Editorial Comment

4 MRI Advances in 2024: Pushing All Clinical Boundaries

> Natasha E. Fullerton Institute of Neurological Sciences, Queen Elizabeth University Hospital, Glasgow; School of Psychology & Neuroscience, University of Glasgow, UK

DL-Based Image Reconstruction

- 10 Can We See the Bottom? A Look into Deep Learning-Based Image Reconstruction Dominik Nickel Siemens Healthineers, Erlangen, Germany
- 14 Deep Learning-Based Reconstruction in Clinical MRI – How We Do It in Tübingen Saif Afat, et al. Eberhard Karls University Tübingen, Germany

Musculoskeletal Imaging

26 How I do It: Deep Resolve Sharp and Gain Theodore J. Kryzer, Alex N. Merkle, et al. UCHealth Steadman Hawkins Clinic Denver, Englewood, CO, USA

31 Temporomandibular Joint MRI with the UltraFlex Large 18 Coil Alessandro Lanaro, Salvatore Sgroi, et al. Casa di Cura Solatrix, Rovereto, Italy

35 Beyond Limits: Unveiling Clinical Precision in Knee Imaging with 7 Tesla MRI

Sana Boudabbous, Bénédicte Delattre, et al. University Hospital of Geneva, Switzerland

Pediatric / Fetal Imaging

43 Sedation-Free Musculoskeletal MRI in Children¹ Using Deep Resolve – How I do it

Bac Nguyen

Oslo University Hospital, Rikshospitalet, Oslo, Norway

Phase-Resolved Functional Lung (PREFUL) MRI of Ventilation and Perfusion in Premature Infants¹ Jonathan P. Dyke, et al.

Weill Cornell Medicine, New York, NY, USA

63 Rapid and Clinically Integrated Computer Simulations to Evaluate and Predict Outcome of Invasive Interventions in Patients¹ with Fontan Circulation

Petter Frieberg, et al.
Lund University, Skåne University Hospital, Lund, Sweden

Cardiovascular Imaging

68 Cardiac Magnetic Resonance T1-rho Mapping at 1.5T

> Aurélien Bustin, et al. IHU LIRYC, Heart Rhythm Disease Institute, Université de Bordeaux, France

76 Accelerating Cardiac MRI with Inline Generative AI and Open Recon

Reza Nezafat, et al.

Beth Israel Deaconess Medical Center, Boston, MA, USA

Neurologic Imaging

79 Going Beyond DTI in the Clinic: The Appeal of Microstructural MRI

Ileana Jelescu

Microstructure Mapping Lab, Lausanne University Hospital (CHUV) and University of Lausanne (UNIL), Switzerland

88 Advances in Susceptibility-Weighted Imaging and Quantitative Susceptibility Mapping

Josef Pfeuffer, et al.

Siemens Healthineers, Erlangen, Germany

100 Online: Static Field Correction in 2D and 3D Echo-Planar Imaging (EPI) Sequences

Josef Pfeuffer, et al.

Siemens Healthineers, Erlangen, Germany

102 Dazzling Dilemmas: Differentiating Intracranial Masses Using MRI Imaging

Melissa A. van Kuik, et al.

Department of Neurology, OLVG, Amsterdam, The Netherlands

110 Expert Insights: Slice Adjust

Hui Lit

Siemens Healthineers, Zhengzhou, China

Veterinary MRI

112 Canine and Feline MRI: How Does it Differ from Human MRI?

Zoe Lenard

Animalius Vet, Perth, Australia

Meet Siemens Healthineers

117 Introducing Luis Mendonça

MR collaboration manager for Latin America Siemens Healthineers, Rio de Janeiro, Brazil

118 Introducing Sugil Kim

Onsite 7T scientist
Siemens Healthineers, Seoul, South Korea