

Michael S Middleton

List of Publications by Year in descending order

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61
papers

5,758
citations

126907

33
h-index

123424

61
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61
all docs

61
docs citations

61
times ranked

5161
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>In vivo</i> characterization of the liver fat ¹ H MR spectrum. <i>NMR in Biomedicine</i> , 2011, 24, 784-790.	2.8	452
2	Utility of magnetic resonance imaging versus histology for quantifying changes in liver fat in nonalcoholic fatty liver disease trials. <i>Hepatology</i> , 2013, 58, 1930-1940.	7.3	434
3	Nonalcoholic Fatty Liver Disease: MR Imaging of Liver Proton Density Fat Fraction to Assess Hepatic Steatosis. <i>Radiology</i> , 2013, 267, 422-431.	7.3	410
4	Relaxation effects in the quantification of fat using gradient echo imaging. <i>Magnetic Resonance Imaging</i> , 2008, 26, 347-359.	1.8	356
5	Nonalcoholic Fatty Liver Disease: Diagnostic and Fat-Grading Accuracy of Low-Flip-Angle Multiecho Gradient-Recalled-Echo MR Imaging at 1.5 T. <i>Radiology</i> , 2009, 251, 67-76.	7.3	287
6	Estimation of Hepatic Proton-Density Fat Fraction by Using MR Imaging at 3.0 T. <i>Radiology</i> , 2011, 258, 749-759.	7.3	259
7	Accuracy of MR Imaging-estimated Proton Density Fat Fraction for Classification of Dichotomized Histologic Steatosis Grades in Nonalcoholic Fatty Liver Disease. <i>Radiology</i> , 2015, 274, 416-425.	7.3	239
8	GS-0976 Reduces Hepatic Steatosis and Fibrosis Markers in Patients With Nonalcoholic Fatty Liver Disease. <i>Gastroenterology</i> , 2018, 155, 1463-1473.e6.	1.3	238
9	Linearity, Bias, and Precision of Hepatic Proton Density Fat Fraction Measurements by Using MR Imaging: A Meta-Analysis. <i>Radiology</i> , 2018, 286, 486-498.	7.3	225
10	Agreement Between Magnetic Resonance Imaging Proton Density Fat Fraction Measurements and Pathologist-Assigned Steatosis Grades of Liver Biopsies From Adults With Nonalcoholic Steatohepatitis. <i>Gastroenterology</i> , 2017, 153, 753-761.	1.3	209
11	Effect of PRESS and STEAM sequences on magnetic resonance spectroscopic liver fat quantification. <i>Journal of Magnetic Resonance Imaging</i> , 2009, 30, 145-152.	3.4	201
12	Effect of a Low Free Sugar Diet vs Usual Diet on Nonalcoholic Fatty Liver Disease in Adolescent Boys. <i>JAMA - Journal of the American Medical Association</i> , 2019, 321, 256.	7.4	163
13	Acetyl-CoA Carboxylase Inhibitor GS-0976 for 12 Weeks Reduces Hepatic De Novo Lipogenesis and Steatosis in Patients With Nonalcoholic Steatohepatitis. <i>Clinical Gastroenterology and Hepatology</i> , 2018, 16, 1983-1991.e3.	4.4	153
14	Longitudinal correlations between MRE, MRI-PDFF, and liver histology in patients with non-alcoholic steatohepatitis: Analysis of data from a phase II trial of selonsertib. <i>Journal of Hepatology</i> , 2019, 70, 133-141.	3.7	149
15	Magnetic resonance imaging and liver histology as biomarkers of hepatic steatosis in children with nonalcoholic fatty liver disease. <i>Hepatology</i> , 2015, 61, 1887-1895.	7.3	138
16	Reproducibility of MRI-determined proton density fat fraction across two different MR scanner platforms. <i>Journal of Magnetic Resonance Imaging</i> , 2011, 34, 928-934.	3.4	130
17	Prevalence of Nonalcoholic Fatty Liver Disease in Children with Obesity. <i>Journal of Pediatrics</i> , 2019, 207, 64-70.	1.8	130
18	Magnetic Resonance Imaging Proton Density Fat Fraction Associates With Progression of Fibrosis in Patients With Nonalcoholic Fatty Liver Disease. <i>Gastroenterology</i> , 2018, 155, 307-310.e2.	1.3	113

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19	Diagnostic accuracy of magnetic resonance imaging hepatic proton density fat fraction in pediatric nonalcoholic fatty liver disease. <i>Hepatology</i> , 2018, 67, 858-872.	7.3	112
20	Magnetic resonance elastography measured shear stiffness as a biomarker of fibrosis in pediatric nonalcoholic fatty liver disease. <i>Hepatology</i> , 2017, 66, 1474-1485.	7.3	103
21	In Children With Nonalcoholic Fatty Liver Disease, Cysteamine Bitartrate Delayed Release Improves Liver Enzymes but Does Not Reduce Disease Activity Scores. <i>Gastroenterology</i> , 2016, 151, 1141-1154.e9.	1.3	100
22	Spatial distribution of MRI-determined hepatic proton density fat fraction in adults with nonalcoholic fatty liver disease. <i>Journal of Magnetic Resonance Imaging</i> , 2014, 39, 1525-1532.	3.4	85
23	Imaging Outcomes of Liver Imaging Reporting and Data System Version 2014 Category 2, 3, and 4 Observations Detected at CT and MR Imaging. <i>Radiology</i> , 2016, 281, 129-139.	7.3	85
24	Automated CT and MRI Liver Segmentation and Biometry Using a Generalized Convolutional Neural Network. <i>Radiology: Artificial Intelligence</i> , 2019, 1, 180022.	5.8	78
25	Diagnosis of fatty liver with MR imaging. <i>Journal of Magnetic Resonance Imaging</i> , 1992, 2, 463-471.	3.4	60
26	Intra- and inter-examination repeatability of magnetic resonance spectroscopy, magnitude-based MRI, and complex-based MRI for estimation of hepatic proton density fat fraction in overweight and obese children and adults. <i>Abdominal Imaging</i> , 2015, 40, 3070-3077.	2.0	57
27	Associations between histologic features of nonalcoholic fatty liver disease (NAFLD) and quantitative diffusion-weighted MRI measurements in adults. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 41, 1629-1638.	3.4	57
28	Accuracy and the effect of possible subject-based confounders of magnitude-based MRI for estimating hepatic proton density fat fraction in adults, using MR spectroscopy as reference. <i>Journal of Magnetic Resonance Imaging</i> , 2016, 43, 398-406.	3.4	52
29	Inter-examination precision of magnitude-based MRI for estimation of segmental hepatic proton density fat fraction in obese subjects. <i>Journal of Magnetic Resonance Imaging</i> , 2014, 39, 1265-1271.	3.4	47
30	Intravenous Gadoxetate Disodium Administration Reduces Breath-holding Capacity in the Hepatic Arterial Phase: A Multi-Center Randomized Placebo-controlled Trial. <i>Radiology</i> , 2017, 282, 361-368.	7.3	46
31	In vivo triglyceride composition of abdominal adipose tissue measured by ¹ H MRS at 3T. <i>Journal of Magnetic Resonance Imaging</i> , 2017, 45, 1455-1463.	3.4	44
32	Effect of flip angle on the accuracy and repeatability of hepatic proton density fat fraction estimation by complex data-based, T1-independent, T2*-corrected, spectrum-modeled MRI. <i>Journal of Magnetic Resonance Imaging</i> , 2014, 39, 440-447.	3.4	43
33	Linearity and Bias of Proton Density Fat Fraction as a Quantitative Imaging Biomarker: A Multicenter, Multiplatform, Multivendor Phantom Study. <i>Radiology</i> , 2021, 298, 640-651.	7.3	39
34	Quantifying Abdominal Adipose Tissue and Thigh Muscle Volume and Hepatic Proton Density Fat Fraction: Repeatability and Accuracy of an MR Imaging-based, Semiautomated Analysis Method. <i>Radiology</i> , 2017, 283, 438-449.	7.3	38
35	Repeatability and reproducibility of 2D and 3D hepatic MR elastography with rigid and flexible drivers at end-expiration and end-inspiration in healthy volunteers. <i>Abdominal Radiology</i> , 2017, 42, 2843-2854.	2.1	34
36	In vivo breath-hold ¹ H MRS simultaneous estimation of liver proton density fat fraction, and ¹ T ₁ and ² T ₁ of water and fat, with a multi-TR, multi-TE sequence. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 42, 1538-1543.	3.4	32

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37	Evaluation of Liver Fibrosis Using Texture Analysis on Combined-Contrast-Enhanced Magnetic Resonance Images at 3.0T. <i>BioMed Research International</i> , 2015, 2015, 1-12.	1.9	28
38	Hepatic R2* is more strongly associated with proton density fat fraction than histologic liver iron scores in patients with nonalcoholic fatty liver disease. <i>Journal of Magnetic Resonance Imaging</i> , 2019, 49, 1456-1466.	3.4	28
39	MRI proton density fat fraction is robust across the biologically plausible range of triglyceride spectra in adults with nonalcoholic steatohepatitis. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 47, 995-1002.	3.4	27
40	Accuracy of multiecho magnitude-based MRI (M ² MRI) for estimation of hepatic proton density fat fraction (PDFF) in children. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 42, 1223-1232.	3.4	25
41	Liver histology and diffusion-weighted MRI in children with nonalcoholic fatty liver disease: A MAGNET study. <i>Journal of Magnetic Resonance Imaging</i> , 2017, 46, 1149-1158.	3.4	25
42	Effects of intravenous gadolinium administration and flip angle on the assessment of liver fat signal fraction with opposed-phase and in-phase imaging. <i>Journal of Magnetic Resonance Imaging</i> , 2008, 28, 246-251.	3.4	22
43	MR Evaluation of Breast Implants. <i>Radiologic Clinics of North America</i> , 2014, 52, 591-608.	1.8	20
44	Feasibility of and agreement between MR imaging and spectroscopic estimation of hepatic proton density fat fraction in children with known or suspected nonalcoholic fatty liver disease. <i>Abdominal Imaging</i> , 2015, 40, 3084-3090.	2.0	20
45	Accuracy of PDFF estimation by magnitude-based and complex-based MRI in children with MR spectroscopy as a reference. <i>Journal of Magnetic Resonance Imaging</i> , 2017, 46, 1641-1647.	3.4	19
46	Cross-sectional correlation between hepatic R2* and proton density fat fraction (PDFF) in children with hepatic steatosis. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 47, 418-424.	3.4	19
47	Accuracy of common proton density fat fraction thresholds for magnitude- and complex-based chemical shift-encoded MRI for assessing hepatic steatosis in patients with obesity. <i>Abdominal Radiology</i> , 2020, 45, 661-671.	2.1	16
48	Dairy Fat Intake, Plasma Pentadecanoic Acid, and Plasma Isoheptadecanoic Acid Are Inversely Associated With Liver Fat in Children. <i>Journal of Pediatric Gastroenterology and Nutrition</i> , 2021, 72, e90-e96.	1.8	16
49	Diagnostic Accuracy of Preoperative Gadoteric Acid-enhanced 3-T MR Imaging for Malignant Liver Lesions by Using Ex Vivo MR Imaging-matched Pathologic Findings as the Reference Standard. <i>Radiology</i> , 2015, 276, 775-786.	7.3	14
50	MR elastography in nonalcoholic fatty liver disease: inter-center and inter-analysis-method measurement reproducibility and accuracy at 3T. <i>European Radiology</i> , 2022, 32, 2937-2948.	4.5	12
51	Temperature-corrected proton density fat fraction estimation using chemical shift-encoded MRI in phantoms. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 69-81.	3.0	11
52	Assessment of a high-SNR chemical shift-encoded MRI with complex reconstruction for proton density fat fraction (PDFF) estimation overall and in the low-fat range. <i>Journal of Magnetic Resonance Imaging</i> , 2019, 49, 229-238.	3.4	9
53	The relationship between liver triglyceride composition and proton density fat fraction as assessed by 1 H MRS. <i>NMR in Biomedicine</i> , 2020, 33, e4286.	2.8	9
54	Effect of intravenous gadoxetate disodium and flip angle on hepatic proton density fat fraction estimation with six-echo, gradient-recalled-echo, magnitude-based MR imaging at 3T. <i>Abdominal Radiology</i> , 2017, 42, 1189-1198.	2.1	6

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55	Agreement between region-of-interest- and parametric map-based hepatic proton density fat fraction estimation in adults with chronic liver disease. <i>Abdominal Radiology</i> , 2017, 42, 833-841.	2.1	6
56	Magnetic resonance elastography biomarkers for detection of histologic alterations in nonalcoholic fatty liver disease in the absence of fibrosis. <i>European Radiology</i> , 2021, 31, 8408-8419.	4.5	6
57	Automated CNN-Based Analysis Versus Manual Analysis for MR Elastography in Nonalcoholic Fatty Liver Disease: Intermethod Agreement and Fibrosis Stage Discriminative Performance. <i>American Journal of Roentgenology</i> , 2022, 219, 224-232.	2.2	6
58	Evaluation of Quantitative Imaging Biomarkers for Early-phase Clinical Trials of Steatohepatitis in Adolescents. <i>Journal of Pediatric Gastroenterology and Nutrition</i> , 2020, 70, 99-105.	1.8	5
59	Repeatability and accuracy of various region-of-interest sampling strategies for hepatic MRI proton density fat fraction quantification. <i>Abdominal Radiology</i> , 2021, 46, 3105-3116.	2.1	5
60	Hepatic Steatosis is Negatively Associated with Bone Mineral Density in Children. <i>Journal of Pediatrics</i> , 2021, 233, 105-111.e3.	1.8	4
61	Prospective comparison of longitudinal change in hepatic proton density fat fraction (PDFF) estimated by magnitude-based MRI (MRI-M) and complex-based MRI (MRI-C). <i>European Radiology</i> , 2020, 30, 5120-5129.	4.5	2