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Reference  
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Cardiology



# Siemens European Reference Center Cardiology

Contilia Heart and Vascular Center at the Elisabeth-Krankenhaus Essen

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Answers for life.





# Two strong

## Contilia Heart and Vascular Center, Elisabeth-Krankenhaus Essen

One of the largest hospitals in Germany's central Ruhr metropolitan region, the Elisabeth-Krankenhaus Essen is operated by Contilia GmbH. The hospital's Department of Cardiology and Angiology, the Contilia Heart and Vascular Center, treats about 17,000 inpatients and outpatients each year and enjoys an excellent reputation. In order to achieve optimal patient-centered care, the Contilia Heart and Vascular Center hosts four competence centers: Invasive Cardiology, Noninvasive Cardiology (Imaging), Electrophysiology, and Angiology.

The Contilia Heart and Vascular Center has always been an early adopter of innovative techniques and procedures in cardiology. The department had already integrated the first cardiac MR into their clinical routine by the late 1990's. In addition, minimally invasive techniques have played an important role from an early stage and are continuously developed. Today the integration of noninvasive and invasive cardiology is a key success factor and strength of the Contilia Heart and Vascular Center.

Working closely with BodyGuard!, the hospital's Preventive Medicine Center, the Contilia Heart and Vascular Center is a pioneer in preventive cardiology care.

“The founding of the Siemens European Reference Center Cardiology will contribute to further improving our medical capabilities in the areas of prevention, diagnostics, and therapy – for the benefit of our patients and the economic success of our clinic.”

Professor Georg V. Sabin, MD

Medical Director of the Elisabeth-Krankenhaus Essen,  
Head of the Department of Cardiology and Angiology

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one



## Siemens European Reference Center Cardiology

The partnership between the Contilia Heart and Vascular Center and Siemens Healthcare is based on a mutual commitment to integrate advanced medical technology systems into clinical cardiology routines in order to achieve the best possible care for all patients. The purpose of the collaboration is to improve clinical workflows and promote innovative treatment concepts in noninvasive and invasive cardiology – for example, through the comprehensive use of cardiac MRI, minimally invasive valvular interventions, and the treatment of atrial fibrillation. Now the Contilia Heart and Vascular Center and Siemens Healthcare are strengthening their joint activities in a strategic partnership by establishing the Siemens European Reference Center Cardiology.

The partners will facilitate knowledge-sharing during clinical trainings and fellowships as well as through an exchange of expertise during clinical workflow visits. They will strive to perfect efficient clinical processes by integrating multimodality imaging in diagnostic workflows and ensuring sound decisions and safe procedures in clinical routines.





# Exchanging experience

during customer visits demonstrating the use of multiple modalities

**How can noninvasive diagnostics be efficiently integrated into clinical routines?**

**What is the role of multimodality assessment in the preparation of minimally invasive heart valve replacement?**

**How can risk groups be prevented from becoming patients?**

Experience the impact of innovative imaging techniques integrated into advanced clinical workflows by expert cardiologists. Find out how imaging technology helps to create workflows that add advantages even to established routine procedures. During a customer visit, you will have the opportunity to experience the workflow in the catheter lab as well as the planning and execution of various diagnostic and therapeutic procedures: for example, in the interventional suite. The visits will provide you with a broad variety of insights, ranging from the best ways to establish minimally invasive interventions to the generation of meaningful medical data in long-term research projects and preventive care.

The customer visit program at the Contilia Heart and Vascular Center is tailored to individual requirements and led by experienced clinical specialists. Address your questions in selected topic areas, such as:

## **Noninvasive cardiology, comprising cardiac MRI and CT**

Experience how cardiac MRI can be efficiently integrated into routine diagnostic pathways and learn how the diagnostic data can be used in practice for preventive care.

Discover how multimodality imaging at the Contilia Heart and Vascular Center contributes to pre-interventional planning and peri-interventional monitoring of electrophysiological procedures.

## **Minimally invasive heart valve therapy**

At the Contilia Heart and Vascular Center, minimally invasive heart valve interventions are an established alternative to surgical valve replacement for a growing number of patients. Supervised by an expert team of noninvasive and invasive cardiologists, you can experience firsthand how the team designed and improved its processes in aortic valve replacement and mitral valve repair. You will also have the opportunity to discuss future developments with the experts.

## **BodyGuard! Center**

BodyGuard!, the Center for Preventive Medicine at the Contilia Heart and Vascular Center, offers a preventive care program. During the customer visit, you will see how risk-factor screenings and specialized examinations integrating multiple modalities can be organized into streamlined workflows in preventive cardiology.



“The Euro CMR registry forms the foundation for more diagnostic reliability and faster intervention opportunities in cardiology.”

**Professor Georg V. Sabin, MD**  
Medical Director of the Elisabeth-Krankenhaus Essen,  
Head of the Department of Cardiology and Angiology

“Thanks to the intensive cross-departmental cooperation within our hospital, we are able to offer our patients highly efficient and comprehensive care.”

**Christoph K. Naber, MD**  
Assistant Head of the Department of Cardiology and Angiology,  
lead doctor for invasive cardiology, Elisabeth-Krankenhaus Essen

Cardiac MRI



# Sharing knowledge

## in multimodality clinical trainings and fellowships

**How can noninvasive diagnostic pathways for the evaluation of cardiovascular diseases be implemented in clinical routine?**

**How can the use of multimodality imaging systems contribute to successful treatment of atrial fibrillation and other cardiac arrhythmias?**

**How can medical assistants be optimally trained to support the new interventions?**

In order to make full use of innovative imaging modalities, clinicians need to keep pace with the latest emerging technologies and procedures.

The Contilia Heart and Vascular Center and Siemens offer a dedicated customer fellowship program focused on non-invasive and invasive cardiology. Participants can take an active role in the daily clinical multimodality imaging routine at the Contilia Heart and Vascular Center and gain insights into best practices in the cardiology competency areas. They will learn from the experts to enhance their clinical skills and knowledge in advanced imaging and procedures.

A key factor in workflow optimization and improved efficiency is the best possible support. The fellowship program therefore includes training tailored to the needs of nurses and medical assistants. The program provides opportunities for visitors to extend their knowledge and prepare themselves for advanced technologies in modern cardiac catheter laboratories.

Fellowships and trainings take place throughout the year. A variety of multimodality and workflow training opportunities will be offered. Topics include:

- Improving the structure of a cardiac catheter lab and interventional suite for optimal workflows in invasive cardiology
- Structured lectures and case studies covering the use of cardiac MRI and CT in noninvasive cardiology
- State-of-the-art approaches to electrophysiological evaluation and treatment
- An academic program for nurses and assistants

The trainings will be conducted at the Contilia Heart and Vascular Center and can be adapted to meet individual needs.



“Clearly structured, intelligent workflows not only provide faster and better results, they also provide maximum safety for the patient.”

**Oliver Bruder, MD**

Assistant Head of the Department of Cardiology and Angiology,  
lead doctor for noninvasive cardiology,  
Medical Director and General Manager of BodyGuard!, the  
Center for Preventive Medicine at Elisabeth-Krankenhaus Essen

Attentive care

Minimally invasive  
heart valve therapy



# Supporting the development of new solutions

## through clinical registries and multimodality assessment

The Contilia Heart and Vascular Center and Siemens Healthcare are not only committed to excellence in diagnostic imaging and advanced procedures, they also support a variety of research activities related to the efficient use of innovative technology.

One example of the cooperation between the Contilia Heart and Vascular Center and Siemens Healthcare is the European CMR registry to examine the long-term benefits of cardiovascular magnetic resonance imaging on patient management and clinical outcome. In addition, the Contilia Heart and Vascular Center participates in the European Cardiac CT Registry.

The registry study's practical objective is to evaluate the clinical use of cardiac MRI throughout Europe and integrate this imaging modality into cardiovascular workflows. Information gathered in the study will contribute to research and development at Siemens Healthcare, improvements to existing modalities, and the innovations of tomorrow.

Siemens Healthcare and the Contilia Heart and Vascular Center work together to improve existing medical technologies and establish efficient workflows for better clinical results. Their mutual efforts aim to provide solutions for safe procedures and sound decisions in the field of noninvasive cardiology, electrophysiology, and minimally invasive interventions. The partners will develop processes in which imaging modalities are optimally integrated and efficiently utilized, thereby ensuring that patients receive the optimal treatment.

## The equipment at the Reference Center

To achieve the best possible care for each individual patient, the Contilia Heart and Vascular Center uses fast, accurate, workflow-supporting technologies:

### Four cathlabs and one interventional suite Artis zee®

- Electrophysiology unit
- Coronary intervention units
- Advanced interventional procedures – for example valve replacement

### Dual Source CT–SOMATOM® Definition Flash

- Comprehensive CAD assessment
- Pre-operative planning for hybrid and conventional surgery
- Cardiac risk assessment

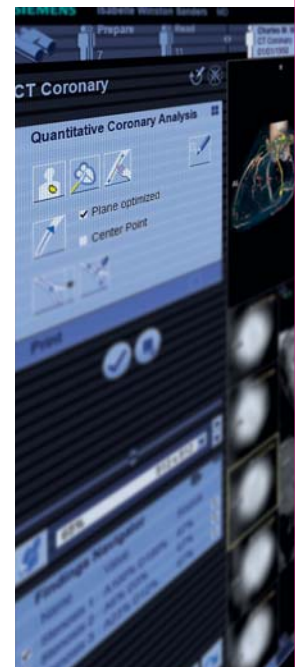
### MAGNETOM® Avanto and MAGNETOM Sonata 1.5T MRI systems

- Comprehensive evaluation of cardiovascular status
- Advanced CAD evaluation
- Tim® (Total imaging matrix) flexible integrated coil technology

### Imaging IT – syngo®.via

- Integrated multimodality workspace
- Assessment of multimodality medical data
- Automated 3D reconstruction, processing, and reporting

syngo.via



# partners

## Siemens Healthcare

The Siemens Healthcare Sector is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, and medical information technology. Siemens Healthcare offers its customers products and solutions for the entire range of patient care from a single source – from prevention and early detection to diagnosis all the way through to treatment and aftercare. By optimizing clinical workflows for the most common diseases, Siemens Healthcare also makes healthcare fast, cost-effective, and excellent.

As a solution provider, Siemens Healthcare continually interacts with expert cardiologists and cardiac surgeons worldwide, thereby gaining a deep understanding of the clinical and economic requirements of cardiovascular care. In the field of cardiology, Siemens Healthcare drives the development and optimization of clinical processes for specific diseases. It is our aim to develop workflows and solutions, using the most advanced technologies, which will provide the best possible care for each individual patient along the entire continuum of diagnosis and treatment.

The Siemens Healthcare Clinical Competence Center Cardiology is dedicated to advancing these concepts and developments in selected clinical partnerships – together with our customers.

“Our partnership with the Contilia Heart and Vascular Center is focused on efficiently integrating innovative treatments for non-invasive and invasive cardiology. It is our mutual goal to transform highly specialized interventions into standards of care for cardiovascular diseases.”

**Tom Miller,**  
CEO Customer Solutions Division,  
Siemens Healthcare Sector

# shared vision



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The statements by Siemens' customers described herein are based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption) there can be no guarantee that other customers will achieve the same results.

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