CME Article

935 Real-Time MRI Guidance of Cardiac Interventions
Adrienne E. Campbell-Washburn, Mohammad A. Tavallaei, Mihaela Pop, Elena K. Grant, Henry Chubb, Kawai Rhode, and Graham A. Wright

Review Article

951 Clinical Quantitative Susceptibility Mapping (QSM): Biometal Imaging and Its Emerging Roles in Patient Care

972 Advances in MRI Around Metal
Pia M. Jungmann, Christoph A. Agten, Christian W. Pfirrmann, and Reto Sutter

Original Research

Chest

992 Quantification of Neonatal Lung Parenchymal Density via Ultrashort Echo Time MRI With Comparison to CT
Nara S. Higano, Robert J. Fleck, David R. Spielberg, Laura L. Walkup, Andrew D. Hahn, Robert P. Thomen, Stephanie L. Merhar, Paul S. Kingma, Jean A. Tkach, Sean B. Fain, and Jason C. Woods

1001 Is It Better to Include Necrosis in Apparent Diffusion Coefficient (ADC) Measurements? The Necrosis/Wall ADC Ratio to Differentiate Malignant and Benign Necrotic Lung Lesions: Preliminary Results
Adem Karaman, Irmak Durur-Subasi, Fatih Alper, Afak Durur-Karakaya, Mahmut Subasi, and Metin Akgun

Head and Neck

1007 Slip Interface Imaging Based on MR-Elastography Preoperatively Predicts Meningioma—Brain Adhesion
Ziying Yin, Joshua D. Hughes, Kevin J. Glaser, Armando Manduca, Jamie Van Gompel, Michael J. Link, Anthony Romano, Richard L. Ehman, and John Huston III

Breast

1017 Identifying Relations Between Imaging Phenotypes and Molecular Subtypes of Breast Cancer: Model Discovery and External Validation
Jia Wu, Xiaoli Sun, Jeff Wang, Yi Cui, Fumi Kato, Hiroki Shirato, Debra M. Ikeda, and Ruijiang Li

1028 Apparent Diffusion Coefficient Values May Help Predict Which MRI-Detected High-Risk Breast Lesions Will Upgrade at Surgical Excision
Safia Cheeney, Habib Rahbar, Brian N. Dontchos, Sara H. Javid, Mara H. Rendi, and Savannah C. Partridge

1037 Preoperative MRI Features Associated With Lymphovascular Invasion in Node-Negative Invasive Breast Cancer: A Propensity-Matched Analysis
Hyejin Cheon, Hye Jung Kim, So Mi Lee, Seung Hyun Cho, Kyung Min Shin, Gab Chul Kim, Ji Young Park, and Won Hwa Kim

Vascular

1045 Simultaneous Noncontrast Angiography and Intraplaque Hemorrhage (SNAP) Imaging: Comparison With Contrast-Enhanced MR Angiography for Measuring Carotid Stenosis
Hongge Shu, Jie Sun, Thomas S. Hatsukami, Niranjan Balu, Daniel S. Hippe, Haining Liu, Ted R. Kohler, Wenzhen Zhu, and Chun Yuan

Technical Development

Vascular

1053 Vessel Wall and Adventitial DCE-MRI Parameters Demonstrate Similar Correlations With Carotid Plaque Microvasculature on Histology
Original Research

Cardiac

1060 Robust Universal Nonrigid Motion Correction Framework for First-Pass Cardiac MR Perfusion Imaging
Mitchel Benovoy, Matthew Jacobs, Farida Cheriet, Nagib Dahdah, Andrew E. Arai, and Li-Yueh Hsu

1073 Native T_1 Value in the Remote Myocardium Is Independently Associated With Left Ventricular Dysfunction in Patients With Prior Myocardial Infarction
Shiro Nakamori, Javid Alakbarli, Steven Bellin, Shweta R. Motiwala, Gifty Addae, Warren J. Manning, and Reza Nezafat

Technical Development

Cardiac

1082 Community Delivery of Semiautomated Fractal Analysis Tool in Cardiac MR for Trabecular Phenotyping
Gabriella Captur, Dina Radenkovic, Chunming Li, Yu Liu, Nay Aung, Filip Zemrak, Catalina Tobon-Gomez, Xuexin Gao, Perry M. Elliott, Steffen E. Petersen, David A. Bluemke, Matthias G. Friedrich, and James C. Moon

Original Research

Abdomen

1089 Novel Biparametric MRI and Targeted Biopsy Improves Risk Stratification in Men With a Clinical Suspicion of Prostate Cancer (IMPROD Trial)
Ivan Jambor, Peter J. Boström, Pekka Taimen, Kari Syvänen, Esa Kähkönen, Markku Kallajoki, Ileana Montoya Perez, Tommi Kauko, Jaakko Matomäki, Otto Ettala, Harri Merisaari, Aida Kivinemi, Peter B. Dean, and Hannu J. Aronen

1096 MR Enterography in Nonresponsive Adult Celiac Disease: Correlation With Endoscopic, Pathologic, Serologic, and Genetic Features
Amir Reza Radmard, Amir Pejman Hashemi Taheri, Elham Salehian Nik, Soheil Koorkari, Shadi Kolahdoozan, Babak Mirminachi, Masoud Sotoudeh, Golnaz Ekhlasi, Reza Malekzadeh, and Bijan Shahbazkhani

Musculoskeletal

1115 MR Elastography Measurement of the Effect of Passive Warmup Prior to Eccentric Exercise on Thigh Muscle Mechanical Properties
Paul Kennedy, Lewis J. Macgregor, Eric Barnhill, Curtis L. Johnson, Michael Perrins, Angus Hunter, Colin Brown, Edwin J.R. van Beek, and Neil Roberts

1128 Medial Femur T_2 Z-scores Predict the Probability of Knee Structural Worsening Over 4–8 years: Data From the Osteoarthritis Initiative

Pediatrics

1149 Liver Histology and Diffusion-Weighted MRI in Children With Nonalcoholic Fatty Liver Disease: A MAGNET Study
Paul Manning, Paul Murphy, Kang Wang, Jonathan Hooker, Tanya Wolfson, Michael S. Middleton, Kimberly P. Newton, Cynthia Behling, Hannah I. Awai, Janis Durelle, Melissa N. Paiz, Jorge E. Angeles, Diana De La Pena, J. Allen McCutchan, Jeffrey B. Schwimmer, and Claude B. Sirin

Neuro

1159 BOLD-fMRI With Median Nerve Electrical Stimulation Predict Hemodynamic Improvement After Revascularization in Patients With Moyamoya Disease
Peng-Gang Qiao, Cong Han, Tianyi Qian, Gong-Jie Li, and Hong Yin

1167 Impact of Vessel Wall Lesions and Vascular Stenoses on Cerebrovascular Reactivity in Patients With Intracranial Stenotic Disease
Petrice M. Cogswell, Taylor L. Davis, Megan K. Strother, Carlos C. Faraco, Allison O. Scott, Lori C. Jordan, Matthew R. Fusco, Blaise deB Frederick, Jeroen Hendrikse, and Manus J. Donahue
1177  **Assessment of Intracranial Meningioma-Associated Calcifications Using Susceptibility-Weighted MRI**  
Lisa C. Adams, Sarah M. Böker, Yvonne Y. Bender, Eva M. Fallenberg, Moritz Wagner, Ralph Buchert, Bernd Hamm, and Marcus R. Makowski

1187  **Intravoxel Incoherent Motion MRI in the Brain: Impact of the Fitting Model on Perfusion Fraction and Lesion Differentiability**  

1200  **Intracellular pH Measured by $^{31}$P-MR-Spectroscopy Might Predict Site of Progression in Recurrent Glioblastoma Under Antiangiogenic Therapy**  
Katharina J. Wenger, Elke Hattingen, Kea Franz, Joachim P. Steinbach, Oliver Bähr, and Ulrich Pilatus

1209  **Topologically Preserving Straightening of Spinal Cord MRI**  
Benjamin De Leener, Gabriel Mangeat, Sara Dupont, Allan R. Martin, Virginie Callot, Nikola Stikov, Michael G. Fehlings, and Julien Cohen-Adad

**Pelvis**

1220  **Benign Prostatic Hyperplasia After Prostatic Arterial Embolization in a Canine Model: A 3T Multiparametric MRI and Whole-Mount Step-Section Pathology Correlated Longitudinal Study**  
Basen Li, Anhui Xu, Nan Wang, Xiangde Min, Zhaoyan Feng, Ming Deng, Liang Li, Jie Cai, Zhen Kang, Kehua Jiang, Dong Kuang, and Liang Wang

**Book Review**

1230  **Diffusion Weighted and Diffusion Tensor Imaging: A Clinical Guide**  
Jean-Philippe Galons

**Letters to the Editor**

1232  **Reply to “Pulmonary Lesion Characterization Using Diffusion-Weighted Imaging: Attention Should Be Paid to Patient Inclusion Criteria and Scanning Parameters”**  
Furkan Ufuk

1233  **Pulmonary Lesion Characterization Using Diffusion Weighted Imaging: Attention Should Be Paid to Patient Inclusion Criteria and Scanning Parameters**  
Qi Wan, Yudong Yu, Yingying Bao, Qiang Lei, Qiao Zou, Yingshi Deng, and Xinchun Li

**Erratum**

1234  **Erratum**

Volume 46, Number 4 was mailed the week of September 18, 2017