

Reviews

- 8 **Radial Planes in Hip Magnetic Resonance Imaging: Techniques, Applications, and Perspectives**
Yan-Li Chen and Wei Chen
- 21 **Best Practice for MRI Diagnostic Accuracy Research With Lessons and Examples from the LI-RADS Individual Participant Data Group**
Christian B. van der Pol, Andreu F. Costa, Eric Lam, Haben Dawit, Mustafa R. Bashir, and Matthew D. F. McInnes
- 29 **Designing Clinical MRI for Enhanced Workflow and Value**
Dana J. Lin, Ankur M. Doshi, Jan Fritz, and Michael P. Recht
- 40 **Imaging Interstitial Fluid With MRI: A Narrative Review on the Associations of Altered Interstitial Fluid With Vascular and Neurodegenerative Abnormalities**
Gerhard S. Drenthen, Elles P. Elschot, Noa van der Knaap, Daniel Uher, Paulien H. M. Voorter, Walter H. Backes, Jacobus F. A. Jansen, and Merel M. van der Thiel

Research Articles

- Pelvis**
- 54 **Detecting Muscle Invasion of Bladder Cancer: An Application of Diffusion Kurtosis Imaging Ratio and Vesical Imaging-Reporting and Data System**
Cai Qin, Qi Tian, Hui Zhou, Yihan Qin, Siyu Zhou, Yutao Wu, Tianjiao E, Shufeng Duan, Yueyue Li, Xiaolin Wang, Zhigang Chen, Guihua Zheng, and Feng Feng
- Editorial**
- 65 **Editorial for "Detecting Muscle Invasion of Bladder Cancer: An Application of Diffusion Kurtosis Imaging Ratio and Vesical Imaging-Reporting and Data System"**
Martin R. Prince and Hiram Shaish
- 67 **Oscillating Gradient Diffusion-Weighted MRI for Risk Stratification of Uterine Endometrial Cancer**
Fumitaka Ejima, Yoshihiko Fukukura, Kiyohisa Kamimura, Masatoyo Nakajo, Takuro Ayukawa, Fumiko Kanzaki, Shintaro Yanazume, Hiroaki Kobayashi, Ikumi Kitazono, Hiroshi Imai, Thorsten Feiweier, and Takashi Yoshiura
- Editorial**
- 78 **Editorial for "Oscillating Gradient Diffusion-Weighted MRI for Risk Stratification of Uterine Endometrial Cancer"**
Kylie Yeung, Ferenc E. Mózes, and James T. Grist
- Breast**
- 80 **Automated Breast Density Assessment in MRI Using Deep Learning and Radiomics: Strategies for Reducing Inter-Observer Variability**
Xueping Jing, Mirjam Wielema, Andrea G. Monroy-Gonzalez, Thom R.G. Stams, Shekar V.K. Mahesh, Matthijs Oudkerk, Paul E. Sijens, Monique D. Dorrius, and Peter M.A. van Ooijen
- Editorial**
- 92 **Editorial for "Automated Breast Density Assessment in MRI Using Deep Learning and Radiomics: Strategies for Reducing Inter-Observer Variability"**
Pegah Khosravi
- Vascular**
- 94 **The Characteristics of Extracranial Internal Carotid Artery and Their Relationship With Surgical Outcomes in Patients With Moyamoya Disease: A Combined Head-and-Neck Vessel Wall MR Imaging Study**
Mingming Lu, Shitong Liu, Peng Peng, Dongqing Liu, Yuan Liu, Fugeng Sheng, Fangbin Hao, Xihai Zhao, Cong Han, Yao He, Fei Yuan, Hongtao Zhang, and Jianming Cai
- 103 **Thoracic Aortic Volume as a Predictor of Cardiovascular Events: The Multi-Ethnic Study of Atherosclerosis**
Sreeja Sanampudi, Gisela Teixidó-Turà, Tomoki Fujii, Chikara Noda, Alban Redhueil, Colin O. Wu, W. Gregory Hundley, Antoinette S. Gomes, David A. Bluemke, João A.C. Lima, and Bharath Ambale-Venkatesh
- Editorial**
- 114 **Editorial for "Thoracic Aortic Volume as a Predictor of Cardiovascular Events: The Multi-Ethnic Study of Atherosclerosis"**
Qianqian Lin and Ying Fu
- Chest**
- 116 **Longitudinal Evaluation of Bronchial Changes in Cystic Fibrosis Patients Undergoing Elexacaftor/Tezacaftor/Ivacaftor Therapy Using Lung MRI With Ultrashort Echo-Times**
Mathieu David, Ilyes Benlala, Stephanie Bui, Thomas Benkert, Patrick Berger, François Laurent, Julie Macey, and Gael Dournes

| | | |
|------------------------|-----|--|
| | 125 | Amide Proton Transfer-Weighted Imaging and Multiple Models Intravoxel Incoherent Motion-Based ¹⁸F-FDG PET/MRI for Predicting Progression-Free Survival in Non-Small Cell Lung Cancer <i>Nan Meng, Han Jiang, Jing Sun, Lei Shen, Xinhui Wang, Yihang Zhou, Yaping Wu, Fangfang Fu, Jianmin Yuan, Yang Yang, Zhe Wang, and Meiyun Wang</i> |
| <i>Editorial</i> | 136 | Editorial for "Amide Proton Transfer-Weighted Imaging and Multiple Models Intravoxel Incoherent Motion Based ¹⁸F-FDG PET/MRI for Predicting Progression-Free Survival in Non-Small Cell Lung Cancer" <i>Bang-Bin Chen and Yu-Shen Huang</i> |
| Head and Neck | 138 | Investigating the Association of Carotid Atherosclerotic Plaque MRI Features and Silent Stroke After Carotid Endarterectomy <i>Ran Huo, Wanzhong Yuan, Huimin Xu, Dandan Yang, Huiyu Qiao, Hualu Han, Tao Wang, Ying Liu, Huishu Yuan, and Xihai Zhao</i> |
| <i>Editorial</i> | 150 | Editorial for "Investigating the Association of Carotid Atherosclerotic Plaque MRI Features and Silent Stroke After Carotid Endarterectomy" <i>Elin Good, Linda Bilos, and Petter Dyverfeldt</i> |
| Pediatrics | 152 | Population Atlas Analysis of Emerging Brain Structural Connections in the Human Fetus <i>Camilo Calixto, Fedel Machado-Rivas, Davood Karimi, Clemente Velasco-Annis, Maria Camila Cortes-Albornoz, Onur Afacan, Simon K. Warfield, Ali Gholipour, and Camilo Jaimes</i> |
| Technical | 161 | In Vivo Measurement of Rat Brain Water Content at 9.4 T MR Using Super-Resolution Reconstruction: Validation With Ex Vivo Experiments <i>Dennis C. Thomas, Ana-Maria Oros-Peusquens, Michael Schöneck, Antje Willuweit, Zaheer Abbas, Markus Zimmermann, Jörg Felder, Avdo Celik, and Nadim Joni Shah</i> |
| <i>Editorial</i> | 173 | Editorial for "In Vivo Measurement of Rat Brain Water Content at 9.4 T Using Super-Resolution Reconstruction: Validation With Ex Vivo Experiments" <i>Rita G. Nunes</i> |
| Musculoskeletal | 175 | Time-Resolved Quantification of Patellofemoral Cartilage Deformation in Response to Loading and Unloading via Dynamic MRI With Prospective Motion Correction <i>Philipp Rovedo, Hans Meine, Patrick Hucker, Elham Taghizadeh, Kaywan Izadpanah, Maxim Zaitsev, and Thomas Lange</i> |
| <i>Editorial</i> | 184 | Editorial for "Time-Resolved Quantification of Patellofemoral Cartilage Deformation in Response to Loading and Unloading via Dynamic MRI with Prospective Motion Correction" <i>Usha Sinha and Shantanu Sinha</i> |
| | 186 | Effects of T_{1ρ} Characteristics of Load-Bearing Hip Cartilage on Bilateral Knee Patellar Cartilage Subregions: Subjects With None to Moderate Radiographic Hip Osteoarthritis <i>Rupsa Bhattacharjee, Rafeek Thahakoya, Johanna Luitjens, Misung Han, Koren E. Roach, Fei Jiang, Richard B. Souza, Valentina Pedoia, and Sharmila Majumdar</i> |
| <i>Editorial</i> | 203 | Editorial for "Effects of T_{1ρ} Characteristics of Load-Bearing Hip Cartilage on Bilateral Knee Patellar Cartilage Subregions: Subjects with None to Moderate Radiographic Hip Osteoarthritis" <i>Tamotsu Kamishima</i> |
| | 205 | Whole Muscle and Single Motor Unit Twitch Profiles in a Healthy Adult Cohort Assessed With Phase Contrast Motor Unit MRI (PC-MUMRI) <i>Matthew G. Birkbeck, Linda Heskamp, Ian S. Schofield, Julie Hall, Avan A. Sayer, Roger G. Whittaker, and Andrew M. Blamire</i> |
| <i>Editorial</i> | 218 | Editorial for "Whole Muscle and Single Motor Unit Twitch Profiles in a Healthy Adult Cohort Assessed With Phase Contrast Motor Unit MRI (PC-MUMRI)" <i>Martin Schwartz</i> |
| <i>Editorial</i> | 220 | Editorial for "Quantitative Assessment of Peripheral Oxidative Metabolism With a New Dynamic ¹H MRI: A Pilot Study in People With and Without Diabetes Mellitus" <i>Graham J. Kemp</i> |
| Abdomen | 222 | Effects of Breathing Patterns on Amide Proton Transfer MRI in the Kidney: A Preliminary Comparative Study in Healthy Volunteers and Patients With Tumors <i>X. Wang, Y. Y. Cao, Y. Jiang, M. Jia, G. Tian, C. Q. Bu, N. Zhao, X. Z. Yue, Z. W. Shen, Y. Ji, and Y. D. Han</i> |

- 231 **Magnetic Resonance Deep Learning Radiomic Model Based on Distinct Metastatic Vascular Patterns for Evaluating Recurrence-Free Survival in Hepatocellular Carcinoma**
Cheng Zhang, Li-di Ma, Xiao-lan Zhang, Cai Lei, Sha-sha Yuan, Jian-peng Li, Zhi-jun Geng, Xin-ming Li, Xian-yue Quan, Chao Zheng, Ya-yuan Geng, Jie Zhang, Qiao-li Zheng, Jing Hou, Shu-yi Xie, Liang-he Lu, and Chuan-miao Xie
- Editorial* 243 **Editorial for "Magnetic Resonance Deep Learning Radiomic Model Based on Distinct Metastatic Vascular Patterns for Evaluating Recurrence-Free Survival in Hepatocellular Carcinoma"**
Pengfei Yang, Zuozhen Cao, and Xi Hu
- 245 **Multi-Parametric MRI for Evaluating Variations in Renal Structure, Function, and Endogenous Metabolites in an Animal Model With Acute Kidney Injury Induced by Ischemia Reperfusion**
Quan Tao, Qianqian Zhang, Ziqi An, Zelong Chen, and Yanqiu Feng
- Editorial* 256 **Editorial for "Multi-Parametric MRI for Evaluating Variations in Renal Structure, Function, and Endogenous Metabolites in an Animal Model With Acute Kidney Injury Induced by Ischemia Reperfusion"**
Jianpan Huang and Kannie W.Y. Chan
- Neuro* 258 **Global and Regional Deep Learning Models for Multiple Sclerosis Stratification From MRI**
Llucia Coll, Deborah Pareto, Pere Carbonell-Mirabent, Álvaro Cobo-Calvo, Georgina Arrambide, Ángela Vidal-Jordana, Manuel Comabella, Joaquín Castilló, Breogán Rodríguez-Acevedo, Ana Zabalza, Ingrid Galán, Luciana Midaglia, Carlos Nos, Cristina Auger, Manel Alberich, Jordi Río, Jaume Sastre-Garriga, Arnau Oliver, Xavier Montalban, Àlex Rovira, Mar Tintoré, Xavier Lladó, and Carmen Tur
- 268 **Associations of Alzheimer's Disease Pathology and Small Vessel Disease With Cerebral White Matter Degeneration: A Tract-Based MR Diffusion Imaging Study**
Kaicheng Li, Shuyue Wang, Xiao Luo, Qingze Zeng, Xiaocao Liu, Luwei Hong, Jixuan Li, Hui Hong, Xiaopei Xu, Yao Zhang, Yeerfan Jiaerken, Ruiting Zhang, Linyun Xie, Shan Xu, Xinyi Zhang, Yanxing Chen, Zhirong Liu, Minming Zhang, and Peiyu Huang
- Editorial* 279 **Editorial for "Associations of Alzheimer's Disease Pathology and Small Vessel Disease With Cerebral White Matter Degeneration: A Tract-Based MR Diffusion Imaging Study"**
Harald E. Möller
- 281 **MRI-Based Radiomics Approach for Differentiating Juvenile Myoclonic Epilepsy from Epilepsy with Generalized Tonic–Clonic Seizures Alone**
Yongsik Sim, Seung-Koo Lee, Min Kyung Chu, Won-Joo Kim, Kyoung Heo, Kyung Min Kim, and Beomseok Sohn
- Editorial* 289 **Editorial for "MRI-Based Radiomics Approach for Differentiating Juvenile Myoclonic Epilepsy From Epilepsy With Generalized Tonic–Clonic Seizures Alone"**
Matthew D. Lee and Rajan Jain
- 291 **Quantitative MRI Analysis of Brachial Plexus and Limb-Girdle Muscles in Upper Extremity Onset Amyotrophic Lateral Sclerosis**
Weiqiang Liang, Yang Liu, Yali Zhao, Yu Chen, Yangyang Yin, Linhan Zhai, Zehui Li, Zhenxiang Gong, Jing Zhang, and Min Zhang
- Editorial* 302 **Editorial for: "Quantitative MRI Analysis of Brachial Plexus and Limb-Girdle Muscles in Upper Extremity Onset Amyotrophic Lateral Sclerosis"**
Robert Rehmman
- 304 **Altered Brain Function in Pediatric Patients With Complete Spinal Cord Injury: A Resting-State Functional MRI Study**
Ling Wang, Shengqiang Wang, Weimin Zheng, Beining Yang, Yanhui Yang, Xin Chen, Qian Chen, Xuejing Li, Yongsheng Hu, Jubao Du, Wen Qin, Jie Lu, and Nan Chen
- Editorial* 314 **Editorial for "Altered Brain Function in Pediatric Patients With Complete Spinal Cord Injury: A Resting-State Functional MRI Study"**
Rui Duarte Armindo and Moss Y. Zhao
- 316 **Quantitative MRI of Gd-DOTA Accumulation in the Mouse Brain After Intraperitoneal Administration: Validation by Mass Spectrometry**
Anthony Tessier, Anthony J. Ruze, Isabelle Varlet, Estelle M.H. Laïb, Emilien Royer, Monique Bernard, Angèle Viola, and Teodora-Adriana Perles-Barbacaru

- Editorial** 325 **Editorial for “Quantitative MRI of Gd-DOTA Accumulation in the Mouse Brain After Intraperitoneal Administration: Validation by Mass Spectrometry”**
Sairam Geethanath
- 327 **Altered Neurovascular Coupling in Patients With Mitochondrial Myopathy, Encephalopathy, Lactic Acidosis, and Stroke-Like Episodes (MELAS): A Combined Resting-State fMRI and Arterial Spin Labeling Study**
Rong Wang, Xueling Liu, Chong Sun, Bin Hu, Liqin Yang, Yiru Liu, Daoying Geng, Jie Lin, and Yuxin Li
- Editorial** 337 **Editorial for “Altered Neurovascular Coupling in Patients With Mitochondrial Myopathy, Encephalopathy, Lactic Acidosis and Stroke-Like Episodes (MELAS): A Combined Resting-State fMRI and Arterial Spin Labeling Study”**
Tae Kim
- Cardiac** 339 **Additional Impact of Aortic Regurgitation on Left Ventricular Strain and Remodeling in Essential Hypertension Patients Evaluated Using MRI**
Wei-Feng Yan, Zhi-Gang Yang, Xue-Ming Li, Si-Shi Tang, Ying-Kun Guo, Li Jiang, Chen-Yan Min, and Yuan Li
- 350 **Biventricular Dysfunction and Ventricular Interdependence in Patients With Pulmonary Hypertension: A 3.0-T Cardiac MRI Feature Tracking Study**
Han Fang, Jin Wang, Rui Shi, Yuan Li, Xue-Ming Li, Yue Gao, Li-Ting Shen, Wen-Lei Qian, Li Jiang, and Zhi-Gang Yang
- Editorial** 363 **Editorial for “Biventricular Dysfunction and Ventricular Interdependence in Patients With Pulmonary Hypertension: A 3.0-T Cardiac MRI Feature Tracking Study”**
Farah Cadour, Joevin Sourdon, and Stanislas Rapacchi
- 365 **Reference Values for Fetal Cardiac Dimensions, Volumes, Ventricular Function and Left Ventricular Longitudinal Strain Using Doppler Ultrasound Gated Cardiac Magnetic Resonance Imaging in Healthy Third Trimester Fetuses**
Prashant K. Minocha, Erin K. Englund, Richard M. Friesen, Takashi Fujiwara, Sarah A. Smith, Mariana L. Meyers, Lorna P. Browne, and Alex J. Barker
- Editorial** 375 **Editorial for “Reference Values for Fetal Cardiac Dimensions, Volumes, Ventricular Function and Left Ventricular Longitudinal Strain Using Doppler Ultrasound Gated Cardiac Magnetic Resonance Imaging in Healthy Third Trimester Fetuses”**
Rosario Lopez Gonzalez and William M. Holmes
- 377 **Assessment of Pulmonary Arteries Hemodynamics and Its Relationship With Cardiac Remodeling and Myocardial Fibrosis in Athletes With Four-Dimensional Flow MRI**
Mingsong Tang, Fan Zhang, Binyao Liu, Qian Liu, Wanying Qi, Min Tang, Yong Luo, and Jing Chen
- Editorial** 388 **Editorial for “Assessment of Pulmonary Arteries Hemodynamics and Its Relationship With Cardiac Remodeling and Myocardial Fibrosis in Athletes With Four-Dimensional Flow MRI”**
Robert R. Edelman and Amit Pursnani
- Commentary** 390 **Chatbots for Literature Review and Research—Insights from a Panel Discussion at the Annual Meeting of the International Society of Magnetic Resonance in Medicine (ISMRM) 2023**
Grace McIlvain, Thekla H. Oechtering, Ummul Afia Shammii, Rajesh Bhayana, Jana Hutter, Linda Moy, and Mark Schweitzer