

Editorial

- 509 The Evolving Landscape of Self-Assessment Continuing Medical Education (SA-CME)**

Mustafa R. Bashir, Tim Leiner, and Scott B. Reeder

Reviews

- 511 Biomedical Applications of Sodium MRI In Vivo**

Guillaume Madelin and Ravinder R. Regatte

- 530 MRI Biosensors: A Short Primer**

Angelique Louie

Original Research

Abdominal Imaging

- 540 Spleen Size Measured on Enhanced MRI for Quantitatively Staging Liver Fibrosis in Minipigs**

Xiao-li Chen, Tian-wu Chen, Zhen-lin Li, Xiao-ming Zhang, Nan Chen, Nan-lin Zeng, Hang Li, Hong-jie Tang, Yu Pu, and Chun-ping Li

- 548 Timing of the Hepatic Arterial Phase at Gd-EOB-DTPA-Enhanced Hepatic Dynamic MRI: Comparison of the Test-Injection and the Fixed-Time Delay Method**

Shinichi Nakamura, Takeshi Nakaura, Masafumi Kidoh, Daisuke Utsunomiya, Yasuro Doi, Kazunori Harada, Shozaburo Uemura, and Yasuyuki Yamashita

- 555 Added Value of Diffusion-Weighted Imaging to MR Cholangiopancreatography With Unenhanced MR Imaging for Predicting Malignancy or Invasiveness of Intraductal Papillary Mucinous Neoplasm of the Pancreas**

Koung Mi Kang, Jeong Min Lee, Cheong-Il Shin, Jee Hyun Baek, Seung Ho Kim, Jeong Hee Yoon, Joon Koo Han, and Byung Ihn Choi

- 564 Bilateral Kidney Sodium-MRI: Enabling Accurate Quantification of Renal Sodium Concentration Through a Two-Element Phased Array System**

Raffi Kalayciyan, Friedrich Wetterling, Sabine Neudecker, Stefan Haneder, Norbert Gretz, and Lothar R. Schad

Breast Imaging

- 573 Optimizing MRI Scan Time in the Computation of Pharmacokinetic Parameters (K^{trans}) in Breast Cancer Diagnosis**

Amarnath Jena, Shashi Bhushan Mehta, and Sangeeta Taneja

Cardiovascular Imaging

- 580 Left Atrial Flow Velocity Distribution and Flow Coherence Using Four-Dimensional FLOW MRI: A Pilot Study Investigating the Impact of Age and Pre- and Postintervention Atrial Fibrillation on Atrial Hemodynamics**

Jacob U. Fluckiger, Jeffrey J. Goldberger, Daniel C. Lee, Jason Ng, Richard Lee, Amita Goyal, and Michael Markl

- 588 In Vivo Comparison of Myocardial T1 With T2 and T2* in Thalassaemia Major**

Yanqiu Feng, Taigang He, John-Paul Carpenter, Andrew Jabbour, Mohammed Harith Alam, Peter D. Gatehouse, Andreas Greiser, Daniel Messroghli, David N. Firmin, and Dudley J. Pennell

- 594 3D Coronary MR Angiography at 1.5 T: Volume-Targeted Versus Whole-Heart Acquisition**

Hang Jin, Meng-Su Zeng, Mei-Ying Ge, Hong Yun, and Shan Yang

- 603 Absolute Quantification of Myocardial Blood Flow With Constrained Estimation of the Arterial Input Function**

Jacob U. Fluckiger, Brandon C. Benefield, Kathleen R. Harris, and Daniel C. Lee

Musculoskeletal Imaging

- 610 Quantifying Image Distortion of Orthopedic Materials in Magnetic Resonance Imaging**

Matthew F. Koff, Parina Shah, Kevin M. Koch, and Hollis G. Potter

- 619 Comparison of Dixon and T1-Weighted MR Methods to Assess the Degree of Fat Infiltration in Duchenne Muscular Dystrophy Patients**
Beatrijs H. Wokke, Clemens Bos, Monique Reijnierse, Carla S. van Rijswijk, Holger Eggers, Andrew Webb, Jan J. Verschuuren, and Hermien E. Kan
- 625 Anisotropic Analysis of Multi-component T₂ and T_{1ρ} Relaxations in Achilles Tendon by NMR Spectroscopy and Microscopic MRI**
Nian Wang and Yang Xia
- Neuroimaging Imaging**
- 634 Usefulness of ¹H-MRS in Differentiating Bilirubin Encephalopathy From Severe Hyperbilirubinemia in Neonates**
Wulin Wu, Ping Zhang, Xiaoyi Wang, Ashley Chineah, and Mingwu Lou
- 641 MR Imaging of the Yucatan Pig Head and Neck Vasculature**
Charbel A. Habib, David Utraiainen, Jean Peduzzi-Nelson, Elizabeth Dawe, Janine Mattei, Zahid Latif, Kenneth Casey, and E. Mark Haacke
- 650 Diffusion Tensor Imaging of Normal-Appearing White Matter in Unilateral Cerebral Arterial Occlusive Disease**
Xiangshui Meng, Qing Wang, Jinwen Hou, Xiaoming Zhang, Enguo Wang, Qilu Li, Qingshi Zeng, Qian Wang, Chuanfu Li, and Xiangxing Ma
- 655 Inter- and Intra-rater Reliability of Blood and Cerebrospinal Fluid Flow Quantification by Phase-contrast MRI**
Inga Koerte, Caroline Haberl, Michael Schmidt, Andreas Pomschar, Sang Lee, Petra Rapp, Denise Steffinger, Rong-Wen Tain, Noam Alperin, and Birgit Ertl-Wagner
- 663 Value of Diffusion-Weighted MR Imaging Performed With Quantitative Apparent Diffusion Coefficient Values for Cervical Lymphadenopathy**
Lian-Ming Wu, Jian-Rong Xu, Jia Hua, Hai-Yan Gu, Jiong Zhu, and Jiani Hu
- 671 Postoperative Evaluation of Superficial Temporal Artery-Middle Cerebral Artery Bypass Using an MR Angiography Technique With Combined White-Blood and Black-Blood Sequences**
Kazuhiro Tsuchiya, Masamichi Imai, Toshiaki Nitatori, and Tokunori Kimura
- 677 Subcompartmentalization of Extracellular Extravascular Space (EES) Into Permeability and Leaky Space With Local Arterial Input Function (AIF) Results in Improved Discrimination Between High- and Low-Grade Glioma Using Dynamic Contrast-Enhanced (DCE) MRI**
Prativa Sahoo, Ram K.S. Rathore, Rishi Awasthi, Bhaswati Roy, Sanjay Verma, Divya Rathore, Sanjay Behari, Mazhar Husain, Nuzhat Husain, Chandra M. Pandey, Sudipta Mohakud, and Rakesh K. Gupta
- Pelvic Imaging**
- 689 Ovarian Imaging by Magnetic Resonance in Adolescent Girls With Polycystic Ovary Syndrome and Age-Matched Controls**
Michele Brown, Alice S. Park, Rana F. Shayya, Tanya Wolfson, H. Irene Su, and R. Jeffrey Chang
- 694 Diffusion-Weighted Imaging of the Prostate: Comparison of b1000 and b2000 Image Sets for Index Lesion Detection**
Andrew B. Rosenkrantz, Nicole Hindman, Ruth P. Lim, Kasturi Das, James S. Babb, Thais C. Mussi, and Samir S. Taneja
- Physics**
- 701 Combined Parallel and Partial Fourier MR Reconstruction for Accelerated 8-Channel Hyperpolarized Carbon-13 In Vivo Magnetic Resonance Spectroscopic Imaging (MRSI)**
Michael A. Ohliger, Peder E.Z. Larson, Robert A. Bok, Peter Shin, Simon Hu, James Tropp, Fraser Robb, Lucas Carvajal, Sarah J. Nelson, John Kurhanewicz, and Daniel B. Vigneron
- Thoracic Imaging**
- 714 Noninvasive Visualization of Endoleaks After Endovascular Aortic Aneurysm Repair Through Unenhanced MRI With Motion-Sensitized Driven Equilibrium Preparation: Phantom Experiments**
Tsukasa Saida, Kensaku Mori, Hitoshi Yabe, Masashi Shindo, Katsuhiko Nasu, Masanari Shiigai, Hideto Takahashi, and Manabu Minami

722 Subject Tolerance of 7 T MRI Examinations

Maarten J. Versluis, Wouter M. Teeuwisse, Hermien E. Kan, Mark A. van Buchem, Andrew G. Webb, and Matthias J. van Osch

726 Neoadjuvant Chemotherapy Evaluation by MRI Volumetry in Rectal Cancer Followed by Chemoradiation and Total Mesorectal Excision: Initial Experience

Stephanie Nougaret, Shinya Fujii, Helen C. Addley, Frederic Bibeau, Himanshu Pandey, Hisham Mikhael, Caroline Reinhold, David Azria, Philippe Rouanet, and Benoit Gallix

733 Assessment of Intracranial Blood Flow Velocities Using a Computer Controlled Vasoactive Stimulus: A Comparison Between Phase Contrast Magnetic Resonance Angiography and Transcranial Doppler Ultrasonography

Jackie Leung, Amir Behpour, Neil Sokol, Arun Mohanta, and Andrea Kassner

739 Functional MRI in Conscious Rats Using a Chronically Implanted Surface Coil

Chris J. Martin, Aneurin J. Kennerley, Jason Berwick, Michael Port, and John E.W. Mayhew

745 Regional Difference in GABA Levels Between Medial Prefrontal and Occipital Cortices

Jan Willem van der Veen and Jun Shen

751 Pulmonary Perfusion MRI Using Interleaved Variable Density Sampling and Highly Constrained Cartesian Reconstruction (HYCR)

Kang Wang, Mark L. Schiebler, Christopher J. Francois, A. Munoz Del Rio, Ma. Daniela Cornejo, Laura C. Bell, Frank R. Korosec, Jean H. Brittain, James H. Holmes, and Scott K. Nagle