

**CME Article**

---

- CME** 1 **An Introduction to ASL Labeling Techniques**  
*Eric C. Wong*

**Editorial**

---

- 11 **NSF: Still Relevant**  
*Henrik S. Thomsen*

**Original Research**

---

- Pediatric** 13 **Clinical Performance of Contrast Enhanced Abdominal Pediatric MRI With Fast Combined Parallel Imaging Compressed Sensing Reconstruction**  
*Tao Zhang, Shilpy Chowdhury, Michael Lustig, Richard A. Barth, Marcus T. Alley, Thomas Grafendorfer, Paul D. Calderon, Fraser J.L. Robb, John M. Pauly, and Shreyas S. Vasanawala*

- Whole Body** 26 **Whole-Body MRI, Including Diffusion-Weighted Imaging, for Staging Lymphoma: Comparison With CT in a Prospective Multicenter Study**  
*Thomas C. Kwee, Malou A. Vermoolen, Erik A. Akkerman, Marie José Kersten, Rob Fijnheer, Inge Ludwig, Frederik J.A. Beek, Maarten S. van Leeuwen, Marc B. Bierings, Marrie C.A. Bruin, József Zsíros, Henriëtte M.E. Quarles van Ufford, John M.H. de Klerk, Judit Adam, Jaap Stoker, Cuno S. Uiterwaal, and Rutger A.J. Nivelstein*

- Neurologic** 37 **Test-Retest Reliability of fMRI Activation Generated by Different Saccade Tasks**  
*Katerina Lukasova, Jens Sommer, Mariana P. Nucci-da-Silva, Gilson Vieira, Marius Blanke, Frank Bremmer, João R. Sato, Tilo Kircher, and Edson Amaro Jr.*

- 47 **Machine Learning in Preoperative Glioma MRI: Survival Associations by Perfusion-Based Support Vector Machine Outperforms Traditional MRI**  
*Kyrre E. Emblem, Paulina Due-Tonnessen, John K. Hald, Atle Bjornerud, Marco C. Pinho, David Scheie, Lothar R. Schad, Torstein R. Meling, and Frank G. Zoellner*

**Clinical Note**

---

- Neurologic** 55 **Real-Time and Three-Dimensional MRI for Diagnosis of Pharyngoceles**  
*Louisa Traser, Claudia Spahn, Bernhard Richter, Tobias Baumann, Martin Schumacher, and Matthias Echternach*

**Original Research**

---

- Abdomen** 58 **Abdominal MRI at 3.0 T: LAVA-Flex Compared With Conventional Fat Suppression T1-Weighted Images**  
*Xing Hui Li, Jiang Zhu, Xiao Ming Zhang, Yi Fan Ji, Tian Wu Chen, Xiao Hua Huang, Lin Yang, and Nan Lin Zeng*

- 67 **A Novel Semiautomatic Parenchyma Extraction Method for Improved MRI R2\* Relaxometry of Iron Loaded Liver**  
*Yanqiu Feng, Meiyang Feng, Huashuai Gao, Xinyuan Zhang, Xuegang Xin, Jianjin Feng, Wufan Chen, and Taigang He*

- 79 **Age-Related Change in Renal Corticomedullary Differentiation: Evaluation With Noncontrast-Enhanced Steady-State Free Precession (SSFP) MRI With Spatially Selective Inversion Pulse Using Variable Inversion Time**  
*Yasufumi Noda, Akihiko Kanki, Akira Yamamoto, Hiroki Higashi, Daigo Tanimoto, Tomohiro Sato, Atsushi Higaki, Tsutomu Tamada, and Katsuyoshi Ito*

- 84 **Functional Evaluation of Transplanted Kidneys Using Arterial Spin Labeling MRI**  
*Philipp Heusch, Hans-Jörg Wittsack, Dirk Blondin, Alexandra Ljimini, Michael Nguyen-Quang, Petros Martirosian, Hakan Zenginli, Philip Bilk, Patric Kröpil, Till A. Heusner, Gerald Antoch, and Rotem S. Lanzman*

- 90 DCE-MRI of the Liver: Effect of Linear and Nonlinear Conversions on Hepatic Perfusion Quantification and Reproducibility**  
*Shimon Aronhime, Claudia Calcagno, Guido H. Jajamovich, Hadrien Arezki Dyvorne, Philip Robson, Douglas Dieterich, M. Isabel Fiel, Valérie Martel-Laferriere, Manjil Chatterji, Henry Rusinek, and Bachir Taouli*
- 99 Correlation Between Tissue Metabolism and Cellularity Assessed by Standardized Uptake Value and Apparent Diffusion Coefficient in Peritoneal Metastasis**  
*Xue Yu, Elaine Yuen Phin Lee, Vincent Lai, and Queenie Chan*
- 106 Gadoxetate Disodium in Patients With Primary Sclerosing Cholangitis: An Analysis of Hepatobiliary Contrast Excretion**  
*Kristina I. Ringe, Jan Hinrichs, Elmar M. Merkle, Tobias J. Weismüller, Frank Wacker, and Bernhard C. Meyer*

## Technical Note

---

### Abdomen

- 113 Retrospective Assessment of the Utility of an Iron-Based Agent for Contrast-Enhanced Magnetic Resonance Venography In Patients With Endstage Renal Diseases**  
*Mustafa R. Bashir, Rekha Mody, Amy Neville, Ramin Javan, Danielle Seaman, Charles Y. Kim, Rajan T. Gupta, and Tracy A. Jaffe*

## Original Research

---

### Cardiac

- 119 Left Atrial Late Gadolinium Enhancement With Water-Fat Separation: The Importance of Phase-Encoding Order**  
*Jaime L. Shaw, Benjamin R. Knowles, James W. Goldfarb, Warren J. Manning, and Dana C. Peters*
- 126 Usefulness of India Ink Artifact in Steady-State Free Precession Pulse Sequences for Detection and Quantification of Intramyocardial Fat**  
*Giovanni Donato Aquaro, Giancarlo Todiere, Elisabetta Strata, Andrea Barison, Gianluca Di Bella, and Massimo Lombardi*
- 133 Cardiovascular Magnetic Resonance Validation of Fractional Changes in Annulo-Apical Angles and Tricuspid Annular Plane Systolic Excursion for Rapid Assessment of Right Ventricular Systolic Function**  
*Simon A. Zakeri, Rosica Panayotova, Alexander N. Borg, Christopher A. Miller, and Matthias Schmitt*
- 140 MRI Hemodynamic Markers of Progressive Bicuspid Aortic Valve-Related Aortic Disease**  
*Michael D. Hope, Monica Sigovan, S. Jarrett Wrenn, David Saloner, and Petter Dyverfeldt*

### Pelvis

- 146 Repeatability of Diffusion-Weighted Imaging in Rectal Cancer**  
*Martijn Intven, Onne Reerink, and Marielle E.P. Philippens*
- 151 MRI Appearances of Ovarian Serous Borderline Tumor: Pathological Correlation**  
*Shu Hui Zhao, Jin Wei Qiang, Guo Fu Zhang, Orest B. Boyko, Shi Jia Wang, Song Qi Cai, and Li Wang*
- 157 Apparent Diffusion Coefficient (ADC) Measurement in Endometrial Carcinoma: Effect of Region of Interest Methods on ADC Values**  
*Chie Inoue, Shinya Fujii, Sachi Kaneda, Takeru Fukunaga, Toshio Kaminou, Junzo Kigawa, Tasuku Harada, and Toshihide Ogawa*

### Physics

- 162 Optimization of Rapid Acquisition With Relaxation Enhancement (RARE) Pulse Sequence Parameters for <sup>19</sup>F-MRI Studies**  
*Alfonso Mastropietro, Elisabetta De Bernardi, Gian Luca Breschi, Ileana Zucca, Massimo Cametti, Chiara Dolores Soffientini, Marco de Curtis, Giancarlo Terraneo, Pierangelo Mentrangolo, Roberto Spreafico, Giuseppe Resnati, and Giuseppe Baselli*
- 171 T<sub>1</sub> Mapping Using Variable Flip Angle SPGR Data With Flip Angle Correction**  
*Gilad Liberman, Yoram Louzoun, and Dafna Ben Bashat*
- 181 Fast Image Reconstruction With L2-Regularization**  
*Berkin Bilgic, Itthi Chatnuntaweck, Audrey P. Fan, Kawin Setsompop, Stephen F. Cauley, Lawrence L. Wald, and Elfar Adalsteinsson*

## Technical Note

---

### Physics

#### **192 Regional Perfusion Imaging Using pTILT**

*Cheng Ouyang and Bradley P. Sutton*

---

### Original Research

### Thoracic

#### **200 Accuracy of Diffusion-Weighted (DW) MRI With Background Signal Suppression (MR-DWIBS) in Diagnosis of Mediastinal Lymph Node Metastasis of Nonsmall-Cell Lung Cancer (NSCLC)**

*Liang Xu, Jiakai Tian, Yuhui Liu, and Chuanfu Li*

### Vascular

#### **206 Real-Time Flow MRI of the Aorta at a Resolution of 40 msec**

*Arun Joseph, Johannes T. Kowallick, Klaus-Dietmar Merboldt, Dirk Voit, Sebastian Schaetz, Shuo Zhang, Jan M. Sohns, Joachim Lotz, and Jens Frahm*

#### **214 Reduction of Motion Artifacts in Carotid MRI Using Free-Induction Decay Navigators**

*Petter Dyverfeldt, Vibhas S. Deshpande, Tobias Kober, Gunnar Krueger, and David Saloner*

---

## Technical Note

### Vascular

#### **221 Fully Automated Tool to Identify the Aorta and Compute Flow Using Phase-Contrast MRI: Validation and Application in a Large Population Based Study**

*Akshay Goel, Roderick McColl, Kevin S. King, Anthony Whittemore, and Ronald M. Peshock*

### Musculoskeletal

#### **229 Feasibility of Three-Dimensional MRI of Proximal Femur Microarchitecture at 3 Tesla Using 26 Receive Elements Without and With Parallel Imaging**

*Gregory Chang, Cem M. Deniz, Stephen Honig, Chamith S. Rajapakse, Kenneth Egol, Ravinder R. Regatte, and Ryan Brown*

#### **239 Manual Segmentation of Individual Muscles of the Quadriceps Femoris Using MRI: A Reappraisal**

*Yoann Barnouin, Gillian Butler-Browne, Thomas Voit, David Reversat, Noura Azzabou, Gaëlle Leroux, Anthony Behin, Jamie S. McPhee, Pierre G. Carlier, and Jean-Yves Hogrel*

---

## Book Review

#### **248 Measurements and Classifications in Musculoskeletal Radiology**

*Elaine S. Gould*

Volume 40, Number 1 was mailed the week of June 23, 2014