



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK PAYNE • Director, Division of Health Service Regulation

VIA EMAIL ONLY

November 6, 2024

Elizabeth Kirkman
Elizabeth.kirkman@atriumhealth.org

No Review

Record #: 4643
Date of Request: September 19, 2024
Facility Name: Atrium Health Cabarrus
FID #: 943049
Business Name: The Charlotte-Mecklenburg Hospital Authority
Business #: 1770
Project Description: Retain the Siemens Axion Artis dTC/dTA Detector serial #55423 interventional radiology equipment that will be replaced
County: Cabarrus

Dear Ms. Kirkman:

The Healthcare Planning and Certificate of Need Section, Division of Health Service Regulation (Agency) received your correspondence regarding the project described above. Based on the representation in your request and the CON law **in effect on the date of this response to your request**, the project as described is not governed by, and therefore, does not currently require a certificate of need. If the CON law is subsequently amended such that the above referenced proposal would require a certificate of need, this determination does not authorize you to proceed to develop the above referenced proposal when the new law becomes effective.

This determination is binding only for the facts represented in your correspondence. If changes are made in the project or in the facts provided in the correspondence referenced above, a new determination as to whether a certificate of need is required would need to be made by this office. **As a reminder, it is unlawful to offer or develop a new institutional health service without first obtaining a certificate of need. The Department reserves the right to impose sanctions, including civil penalties and the revocation of a license, upon any entity that offers or develops a new institutional health service without first obtaining a certificate of need.**

Please do not hesitate to contact this office if you have any questions.

Sincerely,

Gregory F. Yakaboski, Project Analyst

Micheala Mitchell, Chief

cc: Acute and Home Care Licensure and Certification Section, DHSR
Radiation Protection Section, DHSR

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF HEALTH SERVICE REGULATION
HEALTHCARE PLANNING AND CERTIFICATE OF NEED SECTION

LOCATION: 809 Ruggles Drive, Edgerton Building, Raleigh, NC 27603
MAILING ADDRESS: 809 Ruggles Drive, 2704 Mail Service Center, Raleigh, NC 27699-2704
<https://info.ncdhhs.gov/dhsr/> • TEL: 919-855-3873

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

From: [Huber, Brighid K](#)
To: [Yakaboski, Greg](#)
Subject: Re: [External] 2024 Atrium Health Cabarrus Exemption Request to Replace and Relocate IR/Vascular Equipment on the Main Campus
Date: Wednesday, October 30, 2024 3:50:49 PM

CAUTION: External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Hi Greg,

I hope you're doing well! Please see below:

- The total cost to purchase, install and make the Replacement Equipment operational is \$8,978,138
- The current maximum fair market value of the Existing Equipment (which is the equipment that is being retained or re-acquired) is **less** than \$57,023

Please let me know if you have any other questions or if I can provide additional information that would be helpful.

Thank you!

Brighid

Brighid Knoll Huber, MHA, ATC
Core Market Growth Business Development
Mobile: 724-986-6214

From: Yakaboski, Greg <greg.yakaboski@dhhs.nc.gov>
Sent: Monday, October 28, 2024 3:41 PM
To: Huber, Brighid K <Brighid.Huber@atriumhealth.org>
Subject: [EXTERNAL] RE: [External] 2024 Atrium Health Cabarrus Exemption Request to Replace and Relocate IR/Vascular Equipment on the Main Campus
WARNING: This email originated from outside of Advocate Health (greg.yakaboski@dhhs.nc.gov). **DO NOT** click links or open attachments unless you know and trust the sender. **NEVER** provide your login information to anyone. **USE** Squish the Phish to report suspicious email.

Brighid,

Could you just send me identify the project capital cost for each project?

Example- the replacement equipment- is the projected cost the \$8,978,138

OR does that figure include the cost of the existing equipment proposed to be “re-acquired”

So, if the FMV for the existing equipment is \$57,023 or less (as seems to be the case from your most recent letter) just send me an email stating such:

Replacement Equipment and associated costs- \$8,978,138 (or is this the total from which the

\$57,023 needs to be subtracted?)

Existing Equipment being re-acquired- \$57,023

Thanks,

Greg

Sincerely,

Gregory F. Yakaboski

Gregory F. Yakaboski

Project Analyst

[Division of Health Service Regulation](#), Certificate of Need

[NC Department of Health and Human Services](#)

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#StayStrongNC and get the latest at nc.gov/covid19

Office: 919-855-3873

Greg.Yakaboski@dhhs.nc.gov

809 Ruggles Drive, Edgerton Building

2704 Mail Service Center

Raleigh, NC 27699-2704

[Twitter](#) | [Facebook](#) | [YouTube](#) | [LinkedIn](#)

From: Huber, Brighid K <Brighid.Huber@atriumhealth.org>

Sent: Thursday, October 3, 2024 3:59 PM

To: Yakaboski, Greg <greg.yakaboski@dhhs.nc.gov>

Subject: [External] 2024 Atrium Health Cabarrus Exemption Request to Replace and Relocate IR/Vascular Equipment on the Main Campus

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Hi Greg,

As a follow up to our call this morning, please see below for the high level bullet points summarizing our exemption request to replace and relocate existing interventional radiology/vascular equipment on the main campus of Atrium Health Cabarrus:

Overall Project Summary

- Atrium Health Cabarrus proposes to replace an existing piece of interventional radiology/vascular equipment ("Existing Equipment") that is located on the main campus. The replacement interventional radiology/vascular equipment ("Replacement Equipment") will be relocated to and installed in renovated space in a different building on the main campus.
- In the same way as a previous exemption request submitted in 2018 (see page 8 of the pdf), our current request involves the following two components:
 - Replace existing interventional radiology/vascular equipment on the main campus of Atrium Health Cabarrus and relocate the replacement equipment to renovated space in a different building on the main campus of Atrium Health Cabarrus.
 - Retain, or alternatively, re-acquire the existing (i.e. old) piece of interventional radiology/vascular equipment since the value of this equipment is well below the

current threshold for major medical equipment. The Existing (i.e. old) Equipment will remain in its current location.

- In response to the exemption request submitted in 2018, the CON Section issued the following:
 - Exemption for the equipment replacement and relocation (see page 58 of the pdf)
 - No review for the retention/re-acquisition of the "old" piece of equipment (see page 59 of the pdf)

Location of the Project - Main Campus of Atrium Health Cabarrus

- We are proposing to replace an existing piece of interventional radiology/vascular equipment ("Existing Equipment") that is located on the first floor of the Clinical Services Building on the main campus of Atrium Health Cabarrus and relocate the Replacement Equipment to renovated space in another building on the main campus of Atrium Health Cabarrus (the Heart and Vascular Tower).
 - Please see the Atrium Health Cabarrus main campus site plan shown on page 62 of the pdf.

Cost of the Project

- The total cost of the project is \$8,978,138. This figure includes the cost to purchase the Replacement Equipment as well as the cost to renovate the space where it will be installed in the Heart and Vascular Tower.

Previous Certificate of Need Approval for Existing Equipment

- The Existing Equipment was retained/re-acquired as a result of a previous exemption request that was submitted/approved in 2018. Please see page 59 of the pdf for the 'No Review' the CON Section previously issued for the Existing Equipment.

Comparable Equipment

- The Existing Equipment has been used for interventional radiology and vascular cases since it was retained/re-acquired in 2018. Although the Replacement Equipment possesses some expanded capabilities due to technological improvements, Atrium Health Cabarrus intends to use the Replacement Equipment for substantially the same procedures for which it currently uses the Existing Equipment.
 - Please see the equipment comparison chart on page 94 of the pdf.

Use of Existing Equipment

- The Existing Equipment has been in use and performing interventional radiology and vascular cases since it was retained/re-acquired in 2018. For example, in the 12 months from August 2023 to July 2024, 819 procedures were performed on the Existing Equipment.
 - Please see page 96 of the pdf.

Retention/Re-Acquisition of the Existing Equipment

- In 2018, the maximum Fair Market Value (FMV) of the Existing Equipment was \$57,023.
- The current CON reviewability threshold for major medical equipment is \$1,980,800.
- Since the FMV of the Existing Equipment was significantly less than \$1,980,800 six years ago in 2018, with the continued depreciation of the equipment, the current FMV of the Existing Equipment is also less than \$1,980,800.
- Given that the current value of the Existing Equipment does not trigger the major medical equipment threshold, Atrium Health Cabarrus proposes to retain, or alternatively, re-acquire the Existing Equipment, which will remain in its current location in the Clinical Services Building on the main campus.

Please let me know if you have any questions or if additional information is needed.

Thank you,

Brighid

Brighid Knoll Huber, MHA, ATC

Core Market Growth Business Development

Mobile: 724-986-6214

Atrium Health

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September 16, 2024

Ms. Micheala Mitchell, 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: Exemption Request for The Charlotte-Mecklenburg Hospital Authority d/b/a Atrium Health Cabarrus (“AH Cabarrus”) to Replace and Relocate Interventional Radiology/Vascular Equipment

Dear Ms. Mitchell:

The Charlotte-Mecklenburg Hospital Authority d/b/a Atrium Health Cabarrus (“AH Cabarrus”), seeks to acquire a Siemens ARTIS icono ceiling IR Pro system (“Replacement Equipment”). Please see Attachment A for a copy of AH Cabarrus’s current hospital license. The Replacement Equipment will replace a Siemens Axiom Artis dTC/dTA Detector (“Existing Equipment”) that was originally acquired in 2007 and was retained pursuant to a 2018 equipment replacement exemption (“2018 Exemption”) – see Attachment B. The Existing Equipment is currently housed in Interventional Radiology Room #9 on the first floor of the Clinical Services Building on the main campus of AH Cabarrus located at 920 Church Street North, Concord, NC 28025. The Replacement Equipment will be relocated to renovated space on the first floor of the heart and vascular tower on AH Cabarrus’s main campus (see Attachment C).

The purpose of this letter is to provide the Agency with notice and to request a determination that AH Cabarrus’s purchase of the Replacement Equipment is exempt from Certificate of Need (“CON”) review under the replacement equipment exemption provisions contained in NCGS § 131E-184(a)(7).

The General Assembly has chosen to exempt certain, otherwise reviewable events from CON review. Among those exemptions is the acquisition of “replacement equipment,” defined in NCGS § 131E-176(22a) as follows in the CON law:

“Replacement equipment” means equipment that costs less than three million dollars (\$3,000,000) 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. In determining whether the replacement equipment costs less than three million dollars (\$3,000,000), the costs of equipment, studies, surveys, designs, plans, working drawings, specifications, construction, installation, and other activities essential to acquiring and making operational the replacement equipment shall be included. The capital expenditure for the equipment shall be deemed to be the fair market value of the equipment or the cost of the equipment, whichever is greater. Beginning September 30, 2023, and on September 30 each year thereafter, the cost threshold amount in this subdivision shall be adjusted using the Medical Care Index component of the Consumer Price Index published by the U.S. Department of Labor for the 12-month period preceding the previous September 1.¹

Under the provisions found at NCGS § 131E-184(f)(1)-(3), the CON law provides:

¹The current monetary threshold for replacement equipment is \$2,971,200.

- (f) The Department shall exempt from certificate of need review the purchase of any replacement equipment that exceeds the monetary threshold set forth in G.S. 131E-176(22a) 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.

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 Interventional Radiology Room #9 on the first floor of the Clinical Services Building on the main campus of AH Cabarrus. The main hospital building, located at 920 Church Street North in Concord, is the site from which AH Cabarrus exercises financial and administrative control over the entire facility. AH Cabarrus’s Facility Executive’s office is located on the first floor of the main hospital building. Please see a copy of AH Cabarrus’s hospital license in Attachment A.

In addition to the foregoing, AH Cabarrus’s proposal qualifies for this exemption based on the following information:

A. Cost of the Replacement Equipment

The purchase price of the Replacement Equipment is \$2,490,138 (\$1,335,295 Siemens ARTIS icono ceiling IR Pro system + \$863,916 ancillary equipment + \$290,927 freight/storage/sales tax). The projected total cost of this project is \$8,978,138 and includes the cost to acquire, install and make operational the Replacement Equipment. Attachment D provides the quote for the Replacement Equipment. The total capital cost worksheet is provided in Attachment E.

B. Equipment Being Replaced is Located on the Main Campus

The Existing Equipment is currently located in Interventional Radiology Room #9 on the first floor of the Clinical Services Building on AH Cabarrus’s main campus. The Replacement

Equipment will be relocated to renovated space on the first floor of the heart and vascular tower on AH Cabarrus's main campus (see Attachment C).

C. Certificate of Need Issued for Equipment Being Replaced

This proposal also fits within the exemption criterion in Section 131E-184(f)(2). Pursuant to the 2018 Exemption (see Attachment B), the Existing Equipment was retained given that the maximum fair market value ("FMV") of the equipment was less than \$750,000, which was the "major medical equipment" threshold under N.C.G.S 131E-176(14o) at that time. The Agency issued a "No Review" confirming that the retention of the Existing Equipment did not require a Certificate of Need. Please see Attachment B for a copy of the 2018 Exemption as well as the Agency's approval of the exemption request and the "No Review" for the retention of the Existing Equipment.

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.

As identified in the 2018 Exemption, the Existing Equipment has been used for interventional radiology and vascular cases since that time. Although it possesses some expanded capabilities due to technological improvements, AH Cabarrus intends to use the Replacement Equipment for substantially the same procedures for which it currently uses the Existing Equipment (see Attachment F for the Equipment Brochure). The Replacement Equipment is therefore "comparable medical equipment" as defined in Subsection (c).

Furthermore, AH Cabarrus 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, AH Cabarrus represents the use of the Replacement Equipment will not result in the types of expense or charge increases described in Subsection (d)(3).

Documentation provided in Attachment H indicates that 819 procedures were performed from August 2023 to July 2024 on the Existing Equipment.

E. Existing Equipment

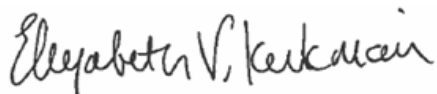
The Existing Equipment was retained pursuant to the 2018 Exemption (see Attachment B). At the time of and as identified in the 2018 Exemption, the Existing Equipment had a maximum fair market value (“FMV”) of \$57,023. The current CON reviewability threshold for “major medical equipment” under N.C.G.S 131E-176(14o) is \$1,980,800. Since the FMV of the Existing Equipment was significantly less than \$1,980,800 six years ago in 2018, the current FMV of the Existing Equipment must also be less than \$1,980,800. Given that the value of this equipment is less than \$1,980,800 and does not trigger the current CON reviewability threshold for “major medical equipment” under N.C.G.S 131E-176(14o), AH Cabarrus proposes to retain the Existing Equipment in its current location in Interventional Radiology Room #9 on the first floor of the Clinical Services Building on the main campus of AH Cabarrus.

CONCLUSION:

Based on the foregoing information, AH Cabarrus hereby requests that the Agency provide a written response confirming that the acquisition and relocation of the Replacement Equipment and the retention of the Existing 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
Core Market Growth Business Development
Atrium Health

Attachments

Attachment A

State of North Carolina

Department of Health and Human Services
Division of Health Service Regulation

Effective January 1, 2024, this license is issued to

The Charlotte-Mecklenburg Hospital Authority

to operate a hospital known as

Atrium Health Cabarrus

located at Concord, NC, Cabarrus 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: 943049

License Number: H0031

Bed Capacity: 457

General Acute: **447** Psych: **10**

Dedicated Inpatient Surgical Operating Rooms: **4**

Shared Surgical Operating Rooms: **15**

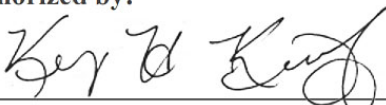
Dedicated Ambulatory Surgical Operating Rooms: **0**

Dedicated Endoscopy Rooms: **6**

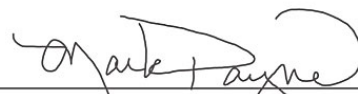
License Categories:

.1100 Partial Hospitalization, .3500 Outpatient Facilities, .5200 Dedicated Inpatient Unit for mental disorders,

Authorized by:



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



Director, Division of Health Service Regulation

Attachment B



Atrium Health

December 11, 2018

Ms. Martha Frisone, 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: Replace and Relocate Interventional Radiology Equipment on the campus of The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Healthcare System NorthEast

Dear Ms. Frisone:

The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Healthcare System NorthEast (CHS NE) is planning to replace and relocate one of its existing interventional radiology rooms with new, technologically comparable equipment. CHS NE intends to purchase a Siemens Artis Q Single Plane System to replace a Siemens Axiom Artis dTC/dTA Detector System that was installed in 2007. The existing equipment is currently located in Interventional Radiology Room #9 on the first floor of the Clinical Services Building on the main campus of CHS NE. The replacement equipment will be relocated to the new patient tower that is currently under development on the main campus of CHS NE pursuant to previously approved Project ID #F-8219-08.

The Siemens Artis Q Single Plane System will be used for the same types of procedures as the existing equipment and will not be used to provide a new health service. A chart comparing the existing equipment and the replacement equipment is included in Attachment A along with supporting documentation. The existing equipment is currently in use and documentation provided in Attachment B indicates 3,110 procedures were performed in Interventional Radiology Room #9 from November 2017 through October 2018.

The total cost related to the replacement of the equipment is \$1,517,535 which includes equipment costs only (\$1,391,700 for the single plane equipment, \$28,612 for the injector and \$97,223 for sales tax). The cost of the development of the room that the equipment will be relocated to in the new patient tower is included in the capital cost approved under Project ID #F-8219-08. The vendor quote for the replacement equipment is provided in Attachment C. The total capital cost worksheet is provided in Attachment D.

The existing single plane equipment located in Interventional Radiology Room #9 has a maximum fair market value (FMV) of \$57,023 (see Attachment E for FMV analysis). Since the fair market

value of the existing equipment is less than \$750,000, it does not trigger the CON reviewability threshold for “major medical equipment” under N.C.G.S 131E-176(14o). As such, CHS NE also proposes to retain the existing single plane equipment. The existing equipment will remain in its current location in Interventional Radiology Room #9 and will be used for interventional radiology and vascular overflow cases.

The North Carolina Certificate of Need statutes provide a definition of replacement equipment in N.C.G.S. 131E-176(22a). The definition requires the replacement equipment be comparable to the existing medical equipment and costs less than \$2,000,000 when installed. The statutes further provide in 131E-184(a)(7) an exemption from certificate of need review for replacement equipment projects if prior notice is provided to the CON Section.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Elizabeth Kirkman". The signature is fluid and cursive, with a large initial "E".

Elizabeth Kirkman, Assistant Vice-President
Atrium Health Strategic Services Group

Attachments

Attachment A

EQUIPMENT COMPARISON – Interventional Radiology Room #9 (Single Plane)

Type of Equipment (List each component)	Existing Equipment	Replacement Equipment
Manufacturer of Equipment	Siemens	Siemens
Tesla Rating for MRIs	N/A	N/A
Model Number	Axiom Artis dTC/dTA Detector System	Siemens Artis Q Single Plane
Serial Number	55423	Not Available Until Installed
Provider's Method of Identifying Equipment	Internal Asset # / Serial #	Internal 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	August 2007	May 2019
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.)	\$1,692,671	\$1,488,932
Total Cost of Equipment	\$1,437,047	\$1,488,932
Fair Market Value of Equipment	\$1,437,047	\$1,488,932
Net Purchase Price of Equipment	\$1,437,047	\$1,488,932
Locations Where Operated	NE CSB	NE Modernization Tower
Number Days in Use/To Be Used in N.C. per Year	365 days/year	365 days/year
Percent of Change in Patient Charges (by procedure)	0%	0%
Percent of Change in Per Procedure Operating Expenses (by procedure)	0%	0%
Type of Procedures Currently Performed on Existing Equipment	Interventional radiology procedures	Interventional radiology procedures
Type of Procedures New Equipment is Capable of Performing	Interventional radiology procedures	Interventional radiology procedures

SIEMENS

Artis Q

Artis Q

Artis Q

Visionary intervention

www.siemens.com/artis-q

Answers for life.



Experience the future of interventional imaging

Artis Q

**Visionary in performance.
Visionary in precision.**

The Artis Q product line for interventional imaging is a visionary breakthrough in X-ray generation and detection that takes **performance and precision** to the next level.

Artis Q offers **unparalleled performance** with the new powerful GIGALIX X-ray tube for **high contrast resolution** at any angle and any patient size while the **high-dynamic range detector** enables enhanced image quality in advanced 3D imaging.

In the fight against the most threatening diseases such as coronary artery disease, stroke, and tumors, Artis Q delivers **innovative applications offering precision** for enhanced guidance during interventional procedures in **cardiology, radiology, and surgery.**

Experience the future of interventional imaging.

Not all features shown are necessarily standard and available in all countries

Visionary in ... performance

To see any device and anatomical structure in any patient and at any angulation is one of the main challenges in interventional imaging. For better performance and image quality, Artis Q provides enhanced visualization to see small devices. It offers high contrast resolution even at steep angulations. And it enables sharp images of moving objects such as coronary arteries while the optimized X-ray pulse helps to reduce radiation by up to 60%. The new large HDR detector offers high dynamic range for excellent soft-tissue resolution in 3D.



CARE + CLEAR



GIGALIX

Focused power

The GIGALIX X-ray tube has been designed around a unique flat emitter technology that generates powerful short pulses. Compared to filament technology, the higher maximum current of the flat emitter enables CLEARpulse and enhances image quality in challenging situations such as with obese patients or in steep angulations. The small square focal spots of the GIGALIX result in higher spatial resolution for all clinical applications and help to better visualize small devices and vessels.

Together with the higher contrast resolution, this results in up to 70% better visibility of small devices.*

With CLEARpulse, the pulse length can be shortened. This allows visualizing moving objects such as coronary vessels more sharply.

CLEARpulse also optimizes the X-ray spectrum by lowering the required tube voltage and allowing for additional filtration.

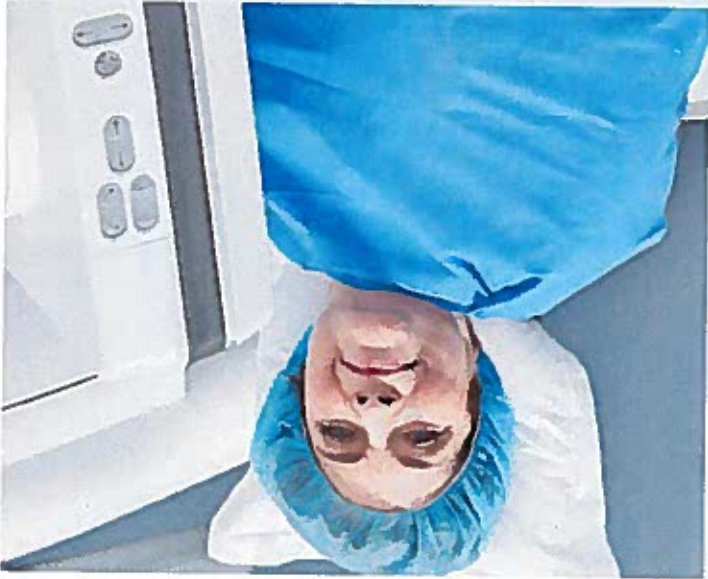
Together with small focal spots, this generates equal image quality with up to 60% less dose*.

The GIGALIX X-ray tube in the Artis Q product line scores a double win: enhanced image quality at a significantly lower dose for both patients and staff.



- Flat emitter technology for high contrast resolution even at steep angulations
- Small square focal spots for excellent spatial resolution to see more details
- CLEARpulse for sharp images and low dose

CLEARpulse – sharp images and low dose



How to optimize X-rays with the GIGALIX tube

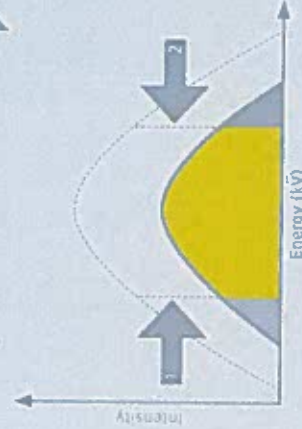
Conventional X-ray spectrum



Pulse spectrum with standard filament tube

■ Low and high energy quanta: increasing skin dose

Optimizing X-ray spectrum



Reducing 1) low energy quanta by inserting additional copper filters, reducing 2) high energy quanta by lowering required kV.

■ Optimal energy quanta: generating X-ray image

Optimized X-ray spectrum

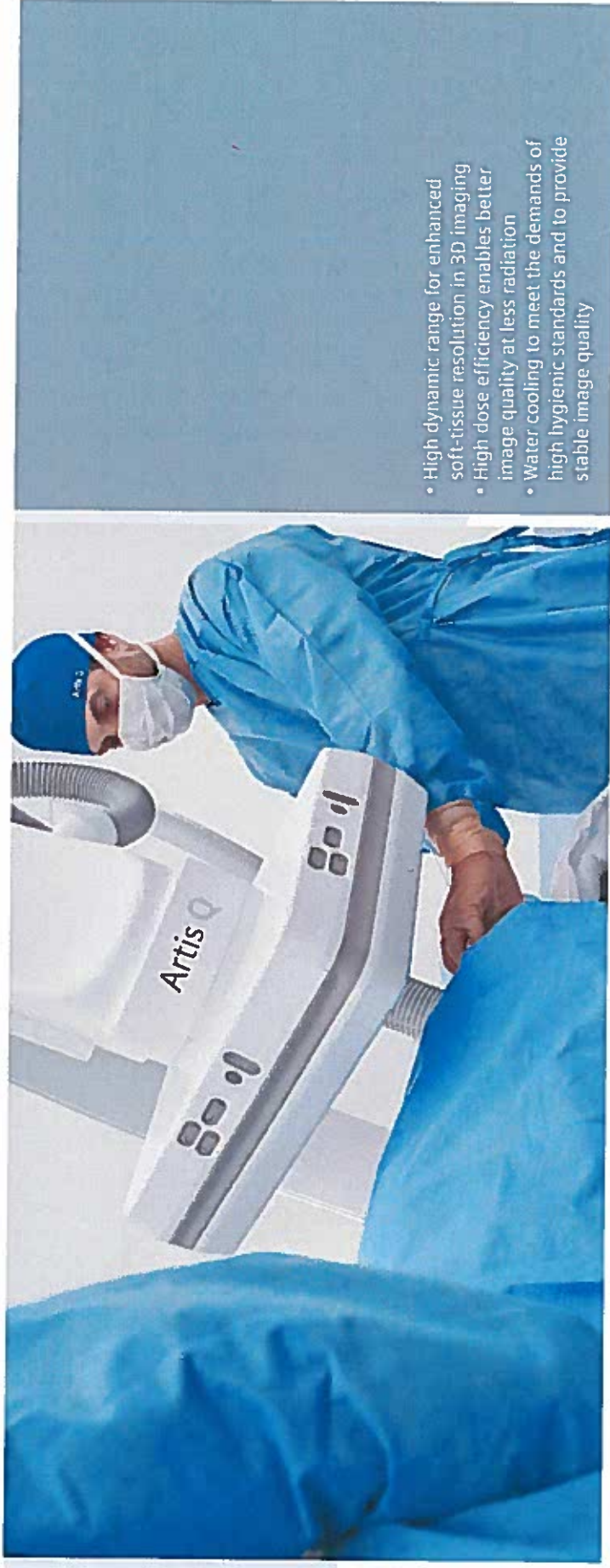


3) Flat emitter technology allows for significant increase of overall intensity

Up to 70% better visibility
of small vessels*

Up to 43% shorter pulses
for better images and optimized dose*

* Compared to previous X-ray tube technology. Data on file.



- High dynamic range for enhanced soft-tissue resolution in 3D imaging
- High dose efficiency enables better image quality at less radiation
- Water cooling to meet the demands of high hygienic standards and to provide stable image quality

New large HDR detector

High dynamic range and dose efficiency

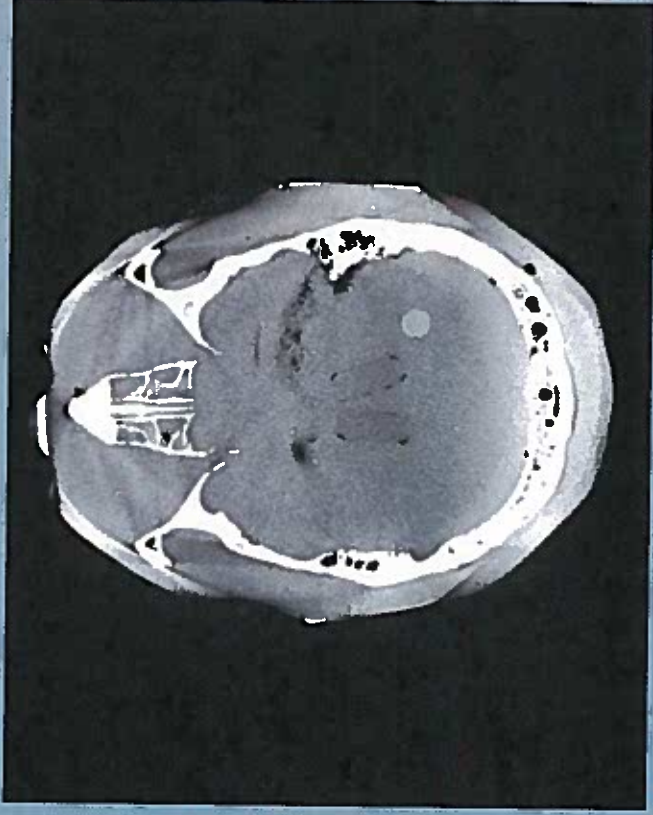
In addition to X-ray generation, X-ray detection is crucial for high image quality. The new large detector comprises a 16-bit read-out generating more than 65,000 gray scale values leading to enhanced soft-tissue contrast in 3D imaging, especially at image borders (e.g. close to bones like the skull).

Increased scintillator thickness enables higher detective quantum efficiency. This provides imaging excellence even in challenging situations and helps to reduce radiation.

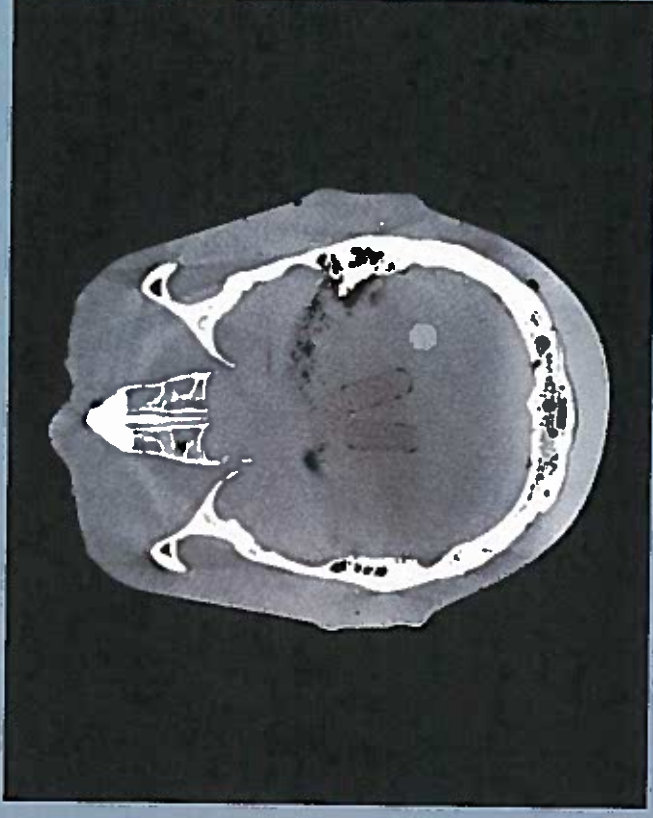
The water-cooled design meets high hygienic requirements, especially in hybrid operating rooms. In addition, it supports a stable image quality even in long-lasting procedures.

syngo DynaCT with large HDR detector – Increased soft-tissue resolution

syngo DynaCT (14 bit read-out)



syngo DynaCT with large HDR detector (16 bit read-out)



Enhanced soft-tissue resolution, especially close to the skull (phantom images using CAPTAN CT 515 phantom)





Visionary in ... precision

Precise guidance is needed to help improve clinical outcomes during interventions. Artis Q offers applications for cardiology, interventional radiology and image-guided surgery.

Applications for advanced interventional imaging



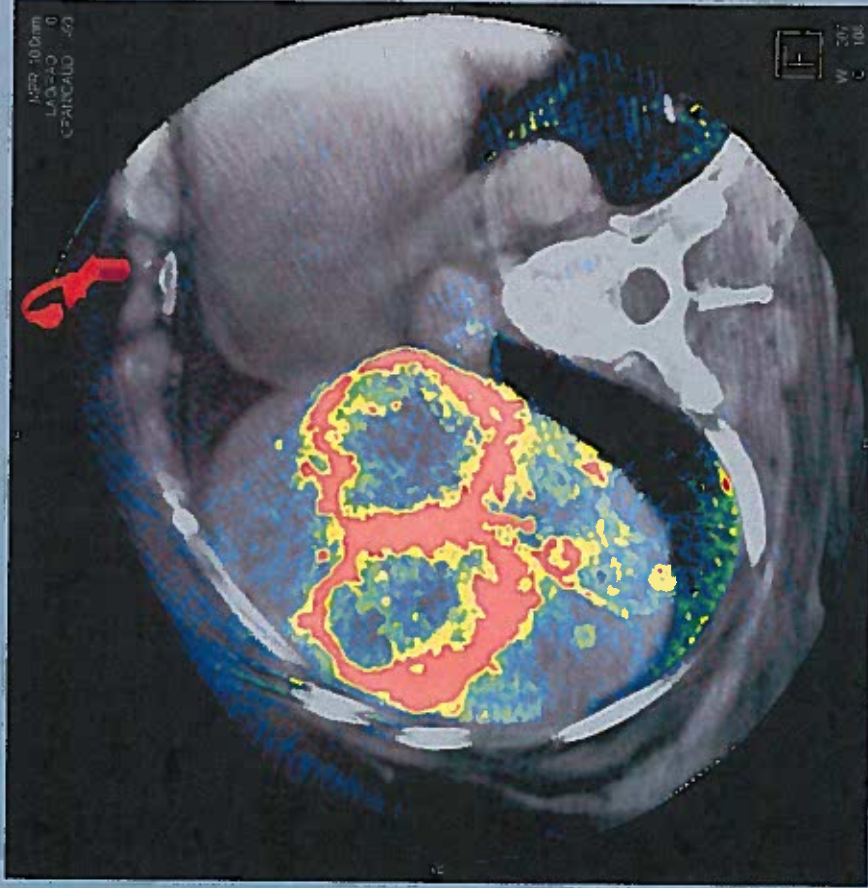
syngo DynaCT Micro – Boosting the level of detail

- 40% increased spatial resolution compared to standard syngo DynaCT
- Better visualization of finest structures
- Enhanced evaluation of e.g. stents, flow diverters or stapes prosthesis



syngo Dyna3D HighSpeed* – Freeze the motion for better treatment

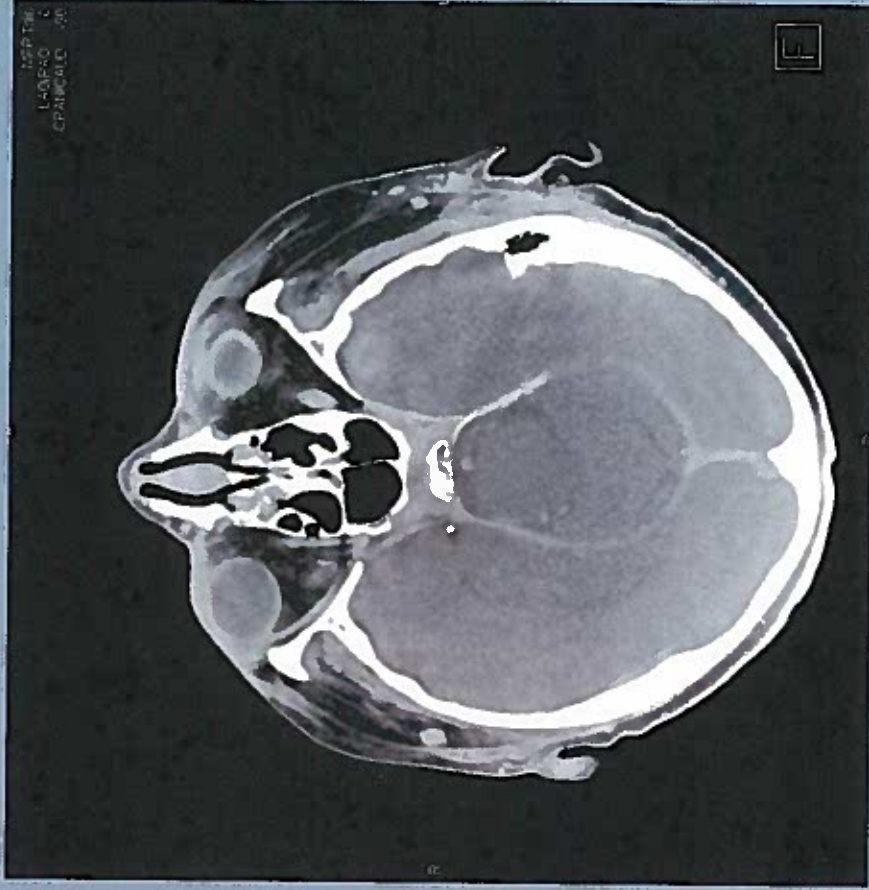
- The fastest 3D protocol on the market – in less than 3 seconds
- Fewer motion artifacts, less contrast media
- Better visualization of moving organs



syngo DynaPBV Body –

Evaluate perfusion for personalized therapy

- Provides physiological information about lesions directly in the angio-suite
- Supports endpoint determination during embolization
- Potential to identify non-responders directly after interventional therapy



syngo DynaCT with new large HDR detector –
Increasing soft-tissue resolution

- 4 times the gray-value information
- Enhanced soft-tissue resolution
- Homogeneous image quality

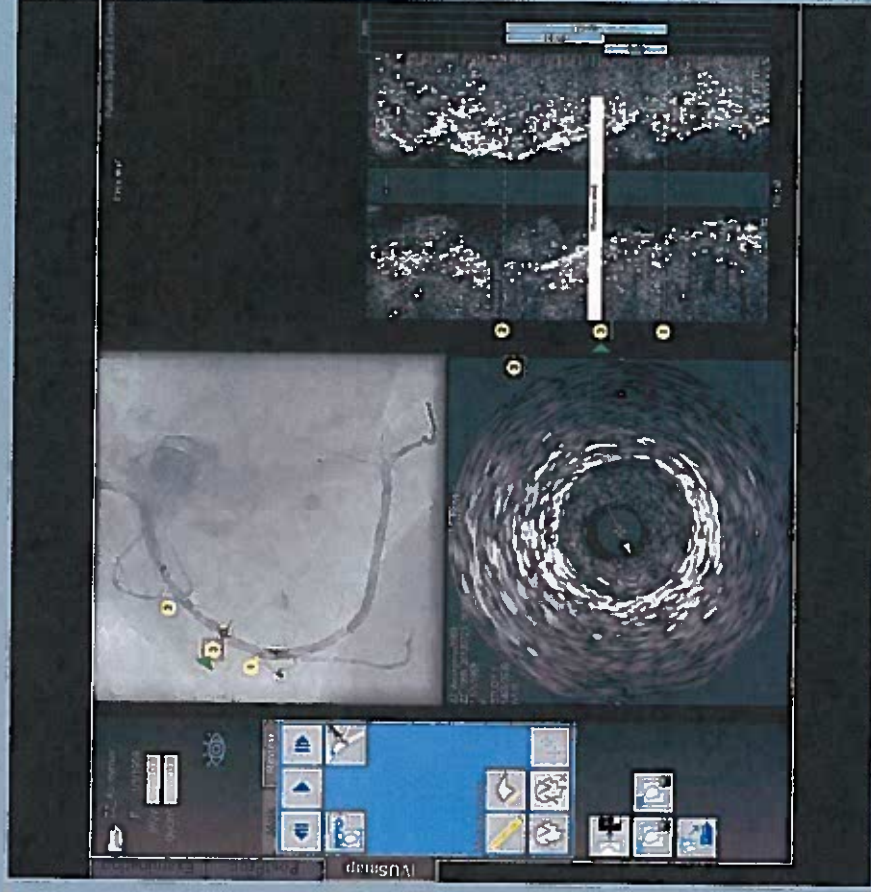
Applications for advanced interventional imaging



CLEARStent Live –

Real-time stent enhancement software

- Support of complex procedures
- Real-time verification of stent positioning while moving the device
- Potential to speed up procedures and to save contrast agent



IVUSmap –

Integrated co-registration of IVUS images with angiography

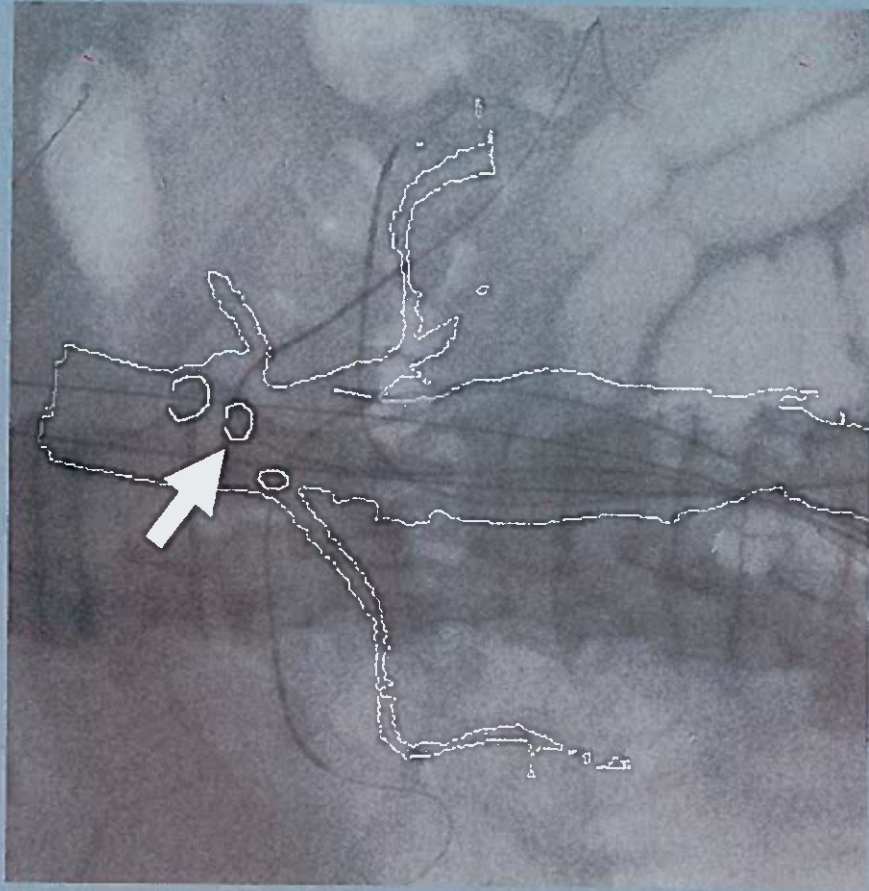
- Combined information of angiography and IVUS imaging
- Bookmarks guide stent positioning and deployment
- Automated workflow integrated into procedure



syngo Aortic ValveGuide -

A new level of valve positioning convenience

- Automated aortic root segmentation and visualization of anatomical landmarks in seconds
- Automated C-arm positioning to orthogonal view without fluoroscopy allowing for dose and contrast medium savings
- Improved guidance through overlay of aortic contour and landmarks onto live 2D image



EVAR-3D Guidance -

New comfort for precise graft deployment

- Segmentation of aortic aneurism and marking of anatomical landmarks like renal arteries
- Automated C-arm positioning to orthogonal view without fluoroscopy allowing for dose and contrast medium savings
- Improved guidance through overlay of aortic contour and landmarks onto live 2D image



When *vision* becomes *reality* ...

Experience the future of interventional imaging and learn more
about Artis Q system configurations and options.

SIEMENS



17

Artis Q

Floor-mounted system

The Artis Q floor-mounted system offers high positioning flexibility on a very small footprint.

The C-arm features a floor rotation point with motorized swivel – from the head-end position to a left-side position. This ensures optimum access to the patient's head as well as extensive coverage from head to toe.

Flexible positioning of the C-arm relative to the table is possible, e.g. allowing access to the patient's left side for pacemaker implantations.

A special orthogonal position with rotated table enables easy access to the patient's head and sides for hybrid procedures.

Artis StraightView maintains upright images for all C-arm and table positions.

The compact and slimline C-arm design has a small footprint requiring an examination room size of only 25 m².



- High positioning flexibility on a very small footprint
- Excellent access to the patient's head for complex procedures under anesthesia
- Extensive coverage from head to toe



Artis Q Ceiling-mounted system

The Artis Q ceiling-mounted system offers high positioning flexibility for the C-arm at any angle.

The C-arm can be conveniently positioned around the patient's left, right or head side, and any angle in between. This enables optimum patient access. The longitudinal ceiling travel offers maximum coverage from head to toe as well as easy parking away from the table.

For increased imaging accuracy, InFocus maintains the projection angle during stand rotation, IsoTilt the projection angle

during table tilting, and StraightView upright images for all positions of the C-arm and table.

In addition, the system provides the uncompromised image quality of syngo DynaCT in the lateral position.

Not only the Artis tables, but also surgery tables from Maquet and Trumpf can be integrated into the system.

- High positioning flexibility of the C-arm at any angle
- Easy parking away from the table
- Maximum patient coverage from head to toe
- High 3D image quality also in lateral acquisition





Artis Q

Biplane system

The Artis Q biplane system offers high positioning flexibility and excellent patient access for biplane imaging.

The Artis Q biplane system combines high performance and positioning flexibility. It supports two isocentric imaging positions enabled by the floor rotation point with motorized swivel from head end to left side. This allows optimum access to the patient's head as well as extensive coverage from head to toe in biplane imaging mode.

In single plane mode, the table and stand rotation allows access even to the patient's left side. A special orthogonal position with rotated table enables easy access to the patient's head for complex procedures under anesthesia. For increased imaging accuracy, IsoTilt maintains the projection angle during table tilting and Artis StraightView upright images for all C-arm and table positions.

- Two isocentric imaging positions enabling access to the patient's head for anesthesia in biplane mode
- Synchronized movements of both planes
- Extensive coverage from head to toe



Artis zeego

Artis zeego offers unparalleled positioning flexibility with a variable isocenter.

The unique multiple-axis design of Artis zeego enables unparalleled positioning flexibility and makes it the optimal system for hybrid operating rooms and all procedures where coverage and advanced 3D imaging are key.

3D rotational imaging can be performed from five different system positions: at the patient's left, right, and head, and with the table rotated to the left or right.

Artis zeego offers unique 3D imaging protocols such as syngo DynaCT 360 and syngo Dyna3D HighSpeed.

Thanks to its unique variable isocenter, the working height of the Artis zeego system can be adjusted to a comfortable level according to user height.

Flexible parking positions provide operators with ample work space around the table when imaging is not required.

Artis zeego meets the highest hygienic standards in the OR, allowing laminar air flow and maintaining sterility requirements.

- Variable isocenter for comfortable working height
- Enables 3D rotational imaging from five different system positions
- Meets the highest hygienic standards in the OR



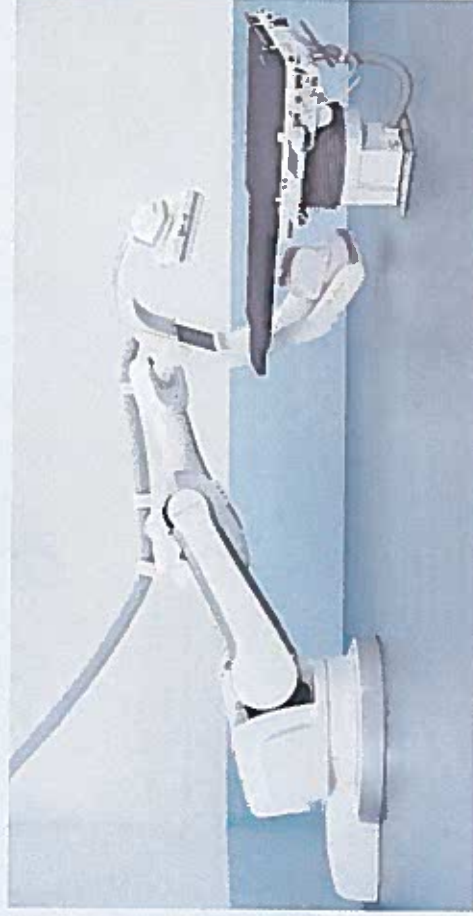
The broadest portfolio of surgical tables on the market

With the Artis OR table and integrated surgical tables from Maquet and Trumpf, Siemens gives you the broadest choice of table systems for your hybrid and operating rooms.

Artis OR table

Designed for easy patient access, superb positioning and total body coverage, the integrated Artis OR table is a proven and reliable interventional table with tilt and cradle functionality. Featuring a radiolucent free-floating tabletop that allows for

artifact-free 3D imaging, it is particularly well suited for procedures in cardiac and vascular surgery. This is the table of choice, particularly if the room is shared with interventionalists.



Artis OR table

- Available with the entire Artis family
- Suitable for 3D imaging
- Free floating
- Tilt and cradle functionality $\pm 15^\circ$
- Overhang 224 cm (102.36")
- Maximum weight 200 kg (440.9 lbs)



Trumph TruSystem 7500



Maquet Magnus

Trumph TruSystem7500 and Maquet Magnus

These surgery tables come with one-piece carbon or with segmented, radiolucent tabletops. These breakable tabletops are highly flexible and the segments are partially motorized. Shuttling allows convenient use of whichever tabletop best matches the requirements of a procedure. Therefore, the integrated surgery tables are optimally suited for multidisciplinary use or rooms with a high percentage of open surgical procedures. Most surgical disciplines require sophisticated

patient positioning, i.e. neurosurgery, urology, trauma surgery, orthopedic surgery, abdominal surgery, and thoracic surgery. These integrated surgery tables provide the flexibility necessary.

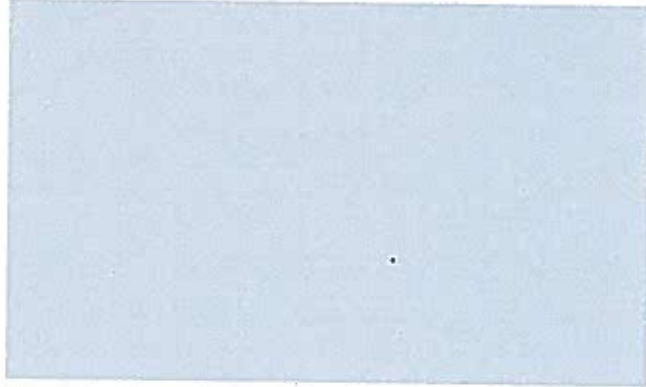
Artis Large Display

It's time to see the whole picture on one monitor.

With the Artis Large Display, 9, 18, or 24 video signals can be connected to the screen. The screen layout can be changed from the tableside.

With its built-in backup concept, additional back-up monitors are no

longer necessary. Also, a special algorithm ensures sharp display of ECG signals in zoomed formats, which is especially important to precisely visualize intracardiac ECG signals.



- Scalable from 9 to 24 inputs
- Tableside control
- Special ECG signal optimization algorithm



- Control up to 9 systems from one workplace and clean up your control room
- Configure the Cockpit to your needs with one or two keyboards and monitors

Artis Cockpit

It's time to clean up the control room.

Stop running from one system to the next – let the Artis Cockpit consolidate all your information in one workplace. The 30-inch medical-grade monitor offers 4 megapixel resolution and high brightness for excellent image display. Up to 9 inputs can be simultaneously displayed and controlled, with a choice of four different layouts. The position of the system inputs on the screen

can be easily rearranged using the unique drag & drop functionality.

Artis Cockpit offers one single workplace that can be equipped with one or two keyboards and monitors. With so much more efficiency in the control room, you can focus on your procedure and your patient.

CARE & CLEAR

Artis Q includes the CARE and CLEAR packages to complement the imaging chain for optimized post-processing and dose reduction. The CARE package helps reduce radiation for the operator and patient. The CLEAR package offers a comprehensive range of applications to enhance image quality. CARE and CLEAR are standard with all Artis Q systems.

We think beyond technical hardware improvements. Introduced in 1994, our ever growing CARE portfolio (Combined Applications to Reduce Radiation Exposure) continues to reduce radiation dose for patients and clinical staff while maintaining high image quality for diagnostic confidence.

Dose saving

- CAREvision provides variable fluoroscopy frame rates, pulse frequencies can be adapted to clinical needs
- CAREfilter is a specially designed copper prefiltration system that automatically adjusts the filter to the patient's anatomy
- CAREprofile allows radiation-free collimator and semitransparent filter

adjustment using the last image hold (LIH) position as reference

- CAREposition enables radiation-free object positioning, i.e. allows the table or C-arm position to pan without using fluoroscopy
- Low-Dose Acquisition, a dedicated acquisition protocol, helps to achieve dose reductions

Low-Dose syngo DynaCT provides 3D images at the lowest possible dose levels

Dose monitoring

- CAREguard allows three threshold values to be defined for the accumulated skin dose and signals when a skin dose level is exceeded

- CAREwatch displays the dose area product and dose rate at the interventional reference point on the live display in the examination and control rooms
- CAREmonitor shows in real-time the accumulated peak skin dose according to the current projection in the form of a fill indicator on the live monitor

Dose reporting

- CAREreport is a DICOM-structured radiation report containing all patient demographic, procedure, and dose information
- CARE Analytics is a stand-alone tool for installation on any PC in the hospital network, allowing evaluation of DICOM dose structured reports





Almost 20 years of Siemens innovations to reduce, monitor, and report dose in angiography

- CLEAR offers a comprehensive range of applications with real-time processing to enhance image quality – without increasing the dose.
- CLEARpulse shortens the pulse length and optimizes the X-ray spectrum, which leads to overall image quality improvements
- CLEARcontrol enhances the image creation process with a unique histogram analysis and optimizes image brightness and contrast

- CLEARview enhances overall image quality, especially when using low-dose imaging protocols with dose-adaptive noise reduction
- CLEARmotion helps detect small structures and efficiently compensates for motion artifacts
- CLEARchoice enables preferred image quality selection during application

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 are subject to change without prior notice. Some of the features and products described herein may not be available in the United States or other countries.

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Healthcare Sector
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www.siemens.com/healthcare

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

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In the interest of complying with legal requirements concerning the environmental compatibility of our products (protection of natural resources and waste conservation), we recycle certain components. Using the same extensive quality assurance measures as for factorynew components, we guarantee the quality of these recycled components.

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For accessories, go to:
www.siemens.com/medical-accessories

Attachment B

CHS NE Interventional Radiology Room #9 (Single Plane) Volumes

Month	Volume
Nov-17	251
Dec-17	234
Jan-18	227
Feb-18	249
Mar-18	248
Apr-18	237
May-18	252
Jun-18	284
Jul-18	264
Aug-18	276
Sep-18	264
Oct-18	324
Total	3,110

Attachment C

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



SIEMENS REPRESENTATIVE
Edwin Winicki - (336) 688-0978

PRELIMINARY PROPOSAL

Customer Number: 0000035965

Date: 12/7/2018

ATRIUM HEALTH
1000 BLYTHE BLVD
CHARLOTTE, NC 28203-5812

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

Quote Nr:	1-HGDCDG Rev. 3
Trade:	N/A – No trade
Terms of Payment	00% Down, 80% Delivery, 20% Installation Free On Board: Destination
Purchasing Agreement	Premier Purchasing Partners
Terms and Conditions	Premier terms and conditions apply
Proposal Valid Until	12/31/2018

Siemens Artis Q Ceiling for CMC-Northeast

All items listed below are included for this system: *(See Detailed Technical Specifications at end of Proposal.)*

Qty	Part No.	Item Description
1	14434094	Artis Q ceiling Interv. Rad. Artis Q ceiling for interventional radiology The Artis Q product line is setting new standards in interventional imaging. The Artis Q ceiling for interventional radiology now features PURE(r). PURE adds smooth interaction to Siemens' smart technologies. It is designed to boost productivity and enhance outcomes for certain clinical applications while increasing image quality and reducing dose. The GIGALIX X-ray tube concentrates high pulse power on small, square-shaped focal spots (flat emitter technology for all focal spots). This provides unprecedented image quality for confidence in challenging situations. The ceiling-mounted C-arm offers highly flexible positioning. The motorized rotation of the C-arm from a head-end position to a lateral position allows for free head access and full patient coverage without rotating the table. The patient table is fitted with a freely movable patient positioning tabletop. The as40HDR flat detector is optimized for the requirements of radiology.

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		Digital acquisition technology and digital subtraction angiography with up to 7.5 f/s in 1k/12 bit matrix are available. The complete CARE+CLEAR package offers optimal image quality at the lowest reasonable dose. Live and reference images are displayed on two 19" flat screens in the exam room. In the control room live images are displayed on a third screen.
1	14432948	Automap Automatic stand positioning depending on the selected reference image and automatic reference image selection depending on the stand positioning.
1	14432939	2nd 4 pedal wireless footswitch Additional 4-pedal footswitch for release of fluoroscopy, exposure, and table brake, as well as a configurable additional function. Wireless connection via radio communication.
1	14432897	Head-end table tilting Motorized tilt and stepping of the patient table in longitudinal direction for electrophysiological or peripheral examinations, for example, as well as for stabilizing a patient. Includes a power-assisted tabletop control module. Notes: Table tilting reduces the maximum patient weight to 200 kg. As before however, it is possible to install up to 40 kg of additional accessories. Note: It is mandatory to provide UPS back up with this table option in order to comply with IEC 60601-2-43 CL, 201.15.101. Reason: In the event of power failure a neutral table position suitable for CPR must be reachable within 15 seconds. Please include a suitable UPS from Siemens as required or make sure any existing / planned UPS provision for your installation site will satisfy the requirement
1	14432894	Laser crosshairs Laser crosshairs integrated in the cover of the flat detector and table-side operation for easier, quicker and dose-saving positioning of the patient (with biplane systems only plane A).
1	14432947	Fuoro Loop Storage and review of dynamic fluoroscopic sequences (Fuoro Loop). This saves an additional acquisition and reduces dose. The maximum storable fluoroscopic time depends on the selected pulse rate, e.g. 34 s at 30 p/s, 68 s at 15 p/s.
1	14434151	DYNAVISON DSA/DR Native or subtracted digital rotational angiography with angle triggering.
1	14432926	Card acq. mode w/high speed Fast acquisition module for DR and DSA as well as digital card acquisition technology with frame rates of 7.5, 10, 15 and 30 f/s, acquisition, display and storage in 1k matrix.
1	14432943	Vascular analysis Vessel analysis with determination of degree of stenosis, distance measurement and calibration.
1	14432831	syngo interv. Onco. Engine Pro as40 A workstation for reconstruction, post-processing and handling of 3D information including specific applications for interventional oncology. The package includes the following functionalities: 3D high-contrast and CT-like soft-tissue imaging (syngo DynaCT), 3D functional imaging providing physiologic blood volume information (syngo DynaPBV Body), 3D roadmap for dynamic overlay of planning data and 3D volumes on live fluoroscopy, 3D/3D fusion functionality for integration of pre-interventional 3D datasets, Workflow support for embolization and needle guidance, extended visualization (e.g. DSA) and post-processing of 2D images or scenes on the XWP (Angio Viewer) incl. 2D functional imaging for visualization of blood flow characteristics (syngo IFlow) and side-by-side comparison of images or scenes (Scene Compare), in-room control for table-side operation of advanced applications, Expert-I functionality for remote operation of the XWP. Only for PURE systems, the package also includes: 3D Wizard for expert step-by-step guidance in 3D acquisition, Parallel patient processing capabilities, Fusion of pre-interventional 3D datasets based on 2 projections (2D/3D Fusion), Marking of points or lines on the 3D geometry or MPRs and overlay of these markings on live fluoroscopy.
2	14432953	Lower body radiation protection This radiation shield protects the user from scattered radiation when standing at the table side. It can be attached to

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		<p>the accessory rails either on the right or on the left side of the patient positioning table. It provides the user an additional accessory rail. It includes a basic unit (71.5 cm x 75 cm / 28.2" x 29.5" (l x w); 7.7 kg / 16.98 lb), one lower body radiation protection pivot swivel element (77 cm x 48 cm / 30.3" x 18.9" (l x w); 3.8 kg / 8.4 lb) and three clip-on units (57 cm / 22.4" x 33 cm / 12.99" (l x h), 2.2 kg / 4.85 lb; 27 cm / 10.6" x 33cm / 12.99", 0.9 kg / 1.98 lb and 27 cm / 10.6" x 25cm / 9.8", 1 kg / 2.2 lb) with a lead of 0.5 mm / 0.02" Pb. The maximum weight of the accessory rails is 40 kg (88.2 lb). Intended only for use with Artis / ARTIS tables.</p>
2	14434157	<p>Moveable upper body rad. protection This radiation shield protects the user from scattered radiation. For room heights up to 290 cm / 114.2". It includes a ceiling rail (4 m / 157.5"), a ceiling mounted and movable stand (80 cm or 57 cm / 31.5" or 22.4"), a support arm (94 cm x 91 cm / 37" x 35.8") and an acrylic glass. The shield is made of acrylic glass with lead equivalent of 0.5 mm (w x h: 61 cm x 76 cm / 24" x 29.9"), which can pivot and rotate around a fixed point with a range of 360 degrees. The operation range is limited when used with Artis floor/biplane MN. Max. weight: 18 kg / 39.68 lb.</p>
1	14440512	<p>LED Exam Light Ceiling-mounted, flexible positionable examination light with focusable light system. It is fully integrated into the ceiling-installed radiation protection mounting unit. - Luminance: 60,000 Lux for 100 cm / 39.4" distance - Working distance: 70 to 140 cm / 27.6" to 55.1" - Color rendering index Ra at 4500 Kelvin: 95 - Color temperature: 4,300 Kelvin - Focusable light field: 14 to 25 cm / 5.5" to 9.8" - Diameter of light head: 33 cm / 13" - Number of LEDs: 19 - Total input power: 20 VA</p>
1	14440411	<p>Intercom - Comfort Intercom system for communication between examination room and control room. It includes - a microphone with a control box for the control room - a microphone with an adaptive acoustic filter for background noise suppression for the examination room - a footswitch for conversation selection for the examination room</p>
1	14443011	<p>Large Display diagn. Protection The high quality laminated glass protective screen protects the panel of the monitor against mechanical damage and fluid ingress on the front. It is suited for clinical image evaluation. Features: The laminated glass enforces high mechanical strenght and resistivity against mechanical impact, the special coating reduces reflections for a continuous image quality, excellent spectral transmissison of at least 98%, can be added to existing Artis Large Display installations. Weight: approx. 12kg (55") up to 16kg (60")</p>

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		Note: Observe the maximum permissible load of the display suspension, a combination with other options mounted to the display suspension might be restricted.
1	14434231	<p>Sec. operation in the control room</p> <p>Interface for connecting the additional system control from the control room. Rail profile for hanging control modules (e.g. the table module) in the control room. Safety button for switching off all system functions from the control room.</p>
1	14440510	<p>Secondary Hand Switch Ctrl (C Room)</p> <p>Additional hand switch for radiation release and additional control functions.</p>
1	14434220	<p>VOLCANO s5i cable set</p> <p>Cable set for operating the Volcano s5i ultrasound system incl. s5iz and s5iu (CORE-System). It contains all cables for connecting the components at the patient table to the s5i imaging system in the control room. This cable set will already be integrated into the Artis table in the factory. With this item, a display is delivered additionally for the examination room if an Artis Large Display was not ordered. If an Artis Large Display is ordered, the configuration includes a connection kit for the Artis Large Display instead of the 19" display.</p>
1	14432950	<p>DICOM RIS-Modality Worklist</p> <p>Import of patient/examination data from an external RIS/HIS patient management system with DICOM MWL (Modality Worklist).</p>
1	14434232	<p>Injector conn. in the control room</p> <p>Interface for controlling the contrast medium injector in the control room. Injectors can be offered by Siemens Healthcare Accessory Solutions</p>
1	14417114	<p>AXA-CS special solution</p> <p>This option is used to order via SCM a special solution previously requested from the Customized Solutions Team. The price is presented by the Customized Solutions Team in a separate offer.</p>
1	14434173	<p>Large Display large work area</p> <p>Preparation for the large color flat screen display on an extended arm for increased reach and working range. An additional cantilever beam extends the radial coverage of the display by approximately 60 cm. This extended suspension is installed on a ceiling-mounted carriage. The display holder is height-adjustable, longitudinally mobile and can swivel and rotate. In case of a ceiling-mounted or biplane configuration the carriage operates in the same rails as the C-arm carriage, which have been extended by 1.2 m for easy operation. This item also includes cables for the examination room. Note: The type of large display can be chosen with a separate position.</p>
1	14434176	<p>Large Display video controller 18</p> <p>Large Display Video Controller 18 is the middle of three different video controller sizes. A maximum of 18 video signals can be connected and displayed simultaneously on the Large Display. The Large Display video controller 18 receives various internal and external video signals for presentation to scale on the Large Display. Up to 18 external and internal video sources can be connected (max. 14 DVI-D and 4 analog (VGA) channels).</p>
1	14443012	<p>LD High Contrast panel size 55"</p> <p>Large color flat screen display (including cables) for the examination room, with a panel diagonal of 55". This large display version provides an excellent clinical image quality due to its new IPS panel technology.</p>
1	14455598	<p>Artis Freestyle Access cable kit</p> <p>Preparation for mounting, connection and display of the wireless "ACUSON Freestyle Elite with Artis Access" ultrasound system on the Large Display of the Artis system. Artis Freestyle Access optimizes the workflow when using ultrasound guidance in the interventional suite.</p>

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	AXA_INITIAL_3 2	<p>It provides a zero-cables, zero footprint, fully connected solution for ultrasound guidance in the interventional suite.</p> <p>Initial onsite training 32 hrs Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	AXA_FOLLOW UP_32	<p>Follow-up training 32 hrs Up to (32) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	AXA_FOLLOW UP_12	<p>Follow-up training 12 hrs Up to (12) 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.</p>
1	AXA_FOLLOW UP_12	<p>Follow-up training 12 hrs Up to (12) 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.</p>
1	AXA_ECLASS	<p>e.class-Virtual Instructor Led Training AXA_ECLASS Tuition for up to (4) imaging professionals to participate in a Siemens instructor led virtual class. The virtual setting allows the participant to benefit from classroom training without the need to travel to a Siemens training center. 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.</p>
1	AXA_PURE_E SSCL	<p>AX Artis PURE Essential Class Tuition for (1) imaging professional to attend Siemens class at Siemens Training Center. The Artis PURE Essentials Course is a 3.5-day classroom course beginning on Tuesday at 8:30 a.m. and ending on Friday at 12:00 p.m. It is designed to provide the participant with an in-depth knowledge of the essential functions of the Artis system as well as the skills needed to perform these functions. Through the use of demonstrations, lectures, and hands-on lab experience using an Artis system, participants will learn Artis system principles and workflows of patient examinations. Additionally, participants have the opportunity to meet other users and share their experiences and solutions to various challenges of the IR, cath lab, and the Hybrid OR environment. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed by the later of (12) months from purchase or install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	AXA_PURE_3D ADVCL	<p>AX PURE 3D Advanced Class Tuition for (1) imaging professional to attend Siemens class at Siemens Training Center. The Advanced PURE Applications classroom course is a 4 day classroom course beginning on Tuesday at 8:30 a.m. and ending on Friday at 4:30 p.m. This course will provide the participants with the in-depth knowledge of the essential functions of the PURE advanced 3D applications software as well as the skills needed to perform these functions. Through the use of demonstrations, lectures, and hands-on lab time on a PURE system, participants will learn the advanced post-processing techniques and advanced 3D applications for PURE software. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed by the later of (12) months from purchase or install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	EPW935515UPS	Eaton Powerware 9355 15 kVA UPS Includes UPS, battery, maintenance bypass panel, and one year on-site parts and labor coverage (24x7) by Eaton Powerware. This UPS is recommended when protection and uninterruptible power is required for the Artis' C-arm and table. Emergency fluoroscopy is not available with this UPS. If emergency fluoroscopy is required, the 9390 - 160 kVA UPS is recommended for the full system. One UPS per lab. Additional seismic brackets are required to make this system OSHPD approved.
2	GEL1040136601278	Black anti-fatigue mat 36x60 Black NewLife EcoPro anti-fatigue mat (36 inches x 60 inches), 3/4 inch polyurethane foam, fluid and dirt resistant with anti-microbial properties, matte textured surface. The ultimate employee benefit for workers who stand, are ergonomically designed to provide the perfect balance of premium comfort and optimal support. Proprietary Cellulon(r)Polyurethane Technology stands up to the tough demands of commercial environments while providing lasting comfort that won't bottom out over time. This eco-friendly line of anti-fatigue mats is certified by the National Floor Safety Institute for its high traction bottom surface.
1	VO400010002	Volcano CORE Integrated CORE Precision Guided Therapy System CORE CPU, Operator's Manual, Power Transformer, Cable Pre-Install Kit, Connection Box, two (2) Standard Controller and one (1) bedrail mount, 19"NEC Monitor Kit, Phased Array PIM Body, FFR functionality, DICOM Network Connection, ChromaFlo Functionality. -Includes VH IVUS End User License Agreement Customer agrees that use of the VH IVUS Software is subject to the terms of the End User License Agreement. A copy of the End User License Agreement is also available from your VOLCANO representative or online at www.volcanocorp.com/products/pdf-files/software-support-vh-ivus.pdf -Includes Seven (7)Year IVUS Software Support Agreement and one year warranty through Volcano. This signed Agreement provides for the purchase of the IVUS Software Support Agreement (SSA), which provides for unspecified IVUS software revisions released during for a seven (7)year term (should any be commercially released) at no additional cost. In the absence of an SSA, future software revision releases will be made available at additional cost to be determined upon commercial availability. Options: CORE Revolution Option Includes SpinVision PIMr and PIM Cable CORE Control Pad Option Bedside touchscreen controller offering system control from the sterile field CORE Printer Option Medical grader local printer for Volcano system
1	VO806071026	Volcano CORE Revolution Option Includes SpinVision PIMr and PIM Cable This kit includes a patient interface module (PIM-r) for connecting rotational IVUS catheters and all hardware required for the upgrade.
1	VO400161001	Volcano CORE Control Pad Option Bedside touchscreen controller offering system control from the sterile field
1	VO430420006	Volcano CORE Printer Option Medical grader local printer for Volcano system.
1	VO435010030	Volcano iFR Modality software iFR Hyperemia-Free Lesion Assessment Modality CORE Interface, Operator's Manual. Volcano's proprietary instantaneous, trans-lesional pressure ratio measured during the wave-free period.
1	AXA_RIG_QSP _STD	Standard Rigging Q Q.Zen SP
1	AT_USD_FREE STYLE	ACUSON Freestyle ultrasound system ACUSON Freestyle ultrasound system

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



SIEMENS REPRESENTATIVE
 Edwin Winicki - (336) 688-0978

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		Includes 3 Year Standard Warranty 11002300 ACUSON Freestyle Mainframe "The ACUSON Freestyle(tm) ultrasound system" is the world's first ultrasound system that operates with wireless transducers, a breakthrough in ultrasound imaging. The system features superior image quality and a new standard in ease of use in an ergonomic and portable design. Standard features include: - B-mode - Color flow mapping - Spatial compounding - Speckle reduction - Auto image optimization - Supports wireless transducers - One (1) transducer cable adapter - Two (2) batteries for wireless transducers - DICOM Storage, Storage Commitment, Modality Worklist and Echo - DICOM networking: Ethernet (wired) and 802.11b/g (wireless) - Factory default and user customizable exam types - High resolution flat panel display - A/C and battery operation - Two (2) charger bays for wireless transducer batteries"
1	AXA_BIOMED_TRN	Biomedical Training AXA: AX2ARTZPUR Artis Zee system with/without PURE 15 days \$23,205
1	CS10943	monitor cart with live/Ref display The customized solution enables the configuration of the system with a monitor cart with two 19" displays for Live- and Reference Image as 2nd display device. Parts of the CS kit: The CS kit includes a permanently connected mobile display trolley with two 19" flat displays as well as all required tests, the documentation and the release for this modification. Notes: • This CS is not valid with an ecoline system. • A second DCS is not possible with this CS solution.
1	AXA_ADDL_RIGGING	Additional Rigging AXA \$13,335
2	AXA_BIOMED_TRN	Biomedical Training AXA: XX2SYNGO Syngo with MultiModality Workstation 5 days \$8,542.50
1	AXA_BIOMED_TRN	Biomedical Training AXA: XP1XPESADV Service Essentials for AX/XP- Advance Level 10 days \$15,300
2	AXA_BIOMED_TRN	Biomedical Training AXA : AX2ANGCOFA Common Functions/Apps for Angio 10 days \$15,555

Sell Price : \$1,376,700
 Freight and Rigging : \$15,000
 Final Price : \$1,391,700

Estimated Tax (final tax is computed at time of installation) : \$97,223

PRELIMINARY PROPOSAL

Optional Items (not included in Final price above) :

Qty	Part No.	Item Description	Extended Price
1	BART700PEDL	<p>Mark 7 Arterion, Pedestal System</p> <p>The Arterion Mark 7 Pedestal contrast medium injector can be positioned anywhere at the patient positioning table on a mobile unit, for direct operation of all functions in the examination room.</p> <p>The injector system includes:</p> <p>A mobile pedestal stand with electronics unit, a contrast medium heater and a connection cable to the manual release.</p> <p>A support arm with injector head and a control lever for moving the injector head.</p> <p>A user control console with large touch screen and corresponding additional monitoring display on the injector head.</p> <p>Functions</p> <p>Pressure limitation: for 150 ml syringes 689 to 8273 kPa, corresponds to 100 to 1200 psi. .</p> <p>Flow rates for 150 ml syringes: 0.1 to 45 ml/s in increments of 0.1 ml/s 0.1 to 59.9 ml/min in increments of 0.1 ml/min rise/fall: 0 to 9.9 s in increments of 0.1 seconds</p> <p>Release delay for injection or radiation: 0 to 99.9 s in increments of 0.1 s.</p> <p>Adjustable volume for 150 ml syringes: 1 ml to the max. syringe capacity in increments of 1 ml.</p> <p>Fill rate: Variable syringe filling speed 1-20ml/s.</p> <p>Injection protocols: Up to 40 injection protocols possible.</p> <p>Parameters currently displayed on the touch screen display and on the head display: Injection speed Injection volume Remaining volume Injection duration Applied pressure</p> <p>Contrast medium heating: Nominal 35°C (95°F)+-5°C (9°F)</p> <p>Injection data memory Up to 50 injection data items stored</p> <p>Included in the scope of delivery Injector standard configuration 150 ml SIEMENS interface cable Operator Manual Service manual (English).</p> <p>Power supply 200 V to 250 V; 50/60 Hz.</p>	+ \$27,067
1	BINSART700P	Arterion Pedestal Install	+ \$1,545

Attachment D

PROPOSED TOTAL CAPITAL COST OF PROJECT

Project name: CHS NE Interventional Radiology Room #9 (Single Plane) Equipment Replacement
Provider/Company: Atrium Health

(1) Purchase price of land	_____
(2) Closing costs	_____
(3) Site Preparation	_____
(4) Construction/Renovation Contract	_____ \$0
(5) Landscaping	_____
(6) Architect/Engineering Fees	_____ \$0
(7) Medical Equipment	_____ \$1,517,535
(8) Non Medical Equipment	_____
(9) Furniture	_____
(10) Consultant Fees (CON Fees and Legal Fees)	_____
(11) Financing Costs	_____
(12) Interest During Construction	_____
(13) Other (Sales Tax Value)	_____
(14) Total Capital Cost	_____ \$1,517,535

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

John M. Beyer 12/10/18
 (Signature of Licensed Architect or Engineer) DATE



Sales taxes have been included in these equipment costs. However, because Atrium Health is entitled to a sales tax refund under N.C. Gen. Stat. § 105-164.14(b) and 105-467, the sales tax that Atrium Health initially incurs for this medical equipment purchase will be refunded to Atrium Health, and thus will reduce the capital costs that Atrium Health actually incurs for the equipment by \$97,223.

Attachment E

SELECTPLUS™

Fair Market Value Analysis

WO: 871595
For: Chris Hollar
Facility: Carolinas Healthcare
Date: Wednesday, November 28, 2018

▶ **Total ECRI FMV Estimate = \$22,809 to \$57,023**

Vendor: Siemens Healthcare
Device: Radiographic/Fluoroscopic Systems, Angiography/Interventional
Model: Axiom Artis DTA

Contents

- ▶ FMV Details
- ▶ Depreciation Table(s)

Thank you for your request for a fair market value (FMV) analysis of your Model 1 from Man 1. If you have any questions or require additional information, please do not hesitate to call the analyst.

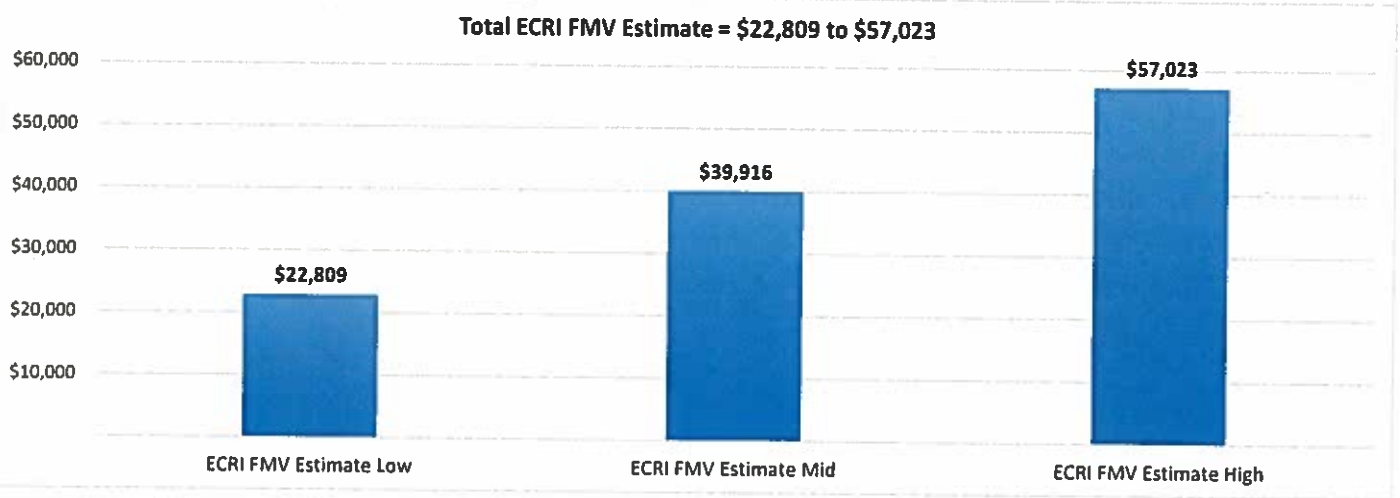
Prepared By

Sarah Holskin
Healthcare Technology Specialist
Phone: (800) 998-3274, ext. 5484
Email: sholskin@ecri.org

ECRIInstitute
The Discipline of Science. The Integrity of Independence.

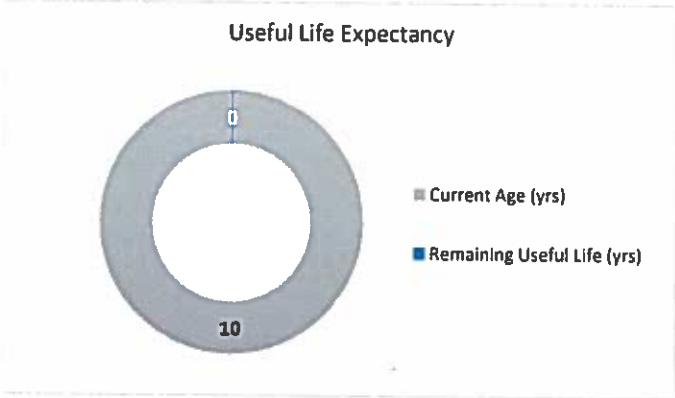
Disclaimer: ECRI Institute's FMV estimate is defined as the cash amount that a buyer may reasonably offer, and a seller accept, in exchange for capital medical equipment on the open market. Our estimate assumes that both the buyer and seller are reasonably knowledgeable and neither is being pressured into a transaction. ECRI Institute's FMV estimate is not an imposed value. Due to the highly subjective nature of FMV's, our estimate is not in any manner a guarantee of value.

FMV Analysis Details



Manufacturer	Model	Current Age (yrs)	ECRI Useful Life (yrs)	Purchase Price	Price Source	Qty	ECRI FMV Estimate Low	ECRI FMV Estimate Mid	ECRI FMV Estimate High
Siemens Healthcare	Axiom Artis DTA	10	10	\$1,140,470	Client	1	\$22,809	\$39,916	\$57,023
TOTALS				\$1,140,470		1	\$22,809	\$39,916	\$57,023

Total ECRI FMV Estimate = \$22,809 to \$57,023



The ECRI useful life is the number of years we believe the product can typically be used and serviced. These expected useful lives are derived from a consensus of ECRI Institute experts that have examined the real-world replacement intervals for capital equipment and information technology.

We utilize a useful life expectancy of ten (10) years for angio systems. By way of comparison, the American Hospital Association (AHA) life span for this technology is seven (7) years.

Discussion

Purchased 10+ years ago, your Siemens Axiom Artis DTA has surpassed its expected useful life. Furthermore, this model has been discontinued and may be difficult to service. As such, we believe the residual value of the equipment would be limited to no more than 2% to 5% of the original estimated purchase price of \$1,140,470. Therefore, we estimate the FMV for your Axiom Artis DTA to be \$22,809 to \$57,023.

Please note that our FMV estimates do not take into account usage or condition of the equipment. Our analysis also does not account for any clinical value that the equipment may hold, but rather estimates what value the equipment may have in the used medical device marketplace. In order to most accurately determine the FMV of your equipment, we suggest that you:

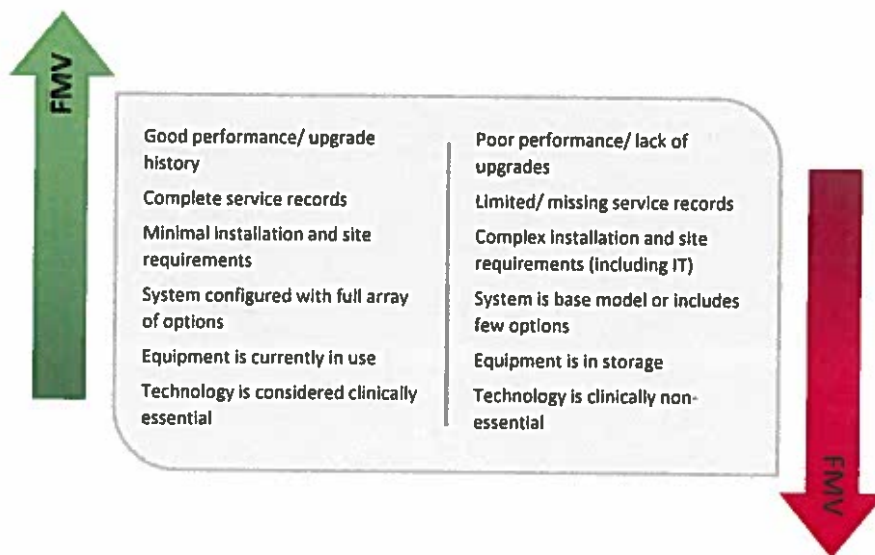
1. Consider the availability of new technology.
2. Determine if the equipment no longer meets government or safety standards.
3. Decide if it is more economical to repair or replace the equipment.
4. Ensure the availability of repair parts from original equipment manufacturer (OEM).
5. Ascertain if obsolescence impacts clinical/operational effectiveness.
6. Define the reliability/dependability of the equipment.

Many factors can enhance or detract from the FMV. Changes in demand due to reported problems and device recalls, as well as technological innovations can also have a significant impact.

Model-specific factors affecting the FMV:

Enhances FMV		Detracts From FMV	
Large market share	<input type="checkbox"/>	Small market share	<input type="checkbox"/>
Model still in production	<input type="checkbox"/>	Discontinued model	<input type="checkbox"/>
Well known OEM	<input type="checkbox"/>	Little known OEM	<input type="checkbox"/>
Service available from OEM	<input type="checkbox"/>	No longer serviceable by OEM	<input type="checkbox"/>
Service available from 3rd party	<input type="checkbox"/>	Servicing restricted to OEM	<input type="checkbox"/>
Stable technology	<input type="checkbox"/>	Volatile Technology	<input type="checkbox"/>

Other facility-specific factors that can impact the FMV:



Straight Line Depreciation Table(s)

10 Year Useful Life

FMV	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Max	90%	81%	72%	63%	54%	45%	36%	27%	18%	10%
Min	85%	76%	67%	58%	49%	40%	31%	22%	13%	5%

The member agrees to hold in strict confidence SELECTplus Custom Analyses, as well as the content of the other Products and Services offered under the SELECTplus Agreement, using them only for their intended purpose and within its own institution, and shall not transmit them to or share them with third parties without the prior written permission of ECRI Institute in each instance. The provisions of this clause shall survive expiration or termination of this Agreement. In the event that member uses or attempts to use the Custom Analysis, or other SELECTplus Products and Services, in a manner that is contrary to the terms of the SELECTplus Agreement, it may result in an automatic termination of the usage rights granted herein and will give ECRI Institute the right (in addition to any such remedies available to it) to injunctive relief enjoining those acts, it being acknowledged that legal remedies are inadequate.

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**NC DEPARTMENT OF
HEALTH AND
HUMAN SERVICES**

ROY COOPER • Governor

MANDY COHEN, MD, MPH • Secretary

MARK PAYNE • Director, Division of Health Service Regulation

December 20, 2018

Elizabeth Kirkman
Atrium Health
2709 Water Ridge Parkway, Suite 200
Charlotte, NC 28217

Exempt from Review – Replacement Equipment

Record #: 2819
Facility Name: Carolinas Healthcare System NorthEast
FID #: 943049
Business Name: The Charlotte-Mecklenburg Hospital Authority
Business #: 1770
Project Description: Replace and relocate interventional radiology equipment in room #9
County: Cabarrus

Dear Ms. Kirkman:

The Healthcare Planning and Certificate of Need Section, Division of Health Service Regulation (Agency), determined that based on your letter of December 11, 2018, the above referenced proposal is exempt from certificate of need review in accordance with N.C. Gen. Stat. §131E-184(a)(7). Therefore, you may proceed to acquire without a certificate of need the Siemens Artis Q Single Plane interventional radiology equipment to replace the Siemens Axiom Artis dTC/dTA Detector System interventional radiology equipment.

Moreover, you need to contact the Agency's Construction, Radiation Protection, 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,

Gloria C. Hale

Gloria C. Hale
Team Leader

Martha J. Frisone

Martha J. Frisone
Chief, Healthcare Planning and
Certificate of Need Section

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

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF HEALTH SERVICE REGULATION

HEALTHCARE PLANNING AND CERTIFICATE OF NEED SECTION

LOCATION: 809 Ruggles Drive, Edgerton Building, Raleigh, NC 27603
MAILING ADDRESS: 2701 Mail Service Center, Raleigh, NC 27699-2701
www.ncdhhs.gov/dhsr/ • TEL: 919-855-3750 • FAX: 919-733-2757

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**

ROY COOPER • Governor
MANDY COHEN, MD, MPH • Secretary
MARK PAYNE • Director, Division of Health Service Regulation

December 20, 2018

Elizabeth Kirkman
Atrium Health
2709 Water Ridge Parkway, Suite 200
Charlotte, NC 28217

No Review

Record #: 2820
Facility Name: Carolinas Healthcare System NorthEast
FID #: 943049
Business Name: The Charlotte-Mecklenburg Hospital Authority
Business #: 1770
Project Description: Acquire interventional radiology equipment
County: Cabarrus

Dear Ms. Kirkman:

The Healthcare Planning and Certificate of Need Section, Division of Health Service Regulation (Agency) received your correspondence regarding the above referenced proposal. Based on the CON law **in effect on the date of this response to your request**, the proposal described in that correspondence is not governed by, and therefore, does not currently require a certificate of need. If the CON law is subsequently amended such that the above referenced proposal would require a certificate of need, this determination does not authorize you to proceed to develop the above referenced proposal when the new law becomes effective.

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

This determination is binding only for the facts represented in your correspondence. If changes are made in the project or in the facts provided in the correspondence referenced above, a new determination as to whether a certificate of need is required would need to be made by this office.

Please do not hesitate to contact this office if you have any questions.

Sincerely,



Gloria C. Hale
Team Leader



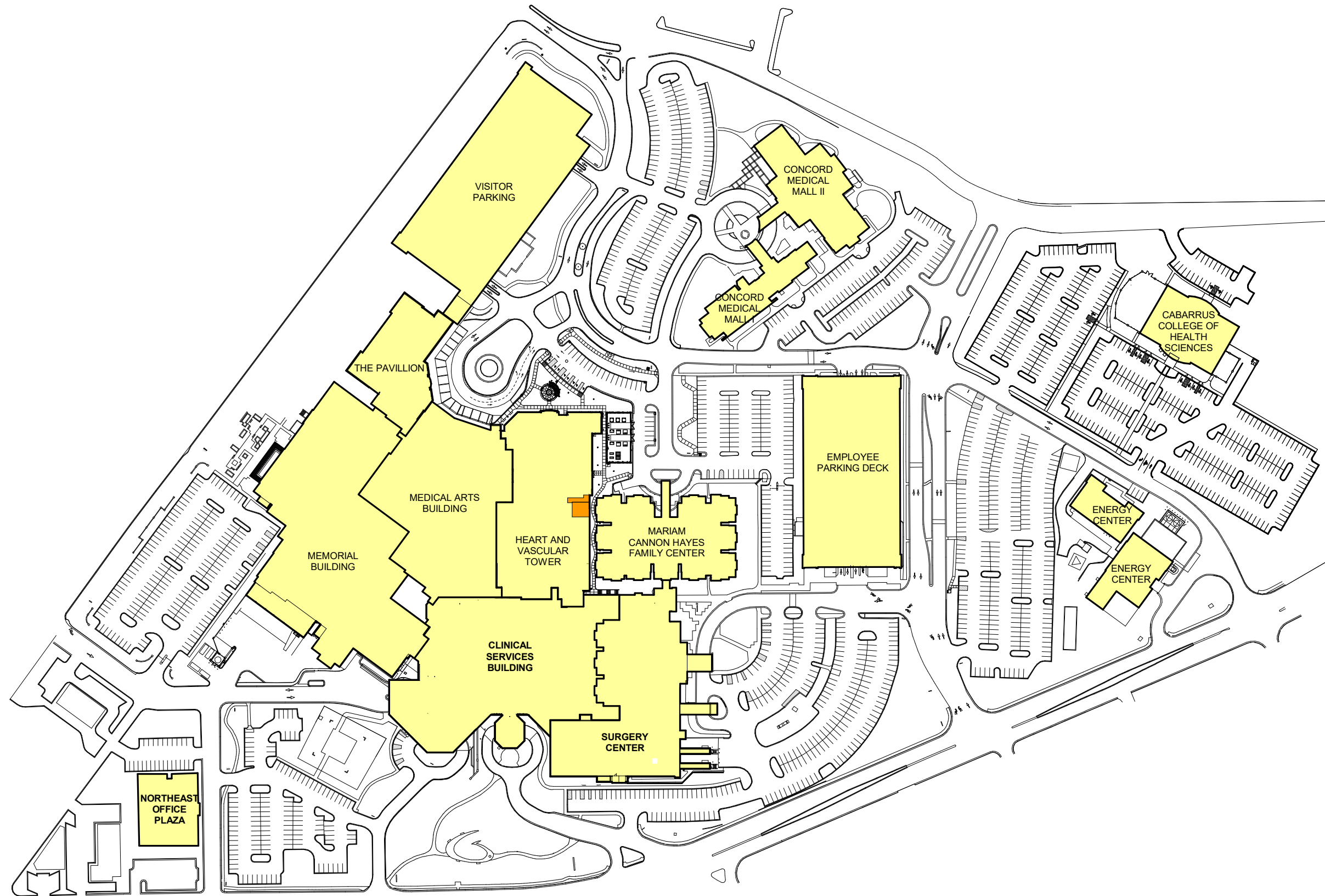
Martha J. Frisone, Chief
Healthcare Planning and Certificate of Need Section

cc: Radiation Section, DHSR
Acute and Home Care Licensure and Certification Section, DHSR
Melinda Boyette, Administrative Assistant, Healthcare Planning, DHSR

Attachment C

Color Key

- EXISTING BUILDING
- RENOVATION



SITE PLAN

IR #9 REPLACEMENT & RELOCATION

Atrium Health

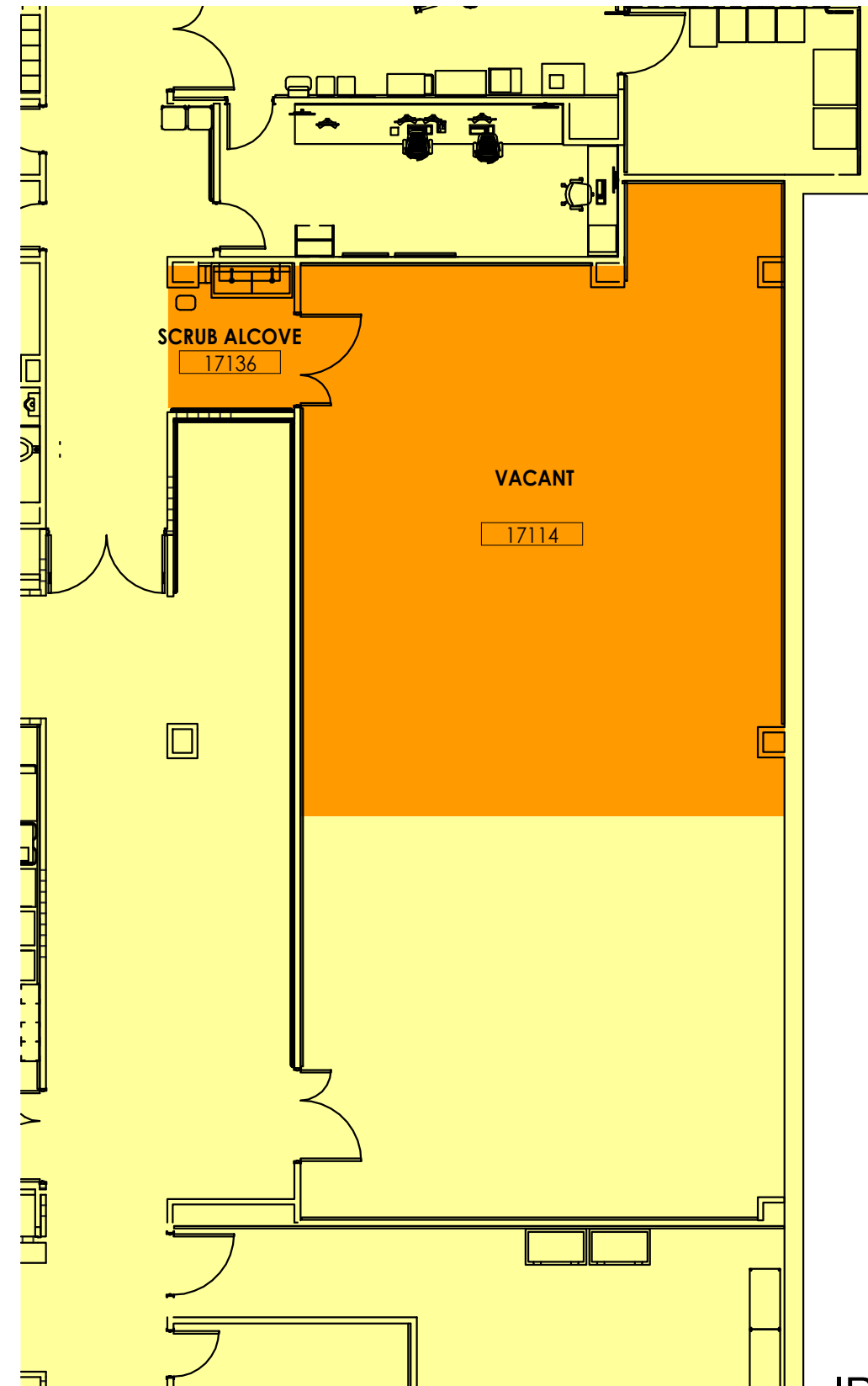
08/08/2024

Atrium Health Cabarrus



Color Key

- EXISTING BUILDING
- RENOVATION



Existing Enlarged Floor Plan - Level 01

IR #9 REPLACEMENT & RELOCATION

Atrium Health

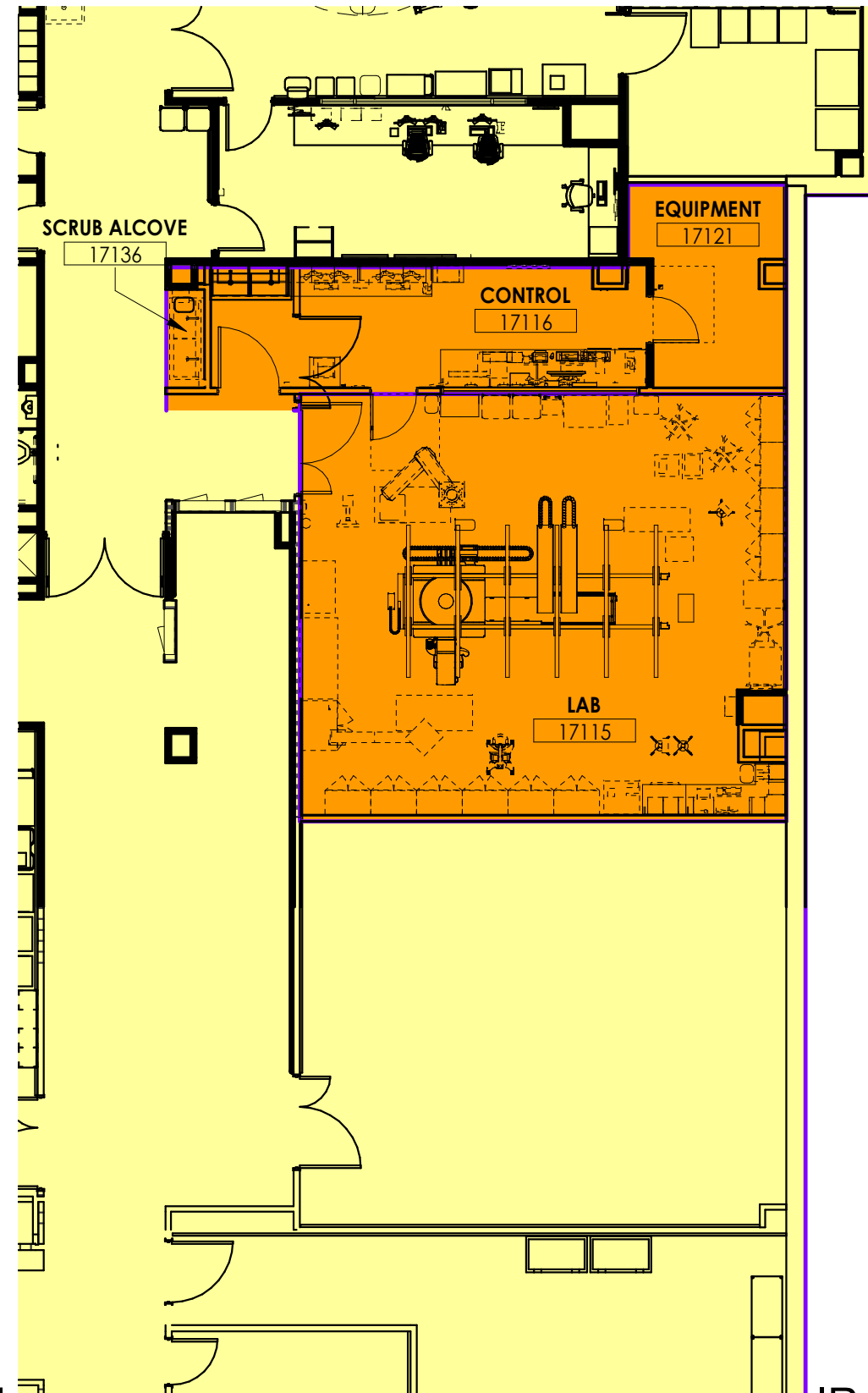
08/08/2024

Atrium Health Cabarrus



Color Key

- EXISTING BUILDING
- RENOVATION



Proposed Enlarged Floor Plan - Level 01

IR #9 REPLACEMENT & RELOCATION



Attachment D

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

SIEMENS REPRESENTATIVE
Edwin Winicki - +1 (336) 688-0978
edwin.winicki@siemens-healthineers.com

PRELIMINARY PROPOSAL

Customer Number: 0000001210

Date: 12/18/2023

ATRIUM HEALTH
1000 BLYTHE BLVD
CHARLOTTE, NC 28203

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

<u>Table of Contents</u>	<u>Page</u>
ARTIS icono ceiling IR Pro (Quote Nr. CPQ-965509 Rev. 0).....	2

Contract Total: \$ 1,335,295
(total does not include any Optional or Alternate components which may be selected)

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

SIEMENS REPRESENTATIVE
 Edwin Winicki - +1 (336) 688-0978
 edwin.winicki@siemens-healthineers.com

PRELIMINARY PROPOSAL

Quote Nr: CPQ-965509 Rev. 0

Terms of Payment: 00% Down, 80% Delivery, 20% Installation
 Free On Board: Destination

Purchasing Agreement: ATRIUM HEALTH CSS-MM-6335

ATRIUM HEALTH CSS-MM-6335 terms and conditions apply to Quote Nr CPQ-965509

Customer certifies, and Siemens relies upon such certification, that : (a) ATRIUM HEALTH CSS-MM-6335 is the sole GPO for the purchases described in this Quotation, and (b) the person signing this Quotation is fully authorized under the Customer’s policies to choose and indicate for Customer such appropriate GPO.

ARTIS icono ceiling IR Pro

Qty	Part No.	Item Description
1	14465280	ARTIS icono ceiling IR Pro ARTIS icono ceiling IR Pro combines mechanical flexibility and positioning accuracy with 2k imaging and smart workflow guidance.
1	14465321	Omni Spin ARTIS icono ceiling Omni Spin.
1	14465322	Ceiling rail kit Ceiling rail kit for 2840 mm room height (instead of 2710 mm standard room height). Minimum room size: 6 m x 5.66 m
1	14465043	Imaging System Image system computer for control of system operation and image acquisition. Dual architecture In order to provide highest level system availability, the imaging system consists of two independent computer systems that manage central tasks such as real-time image processing during fluoroscopy or acquisition as well as post-processing and networking functionality separately from one another. This ensures the best possible system performance and availability. Image storage capacity 100,000 images in 1k matrix with a size of 2 MB 25,000 images in 2k matrix with a size of 8MB
1	14432948	Automap Automatic stand positioning depending on the selected reference image and automatic reference image selection depending on the stand positioning.
1	14465042	OPTIQ with as40HDR GIGALIX OPTIQ image chain with the following tube, collimator, and flat detector configuration: as40HDR detector and GIGALIX tube The as40HDR flat detector is optimized for the requirements of radiology. The GIGALIX X-ray tube concentrates high pulse power on small, square-shaped focal spots (flat emitter technology for all focal spots). This provides unprecedented image quality for confidence in challenging situations.

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14465015	<p>Multimodality Viewing Supports the connection of external video sources such as Sensis/recording systems, PACS, HIS/RIS, Ultrasound, ECG, IVUS, OCT, external video, endoscope, mapping systems, and their visualization on the exam room display. Adapted to the local needs and depending on the availability of the cockpit option up to 24 external sources can be connected.</p>
1	14455572	<p>Large Display (pivot mount) Large color flat screen display (including cables) for the examination room, with a panel diagonal of 55". This large display provides an excellent clinical image quality due to its new IPS panel technology.</p> <p>The Large display is fixed on a ceiling-mounted, rotatable, and height-adjustable display holder in the examination room.</p>
1	14465217	<p>Large Display diagn. protection 55" laminated glass protective screen for the monitor panel.</p>
1	14465325	<p>Large Display (pivot mount) Large color flat screen display (including cables) for the examination room, with a panel diagonal of 55". The large display is fixed on a ceiling-mounted, rotatable, and height-adjustable display holder in the examination room.</p>
1	14465217	<p>Large Display diagn. protection 55" laminated glass protective screen for the monitor panel.</p>
1	14465030	<p>Large control room display Large control room display - Panel: 31.5" - Resolution 3840 x 2160 - Pixel size: 0.181 x 0.181 mm - Typical contrast: max. 1000 : 1 - Max. luminance 700 cd/m2 - Calibrated luminance: 400 cd/m2 - Display area (diagonal): 800 mm - Dimensions without stand: (W x H x D) 761 x 471 x 90 mm</p>
1	14465045	<p>ARTIS multi-tilt table ARTIS multi-tilt table ensures optimal patient positioning regardless of the procedure and patient size. With an unprecedented level of material integrity, it is suitable for even the heaviest of patients.</p> <ul style="list-style-type: none"> - Maximum table load: 440 kg (970 lbs.) consisting of 280 kg (617 lbs.) for the patient, 100 kg (220 lbs.) for accessories, plus 60 kg (132 lbs.) for CPR - Allows tilting in +15°/-20° and a +/-15° cradle - The easy-float tabletop permits hassle-free positioning of the tabletop regardless of patient weight, mounted lower-body radiation protection and tableside modules - Small table base allows upright and comfortable standing, close to the patient. - The Siemens unique IsoTilt functionality keeps the C-arm projection during Trendelenburg tilting. - Ball bearing mounted slidable accessory rails on both sides for easy positioning of control modules and accessories. <p>Note: It is mandatory to provide UPS back up with this table option in order to comply with IEC 60601-2-43 CL. 201.15.101. Reason: In the event of power failure a neutral table position suitable for CPR must be reachable within 15 seconds. A suitable UPS from Siemens as required must be included in your order unless an existing / planned UPS provision for your installation site will satisfy the requirement.</p>
1	14455546	<p>Tabletop - long This tabletop has an extended length of 2637±1 mm (103.8"±0.04"). It includes a carbon fiber patient tabletop and a set of three Velcro body straps for securing and compressing the patient. Maximum patient weight: 200 kg / 440.9 lbs.</p>

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		Weight: 15.5 kg / 34.2 lbs. Length: 2637 ± 1 mm / 103.8" ± 0.04" Width: 525 ± 0.5 mm / 20.7" ± 0.02"
		Intended only for use with ARTIS tables.
1	14455548	Mattress - thick Matching, special-foam mattress, 7 cm, incl. a latex-free cover. This visco-elastic comfort mattress reacts to temperature and has the special property of adapting to the individual body shape under the influence of body weight and heat. Mattress thickness: 70 ± 5 mm / 2.8" ± 0.2"
1	14465054	Oper. contr. ARTIS table For an ideal workflow, full system operation can be performed directly at the table side. This includes complete system operation through modular control elements for controlling C-arm movements, patient table, and collimator. The illuminated controls and touch display are easy to use – even when covered with drapes for sterile operation. Pilot module The pilot module provides comfortable and ergonomic operation of the system. It allows the control of system and table movements, imaging parameters, the selection of examination protocols, image acquisition and evaluation and many other functions. The touch screen can be configured to meet individual clinical requirements. The Touch2Move technology allows intuitive activation of system movements. Table control module (with ARTIS multi-tilt table) The table operating module with panning knob for servo-assisted table movement enables virtually force-free movement of the patient regardless of table load and table inclination. Table control module (with ARTIS standard table) Table control module with panning knob for free-floating tabletop movement. Collimator control module The Collimator control module for controlling of all collimator functions, such as rectangular blade or wedge-shaped filters. Hand switch Multi-functional hand switch for acquisition control, switching acquisition frame rates and/or step movements. (This switch might not be available in all countries.)
1	14465069	1st 4 pedal cable footswitch Wired 4-pedal footswitch for release of fluoroscopy, acquisition, and tabletop brake (with ARTIS table), as well as configurable control function.
1	14465049	2nd 4 pedal wireless footswitch Additional wireless 4-pedal footswitch for release of fluoroscopy, acquisition, and tabletop brake (with ARTIS table), as well as configurable control function.
1	14455557	Second op. cont. - system modu. Additional collimator and pilot control module for system movements, imaging parameters as well as review and many other functions.
1	14465075	Second op. contr. - table modu. Depending on the configured table and location for the control modules one of the following table control modules will be delivered. Table control module - servo-assisted (with ARTIS multi-tilt table) The table control module with panning knob for servo-assisted table movement enables virtually force-free movement of the patient regardless of table load and table inclination.

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14465124	<p>Table control module – panning (with ARTIS standard table) Table control module with panning knob for free-floating tabletop movement.</p> <p>Operation in the control room Preparation for system operation from control room.</p>
1	14465095	<p>Op. ctrl. - handswitch (C-Room) Additional handswitch for radiation release and additional control functions.</p>
1	14455566	<p>Injector connection (C-Room) Interface in the control room for controlling the contrast medium injector. Injectors can be offered by Siemens Healthcare Accessory Solutions.</p>
1	14440419	<p>Cable clips ECG Cable clips for securing the ECG cable to the patient tabletop. It includes 10 cable clips.</p> <p>Intended only for use with Artis / ARTIS tables</p>
1	14465062	<p>Infusion bottle holder This infusion bottle holder can be mounted at the accessory rail of the patient table. It holds up to 4 infusion bottles. It includes an infusion bottle holder made of stainless steel with 4 retaining rings.</p> <p>Intended only for use with Artis/ARTIS tables.</p>
1	14440459	<p>Arm rest Arm support used for the arm approach. Length: 1 m (39.4"). Slides underneath the patient mattress and is held in position by the patient's weight. Made of radiolucent carbon fiber material which is easy to clean. It includes two additional support pads of two different heights (4 and 7 cm). Length pad: 60 cm / 23.62" Width: 9 to 20 cm / 3.54" to 7.87" Maximum weight: 5 kg (11.02 lbs.) Weight (with pads): 2.1 kg / 4.63 lbs.</p> <p>Intended only for use with Artis / ARTIS tables.</p>
1	14440460	<p>Arm holder (pair) The patient's arms can be comfortably placed along the body using these two arm holders. They slide underneath the patient mattress and is held in position by the patient's weight. It includes two pairs of arm holders of different length (540 mm / 690 mm - 21.2" / 27.2") and height (85 mm / 115 mm - 3.35" / 4.53"), suitable both for thick and thin patient mattresses.</p> <p>Intended only for use with Artis / ARTIS tables.</p>
1	14440474	<p>Body strap set Can be used to secure patient to the patient table and to compress patient anatomy. It consists of two belts with Velcro straps (l x w: 185 cm x 10 cm / 72.8" x 3.94").</p> <p>Intended only for use with Artis / ARTIS tables.</p>
2	14465056	<p>Abdomen radiation prot. IR This radiation shield protects the user from scattered radiation when standing at the table side. It can be attached to the accessory rails either on the right or on the left side of the patient positioning table. It provides the user an additional accessory rail. It includes a basic unit (89 cm x 75 cm / 35" x 29.5" (l x h); one lower body radiation protection pivot swivel element (48 cm x 75 cm / 18.9" x 30.3" (l x h); one flip down element 57 cm x 33cm / 22.4" x 12.99" (l x h), and two clip-on units (27 cm x 33 cm / 10.6" x 12.99", and 27 cm x 25 cm / 10.6" x 9.8")</p>

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		with a lead of 0.5 mm / 0.02" Pb.
		The maximum load of the accessory rails is 20 kg (44.1 lb).
		Intended only for use with ARTIS tables. It provides a distance of 7cm to prevent the collision with the table base in case of maximum penning.
1	14432926	Card acq. mode w/high speed Card Highspeed enables image acquisition with up to 30 frames per second and helps visualizing a moving heart.
1	14465205	PERISTEPPING / PERIVISION C-arm stepping for real-time bolus chasing.
		Peripheral digital angiography with stepping and online subtraction display.
1	14465096	QVA Vascular analysis Vessel analysis with determination of degree of stenosis, distance measurement and calibration. With ARTIS icono SW version VE21 and higher QVA is available as the optional feature "QuantWeb QVA". QuantWeb QVA is part of syngo application software and can be deployed on the imaging system.
1	14465077	syngo EVAR Guidance Engine Application software for reconstruction, post-processing and handling of 3D information including applications for endovascular treatment of aortic aneurysms. The package includes the following functionalities: - 3D high-contrast and CT-like soft-tissue imaging (syngo DynaCT) - 3D Wizard for expert step-by-step guidance in 3D acquisition - 3D roadmap for dynamic overlay of planning data and 3D volumes on live fluoroscopy - Fusion functionality for integration of pre-interventional 3D datasets also from other modalities into the Angio-room (syngo 3D/3D Fusion and syngo 2D/3D Fusion) - Marking of points or lines on the 3D geometry or MPRs and overlay of these markings on live fluoroscopy - In-room control for table-side operation of advanced applications - Parallel patient processing capabilities, syngo EVAR Guidance – a dedicated and optimized workflow facilitating the use of 3D image guidance during EVAR procedures.
1	14455928	VOLCANO Cable Set plus Cable set for operating the Volcano s5i ultrasound system incl. s5iz and s5iu (CORE-System). It contains all cables for connecting the components at the patient table to the s5i imaging system in the control room. This cable set will already be integrated into the Artis table in the factory. With this item, a display is delivered additionally for the examination room if an Artis Large Display was not ordered. If an Artis Large Display or Panoramic Display is ordered, the configuration includes a connection kit instead of the 19" display. Also with this item comes the Accessory spacer rail (Kenex Electro-Medical LTD.) This is an accessory rail for attachment of tableside rail equipment (for use with an

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14455607	<p>extended lateral moving tabletop). This accessory allows tableside mounted equipment, to be used on a table featuring extended lateral tabletop movement. Rail accessories which would strike the table pedestal, are positioned outside of this movement range.</p> <p>syngo iFlow syngo iFlow allows the visualization and analysis of the flow and perfusion in the examined organs. This information is based on the time-to-peak calculations from a routine DSA acquisition. The calculations can be shown as a color-map of the whole organ. It is also possible to analyze the flow and perfusion of regions of interest (ROIs) defined by the user and this information can be displayed with graphics, which might further help in understanding the flow dynamics of these ROIs.</p>
1	AX_PR_ICONC MULTI	<p>IconoCeiling w multitilt table promotion Promotional incentive to be used for configurations including the combination of an ARTIS icono ceilingmounted imaging system in combination with the ARTIS multitilt table. No other Promos can be combined. Must include one or more of the following: POS contract, Book & Bill, Multi-unit purchase. Required Part Numbers: One of 14465276, 14465279, 14465277, 14465280, 14465278, 14465281, AND 14465045</p>
1	AXA_RIG_ICON O_SP	<p>Standard Rigging icono SP</p>
1	AXA_IRCA_CM BD_LV1	<p>Essential Edu Package (AXA)(IRCA)(C/BP) This Essential Interventional Radiology & Interventional Cardiology education package for ceiling-mounted and biplane systems includes: - Dedicated Siemens Education Consultant: partnering with your Education Coordinator to create a blended curriculum adapted to your facility's individual needs. - Blended Learning Curriculum: a combination of at least two (2) 28-hour onsite trainings, digital (immersive, online & virtual) education, and instructor-led classroom elevated by ASRT accreditation. Designed for your team to maximize their confidence and competence on your system. - On-site Customization: optimizing system hardware, software, workflow and operating safety consistent with the cleared use of the system. - Ongoing Educational Case Support: ability to request onsite case-support for advanced procedures. The education will be delivered in four (4) phases: 1) Pre-Installation: Customized Education Plan (CEP) tailored to your sites experience level and case types. Training needs assessed on hardware and software options, system positions, 2D/3D imaging, post-processing techniques and ongoing procedure support. 2) Pre-Go Live: blend of virtual courses & instructor-led classroom training. 3) Go Live: minimum of two (2) weeks of onsite clinical applications sessions, guiding staff members, reinforcing concepts and practices acquired during pre-training. 4) Warranty /Post-Go Live: continuation of the CEP delivery. Ongoing case support on advanced request and subject to availability. Parties will mutually agree on deliverables and scheduling of the requested training. This educational offering must be utilized within 12 months following install end date. If this offering is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	AXA_EP1_28	<p>Essential Training PH 1 (Onsite-28) AXA Up to (28) hours of on-site clinical Education training, scheduled consecutively (Monday – Friday) during standard business hours (7:00am-5:00pm) for a maximum of (4) imaging super users. 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.</p>
1	BART700TABL	<p>Mark 7 Arterion, Table Mount Injector The Arterion Mark 7 Table contrast medium injector allows for the remote installation of the system power supply and installation of the injector head onto a table bracket.</p>

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		<p>The injector system includes: Power supply and injector head with corresponding cabling An adjustable height table bracket for the injector head A desk mounted user control console with large touch screen</p> <p>Functions Pressure limitation: for 150 ml syringes 689 to 8273 kPa, corresponds to 100 to 1200 psi. .</p> <p>Flow rates for 150 ml syringes: 0.1 to 45 ml/s in increments of 0.1 ml/s 0.1 to 59.9 ml/min in increments of 0.1 ml/min rise/fall: 0 to 9.9 s in increments of 0.1 seconds</p> <p>Release delay for injection or radiation: 0 to 99.9 s in increments of 0.1 s.</p> <p>Adjustable volume for 150 ml syringes: 1 ml to the max. syringe capacity in increments of 1 ml.</p> <p>Fill rate: Variable syringe filling speed 1-20ml/s.</p> <p>Injection protocols: Up to 40 injection protocols possible.</p> <p>Parameters currently displayed on the touch screen display and on the head display: Injection speed Injection volume Remaining volume Injection duration Applied pressure</p> <p>Contrast medium heating: Nominal 35°C (95°F)+-5°C (9°F)</p> <p>Injection data memory Up to 50 injection data items stored</p> <p>Included in the scope of delivery Injector standard configuration 150 ml SIEMENS interface cable Operator Manual Service manual (English).</p> <p>Power supply 200 V to 250 V; 50/60 Hz.</p>
1	BINSART700R	Arterion Rack Mnt Install
1	BKMA320RT	PEDESTAL FOR INJECTOR HEAD,MARK V PROVIS Injector pedestal for the Medrad Arterion injector.
1	EPW935515UPS	Eaton Powerware 9355 15 kVA UPS Includes UPS, battery, maintenance bypass panel, and one year on-site parts and labor coverage (24x7) by Eaton Powerware. This UPS is recommended when protection and uninterruptible power is required for the Artis' C-arm and table. Emergency fluoroscopy is not available with this UPS. If emergency fluoroscopy is

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description	
		required, the 9390 - 160 kVA UPS is recommended for the full system. One UPS per lab.	
		Additional seismic brackets are required to make this system OSHPD approved.	
1	GEL1040136601 278	Black anti-fatigue mat 36x60 Black NewLife EcoPro anti-fatigue mat (36 inches x 60 inches), 3/4 inch polyurethane foam, fluid and dirt resistant with anti-micorbial properties, matte textured surface.	
		The ultimate employee benefit for workers who stand, are ergonomically designed to provide the perfect balance of premium comfort and optimal support. Proprietary Cellulon®Polyurethane Technology stands up to the tough demands of commercial environments while providing lasting comfort that won't bottom out over time. This eco-friendly line of anti-fatigue mats is certified by the National Floor Safety Institute for its high traction bottom surface.	
1	CS14665	modified footswitch allocation The footswitch pedal allocation of "Table Break" and "ACQ" will be exchanged. This modification will be done for both, wireless- and wired footswitch in examination room (ARTIS multi-tilt table). The CS kit includes the HW adapters as well as all required tests, documentation and the release for this modification. Notes: • This CS is not valid with an ecoline system • With the modification all (4-pedal) footswitches in the exam room (ARTIS multi-tilt table, 1st user location) have the same footswitch configuration. • The modified foot pedal configuration is not valid for footswitches in control room (2nd user location) or footswitches on UI trolley or in combination with OEM boom UI (3rd user location). If a 2nd or 3rd user location is retrofitted with a foot switch at a later date, an additional CS request is required to obtain the same foot pedal configuration.	
1	AXA_ADDL_RIG GING	Additional Rigging AXA De-installation of existing lab dTA fl#(400-205542) Project # 2018-3252 \$ 17,957	
1	AXA_ADDL_RIG GING	Additional Rigging AXA \$9,825	
			System Total \$ 1,335,295

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PRELIMINARY PROPOSAL

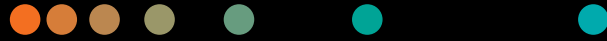
FINANCING: The equipment listed above may be financed through one of our financing partners. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

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

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Attachment E

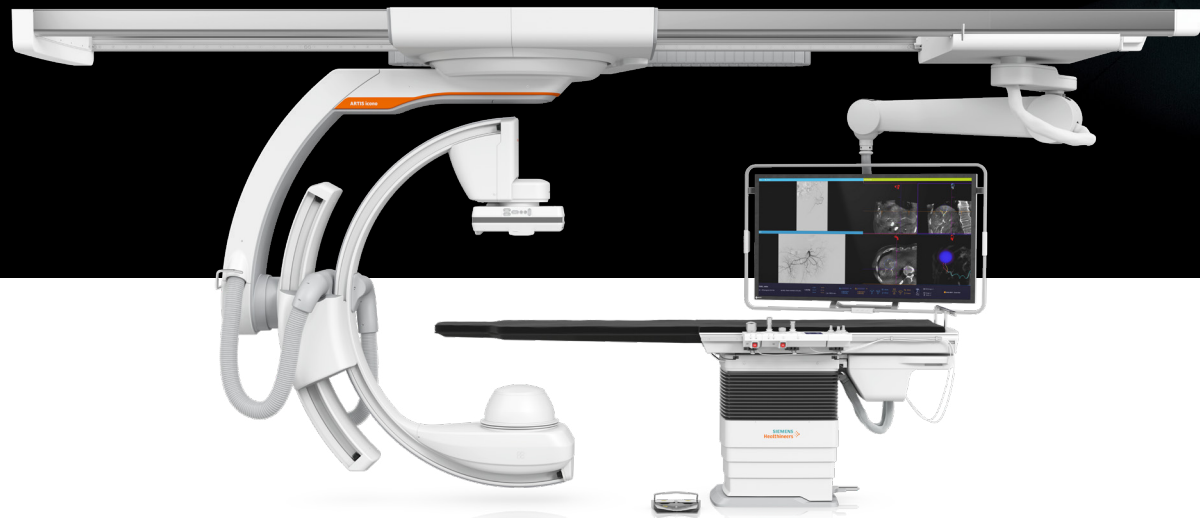
Attachment F



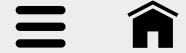
ARTIS icono ceiling

**Faster. More precise.
Easier to use.**

➤ siemens-healthineers.us/artis-icono-ceiling

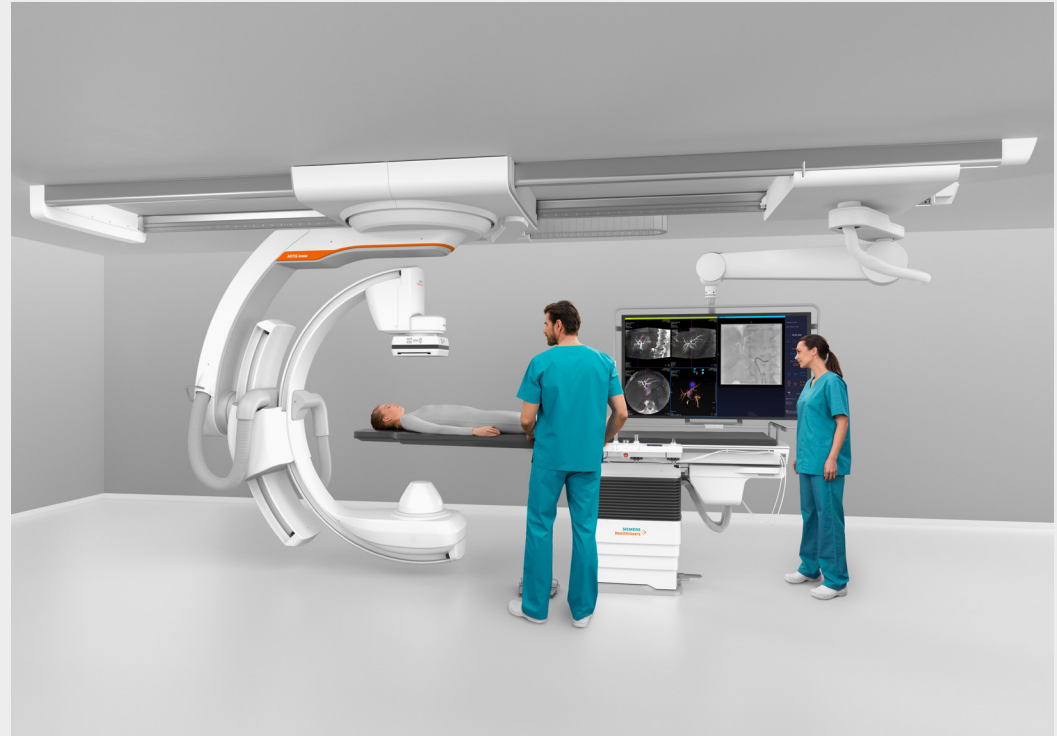


SIEMENS
Healthineers



ARTIS icono ceiling sets the pace in image guidance for basic and complex interventions – by combining mechanical flexibility and positioning accuracy with 2k imaging and smart workflow guidance.

With its image chain OPTIQ and constant image quality at lowest achievable dose*, ARTIS icono ceiling supports you during super-selective procedures. The system performs accurate 3D imaging with a 200° rotation from the side. The new industry-proven motor drives allow for exact system movements and enable 3D acquisitions in as fast as 2.5 seconds – thereby reducing motion artifacts. ARTIS icono ceiling assists you in anatomical navigation and semi-automatic identification of feeder vessels with smart guidance tools. Confidently perform precise and efficient embolization procedures – as well as many other IR procedures.



**Within the possible exposure parameters and given ARTIS hardware configuration as well as status of SID, collimation and grid.*



ARTIS icono ceiling will redefine precision in image-guided therapy and will play a key role in expanding precision medicine.

Click each section below to learn more

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Redefining precision in image-guided therapy	4
Greater precision with more mechanical flexibility	4
Ease of use with improved workflows	6
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Smart guidance for intra-procedural confidence	9
An allrounder for the IR lab	11
Redefining the digital lab of the future	12
A future proof investment	13

Greater precision with more mechanical flexibility



ARTIS icono ceiling is equipped with C-in-C design C-arm technology that allows DynaCT with unseen flexibility, speed, and precision to enhance image quality across the full volume.

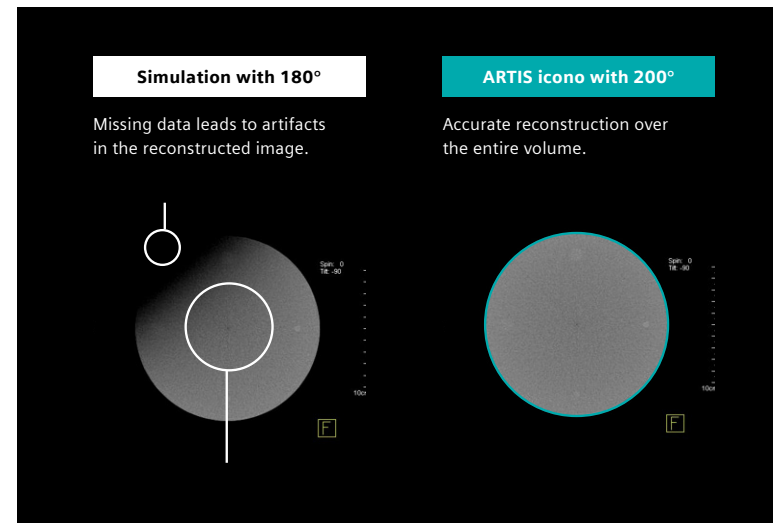
syngo DynaCT delivers accurate 3D acquisitions with high soft-tissue resolution and up to 2.4 meters of coverage from any rail position – with a full 200° of rotation from all sides.

With 95°/s rotations, you can acquire *syngo* DynaCT images in just 2.5 seconds, which means fewer motion artifacts. With simple and precise 3D imaging,

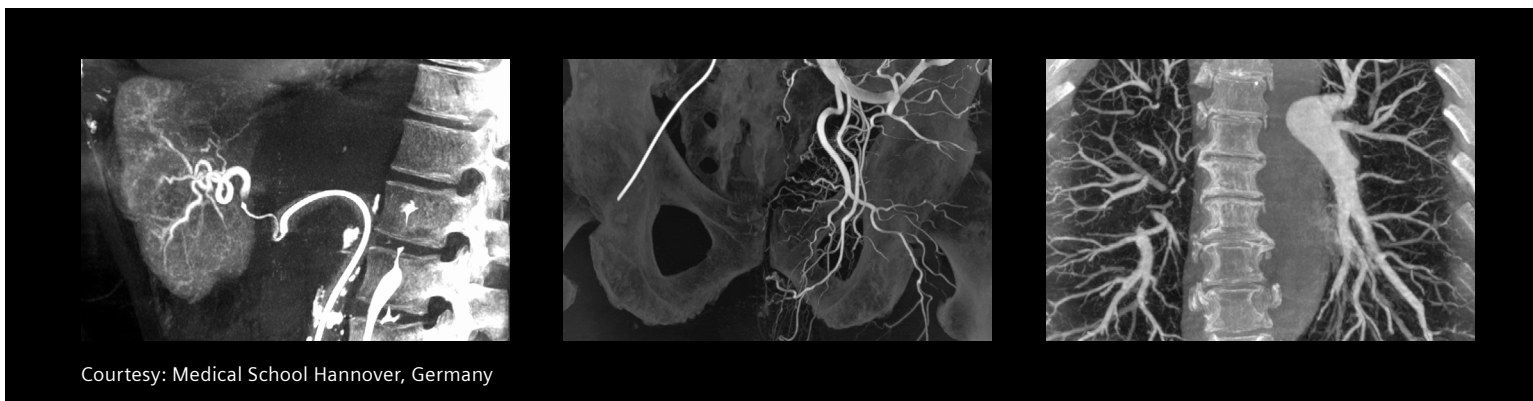
ARTIS icono gives you confidence in procedure planning. Furthermore, *syngo* DynaCT can help reduce the risk of unwanted side effects such as non-target embolization intra-procedurally.

Generate 3D acquisitions with excellent spatial and soft tissue resolution whatever your clinical use case is.

Accurate 3D reconstruction with 200° rotation from the side support PAE and UFE

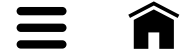


Courtesy: Medical School Hannover, Germany



Courtesy: Medical School Hannover, Germany

ARTIS icono ceiling with unseen flexibility in syngo DynaCT



Flexibility



Speed



Precision

2.4 m/7' 9" coverage

3D acquisitions in flexible ceiling rail positions for 2.4 m/7' 9" coverage with long tabletop

95°/s speed

Up to 95°/s rotational speed for 3D acquisitions* as fast as 2.5 s

Full 200° rotational 3D

Acquisition range from head, left and right side

0.5 mm/0.02" precision

Siemens industry motor and controller technology enabling a positioning precision of better than 0.5 mm

*In head side position of the c-arm



Ease of use with improved workflows

The state-of-the-art user interface with a new pilot module is designed for faster workflows and intuitive use. Procedural intelligence enables minimal user interaction and faster system positioning.

Case Flows are specially designed to streamline existing procedures and give you more confidence when adding new, complex treatments to your treatment portfolio. Case Flows are dedicated sequences of system settings for each diagnostic and interventional step along a given treatment path. At every procedural step, Case Flows automatically adjust the system settings to match your preferences and the situational needs – everything from imaging parameters, C-arm position, SID and system position to zoom factors, filter/collimation and display layout.

3D Wizard guides you during 3D acquisitions with the right protocol, injection details and other helpful information.

Bring your own device (BYOD): Use your Apple iPad with suitable accessories and show content on the ARTIS Large Display in specific segment to access supporting applications during interventions.

Improved ease of use with ARTIS icono ceiling

Speed up your workflow



Case Flows

Faster workflows: Procedural intelligence with minimal user interaction and faster system positioning.



3D Wizard

3D Wizard supports you during 3D acquisitions with the right protocol, injection details and other information.



Pilot Module

State of the art user interface with a new pilot module, designed for faster workflows and intuitive use.

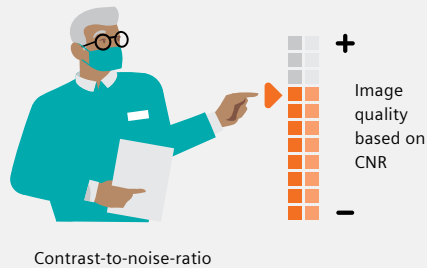


Clear visualization in super selective procedures

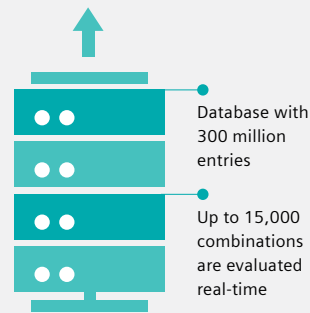
OPTIQ - constant image quality at lowest achievable dose

Our newly developed exposure control OPTIQ uses a contrast-based technique, supported by intelligent, self-adjusting algorithms. It automatically considers SID, collimation settings, grid status, and patient thickness – and finds and applies the best suitable combination of the 5 radiation exposure parameters and the detector dose as an additional variable. OPTIQ constantly aims to achieve the requested contrast-to-noise ratio at the lowest possible dose*.

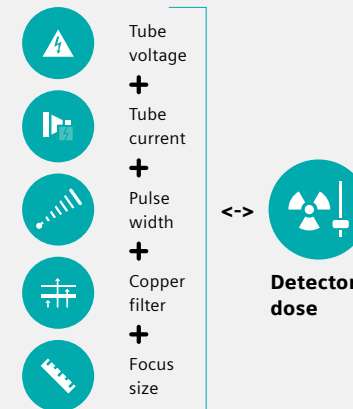
The basis for this complex functionality is a vast database containing 300 million entries. With every image acquisition, the system checks up to 15,000 possible parameter combinations with the goal to select the most dose-efficient one for a specific imaging situation.



Set target image quality, OPTIQ considers all system settings



Parametrization of exposure parameters and detector dose

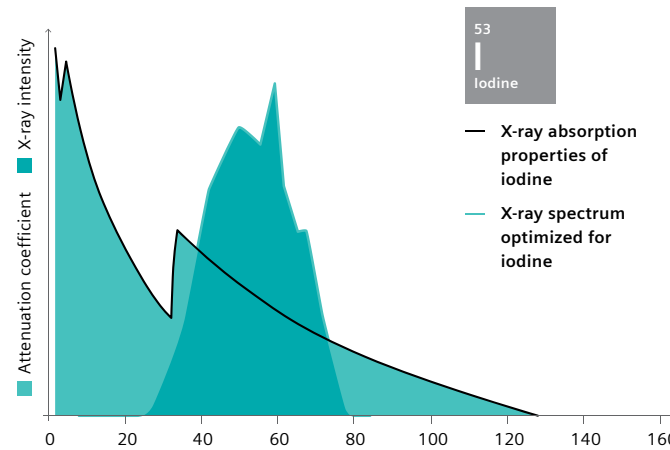
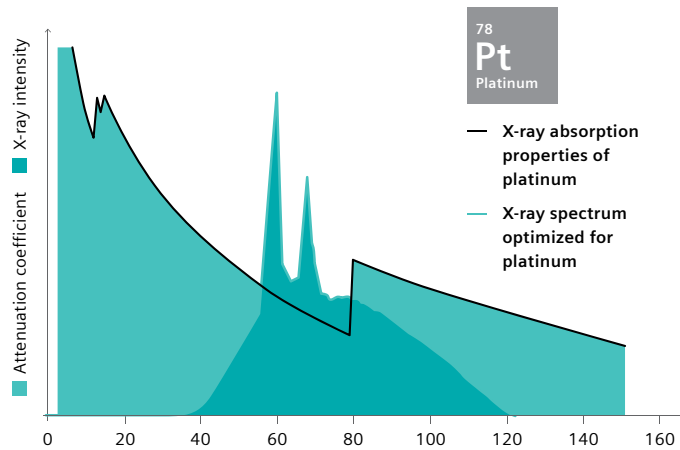


Constant image quality at lowest reasonable achievable dose*

* Within the possible exposure parameters and given ARTIS hardware configuration as well as status of SID, collimation and grid.

ARTIS icono with Structure Scout

Material-specific imaging to improve contrast and reduce dose



X-ray absorption varies for different materials

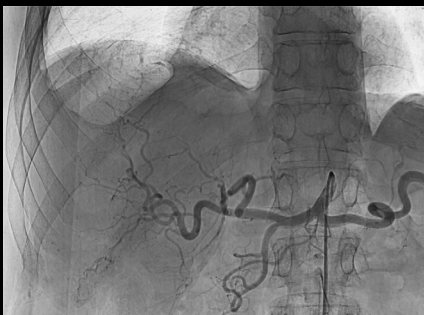
For optimal contrast at lowest possible dose, this needs to be taken into account by the spectrum used.

Structure Scout – optimized visibility of details and devices

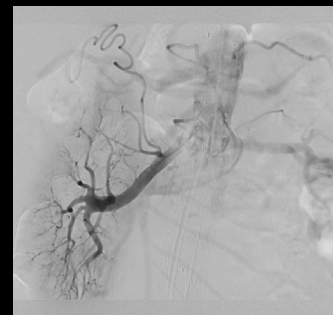
Structure Scout automatically optimizes the visibility of different devices and materials, based on their individual dose absorption property. This material-specific imaging is based on preset values. As a result, the system automatically adapts its exposure control parameters to the material used.

OPTIQ DSA uses a sequence of highly optimized X-ray physics, configurable mask-averaging, and six-dimensional motion correction, followed by non-linear multiscale image processing with anisotropic and asymmetric edge enhancement, to customize contrast and sharpness.

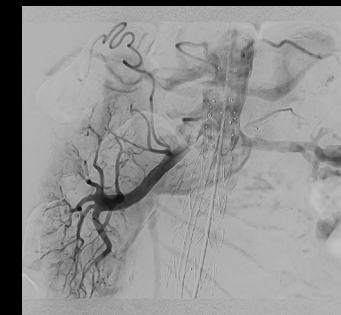
Courtesy: Medical School Hannover, Germany



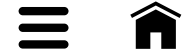
SIRT-Evaluation



Classic DSA processing



OPTIQ DSA



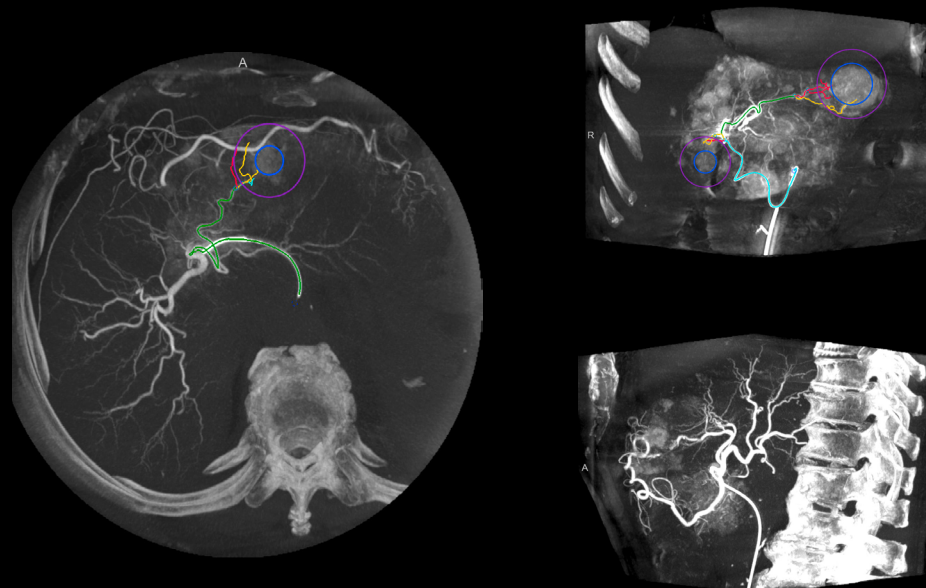
Smart guidance for intra-procedural confidence

Smart guidance tools assist you with semi-automatic identification of feeder vessels and anatomical navigation for example in treatment of liver tumors (TAE, TACE, SIRT), or of prostatic hyperplasia (PAE).

In treatment of liver tumors, *syngo* Embolization Guidance automatically detects the catheter tip that is positioned in

the hepatic artery. It then automatically computes a vessel tree starting at the catheter position and comprising vessel branches that feed a user defined lesion.

Predefined color coding facilitates finding the optimal treatment position for each tumor nodule.



syngo Embolization Guidance

Easy workflow in "identify vessel"-step:

- 01 Center the tumor and mark it with a diameter line
- 02 Automatic detection of the catheter in hepatic artery
- 03 Automatic detection of vessels between the catheter and the marked lesion

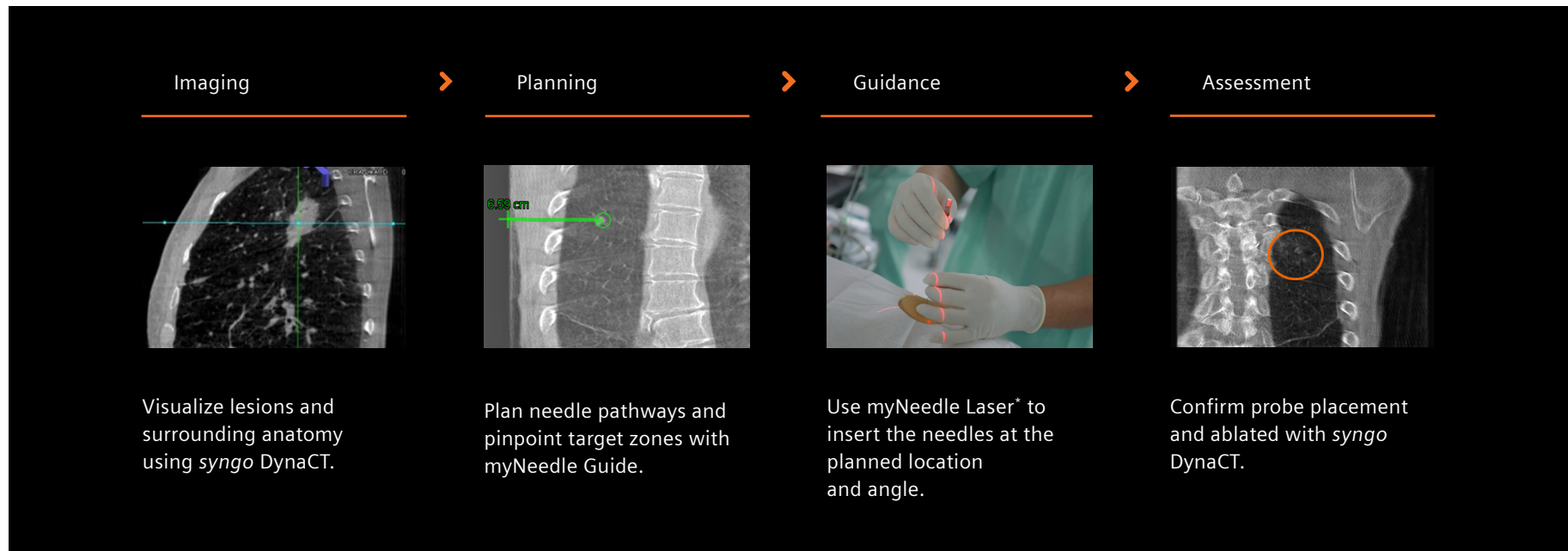
Courtesy: Hannover Medical School, Germany

myNeedle Companion

Universal. Simple. Powerful.

Guidance tools to improve intraprocedural confidence

myNeedle Companion harmonizes planning and guidance for percutaneous needle procedures across modalities. Workflow and user interface are unified on angiography and CT systems. Image fusion seamlessly combines data from multiple modalities to help you visualize critical anatomical structures.



*myNeedle Laser is optional.

Courtesy: University of Frankfurt, Germany (left clinical image); HE GP, Paris, France (right clinical images)



An allrounder for the IR Lab

ARTIS icono is specially designed to improve utilization across a broader range of procedures – now and well into the future. Submillimeter accuracy allows you to move the C-arm into pre-defined positions to reuse roadmap masks. This may help to reduce dose and contrast media. With the new *syngo* DynaCT, dedicated clinical guidance tools and functionalities for improved workflows enable you to conveniently perform a broad range of procedures.

PERISTEPPING and PERIVISION:

Angiography of the legs with a single injection native and subtracted.

***syngo* EVAR Guidance** automates all steps in the preparation of a pre-procedural CT dataset for 3D guided stent deployment. It overlays 3D information on top of live fluoroscopy and delivers optimized C-arm angulations, a precise 3D overlay, and guidewire and catheter navigation.

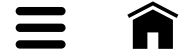
Multimodality Fusion in the interventional suite:

Enabling previous CT, MR or PET CT images to be fused with *syngo* Dyna3D or *syngo* DynaCT datasets. The *syngo* Fusion Package displays relevant diagnostic data at a glance, thereby significantly supporting interventional workflows.

ARTIS Freestyle Access: Zero Cables. Zero Footprint. Fully Connected

Wireless transducers and improved procedural workflow times using automated patient data registration and sending of studies to PACS upon exam completion.

Redefining the digital lab of the future



Next-level connectivity and communication

ARTIS icono brings advanced external applications into your angio suite. Integration is seamless with different systems all connected using a **single third-party interface (TPI) and standard protocols**. The training simulator Mentice VIST® G5 Virtual Patient is a classic example – a perfect symbiosis of external device and angio suite. Simply connect Mentice to your ARTIS icono via the TPI to practice your skills on realistic simulations of your system's controls.

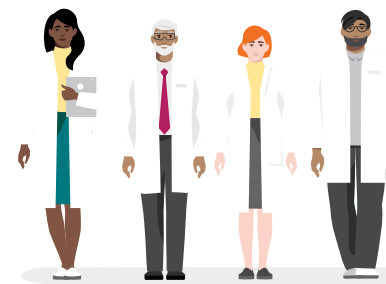
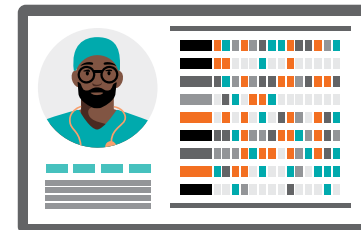
Get your team up to speed faster with innovative learning approaches. ARTIS icono is available with an innovative, all-encompassing package of onboarding, interactive guidance, and consulting. **ExpertGuidance** is an equipment training program that delivers efficient onboarding, workflow education, and interactive guidance during procedures. **FlexForce Coach** delivers comprehensive, staff and performance consulting with experts from Siemens Healthineers. To ensure you make the most of your system's advanced features, **SmartSimulator** provides courses in virtual classrooms with a human instructor.



Next-level connectivity and communication

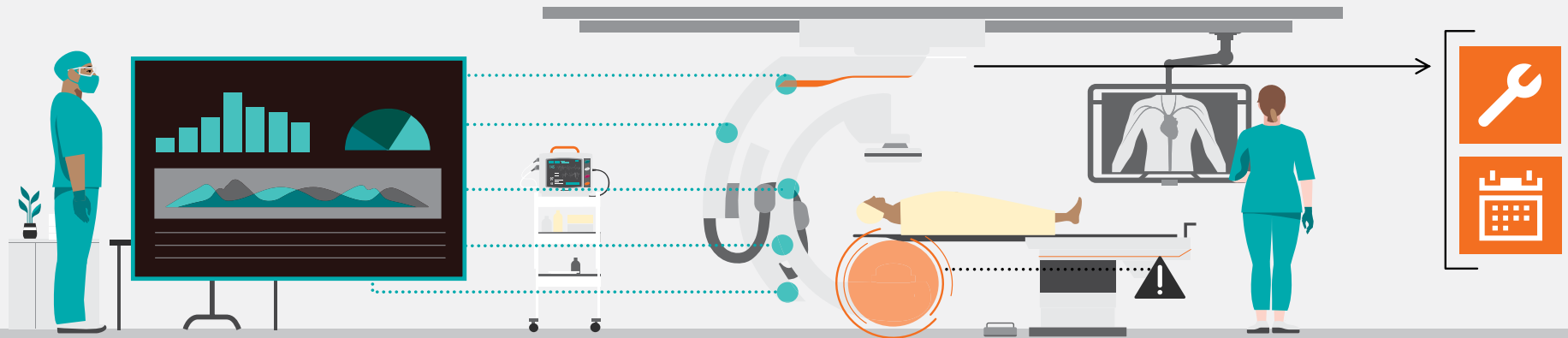
Connect different systems via a **single connection** using the new 3rd party interface with standard protocols

Enables **research in medical engineering** and integration of 3rd party software





A future-proof investment



Reliable hardware

Intelligent components increase uptime due to higher reliability. The ceiling stand and the table come with new, intelligent Siemens industrial motor gears and controllers. These components can report their status via a remote service connection, making them significantly more reliable.



Monitoring of x-ray tube

TubeGuard helps to increase your equipment uptime by monitoring and addressing predictable and detectable X-ray tube failures. TubeGuard provides a combination of proactive tube monitoring, AI-based error prediction, and fast, proactive scheduling of service activities when malfunctions are detected.



Siemens Healthineers AG (listed in Frankfurt, Germany: SHL) pioneers breakthroughs in healthcare. For everyone. Everywhere. As a leading medical technology company headquartered in Erlangen, Germany, Siemens Healthineers and its regional companies is continuously developing its product and service portfolio, with AI-supported applications and digital offerings that play an increasingly important role in the next generation of medical technology. These new applications will enhance the company's foundation in in-vitro diagnostics, image-guided therapy, in-vivo diagnostics, and innovative cancer care.

Siemens Healthineers also provides a range of services and solutions to enhance healthcare providers' ability to provide high-quality, efficient care. In fiscal 2021, which ended on September 30, 2021, Siemens Healthineers, which has approximately 66,000 employees worldwide, generated revenue of €18.0 billion and adjusted EBIT of €3.1 billion.

Further information is available at www.siemens-healthineers.com.

The outcomes and statements provided by customers of Siemens Healthineers are unique to each customer's setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, and level of service/technology adoption), there can be no guarantee that others will achieve the same results.

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

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Attachment G

EQUIPMENT COMPARISON – AH Cabarrus IR #9 Replacement & Relocation

	EXISTING EQUIPMENT	REPLACEMENT EQUIPMENT
Type (e.g., Cardiac Catheterization, Gamma Knife®, Heart-lung bypass machine, Linear Accelerator, Lithotripter, MRI, PET, Simulator, CT Scanner, etc.)	IR / Vascular Equipment	IR / Vascular Equipment
Manufacturer	Siemens	Siemens
Model name/number	Axiom Artis DTA	Artis Icono ceiling IR Pro
Other method of identifying the equipment (e.g., Serial Number, VIN #)	55423	Not Available Until Installed
Is the equipment mobile or fixed?	Fixed	Fixed
Date of acquisition	2007	2024
Was the existing equipment new or used when acquired? / Is the replacement equipment new or used?	New	New
Total projected capital cost of the project	NA	\$8,978,138
Total cost of the equipment	NA (maximum FMV of the Existing Equipment was \$57,023 in 2018)	\$1,428,766
Location of the equipment	AH Cabarrus Clinical Services Building, Level 01	AH Cabarrus Heart & Vascular Tower, Level 01
Document that the existing equipment is currently in use	Existing equipment performed 819 procedures from Aug 2023 to Jul 2024	NA
Will the replacement equipment result in any increase in the average charge per procedure?	NA	No
If so, provide the increase as a percent of the current average charge per procedure	NA	NA
Will the replacement equipment result in any increase in the average operating expense per procedure?	NA	No
If so, provide the increase as a percent of the current average operating expense per procedure	NA	NA
Type of procedures performed on the existing equipment	Interventional Radiology and Vascular Procedures, EP device procedures	NA
Type of procedures the replacement equipment will perform	NA	Vascular Procedures

Attachment H

AH Cabarrus, IR #9
Volume by Month

Month	Volume
Aug-23	75
Sep-23	71
Oct-23	79
Nov-23	76
Dec-23	61
Jan-24	60
Feb-24	57
Mar-24	70
Apr-24	69
May-24	73
Jun-24	68
Jul-24	60
Total	819

From: [Huber, Brigid K](#)
To: [Stancil, Tiffany C](#); [Yakoboski, Greg](#)
Subject: [External] Exemption Request for The Charlotte-Mecklenburg Hospital Authority d/b/a Atrium Health Cabarrus
Date: Wednesday, September 18, 2024 7:05:52 PM
Attachments: [CMHA dba AH Cabarrus Exemption Request to Replace & Relocate IR.Vasc Equipment.pdf](#)

CAUTION: External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Good evening,

I hope this email finds you well. Please find attached an exemption request submitted by The Charlotte-Mecklenburg Hospital Authority (“CMHA”) d/b/a Atrium Health Cabarrus to replace and relocate existing interventional radiology/vascular equipment.

Thank you, and please let me know if you have any questions.

Best,

Brigid

Brigid Knoll Huber, MHA, ATC

Core Market Growth Business Development

Mobile: 724-986-6214

Atrium Health

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