OVERVIEW

MAIN AREAS OF RESEARCH:

- Pulmonary imaging using MRI and CT
- Interventional vascular and tumor therapy
- IT and image post-processing in radiology
- Innovative MRI techniques

HIGHLIGHTS

Radiology is a medical specialty that employs the clinical and scientific use of imaging methods to both diagnose and treat disease.

Department of diagnostic and interventional radiology - fields of activity and service spectrum:

DIAGNOSTIC METHODS (ALL IMAGING DATA ARE ACQUIRED DIGITALLY)

- Radiography (conventional radiology)
- Radioscopy (fluoroscopy)
- Computed Tomography (256-slice CT)
- Magnetic Resonance Imaging (1.5 Tesla - 3.0 Tesla), Non-proton MRI (Helium-3, fluorinated gases)
- Digital Subtraction Angiography (DSA)
- Sonography
- Mammography

THERAPEUTIC METHODS (FULL SPECTRUM OF INTERVENTIONAL RADIOLOGY CARE):

- Balloon dilatation and stent implantation
- Occlusion of blood vessels and tumor embolization
- Percutaneous tumor ablation
- Biliary tract interventions
- Biopsies and implantation of markers for targeted therapies
- Percutaneous drainages

Patients treated in interventional radiology who require special attention or monitoring are taken care of in the ward of the Department of Radiology (which is operated in cooperation with the Department of Radiooncology).

GENERAL SERVICES AND SPECIALTIES:

- Radiology Information System (since 1988)
- Picture-Archiving and Communication System (PACS) (since 1998)
- Teleradiology
- Clinical Trial Center Radiology
- Section of Medical Physics
- Section of Pediatric Radiology
Assessment of Aortic Annulus Size at MD-CT: Influence of Heart Phase and Measurement Method in Patients before TAVI

**PROJECT MANAGER:** Prof. Dr. K Kreitner, Dr. Y Yang

**PROJECT DURATION:** 2014 - 2016

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Detection of pulmonary hemodynamics in probands and patients with pulmonary hypertension using high-resolution phase contrast MRI (MAIFOR)

**PROJECT MANAGER:** Dr. G Winth

**PROJECT DURATION:** 2013 - 2015

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Electronic order communication with „Clinical Decision Support“

**PROJECT MANAGER:** Prof. Dr. P Mildenberger

**PROJECT DURATION:** 2012 - 2015

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Iterative Reconstruction in computer tomography before TAVI: qualitative and quantitative evaluation of image quality

**PROJECT MANAGER:** Prof. Dr. K Kreitner, Dr. Y Yang

**PROJECT DURATION:** 2015 - 2016

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**IMPORTANT PUBLICATIONS // MAX. 5**


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**FIG. 1:** Incidence and localization of true, false and indeterminable aneurysms. SA splenic arterial aneurysm, HA hepatic arterial aneurysm, SMA superior mesenteric artery aneurysm, CT coeliac trunk aneurysm, GDA gastroduodenal artery aneurysm, PDA pancreaticoduodenal artery aneurysm, RA renal artery aneurysm, GA gastric artery aneurysm

**FIG. 2:** T2-weighted HASTE sequence to measure a the Haller index (HI = b/a) and the correction index (CI = [(c − a)/c] × 100) and b the sternal rotation angle and the asymmetry index (AI = 1 − (d/e))