

Innovative Systems for High Quality

New diagnostic center improves clinical workflows by using highly sophisticated, large-scale medical equipment

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The Medical Center of the Johann Wolfgang Goethe University, Frankfurt, Germany, is committed to research-oriented high-end medicine in tertiary medical care. One important step in this direction was the new diagnostic center with 15 large-scale medical devices from Siemens. From the heliport on the roof to radiology and cardiology to the emergency room and the trauma room in the basement – all functions have now been combined in one building. This optimizes workflows and saves time.

By Wiebke Kathmann, PhD

Under the aspect of improving the old building structure, the annex of the central building of the Johann Wolfgang Goethe University Medical Center, Frankfurt, Germany – and its architecture – is an impressive investment into the future. The new building has impressively clean lines, spacious rooms and a modern lobby flooded with light. Here, private patients from abroad – an important group of patients for the hospital – also feel comfortable. Their recruitment via established partners, mainly from the Netherlands, the Benelux countries, Denmark, UK, the U.S., and via the Internet is one pillar of the hospital's success.

"Apart from a professional website, prerequisites for success are the interlocking of modern diagnostic radiology and image-guided innovative interventions, as well as prompt appointment scheduling," says Professor Thomas Vogl, MD, Director of the Department for Diagnostic and Interventional Radiology. Naturally, modern imaging equipment also plays an important role. "For us, Siemens is one of the innovation

leaders. Moreover, we have had a long and stable cooperative relationship with Siemens," adds Dr. Hans-Joachim Conrad, the Administration Manager.

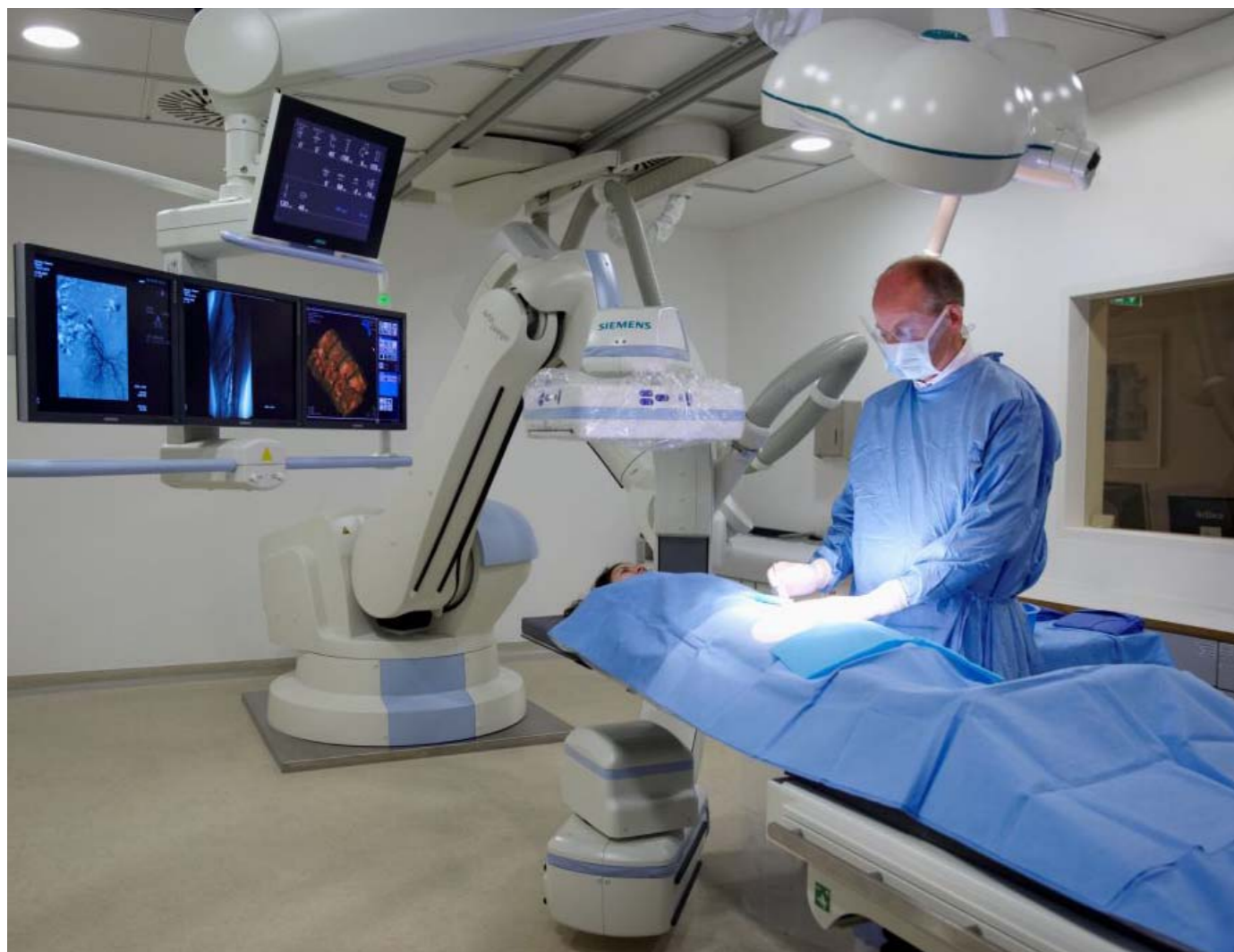
Cutting-edge medical engineering stands for high-quality medical treatment

The diagnostic center is equipped with three magnetic resonance imaging (MRI) systems (open 1.5 T MAGNETOM® Espree, MAGNETOM Avanto, and 3 T MAGNETOM Trio), three cardio systems of the new Artis zee® family, three computed tomography (CT) scanners (SOMATOM® Definition, SOMATOM Sensation 16, SOMATOM Volume Zoom), one UROSKOP® Access, two angio systems (AXIOM® Artis dTA, AXIOM Artis MP) and an X-ray system (AXIOM Vertix MD Trauma) in the trauma room. Says Vogl: "Having three MRI systems with a different diagnostic focus directly next to each other enables us to optimally use the advantages of each system and run complex MRI protocols."

"We were able to reduce ways of transportation, optimize processes, and increase efficiency."

Dr. Hans-Joachim Conrad,
Administration Manager,
Johann Wolfgang Goethe University,
Frankfurt, Germany





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Professor Thomas Vogl, MD, Director, Department for Diagnostic and Interventional Radiology, Johann Wolfgang Goethe University Medical Center, Frankfurt, Germany

“We welcome many experts from all over the world who wish to see the use of modern equipment in daily routine and gain insights into special therapy procedures.”

Prof. Andreas M. Zeiher, MD, Director, Medical Center III: Cardiology, Molecular Cardiology/Electrophysiology, Angiology/Hemostaseology, Johann Wolfgang Goethe University Medical Center, Frankfurt, Germany



Since very recently, one of the first worldwide Artis zeego® systems based on robot technology is also part of the equipment.

International reference center of interventional cardiology

Professor Andreas M. Zeiher, MD, cardiologist and Director of Medical Center III, specializes on translational research – particularly in the field of regenerative medicine, for example, with stem cells or micro-RNA. These approaches may soon be intensified in the recently approved research tower, the ‘European Cardiovascular Science Center Frankfurt’. It is the designated home of patient-oriented cardiovascular research. Already today, experts from around the world come to the reference center every week to see the use of the systems in everyday clinical routine and gain insight into special therapy procedures such as stem cell therapy after infarction or aortic valve stents.

Tumor therapy, the showpiece of interventional radiology

Vogl has established his reputation as a specialist for CT or MRI-guided interventions for metastases and tumors of the liver and lung. Patients from all over the world travel to Frankfurt particularly for transpulmonary percutaneous chemoem-

bolization (TPCE) and laser-induced interstitial thermotherapy (LITT). 20 to 25 interventions are performed at the institute every day; 3,000 liver interventions alone per year. 90 percent of the patients are treated on an outpatient basis and will come to the radiology department the next day only for follow-up. The primary task of the radiology department in an institute for maximum medical care of course is and will always be the provision of radiological services for clinical partners – around the clock.

New business and financing models

The University Medical Center also proved to be innovative in financing the new diagnostic center by launching, among others, an investors’ model that enabled chief physicians with right of settlement to take part in the financing. In recent years, the Frankfurt University Medical Center has gained in importance internationally, which is also reflected in the annual procurement of third-party funds of currently about €34 million. Presently, future scenarios for the various medical fields are being developed, providing the basis for further structural development. This is to further emphasize the leading role of innovative medicine in tertiary medical care at the University Medical

Center in the Rhine-Main Area as well as the increasing number of cooperation models. Support from the industry was also very welcome, not only in terms of leasing contracts for cost-intensive new acquisitions but also in terms of a customized in-house service concept. Currently two Siemens service engineers are onsite at all times, ensuring smooth operation and helping to avoid downtimes. „We decided to go for 90 percent new acquisitions for the diagnostic center. One of the reasons for this is the fact that innovations not only offer higher clinical quality but at the same time contribute to an increase in efficiency and therefore long-term profitability of the investment,“ Conrad summarizes.

Wibke Kathmann, PhD, has a master’s degree in biology. After her studies at the Universities of Marburg and Munich, she obtained her PhD in the area of Theoretical Medicine at the University of Ulm, Germany. She has been working as a medical journalist for 15 years, ten of which she spent as editor and editor-in-chief of a magazine for geriatrics. Since 2003, she has worked as a freelancer in Munich.

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