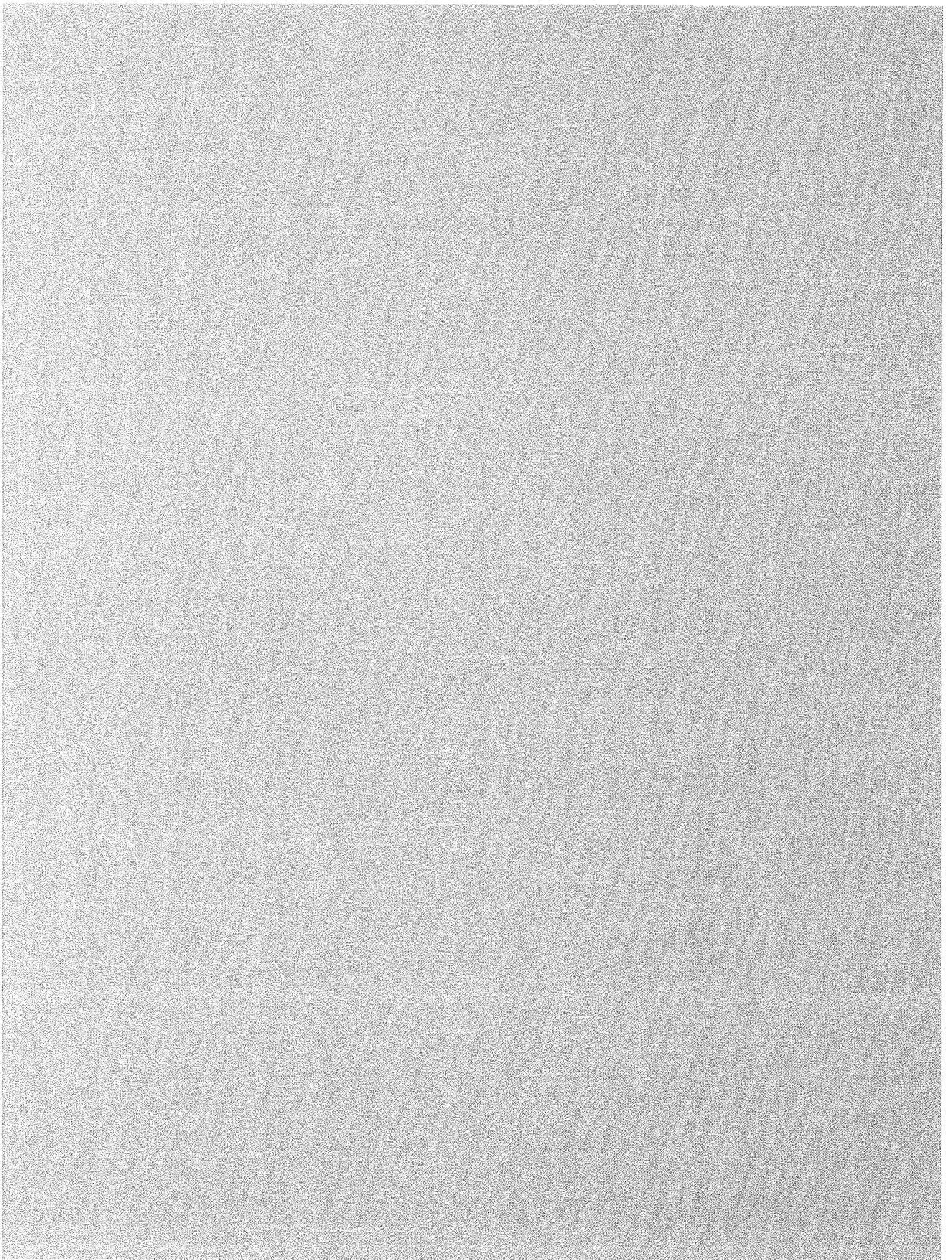
- Two steps ahead in Preventive Care
- Two steps ahead in Freezing Motion
- Two steps ahead in Decision Making
- Added benefits of syngo.via

Clinical Images

Core Technologies

- Dual Source CT
  - Vectron tube
  - Stellar<sup>infinity</sup> detector
- Specifications

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- 19
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# Benefits



# Two steps ahead in Preventive Care

## Kidney-friendly scanning

With an aging population, chronic kidney diseases are on the rise worldwide, creating a need for better care and more effective treatments. Reducing the doses of contrast media means reducing contrast-induced renal toxicity.

### Lower kV, more protection

Up to 20% of patients presented to the radiology department suffer from renal insufficiency. In some cases, the time between a contrast media (CM) enhanced scan and the next CM application can be up to two weeks, with patients waiting for renal function to be restored in the meantime. Customers have used the SOMATOM Force to routinely perform exams at 70 – 90 kV, even in adults, potentially reducing the amount of CM needed. Early clinical experience based on imaging of the left ventricle and aortic root (TAVR studies) demonstrate that a reduction of contrast media administration may be possible using SOMATOM Force's Turbo Flash Mode and its

low kV / High mA capabilities. Consequently, residual renal function may be maintained and the kidneys are better protected against nephrotoxic effects. Patients may receive their subsequent minimally invasive therapy faster, optimizing the entire clinical procedure.

### Less risk, more savings

Reducing CM can potentially mean a significant improvement in clinical results, as well as considerable savings for hospitals. Thus, being two steps ahead in kidney-friendly scanning may mean better outcomes for institutions and patients.

## Low dose early detection



With conventional CT, doses can be too high, and results too vague for successful early detection. The SOMATOM Force provides substantially optimized dose efficiency and higher spatial resolution.

**Lower dose, earlier diagnoses**  
The potential benefits of early detection have been discussed among medical professionals for years. In the case of lung cancer – the leading cause of cancer deaths – the National Lung Cancer Screening Trial (NLST\*\*) has shown that a 20% reduction in mortality from lung cancer is possible when screening exams are performed with low dose CT instead of chest X-rays\*. The SOMATOM Force allows for a previously unleveraged dose reduction through the use of two Selective Photon Shields with the Turbo Flash mode in chest imaging. This, together with outstanding spatial resolution, can help improve the use of CT imaging for the visualization of occult lesions, e. g. in the lung.

**Higher contrast, fewer readmissions**  
Alongside a minimized dose, maximum image quality is required for the early and reliable detection of the first signs of cancer. The SOMATOM Force delivers unprecedented soft-tissue contrast and unmatched speed. In Turbo Flash mode, minimized motion impairment and unparallelled image quality assist in reducing the risk of missing lesions. By significantly reducing radiation levels, the SOMATOM Force takes Computed Tomography a fundamental step ahead in preventive care.

\*Siemens CT product family is indicated for low-dose lung imaging and is not cleared for lung cancer screening.

\*\*National Lung Screening Trial Research Team, et al (2011). Reduced lung-cancer mortality with low-dose computed tomographic screening. N Engl J Med, 365:395-409.



# Two steps ahead in Freezing Motion

## Free-breathing CT imaging

Motion blur and unwanted artifacts can obscure diagnostic image quality. With the SOMATOM Force, image quality can be significantly improved, helping prevent expensive readmissions and uncertain diagnosis.

### More patients, less motion

For decades now, breathing commands have been a part of CT exams, and for a simple reason: avoiding as much movement as possible reduces motion artifacts, thus enhancing image quality. Unfortunately, a significant number of patients simply cannot hold their breath, even for a few seconds. Obese or elderly patients, unconscious or uncooperative cases, and small children are either excluded completely, have to be sedated, or are scanned with results unusable for diagnosis. Providing the industry's highest native temporal resolution, the SOMATOM Force helps to minimize motion artifacts even in these challenging cases.

### Better preparation, reduced complications

The clinical benefits of scanning with a temporal resolution high enough for patients to breathe freely are obvious. But there are also significant benefits from an operational and financial perspective.

## Fastest, most versatile scanning



With less staff and more complex challenges in CT imaging, a dose-efficient, versatile, high-performance standard scan mode may mean higher benefits for more patients and less operational problems.

Simply unique, now universal  
The introduction of the Flash Spiral in 2008 brought a new way of scanning, in many cases replacing conventional sequential and spiral exams. Using ultra-high-pitch imaging, it provided the industry's fastest acquisition speed, covering an entire thorax range in less than a second, an entire heart in one quarter of a second, thus practically freezing motion. The SOMATOM Force now expands these capabilities with Turbo Flash mode – increasing scan speed to an unmatched 737 mm/s, or providing a field of view (FoV) of up to 50 cm at Flash speed coverage, thus bringing the benefits of Flash scanning to obese and acute care patients.

Easy to use, higher performance  
This unmatched acquisition speed is a giant step ahead in freezing motion; making ultra-high-pitch scanning with the Turbo Flash mode widely available is the next step. Applying this unique scan mode in close to challenging clinical fields can substantially reduce the number of protocols and the associated preparation time. Its versatility makes Turbo Flash scanning the mode of choice for regular operation, or in emergency settings. Providing the industry's fastest, most versatile scan mode, the SOMATOM Force takes Computed Tomography a big step ahead in freezing motion.

# Two steps ahead in Decision Making

## 4D imaging at half the dose

With diagnosis often stuck in a compromise between dosage and data, the possibility of delivering high-quality yet dose-efficient imaging could help in make decisions faster and more sustainable.

**Proper diagnoses, precise decisions**  
Utilizing the benefits of functional imaging in addition to morphology has been a goal since the early days of CT. For some clinical scenarios, 4D imaging has found its way into clinical routine. However, despite the clear benefits of dynamic evaluations, the applied dose has been the crucial barrier to broadening its application, especially to body perfusion. The SOMATOM Force significantly lowers this hurdle by not only extending the coverage to 22 cm for perfusion (and even 80 cm for dynamic CTAs), but particularly by reducing the applied dose. Perfusion studies of the liver, for example, now become possible at a dose comparable to conventional multiphase examinations.

**Accurate results, appropriate therapies**  
Besides high doses, multiphase exams come with other drawbacks. Difficult contrast bolus timing and execution foster the risk of unreliable diagnosis. By replacing this with easier-to-perform 4D studies, the SOMATOM Force helps prevent such occurrences. In addition to being more cost-effective, the functional information allows more precise disease stratification, enabling more appropriate decisions. As a result, more – and especially younger – patients can benefit from a more precise assessment of lesions and associated therapies.

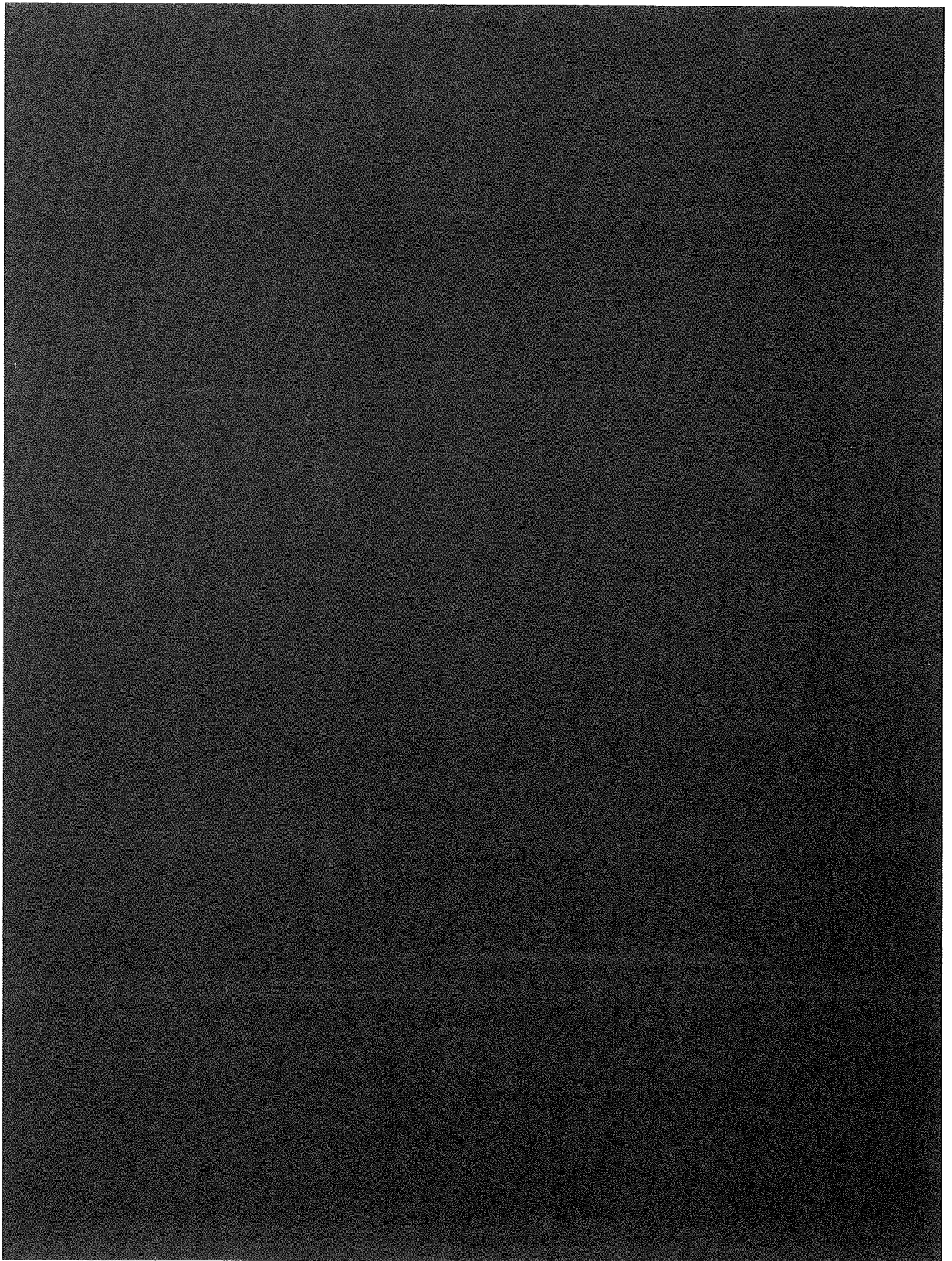
## Precise Dual Energy quantification

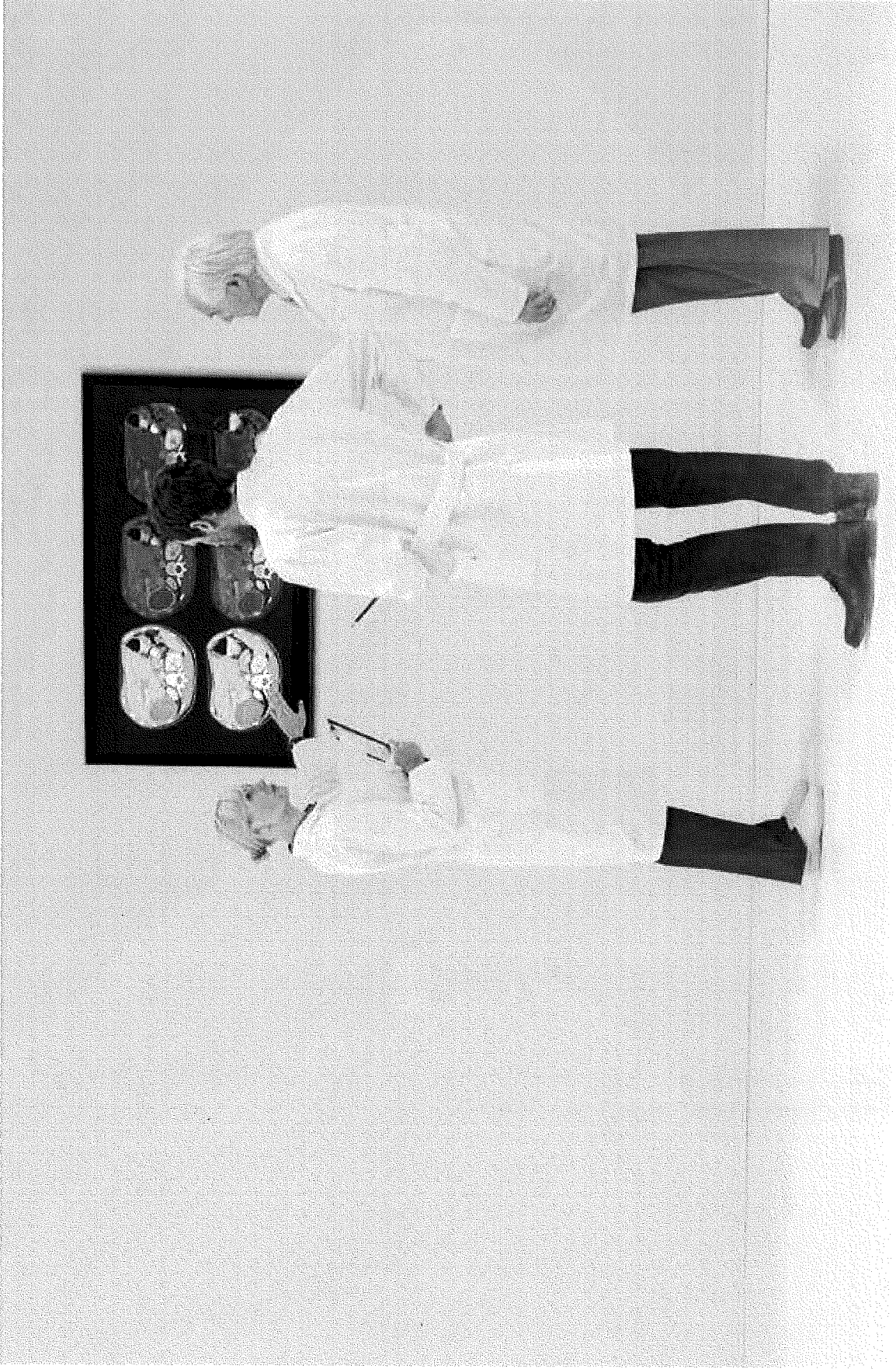


With patient-specific therapies growing more complex and expensive, reliable results for early and accurate decisions mean maximum efficiency in therapy monitoring.

More information, better outcomes  
CT researchers have been looking to add tissue and material information to morphology through the use of Dual Energy (DE) examination for decades. With the introduction of Dual Source CT – the industry's only dose-neutral DE solution – Siemens has taken an essential step in bringing DE into clinical practice. The SOMATOM Force significantly increases visualization, bringing Dual Source DE to a new level. Improved DE acquisition speeds of up to 250 mm/s, and a much broader range of applications, e.g. for obese patients, allow for more precise material differentiation in oncology, cardiovascular and acute care cases.

Saved time, increased usage  
Integrating DE into clinical routine delivers more than merely improved clinical results. Evaluation of treatment response is often based on trial and error, but waiting to see whether a chosen therapy is appropriate can be complex, costly and time-consuming. As a result, many institutions waste resources on unnecessary treatments. Reliable information about tissue and material decomposition allows for faster assessments, and thus faster decision making regarding the appropriateness of a chosen therapy. By making DE quantification more precise and more accessible, the SOMATOM Force takes CT a giant step ahead in decision making.



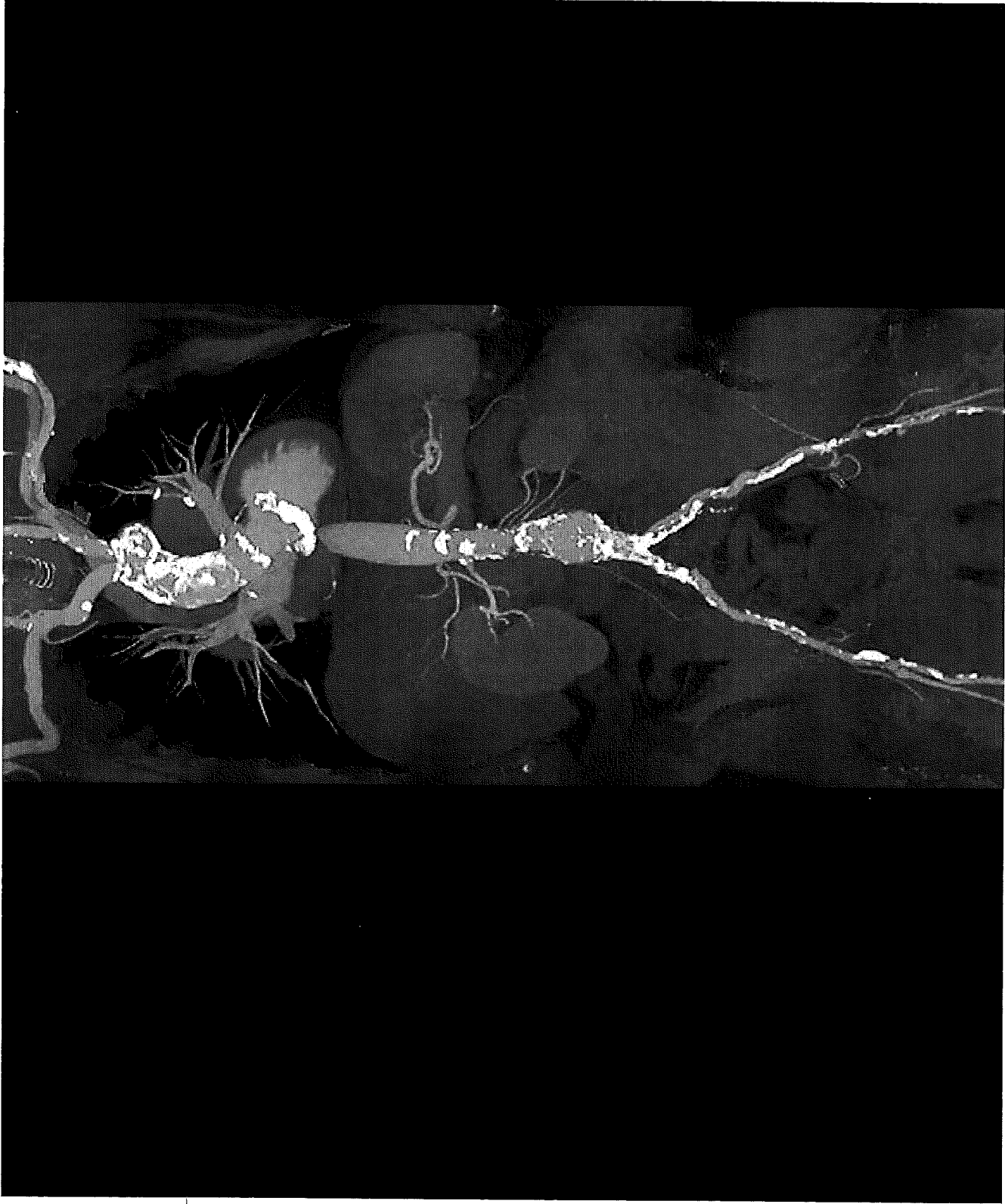


**Clinical Images**

collimation: 64 x 0.6 mm  
spatial resolution: 0.3 mm  
scan time: 12 s  
scan length: 126 mm  
rotation time: 1.0 s  
tube settings: 120 kV, 60 mAs  
DLP: 701 mGy cm  
CTDIvol: 45.09 mGy  
eff. dose: 1.5 mSv

The SOMATOM Force with its Stella<sup>family</sup> detector and the unique Vectron tube significantly increase low contrast detectability and grey-white matter differentiation.





**collimation:**  
2 x 192 x 0.6 mm

**spatial resolution:**  
0.3 mm

**scan time:**  
1.44 s

**scan length:**  
727 mm

**rotation time:**  
0.25 s

**tube settings:**  
90 kV, 194 mAs

**DLP:**  
334 mGy cm

**CTDIvol:**  
4.4 mGy

**eff. dose:**  
5.0 mSv

**contrast media:**  
40 ml

With the new Vectron tube, TAVR planning in a heavy patient with chronic kidney disease can be performed at 90 kV. The increased contrast-to-noise ratio allows contrast media to be reduced to 40 ml\*.

Courtesy of Medical Faculty Mannheim at Heidelberg University, Mannheim, Germany

\*Early clinical experience based on imaging of the left ventricle and aortic root (TAVR studies) demonstrate that a reduction of contrast media administration may be possible using SOMATOM Force's Turbo Flash Mode and its low KV / High mA capabilities



**collimation:**  
 2 x 192 x 0.6 mm  
**spatial resolution:**  
 0.3 mm  
**scan time:**  
 0.2 s  
**scan length:**  
 125 mm  
**rotation time:**  
 0.25 s  
**tube settings:**  
 100 kV, 581 mAs  
**DLP:**  
 99 mGy cm  
**CTDIvol:**  
 5,76 mGy  
**eff. dose:**  
 1.7 mSv  
**contrast media:**  
 40 mL  
**HR independent**  
**temp resolution:**  
 66 ms



A 308lb patient was scanned with Cardiac Turbo Flash mode at 100 kV and 40 ml contrast media. The left main and the left anterior descending artery are shown without artifacts from motion or photon starvation. The new mode allows a pitch-dependent field of view, ranging from 35 to 50 cm, and is suitable for patients of up to 485lb.

**collimation:**  
192 x 0.6 mm

**spatial resolution:**  
0.3 mm

**scan time:**  
47 s

**scan length:**  
433 mm

**rotation time:**  
0.25 s

**tube settings:**  
70 kV, 80 mAs

**DLP:**  
1,404 mGy cm

**CTDIvol:**  
23.57 mGy

**eff. dose:**  
1.1 mSv

Thanks to the new Vectron tube, 70 kV imaging is also applicable with the Adaptive 4D Spiral Plus. The combination with the Adaptive Dose Shield allows for the coverage of long ranges at very low doses. In this dialysis patient (dialysis shunt), a high-grade stenosis could be safely identified with 20 ml of contrast media.



Courtesy of Medical Faculty Mannheim at Heidelberg University, Mannheim, Germany

**collimation:**  
2 x 192 x 0.6 mm

**spatial resolution:**  
0.3 mm

**scan time:**  
0.4 s

**scan length:**  
300 mm

**rotation time:**  
0.25 s

**tube settings:**  
100 kV Sn, 33 ref. mAs

**DLP:**  
4.5 mGy cm

**CTDIvol:**  
0.15 mGy

**eff. dose:**  
0.06 mSv

**contrast media:**  
30 ml



The spectral shaping of the two Selective Photon Shield II enables free-breathing Turbo Flash scanning at 100 kV with much higher air-to-soft-tissue contrast, especially in the lung or colon.

**collimation:**  
2 x 192 x 0.6 mm

**spatial resolution:**  
0.3 mm

**scan time:**  
0.2 s

**scan length:**  
140 mm

**rotation time:**  
0.25 s

**tube settings:**  
80 kV, 543 mAs

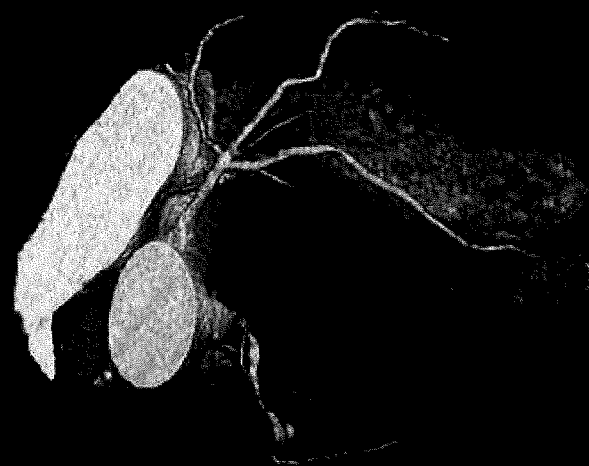
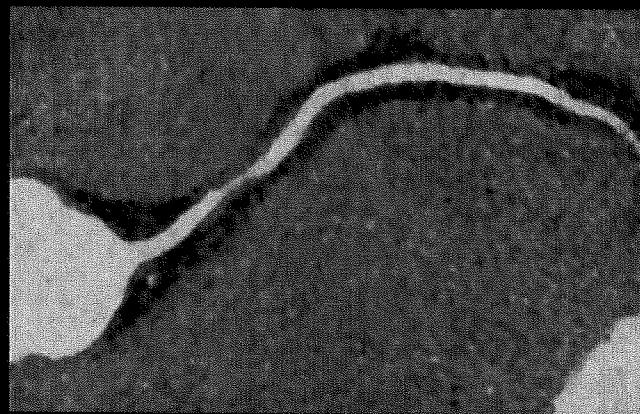
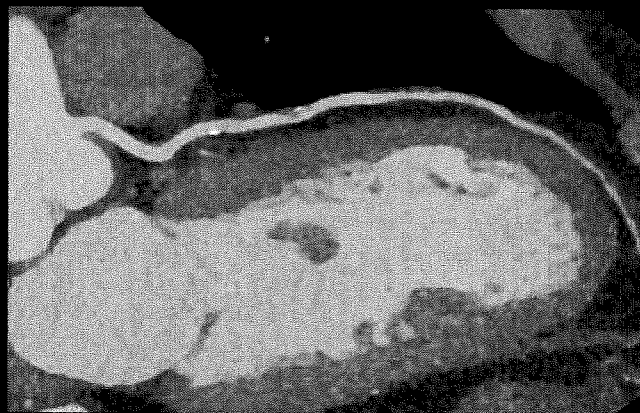
**DLP:**  
45 mGy cm

**CTDIvol:**  
2.49 mGy

**eff. dose:**  
0.6 mSv

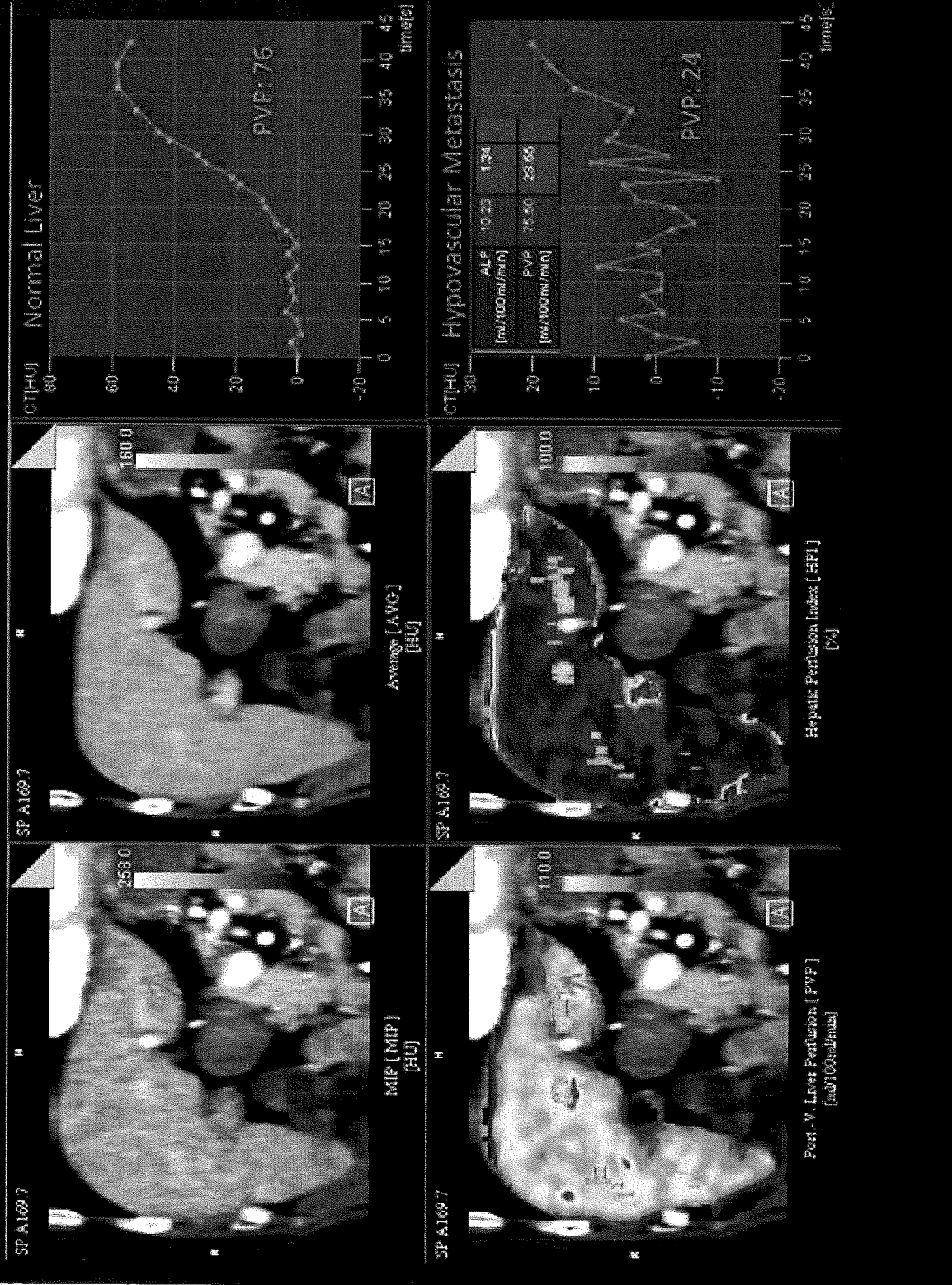
**HR independent**

**temp. resolution:**  
66 ms



Low-kV Turbo Flash coronary CTA was used for the evaluation of coronary heart disease in an adult patient. The true lumen of the calcified plaque in the LAD can be precisely seen at up to 22 lp/cm thanks to the new data measurement system and x-ray tube.

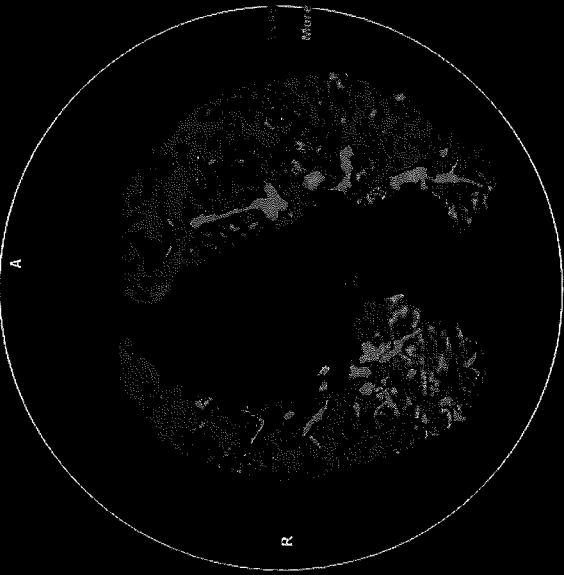
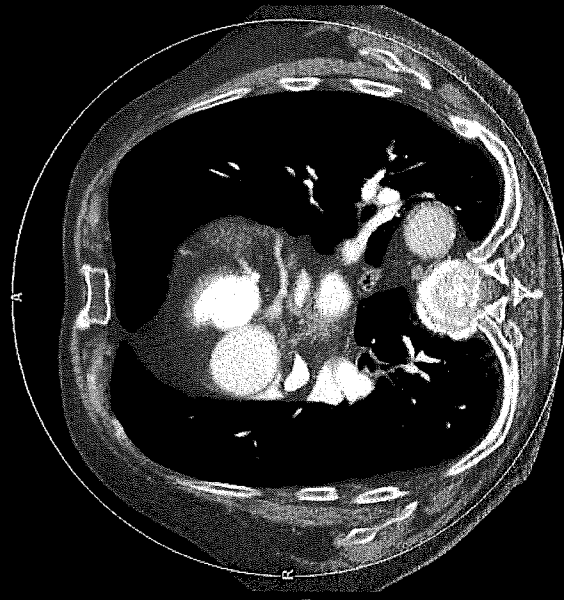
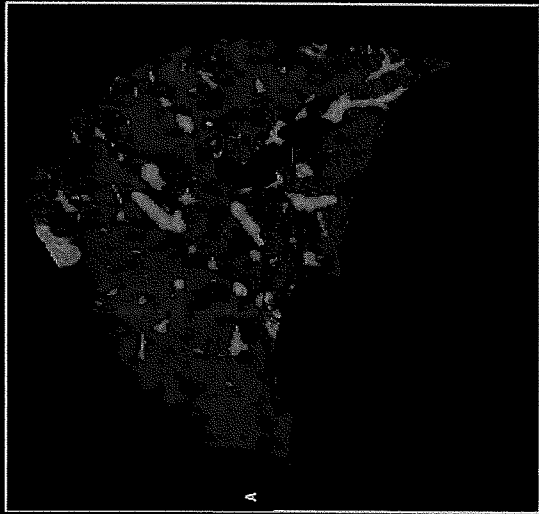
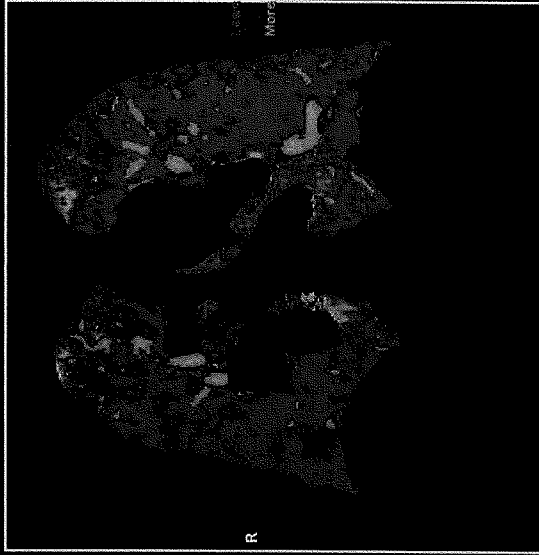
**collimation:**  
 192 x 0.6 mm  
**spatial resolution:**  
 0.3 mm  
**scan time:**  
 35 s  
**scan length:**  
 220 mm  
**rotation time:**  
 0.25 s  
**tube settings:**  
 80 kV, 100 mAs  
**DLP:**  
 948 mGy cm  
**CTDIvol:**  
 49,4 mGy  
**eff. dose:**  
 14 mSv  
**temporal resolution:**  
 up to 1.5 s cycle time

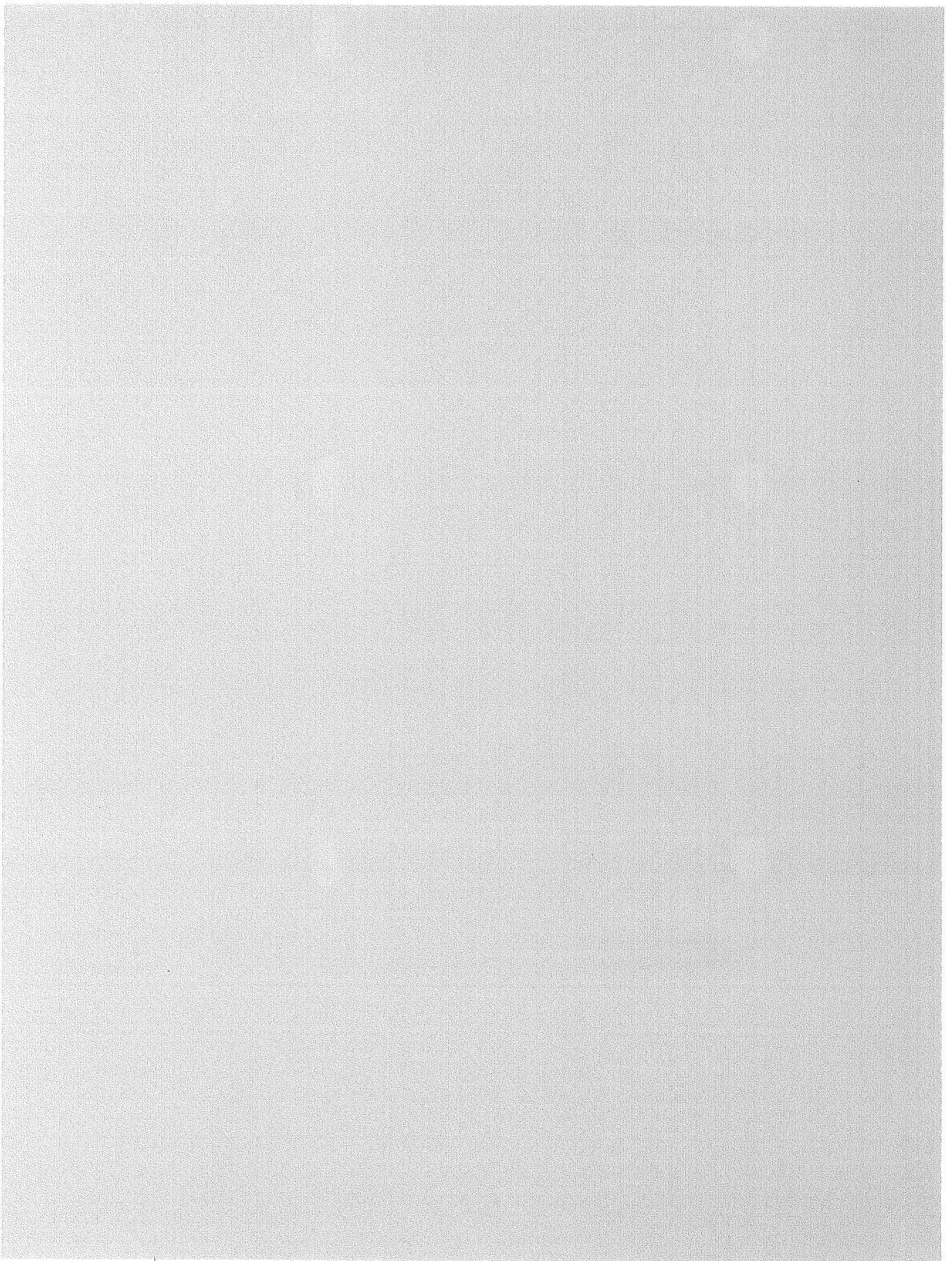


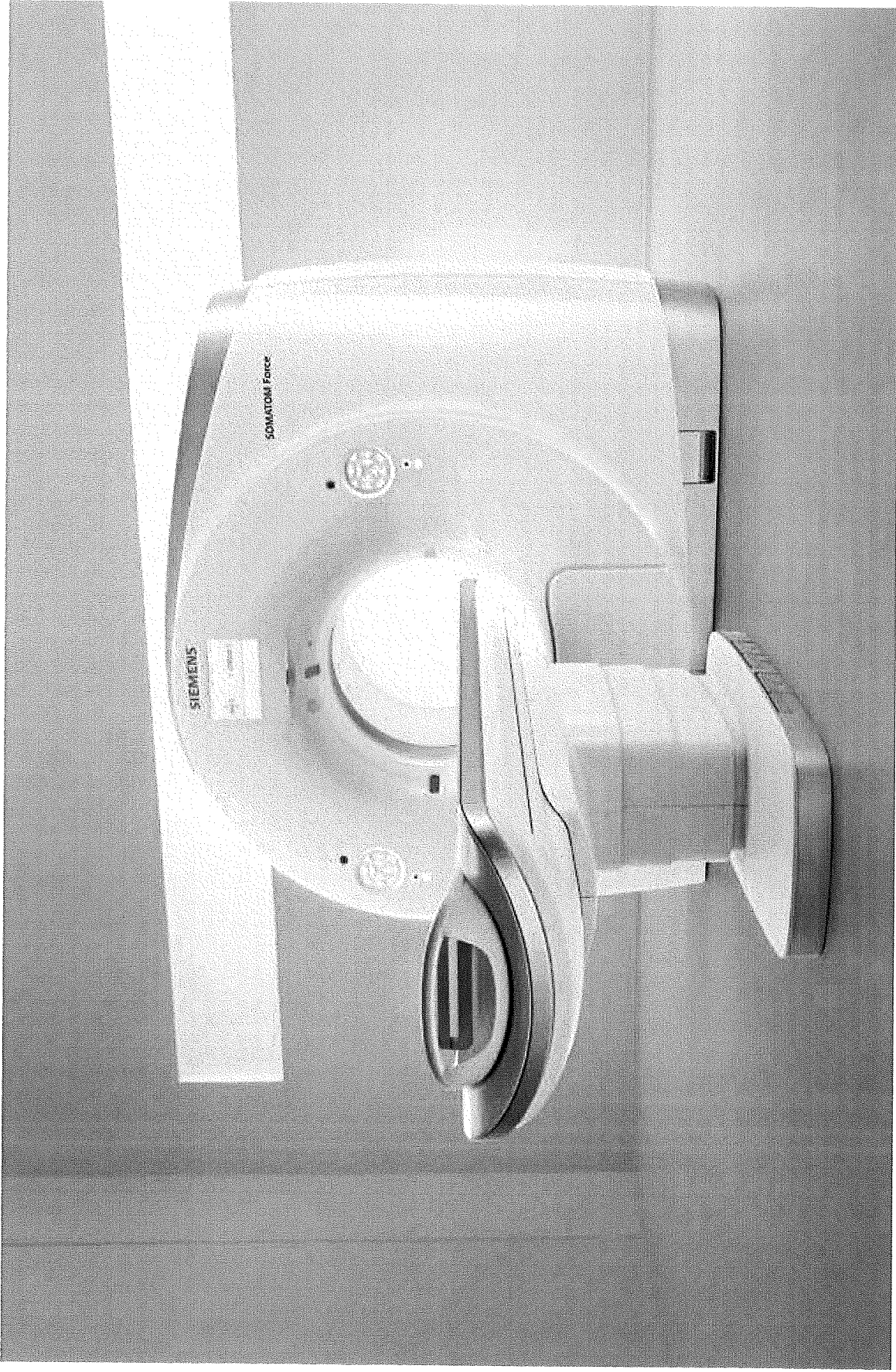
This liver perfusion study, showing a liver metastasis, was acquired with the new Stellar<sup>infinity</sup> detector and the Adaptive 4D Spiral Plus, in combination with the Adaptive Dose Shield. Prior to targeted therapy, the baseline blood flow quantification was dynamically acquired over a range of 22 cm at a very low perfusion dose.

**collimation:**  
 128 x 0.6 mm  
**spatial resolution:**  
 0.3 mm  
**scan time:**  
 4 s  
**scan length:**  
 309 mm  
**rotation time:**  
 0.25 s  
**tube settings:**  
 90/150 kV Sn, 104/76 mAs  
**DLP:**  
 187 mGy cm  
**CTDIvol:**  
 5.54 mGy  
**eff. dose:**  
 2.6 mSv

The new 90/150 kV Sn mode and a 35 cm field of view allow for DE examinations (male, 48 years, 220lb). The new Selective Photon Shield II increases energy separation by 30%. This combination expands DE information to challenging patients for more precise tissue and material decomposition.







# Core Technologies

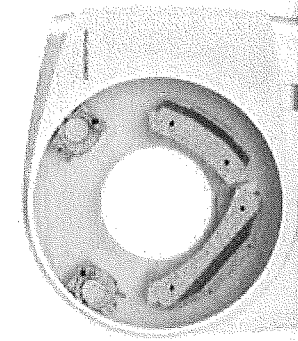


# SOMATOM Force – Core Technologies

Dual Source imaging at ultra-high speed with the unique SOMATOM Force gantry

The SOMATOM Force is the next generation of Dual Source CT, incorporating two innovative X-ray tubes and two revolutionary Stellarium detectors.

The unique Dual Source gantry and high-pitch table of the SOMATOM Force allow CT imaging at unprecedented acquisition speed and temporal resolution.

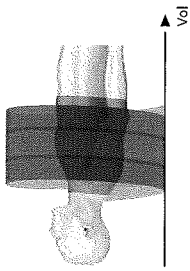


## Continuing a strong heritage

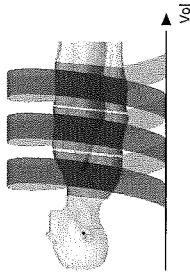
In 2005, Siemens took a giant leap with the introduction of Dual Source CT. The introduction of the SOMATOM Definition allowed, for the first time, heart scanning at any heart rate – it also introduced DE into clinical routine. In 2008, Siemens defied limitations by introducing the SOMATOM Definition Flash. With the Flash Spiral, routine sub-mSv cardiac imaging became possible, defining the new benchmark in low dose CT imaging. Researchers and scientists worldwide have since proven the clinical benefits of Dual Source in several hundred publications and with more than 1,500 installations. Dual Source has found its way into everyday clinical practice.

## Next-generation Dual Source CT gantry

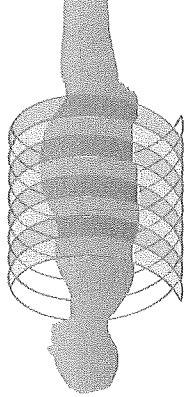
The limits of CT are once again being expanded with the next generation of Dual Source CT: the SOMATOM Force. Its unmatched rotation speed of 0.25 s, in combination with a 50% increase in detector coverage and ultra-high-pitch scanning facilitates an unseen temporal resolution of 66 ms and an acquisition speed of up to 737 mm/s. For the first time, Flash CT scans can be performed with a full field of view (FoV) of 50 cm, starting at a scan speed of close to 40 cm/s. This unique scan mode – the Turbo Flash Spiral – brings the benefits of Flash scanning to a broader range of patients than ever before, making it the fastest, most versatile scan mode in the industry.



Single Source CT scanners are limited to slow pitch, slow scan speed and overlapping scans



Gaps in the acquired volume occur at higher table feeds in Single Source CT



Dual Source CT combines the data from two sources at a table pitch of up to 3.2 without sequential or spiral scanning overlap

The combination of ultra-high-pitch scanning and Dual Source technology is the key enabler for the Turbo Flash spiral with up to 737 mm/s acquisition speed.

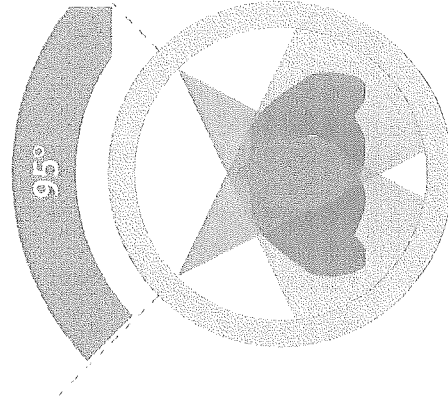
## 66 ms temporal resolution and 737 mm/s acquisition speed

### 66 ms temporal resolution

The SOMATOM Force's fastest rotation speed is 4 rotations per second or 0.25 seconds per rotation, which equals a temporal resolution of 66 ms in cardiac imaging, independent of the heart rate. The extended coverage of the SOMATOM Force can cover an entire heart in approximately 150 ms – faster than a heartbeat. Additionally, high temporal resolution is provided in the entire image. As the data is natively measured, no artificial enhancement of the temporal resolution is needed. Together with a generator power of up to 2 x 120 kW, the SOMATOM Force facilitates freezing motion at outstanding image quality.

### 737 mm per second acquisition speed

With its ultra-high pitch, the Turbo Flash spiral mode can provide a volume coverage speed of up to 737 mm/s. A thorax-abdomen scan can now be performed in just one second. This is a result of the new design of the Stellar<sup>infinity</sup> detector with 50% more coverage and a rotation speed of 0.25 s. The capabilities of the gantry and the table are not the only important factors – when scanning at ultra-high pitch, the available power is essential. In obese imaging and fast volume coverage, maximum power is required to deliver sufficient photon flux for each slice. With 2 x 120 kW generator power, the SOMATOM Force is the ideal scanner for high-speed, large-volume coverage.



The Dual Source gantry of the SOMATOM Force allows reduction of temporal resolution to 66 ms, and only 95° gantry rotation is needed to acquire the data for an entire cardiac case.

# SOMATOM Force – Core Technologies

## Dual Source imaging with the revolutionary Vectron tube

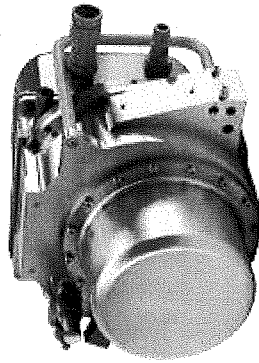
The revolutionary Vectron tube from Siemens delivers enormous power reserves with up to 1,300 mA, especially for low kV imaging at 70 kV to 90 kV

### More than enough power

The SOMATOM Force delivers up to 2 x 1,300 mA, utilizing power reserves from two 120 kW generators, and direct anode cooling from the Vectron X-ray tube. This revolutionary concept was introduced with the STRATON tube. The Vectron tube offers tube voltages from 70–150 kV in increments of 10 kV, automatically selected through CARE kV, based on patient body habitus and examination type. This unique combination allows for more patients to be scanned at low kV from 70 to 90 kV. The higher power reserves now utilize the improved Selective Photon Shield II (SPS II) for both Vectron tubes.

### Making the best even better

The SPS II facilitates filtration of X-ray spectra at considerably higher levels than its predecessor. In addition, the flying focal spot approach of z-Sharp was entirely reworked. The electron beam is now even more accurately and rapidly deflected in a diagonal fashion, creating two focal spots alternating at 4,480/s. Allowing two slices per detector row increases resolution along the scan axis, and enables a significantly increased in-plane resolution. In combination with the smallest focal spot of 0.4 x 0.5 mm (IEC 60336), the Vectron tube routinely delivers spatial resolution of up to 22 lp/cm (equivalent to 0.24 mm) in clinical routine without increases in dose.



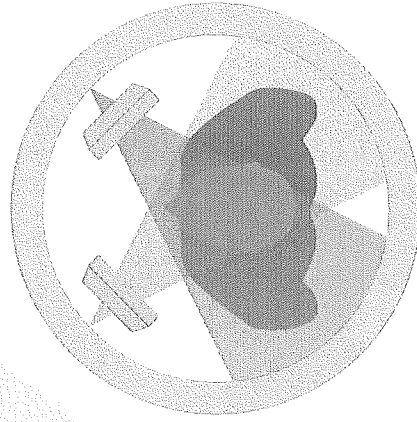
## Low kV for adults and significantly less dose

### Low kV for adults

Siemens pioneered the trend of low kV scanning with the introduction of 80 kV and then 70 kV imaging. Using X-rays at lower kV means scanning at lower energy levels, thus higher attenuation and higher iodine contrast. However, in order to maintain the desired contrast-to-noise ratio (CNR), the power had to be increased. Power limitations consequently restricted the use of these modes, e. g. to very small patients. The outstanding power reserves of the SOMATOM Force now allow maintained CNR at lower kV in adults and obese patients. This means maintaining contrast concentration while reducing radiation dose – and vice versa.

### Air-to-soft-tissue: contrast at less dose

Combining the low kV capabilities of the Vectron tube with the higher X-ray filtration of the two SPS II improves the CNR of air-to-soft-tissue contrast, which is mostly found in the colon or the lung. CNR can also be maintained at reduced patient radiation doses. This increasing efficiency, together with outstanding low-contrast detection through the Stellar<sup>primity</sup> detector, makes the SOMATOM Force the ideal scanner for the early detection of occult lesions\*.

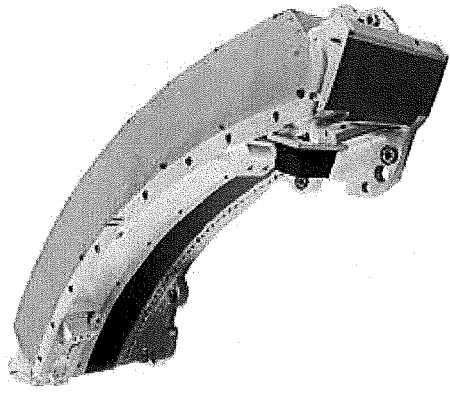


Two Improved Selective Photon Shields are the key components for the significant dose reduction potential of the SOMATOM Force.

\*The SOMATOM Force may achieve the same Contrast-to-Noise level (in terms of image pixel noise) in the image at reduced dose.

# SOMATOM Force – Core Technologies

## Dual Source imaging with the exceptional Stellar<sup>Infinity</sup> detector



The new Stellar<sup>Infinity</sup> detectors with their 2 x 96 row coverage (2 x 192 slices) and the redesigned Adaptive Dose Shield finally bring body perfusion into clinical routine.

### More with less

The benefits of perfusion, or 4D imaging, have long been established. Many institutions have introduced perfusion examinations of the brain as standard care for stroke patients. But when it comes to body perfusion, users are still reluctant to apply it in clinical practice as it is still considered a high-dose examination. With the new Stellar<sup>Infinity</sup> detectors, the SOMATOM Force enables body perfusion suitable for everyday use. The increased coverage of 2 x 96 rows (2 x 192 slices) allows for a perfusion range of up to 22 cm, thus easily covering entire organs. The key to this breakthrough is the new Adaptive Dose Shield that allows a dose reduction of up to 50% in 4D imaging, in comparison to other state-of-the-art CT's.

### Dynamic imaging at half the dose

The Adaptive Dose Shield was improved to meet the requirements of the SOMATOM Force by facilitating faster collimator blade movement. The key innovation for this was faster data transmission through Siemens' unique SiDaNet ultra-fast data bus system. With its faster blade movement, the Adaptive Dose Shield fully completes the Adaptive 4D Spiral Plus in perfusion imaging. Utilizing the higher resolution of the Stellar<sup>Infinity</sup> detectors from 25% more detector channels and a 3D scatter grid are the key enablers for dose reductions – at outstanding high- and low-contrast resolution.

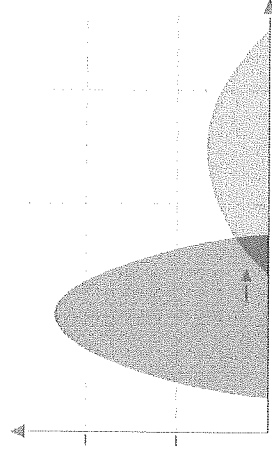
## Less dose in dynamic imaging and 30% more energy separation in DE

### Precision is key

For many years, researchers had been struggling to add tissue and material information to morphology, utilizing the information from two distinct energy levels. It took Siemens' introduction of the first-generation DE scanner in 2005 to achieve the goal of bringing DE to clinical practice. In 2008, Siemens was able to facilitate dose-neutral DE scanning, making it even more accessible. Now, with the SOMATOM Force, Siemens goes one step further. With new energy pairings and the new SPS II, the SOMATOM Force allows new levels of energy separation in DE, and therefore significantly increased precision and clinical impact.

### 30% more energy separation in DE

The quality of DE exams relies on the effective separation of energy spectra. More spectral overlap means less additional data on the material's decomposition. Therefore, the pairing of the two energy levels is important. First, they need to be widely apart. Second, they have to be perfectly set to the needs of the patient. The SOMATOM Force utilizes multiple pairings: the "standard" 80/140 kV, but also new 80, 90, and 100/150 kV modes with Sn (tin) filtration using the SPS II, e. g. for obese patients. 30% better energy separation means similar tissues can be differentiated more precisely, leading to increased diagnostic power in DE.



With the new Selective Photon Shield II, the SOMATOM Force achieves higher energy separation for more precise DE exams.

# SOMATOM FORCE

**"Two steps ahead" VS. "Trying to keep up"  
Second best is not an option.**

## *Two steps ahead in Preventive Care*

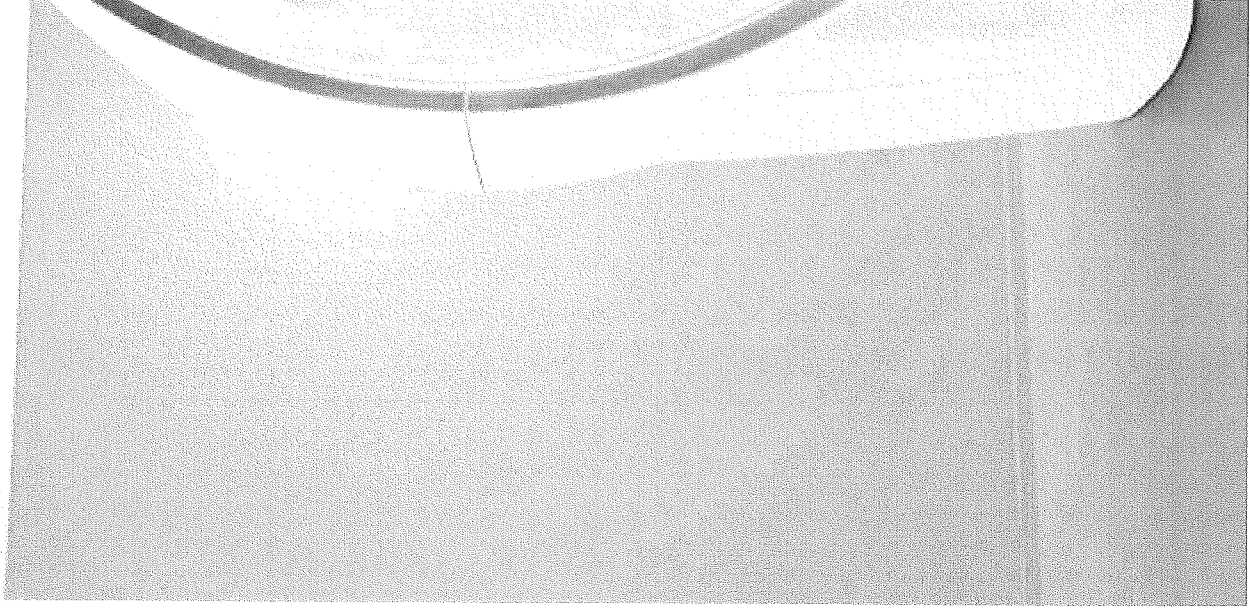
- Kidney-friendly scanning
- Low dose early detection

## *Two steps ahead in Freezing Motion*

- Free-breathing CT imaging
- Fastest, most versatile scanning

## *Two steps ahead in Decision Making*

- 4D imaging at reduced dose
- Precise Dual Energy quantification





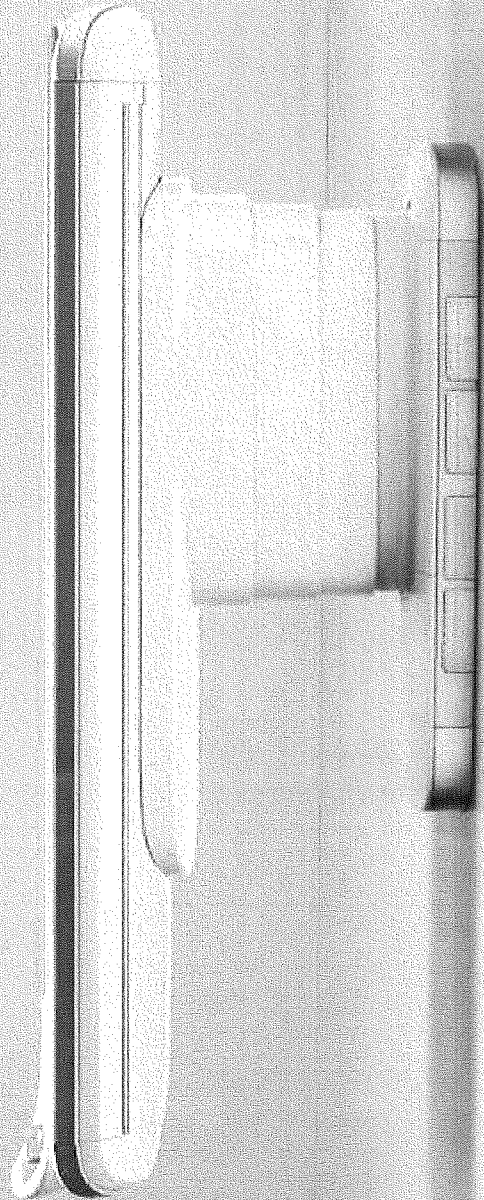
SIEMENS

SOMATOM Force

280.0  
-400.0



<b>Detector</b>	2x Stellar <sup>Infinity</sup> detector with 3D scatter collimator
<b>Number of acquired slices</b>	384 (2 x 192)
<b>Rotation time</b>	up to 0.25 s
<b>Temporal resolution</b>	66 ms
<b>Generator power</b>	240 kW (2 x 120 kW)
<b>kV settings</b>	70 – 150 kV, in increments of 10
<b>Spatial resolution</b>	0.3 mm x 0.3 mm x 0.3 mm standard isotropic resolution
<b>Max. scan speed</b>	737 mm/s* with Turbo Flash
<b>Table load</b>	up to 307 kg/676 lbs*
<b>Gantry opening</b>	78 cm



\*Optional

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

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

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

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Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

*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 in their own rights.

Usage of *syngo.via* for an emergency case requires customer to provide respective emergency measures in case of non-availability of system or network.

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# Attachment G

**EQUIPMENT COMPARISON**

	Existing Equipment	Replacement Equipment
Type of Equipment (List each component)	SOMATOM Sensation 64	SOMATOM Force Dual Source
Manufacturer of Equipment	Siemens	Siemens
Tesla Rating for MRIs	N/A	N/A
Model Number	8377512	14440623
Serial Number	54056	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	October 2004	Spring 2015
Does Provider Hold Title to Equipment or Have a Capital Lease?	Title	Title
Specify if Equipment Was/Is New or Used When Acquired	New	New
Total Capital Cost of Project (Including Construction, etc.) <Use Attached Form>	\$1,500,000	\$3,162,963
Total Cost of Equipment (Replacement includes CT + Injector + Freight + Taxes)	\$1,350,000	\$2,249,463
Fair Market Value of Equipment	\$133,010	N/A
Net Purchase Price of Equipment	\$1,350,000	\$2,249,463
Locations Where Operated	CMC – 1000 Blythe Blvd.	CMC – 1000 Blythe Blvd.
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	All Primary CT Applications	N/A
Type of Procedures New Equipment is Capable of Performing	N/A	All Primary CT Applications (Faster scan speed and lower dose for all applications. Advanced capabilities for trauma, cardiac, and dual energy imaging.)

# Attachment H

**Carolinas Medical Center - 2014 CT Volume (Scan Rm C)**

<b>2014</b>	<b>Rm C</b>	<b>Total</b>
January	2103	4336
February	1755	3619
March	2089	4308
April	2262	4386
May	2244	4627
June	2151	4435
July	2213	4563
August	2134	4401
September	2136	4405
October	2292	4726
November	1938	3995
December	1974	4070
<b>Totals</b>	<b>25291</b>	<b>51871</b>

# Attachment I

# SIEMENS

January 21, 2015

Carolinas Healthcare System  
Attn: Mr. Jeff Aho  
Associate Vice President  
Carolinas Medical Center  
1000 Blythe Boulevard  
Charlotte, NC 28203

Dear Jeff Aho,

The purpose of this letter is to confirm that Siemens Medical Solutions USA, Inc. (Siemens) will be responsible for removing your existing Siemens Sensation 64 with Serial Number 54056 ("existing equipment") as part of your purchase of the Siemens Definition Force for Carolinas Medical Center. The cost for the de-installation and removal is included in the price quotation for the replacement equipment, which totals \$1,775,000 (\$2,050,000 sale price minus \$ 275,000 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

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