

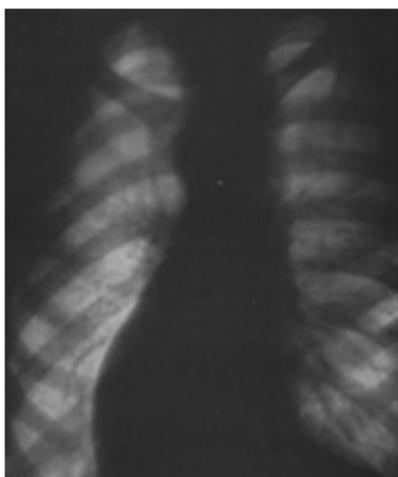
SIEMENS

Cardiology Milestones

A history of innovations from
Siemens Healthcare

[siemens.com/cardiology](https://www.siemens.com/cardiology)

1909/1910



X-ray pioneer Friedrich Dessauer succeeds in creating the first series of pictures of the beating heart with the Dessauer "Blitzapparat" (flash apparatus). His company Veifa-Werke is one of the predecessor companies to Siemens Healthcare.

1911

Siemens & Halske develops an electrocardiograph with current measuring loop, optical control and photographic recording of the ECG. This type of equipment continued to be developed over the following years.



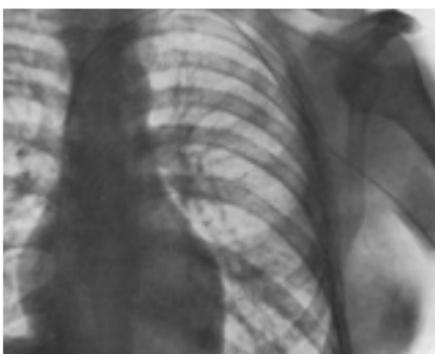
1928



Recordings of the sound of the heart using the heart sound amplifier Siemens SOMATOPHON.

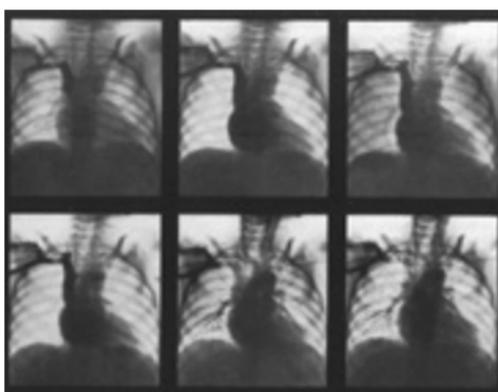
1929

Physician Werner Forßmann attempts the first ever cardiac catheterization; he is initially dismissed before receiving the Nobel Prize for Medicine in 1956 for his bold experiment and his research work. He is also an important pioneer for Siemens, since the continuous control of catheters and vessels using X-ray are essential for cardiac catheter examinations.



© W. Forßmann (Klinische Wochenschrift 8, Nr. 45, 2085-2087)

1950



Siemens presents the first dedicated angiography system at the International Congress of Radiology in London. A special mechanism enabled a series of images to be taken of a cardiac cycle.

1953



Physician Inge Edler and physicist Carl Hellmuth Hertz, both from Sweden, test out a new procedure for identifying heart valve movements using ultrasonic waves.

The first image of this type is taken with a Siemens ultrasonic impulse device. From 1960 the procedure is known as “echocardiography”.

1958



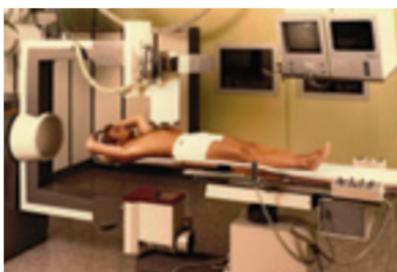
Rune Elmqvist develops the world's first fully implantable pacemaker (Elema-Schönander, subsequently Siemens Elema).

1964

The Nucleopan 3 is a special multi-channel measuring station for nuclear medicine. The device registers heart muscle activity and also has an ECG channel.

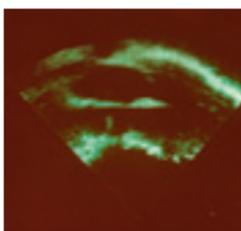


1972



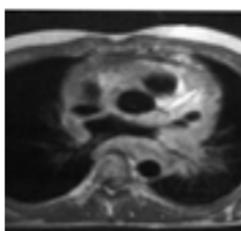
Siemens introduces the Cardoskop U – a special workstation for the cardiac catheter laboratory which unlike previous devices has an imaging system that can be swiveled around the patient.

1979



Echopan KS is the first ultrasonic device solely for echocardiography from Siemens.

1988



Siemens is one of the first providers to supply special software for cardiac MRI scans.

1991

The information and registration system for the cardiac catheter laboratory CATHCOR is launched on the market.



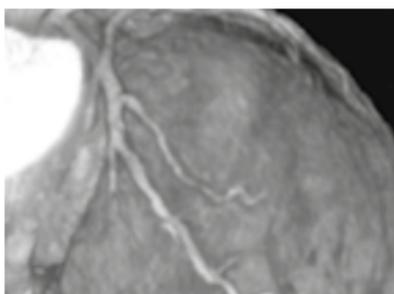
1997



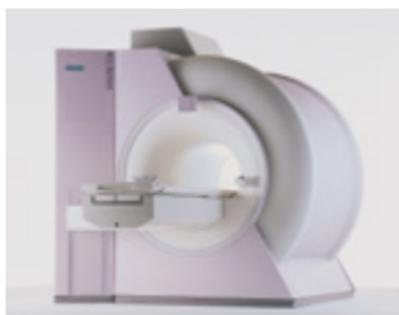
COROSKOP is a floor-mounted C-arm X-ray system which for the first time enables angiography from head to toe.

1999

The Siemens computer tomograph (CT) SOMATOM Volume Zoom enables CT displays of coronary vessels for the first time. It took 40 seconds to create the first image of this type at the Großhadern Clinic in Munich.



2000



The MAGNETOM Sonata is sold as the first magnetic resonance imaging (MRI) system especially for cardiology. The gradients on the 1.5 tesla system are particularly powerful.

2003

In cooperation with the company Stereotaxis, Siemens introduces magnetic navigation into interventional cardiology – the first device is commissioned at the St. Georg Hospital in Hamburg.



2003

The portable ultrasonic device Acuson Cypress is used for cardiac examinations on Mount Everest in order to measure the effect of the elevation on the heart.



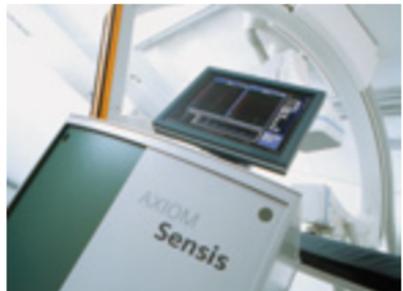
2003



The first two-level angiography system with flat-panel detectors from Siemens is launched. The AXIOM Artis dBC was specifically developed for cardiac examinations and interventions.

2003

With AXIOM Sensis EP (electrophysiology) Siemens supports the treatment of cardiac arrhythmia for the first time in the cardiac catheter laboratory.



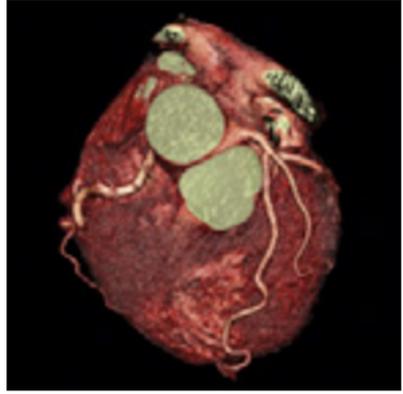
2004



Dade Behring, subsequently acquired by Siemens, launches the Acute Care cTnI laboratory test on the market. This test is used for determining troponin I and helps to identify heart attacks.

2005

Since the introduction of the world's first Dual Source CT SOMATOM Definition in 2005, Siemens is the first and only manufacturer to date to equip all its high-end devices with two X-ray tubes each and detectors. Cardiac CT imaging now becomes clinical routine.



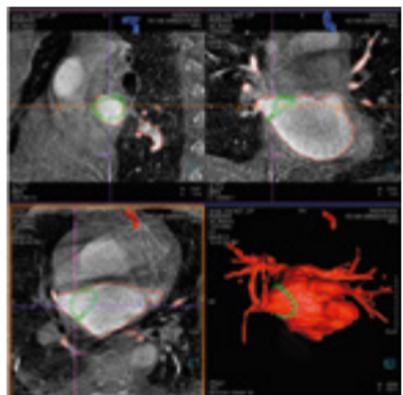
2005



European premiere of Siemens Symbia SPECT/CT at the University Hospital Erlangen. The combination of CT with nuclear medical data improves diagnostic quality.

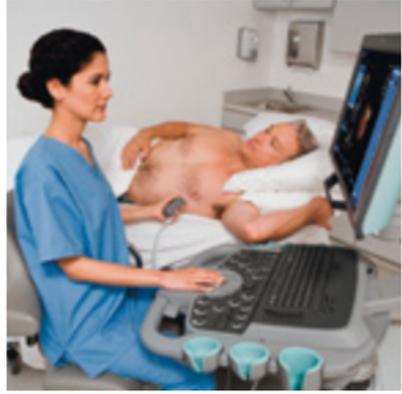
2006

The software *syngo* InSpace EP (electro-physiology) makes three-dimensional imaging of the left atrium possible for the first time. Based on real-time X-ray information it supports the treatment of atrial fibrillation.

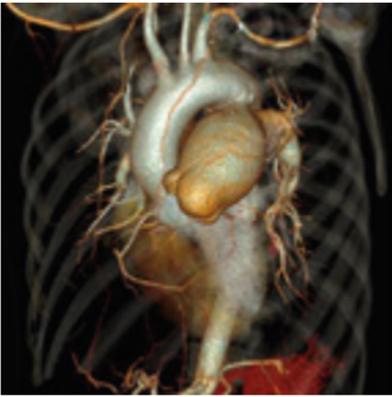


2008

Siemens presents the ACUSON SC2000 Ultrasound System. For the first time, an ultrasound system can provide 3D images of the entire heart in just one heartbeat. The system does not rely on stitched or gated images pieced together from multiple heartbeats to get a full volume.



2008



The SOMATOM Definition Flash, the second generation in the Dual Source CT scanners, enables cardiac imaging for the first time with an effective dosage of less than 1 millisievert.

2008



IQ•SPECT cuts cardiac imaging protocols to less than 5 minutes. This new myocardial perfusion imaging solution enables ultrafast cardiac imaging at the lowest possible dose.

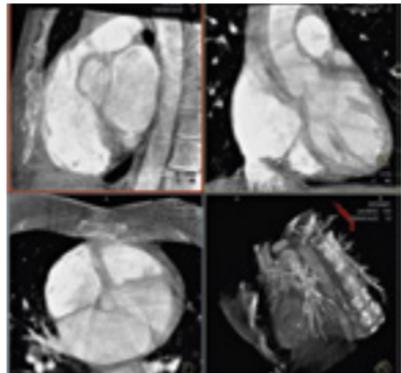
2009

Magnetic resonance imaging gains increasing importance in cardiology. The 3-tesla system MAGNETOM Skyra combines different technologies that enable individual treatment for patients and improve the workflows in MRI scans. Standardized reports and workflow instructions support cardiovascular examinations.

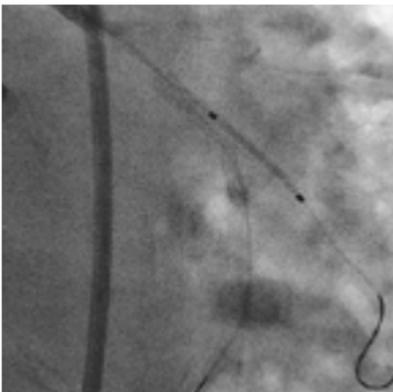


2009

The clinical software *syngo DynaCT Cardiac* allows cross-sectional diagnostic imaging with images similar to CT images for the first time in the catheter laboratory. The cardiologist can therefore navigate the catheter more quickly and easily benefitting from a very high image quality during the intervention.



2012



The software *CLEARstent Live*, which is available for Siemens angiography systems, virtually reduces cardiac movement during coronary procedures. This makes it easier for the cardiologist to detect more effectively where to place a stent precisely in the coronary vessel.

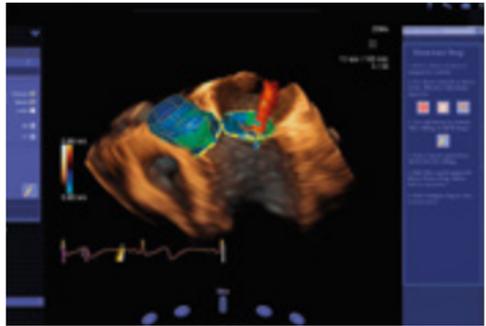
2013

High diagnostic image quality even with the most difficult patient groups. Whether this involves children, pregnant women or patients with cardiac arrhythmia: the computer tomograph SOMATOM Force enables particularly speedy and protective diagnosis with cardiological issues.

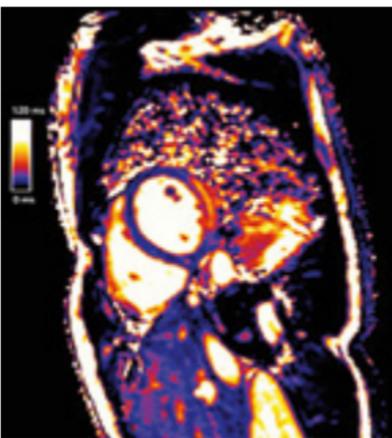


2014

The TEE probe, Z6Ms, provides true 3D real-time volume color Doppler within a beating heart. The award-winning analysis software eSie Valves provides automated measurement & modeling of the cardiac valves. The combination of these technologies allows clinicians to see the whole story of the heart visualizing form, flow, and function for a variety of heart procedures.



2014



MyoMaps is the first MRI application from Siemens that provides quantitative information on the composition of tissue in a color image. This is particularly important for heart disease associated with changes in the tissue.

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Siemens Healthcare Headquarters

Siemens Healthcare GmbH

Henkestraße 127

91052 Erlangen

Phone: +49 9131 84-0

Germany

siemens.com/healthcare

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