



High-end imaging for hybrid rooms

New therapeutic opportunities in the OR

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SIEMENS

A symbiotic environment for surgery and intervention



The growing appeal of hybrid rooms

Integrated interventional imaging in an OR offers numerous advantages over conventional operating rooms, first and foremost in terms of the comprehensive diagnostic and therapeutic support they provide. Hybrid rooms serve as an imaging venue for a broad range of surgical procedures, including highly advanced applications. State-of-the-art image-guided technologies and centralized data management capabilities enable faster results, decisions and treatment. Interdisciplinary operating rooms minimize the need for patient transfers and simultaneously greatly streamline overall workflow. Moreover, through their flexible utilization, they also save time, space and costs.

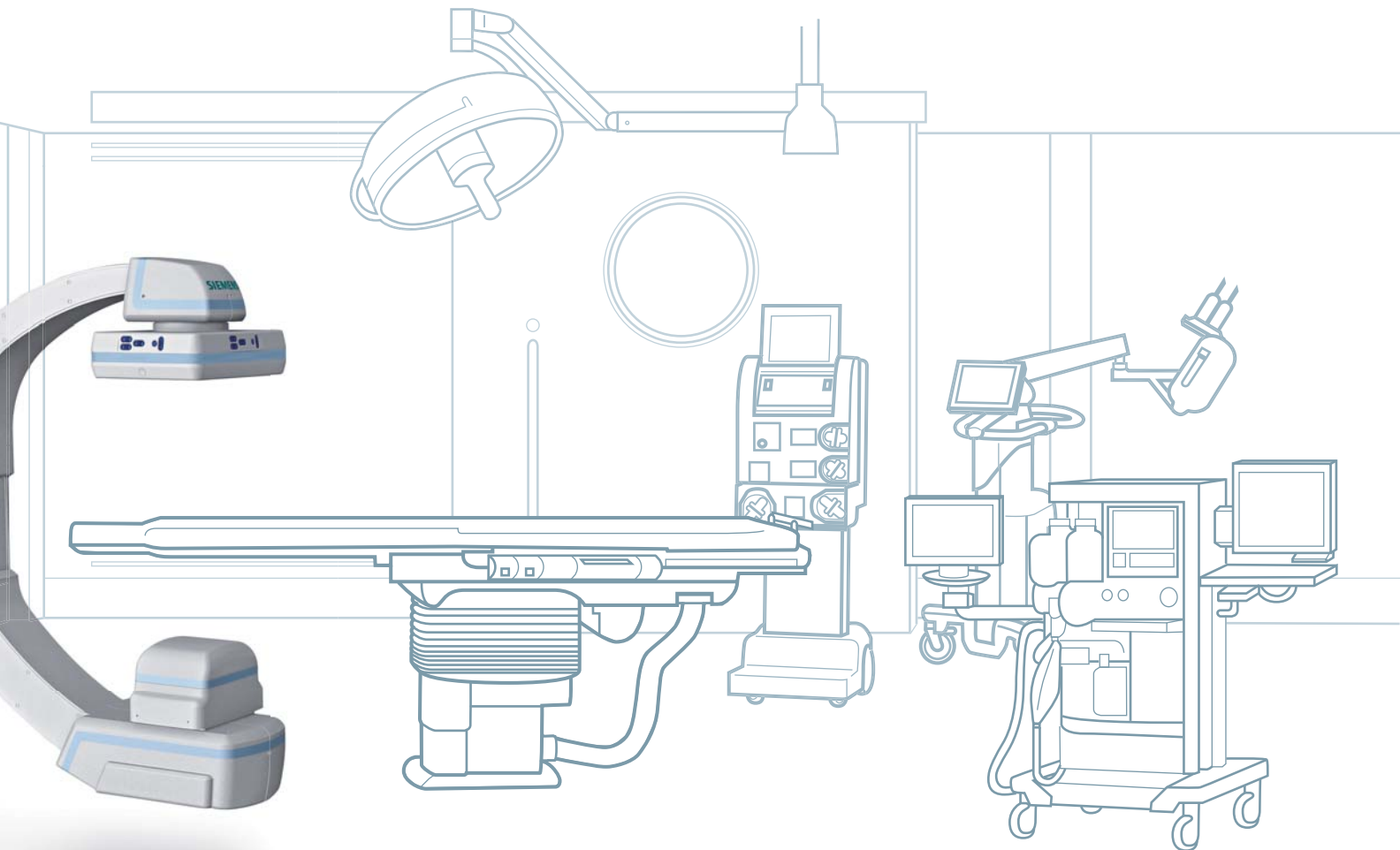


Artis zeego

The first-ever interventional C-arm system to employ robotic technology. Its exceptional flexibility and unique imaging applications make it an ideal system for OR environments.

Partnering in surgical essentials

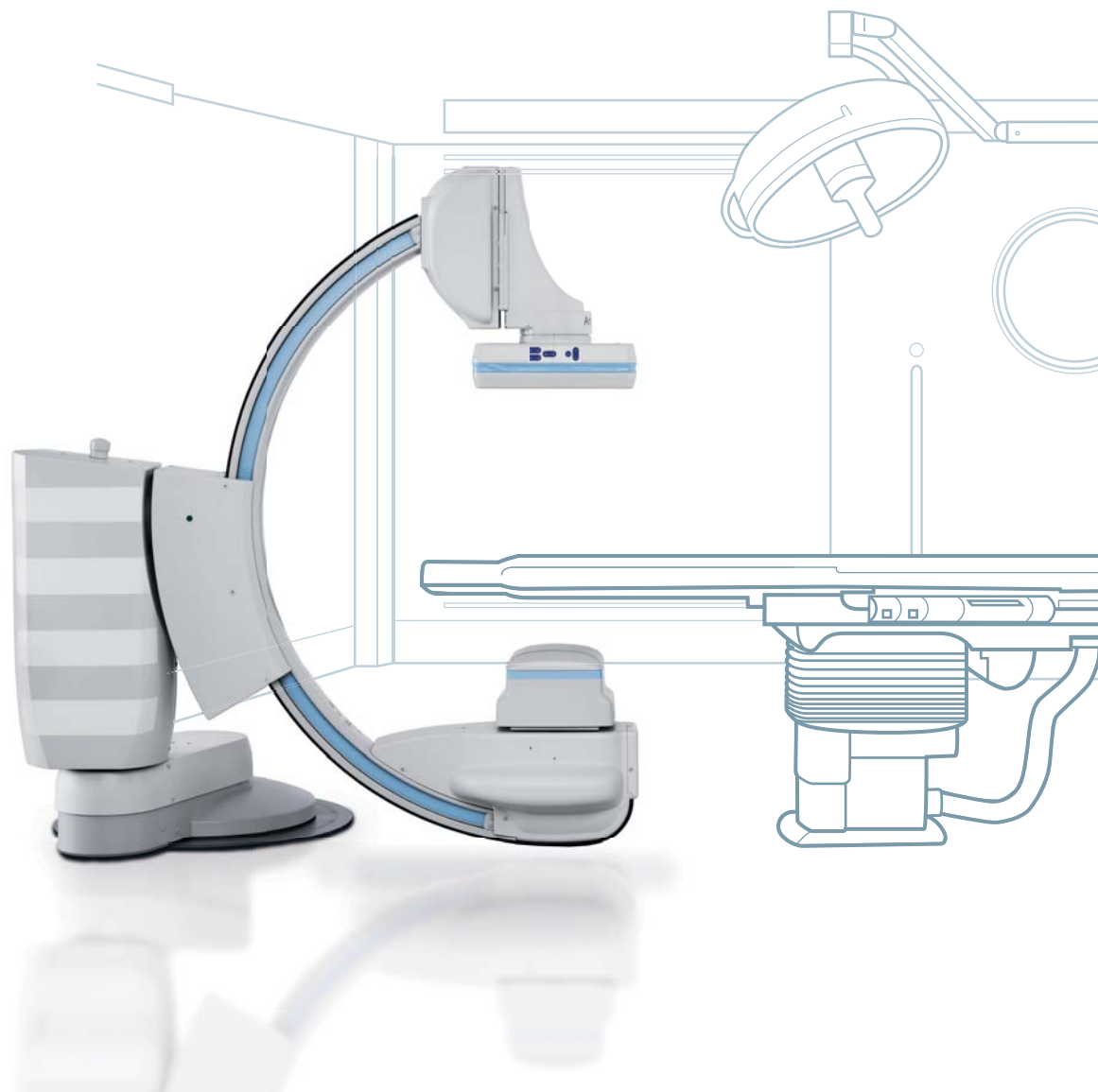
In addition to imaging technologies, hybrid rooms feature a variety of essential OR equipment, for example, heart-lung machines, anesthesia and respirator systems and contrast injectors. Siemens has established successful partnerships and cooperates with several leading providers of various OR technologies.



Surgery is becoming less invasive. Operating rooms are increasingly adapting to these changes. The growing convergence of surgery and imaging is particularly evident in fields such as cardiac, vascular, and neurosurgery. More and more health care facilities are installing so-called hybrid ORs capable of supporting both minimally invasive surgical as well as interventional procedures. Equipped with highly advanced surgical, data management, and imaging technologies, these modern operating rooms create unprecedented opportunities for improved surgical treatment and workflow optimization. They also make good economic sense.

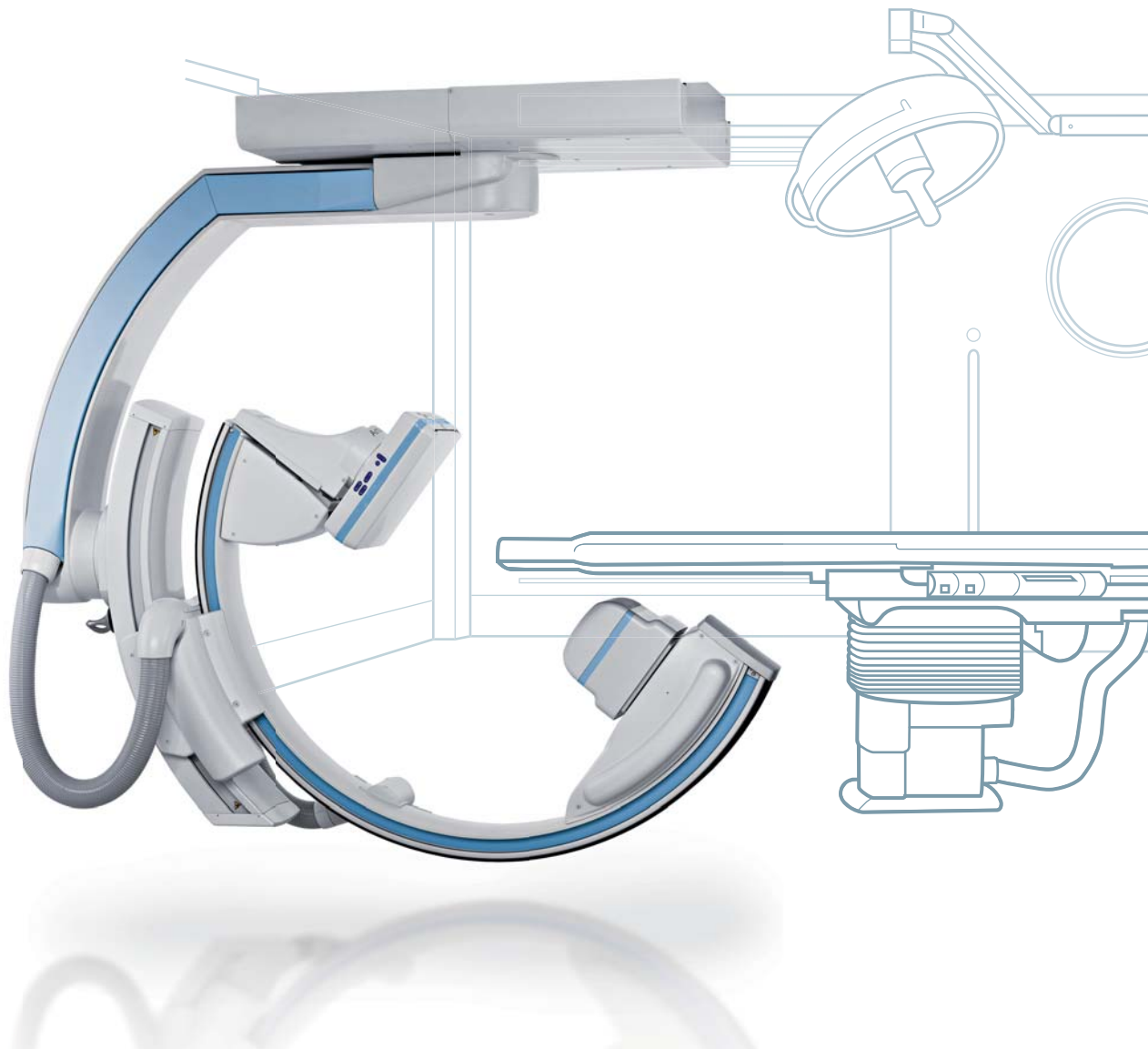
Artis zee floor-mounted system

A real space saver in the OR with a small footprint, the system allows for convenient patient access from both sides of the table.



Artis zee ceiling-mounted system

Full patient coverage combined with flexible working positions and easy patient access are just some of the system's many advantages in the OR.



Artis zee biplane system

Full patient coverage combined with flexible working positions and easy patient access are just some of the system's many advantages in the OR, e.g. for neurosurgery or pediatric applications.



AXIOM Artis U

As a “room-mobile” imaging system, AXIOM Artis U combines the versatility of a mobile C-arm with the high-power output of a fixed C-arm and excellent image quality.

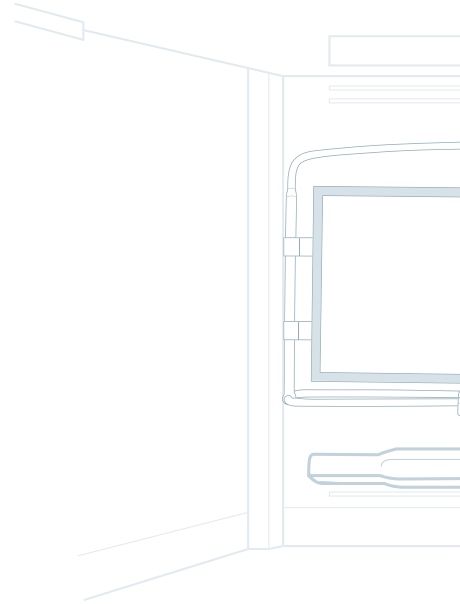


Enhanced Workflow

Multidisciplinary ORs are equipped with highly advanced interventional imaging systems designed to provide optimal clinical and workflow support for surgical procedures. Essentially, they are highly complex, one-stop ORs that place the surgeon at the center of an impressive array of diagnostic and treatment tools.

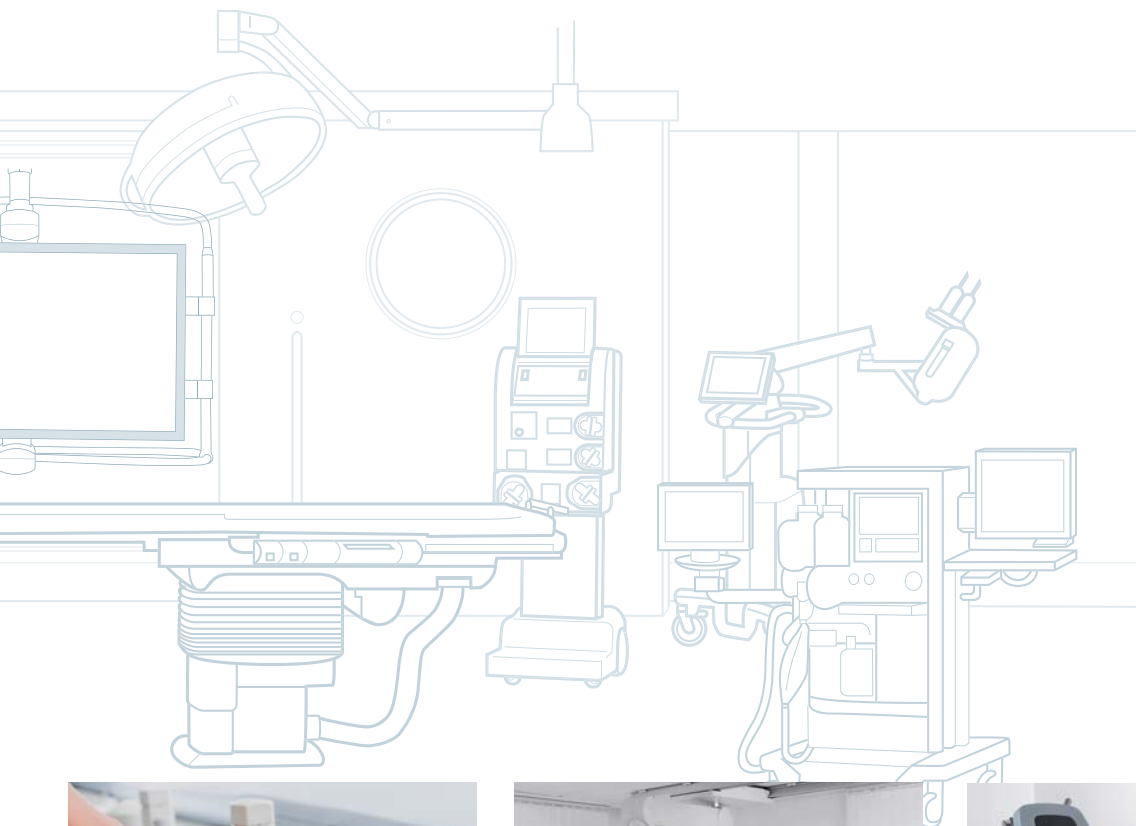
Working in a multiplex surgical theater

In addition to highly advanced imaging technologies, Siemens offers a variety of tools designed to further improve OR system integration and workflow, and thus, team efficiency. Tools such as the Artis zee Large Display.



Artis zee Large Display

Featuring a 56-inch medical-grade screen and 8 megapixel image resolution, the Artis **zee** Large Display provides all of the critical details on one screen – directly at tableside and with unsurpassed sharpness. With up to 21 video source inputs, it can also be used to monitor other rooms, for telemedicine, telcon, endoscopy, or ultrasound applications.



Tableside control

The new tableside user interface of the Artis **zee** systems family features a compact design with easy-to-read *syngo* icons for quick task card selection. An integrated mouse-like control with modular design offers added positioning flexibility and operation convenience.



Endovascular OR Table

Surgeons and interventional radiologists have different table requirements. Siemens has developed an integrated OR table with a floating tabletop and vertical/lateral tilt movement.



Trumpf TruSystem 7500 for Artis zee

Particularly for neuro and orthopedic surgeons, the TruSystem 7500* provides new flexibility – with virtually unlimited configuration possibilities, extreme adjustment angles and a fully integrated design for synchronized movements** of C-Arm and OR table. And it's even more advanced: With the exchangeable tabletop system, patients can be transferred from the shuttle onto the OR table column without moving.

*Trumpf TruSystem 7500 surgical table is only available for Artis zeego and Artis **zee** ceiling-mounted system.

**Fully-synchronized movements only with carbon tabletop.

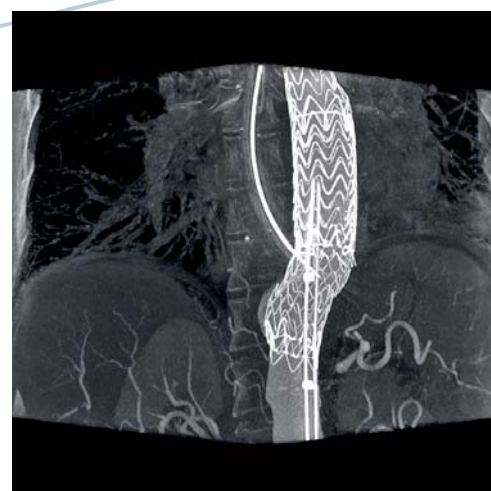


A room with an
excellent view



syngo DynaCT

As a 3D imaging function on the Artis **zee** system, *syngo DynaCT* uses rotational angiography to generate CT-like images. *syngo DynaCT* provides valuable support by allowing you to visualize bleeds or tumors as well as monitor proper stent placement. It is an important tool for preoperative planning and postoperative result evaluation.



Large Volume syngo DynaCT

Even greater soft tissue coverage, for example, of the entire abdomen or thoracic spine can be had with Large Volume *syngo DynaCT*, which is available only with the Artis **zeego** system. Large Volume *syngo DynaCT* offers great advantages, particularly for treating obese patients.

Imaging Excellence

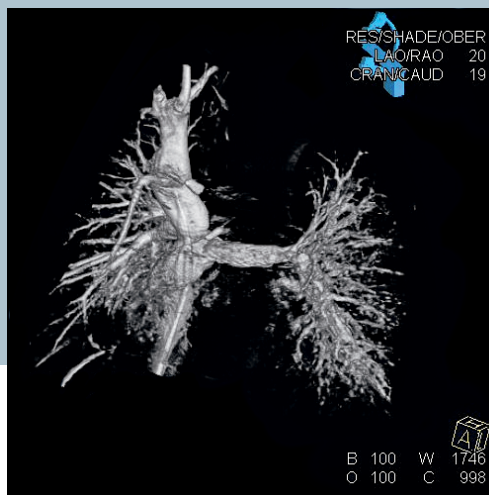
Hybrid operating rooms place a variety of advanced imaging capabilities at the surgeon's immediate disposal. Siemens has put together a portfolio of state-of-the-art imaging applications that comprise both 2D and 3D visualization functions.

Three-dimensional imaging is essential for spatial orientation during procedures.



syngo iPilot

The navigational capabilities provided by *syngo iPilot* enable simultaneous display of the live fluoro image and a matching 3D reconstruction. This 2D/3D overlay facilitates device guidance during operations by improving spatial orientation for surgeons.

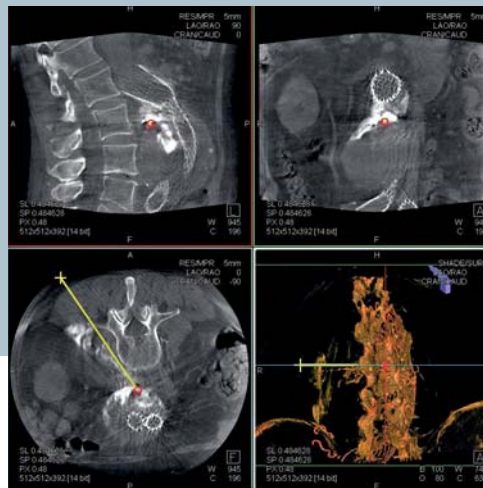


syngo DynaCT Cardiac

Specifically designed for cardiac procedures, *syngo DynaCT Cardiac* allows you to create CT-like images of the beating heart. *syngo DynaCT Cardiac* uses an ECG-triggered mode to collect image data from the same heart phase.

Imaging Excellence

Advanced imaging applications of the Artis zee systems family such as *syngo iGuide*, *syngo iFlow* and *syngo iIdentify* offer invaluable support for complex cardiac, vascular and neurosurgical procedures.



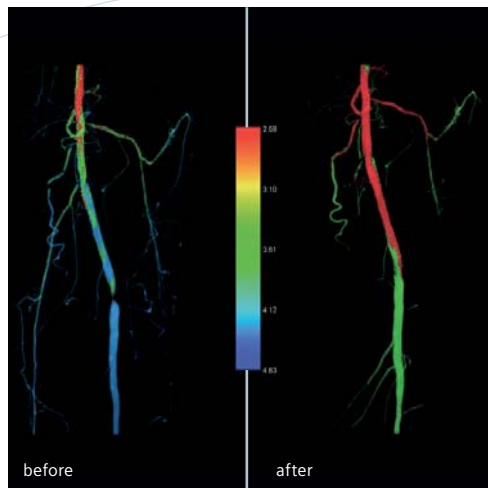
syngo iGuide

Providing integrated needle guidance in one smooth on-screen workflow, *syngo iGuide* helps to increase confidence and accuracy for needle procedures. *syngo iGuide* also offers excellent support for vertebroplasties and kyphoplasties typically performed in orthopedic surgery.



syngo iIdentify

Simultaneous visualization of dual-volume high-contrast or one high-contrast and one low-contrast data set can be had with *syngo iIdentify*. It clearly differentiates between contrast-filled vessels, bones and stents or shows the anatomical structure of tumors with the feeding vessels, which is especially important for tumor surgery.



syngo iFlow

A clinical first, *syngo iFlow* creates a static image with dynamic information showing the history of contrast medium movement through the vessels. *syngo iFlow* thereby provides a better understanding of the flow within the pathology and of the success of a procedure.



syngo InSpace EP

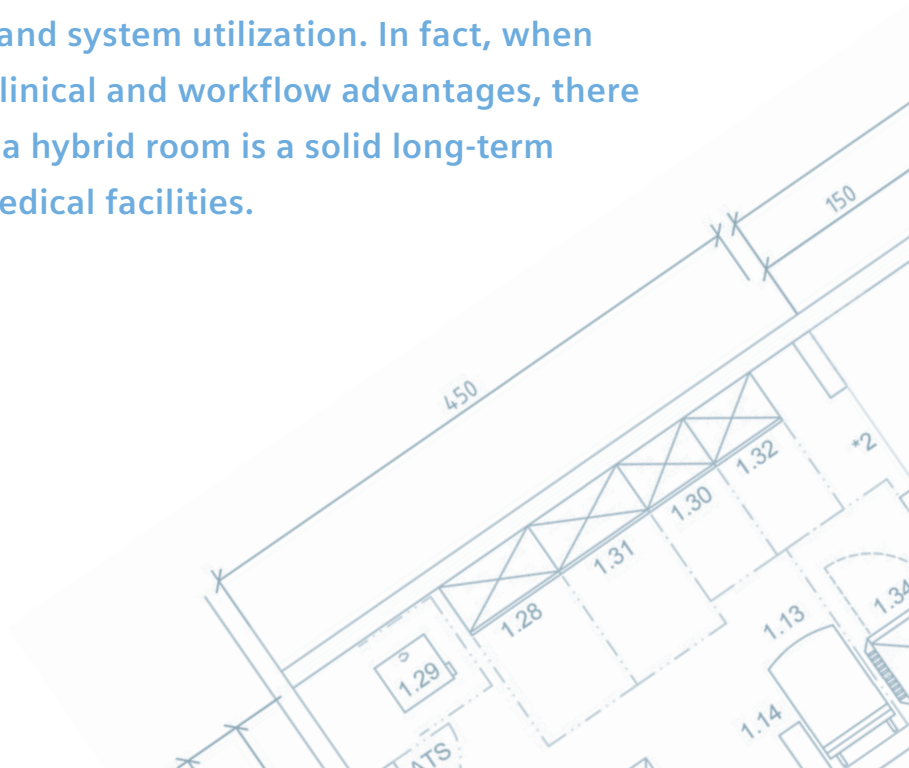
The convenient 3D segmentation of cardiac structures visualized by *syngo InSpace EP*, especially of the ascending aorta, allows for detailed understanding of the anatomy and confident planning for cardiac surgery.

Clinical images courtesy of:
German Heart Center, Berlin, Germany
University Leipzig Heart Center, Leipzig, Germany
Rikshospitalet, University of Oslo, Norway

Modern operating rooms not only meet today's requirements, but also those of the future. Hybrid rooms can accommodate various surgical disciplines in a single room. They enable procedures to be performed faster, more efficiently and with fewer risks and complications.

Money well spent

More patients can be treated in one room, minimizing the need for transfers and shortening intensive care stays. As a result, institutions are frequently able to accommodate new patient profiles. In some cases, hybrid ORs even allow for the treatment of patients previously considered unable to tolerate surgery. That means high room and system utilization. In fact, when considering the many clinical and workflow advantages, there can be little doubt that a hybrid room is a solid long-term investment for many medical facilities.



Installing a modern OR

Good hybrid OR planning involves more than the installation of advanced surgical, data management and imaging systems. It is essential that complex technologies are well integrated. They must allow for flexible utilization and optimal workflow efficiency. Siemens is the one-stop provider for hybrid-room solutions that keep you operating at the cutting edge.

Comprehensive customer support: Life

With Life, our comprehensive customer care solutions, we help customers get the most from their investment. Life comprises programs and services designed to sharpen skills for optimal clinical value. Our "Customer Education" offerings include mutual workshops with other surgical equipment manufacturers, e.g., Medtronic.

www.siemens.com/life-courses



Staying ahead of the curve

Modern pro-active services such as the Guardian Program™ are designed to detect potential system faults before they arise, thus helping to prevent unplanned downtime. There are also offerings for pro-active uptime, managed system upgrade and clinical portfolio expansion.

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Using the same extensive quality assurance measures as for factory-new components, we guarantee the quality of these recycled components.

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