

# Content

## Editorial Comment

- 2 Precision Medicine and Adaptive Technologies in Medical Imaging**  
*Konstantin Nikolaou, University Hospital Tübingen, Germany*
- 8 First Experiences with the World's First MAGNETOM Vida<sup>1</sup>**  
*Mike Notohamiprodjo, University Hospital Tübingen, Germany*

## Pediatric Imaging

- 14 Case Series: Pediatric<sup>2</sup> GOBrain-5-Minute Protocol**  
*Elka Miller, Barry Smith, Children's Hospital of Eastern Ontario, Ottawa, ON, Canada*

## Neurology

- 19 Simultaneous Multi-Slice: a Case-based Presentation of Pre-Operative Brain Tumor Evaluation**  
*Christian Berthelot, et al., Hôpital de l'Enfant-Jésus, Québec, Canada*
- 22 The Assessment of Endolymphatic Hydrops with High-resolution 3D Real Inversion Recovery and 3D Fluid Attenuated Inversion Recovery Sequences**  
*Yan Sha, et al., Eye, Ear, Nose and Throat Hospital, Fudan University, Shanghai, China*
- 26 Rapid MR Susceptibility Imaging of the Brain Using Segmented 3D Echo-Planar Imaging<sup>3</sup> (3D EPI) and its Clinical Applications**  
*Pascal Sati, et al., National Institutes of Health, Bethesda, MD, USA*
- 33 Assessing Brain Volumes Using MorphoBox Prototype<sup>3</sup>**  
*Alexis Roche, et al., University Hospital Lausanne, Switzerland*

- 38 Initial Experience with the MAGNETOM Terra 7T System<sup>1</sup> Focus on Neuroradiology and Knee Imaging**  
*Arnd Doerfler, et al., University Hospital Erlangen, Germany*

## Musculoskeletal Imaging

- 45 How-I-do-it: Creating a 'True' T1-weighted BLADE Measurement for Musculoskeletal Imaging**  
*Thomas Illigen, Siemens Healthineers, Mannheim, Germany*
- 49 Case Report: Lisfranc/Tarsometatarsal Joint Injury**  
*Charles P. Ho, Richard C. Shin, Steadman Philippon Research Institute, Vail, CO, USA*

## Head and Neck Imaging

- 52 High-resolution, Anatomically-accurate Diffusion-weighted Imaging of Orbital and Sinonasal Lesions with RESOLVE**  
*Yan Sha, et al., Eye, Ear, Nose and Throat Hospital, Fudan University, Shanghai, China*

## Oncological Imaging

- 58 Experiences with Robot Assisted MR-guided Inbore Prostate Biopsies**  
*Jeroen Reijnen, Jon Bache Marthinsen, Sørlandet Hospital Kristiansand, Norway*
- 64 Metastatic Prostate Cancer in Practice – the MET-RADS-P Imaging Response System Using Whole-body MRI**  
*Anwar R. Padhani, et al., Paul Strickland Scanner Centre, Northwood, Middlesex, UK*
- 73 Whole-body Diffusion-weighted MR Image Analysis with syngo.via Frontier MR Total Tumor Load<sup>4</sup>**  
*Robert Grimm, et al., Siemens Healthineers, Erlangen, Germany*

- 76 Whole-body MR Image Reading and Bone Assessment with syngo.via Frontier MR Bone Scan<sup>4</sup>**  
*Matthias Fenchel, et al., Siemens Healthineers, Erlangen, Germany*
- 80 Observing Endocrine Therapy Resistance in Metastatic Breast Cancer with Whole-body MRI**  
*Anwar-R. Padhani, Paul Strickland Scanner Centre, Northwood, Middlesex, UK*
- 84 CS-VIBE – a Breakthrough in Ultrafast Dynamic Breast MRI**  
*Ritse M. Mann, Suzan Vreemann, Radboud University Medical Centre, Nijmegen, the Netherlands*
- 90 How-I-do-it: Whole-Body MRI Including DWI**  
*David Hillier, Siemens Healthineers, UK*
- 96 Simultaneous Multi-Slice – a Concise Review Covering Major Applications in Clinical Practice**  
*Val M. Runge, et al., University Hospital of Bern, Inselspital, Bern, Switzerland*

## Cardiopulmonary Imaging / Cardiology

- 102 Chest MRI: Morphological Imaging and Beyond**  
*Giovanni Morana, et al., Ca' Foncello Regional Hospital, Treviso, Italy*
- 112 On Microstructural Dynamics Underlying Myocardial Wall Thickening: Validation of In Vivo Diffusion Tensor CMR and Abnormalities in Hypertrophic and Dilated Cardiomyopathy<sup>3</sup>**  
*Sonia Nelles-Vallespin, et al., Royal Brompton and Harefield NHS Foundation Trust, London, UK*

## Technology

- 119 Recent Advances in In-bore Optical Prospective Motion Correction<sup>3</sup>**  
*Aditya Singh, et al., KinetiCor Inc., Honolulu, HI, USA*
- 122 Pioneers of Connectome Gradients**  
*Ralph Kimmlingen, Siemens Healthineers, Erlangen, Germany*
- 137 Gadgetron: Open Source Image Reconstruction**  
*Michael S. Hansen, et al., National Institutes of Health, Bethesda, MD, USA*

## Spotlight

- 148 MRI at UK Biobank**  
*Niels Oesingmann, et al., UK Biobank, Stockport, Cheshire, UK*

## Meet Siemens Healthineers

- 152 Introducing Edgar Müller, Head of the MR Technology and Innovation Management Team, Erlangen, Germany and Aurélien Stalder, Head of MR Collaboration Team for Greater China**

<sup>1</sup> 510(k) pending. The product is not commercially available. Future availability cannot be guaranteed.

<sup>2</sup> MR scanning has not been established as safe for imaging fetuses and infants less than two years of age. The responsible physician must evaluate the benefits of the MR examination compared to those of other imaging procedures.

<sup>3</sup> WIP, the product is currently under development and is not for sale in the US and in other countries. Its future availability cannot be ensured.

<sup>4</sup> syngo.via Frontier is for research only, not a medical device.