

Faculty



Claus Peter Heussel, MD

Research Interests

1. Radiological investigations of infectious diseases in immunocompromized patients
2. Longitudinal analyses of functional and morphological imaging to complement histology/molecular-biology in solid tumours
3. Computer assisted quantitative image analyses of lung tissue and airway morphology and function

Short CV

Affiliation

Claus Peter Heussel

Professor of Radiology

Head of Diagnostic/Interventional Radiology with Nuclear Medicine

- Editor of „Medizinische Klinik, Intensivmedizin und Notfallmedizin“, Springer Publishing
- Chairman of the chest radiology directors board of the German Roentgen society
- Radiological consultant of the European Conference on Infections in Leukaemia (ECIL)
- Faculty member of the European Society of Thoracic Radiology (ESTI)
- Founder member and radiological consultant of the working team in infections in immunocompromized hosts of the German society of Hematology/Oncology

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Curriculum Vitae

1986 Medical School, Johannes–Gutenberg University Mainz

1993 Resident, obligatory clinical course, department of Hematology/Oncology, Johannes Gutenberg University Mainz

1994 Dissertation (M.D.), Medicinal Clinic of Endocrinology, Johannes–Gutenberg University Mainz

1994 Resident, department of Radiology, Johannes–Gutenberg University Mainz

1999 Postdoc, department of Radiology, Johannes–Gutenberg University Mainz

2002 Spokesmen for lung working group on functional MRI, Johannes–Gutenberg University Mainz

2003 Assistant Professor, department of Radiology, Johannes–Gutenberg University Mainz

2009 Special Professor for Radiology at the Ruprecht–Karls–University Heidelberg

Honours & Awards

2003 European Society of Radiology: Ultrafast ³He–MRT for dynamic analysis of distribution of ventilation

2003 Robert–Müller research award for cand. med. C. Buschsieweke: “Automatic quantification of diffuse interstitial lung disease in multislice CT“

2005 European Society of Radiology: Fluorinated gasses for measurement of pulmonary ventilation in ¹⁹F–MRI

2008 INI–GraphicsNet Best Paper Award „Segmentation and Navigation Support of Clinical Data Sets to Simulate the Bronchoscopy and Rhinoscopy“

2012 Felix–Wachsmann–Prize of the German Academy of Continuous Education in Radiology.

Projects

- One of our long-running projects is concerned with the early detection and characterization of mainly pulmonary infections in immunocompromized patients. Imaging provides important data and expertise for overall case assessment and our treatment successes in dealing with acute cases is based on the close co-operation with the Hematology and Nephrology Departments of Heidelberg University.
- Regional functional lung imaging is more sensitive to detection of lung impairment in COPD, asthma or pulmonary fibrosis than global lung function analysis. Furthermore, targeted treatment strategies require regional disease assessment and ideally, quantification of damaged lung parenchyma. Therefore, our work focuses on optimizing regional distribution of perfusion and ventilation (DZL) in real-time imaging using different techniques such as CT and MRI (^1H , ^3He , ^{19}F). The results are matched with morphological information reflecting the underlying anatomical structure. It is our goal to determine the extent of the disease or remaining functioning amount of lung parenchyma with an automated fully unattended process. This goal has already been achieved in cases of emphysema and global airway quantification.
- Our imaging data contributes to the bronchial carcinoma-projects (DZL) and systems biology projects (Lungsys; DKFZ). Imaging delivers comparative data for early-response evaluation and long-term response to treatment. We also apply invasive procedures for longitudinal assessment of histology / molecular-biology in BC and its metastasis.

Funding

Federal Ministry for education and research (BMBF), Lungsys I + II, DZL
Pharmaceutical companies and medical device industry

Team

Consultants

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Selected Publications

1. Arendrup MC, Bille J, Dannaoui E, Ruhnke M, **Heussel CP**, Kibbler C. ECIL-3 classical diagnostic procedures for the diagnosis of invasive fungal diseases in patients with leukaemia. *Bone Marrow Transplant*. 2012 doi: 10.1038/bmt.2011.246. [Epub ahead of print] (CI 3.746)
2. Lederlin M, Puderbach M, Muley T, Schnabel PA, Stenzinger A, Kauczor HU, **Heussel CP**, Herth FJ, Hoffmann H, Dienemann H, Weichert W, Warth A. Correlation of radio- and histomorphological pattern of pulmonary adenocarcinoma. *Eur Respir J*. 2012 Jul 26. [Epub ahead of print] (CI 5.992)
3. Cordonnier C, Rovira M, Maertens J, Olavarria E, Faucher C, Bilger K, Pigneux A, Cornely OA, Ullmann AJ, Bofarull RM, De la Cámara R, Weisser M, Liakopoulou E, Abecasis M, **Heussel CP**, Pineau M, Ljungman P, Einsele H (2010) Voriconazole for secondary prophylaxis of invasive fungal infection in allogeneic stem cell transplant recipients: results of the VOSIFI study. *Haematologica*. 2010; 95: 1762-1768 (CI 6.416)
4. Schuler M, Herrmann R, De Greve JLP, Stewart K, Gatzemeier U, Stewart DJ, Laufman L, Gralla R, Kuball J, Buhl R, **Heussel CP**, Kommos F, Perruchoud AP, Shepherd FA, Fritz MA, Horowitz JA, Huber C, Rochlitz C (2001) Adenovirus-Mediated Wild-Type p53 Gene Transfer in Patients Receiving Chemotherapy for Advanced Non-Small-Cell Lung Cancer: Results of a Multicenter Phase II Study. *J. Clin. Oncol*. 19: 1750-1758 (CI: 17.793)
5. **Heussel CP**, Kauczor H-U, Heussel G, Fischer B, Begrich M, Mildemberger P, Thelen M (1999) Pneumonia in febrile neutropenic patients bone-marrow and blood stem-cell recipients: use of high-resolution CT. *J. Clin. Oncol*. 17: 796-805 (CI: 17.793)