Christopher Brace

List of Publications by Year
in descending order

122 papers	8,167 citations	66336 42 h-index	48312 88 g-index
122 all docs	122 docs citations	122 times ranked	5275 citing authors

#	Article	IF	Citations
1	Image-guided Tumor Ablation: Standardization of Terminology and Reporting Criteriaâ€"A 10-Year Update. Radiology, 2014, 273, 241-260.	7.3	870
2	Principles of and Advances in Percutaneous Ablation. Radiology, 2011, 258, 351-369.	7.3	737
3	Microwave Tumor Ablation: Mechanism of Action, Clinical Results, and Devices. Journal of Vascular and Interventional Radiology, 2010, 21, S192-S203.	0.5	571
4	Radiofrequency and Microwave Ablation of the Liver, Lung, Kidney, and Bone: What Are the Differences?. Current Problems in Diagnostic Radiology, 2009, 38, 135-143.	1.4	495
5	Image-Guided Tumor Ablation: Standardization of Terminology and Reporting Criteriaâ€"A 10-Year Update. Journal of Vascular and Interventional Radiology, 2014, 25, 1691-1705.e4.	0.5	365
6	Percutaneous Tumor Ablation Tools: Microwave, Radiofrequency, or Cryoablationâ€"What Should You Use and Why?. Radiographics, 2014, 34, 1344-1362.	3.3	284
7	Microwave Tissue Ablation: Biophysics, Technology, and Applications. Critical Reviews in Biomedical Engineering, 2010, 38, 65-78.	0.9	248
8	Tumor Ablation: Common Modalities and General Practices. Techniques in Vascular and Interventional Radiology, 2013, 16, 192-200.	1.0	232
9	Heating technology for malignant tumors: a review. International Journal of Hyperthermia, 2020, 37, 711-741.	2.5	211
10	Pulmonary Thermal Ablation: Comparison of Radiofrequency and Microwave Devices by Using Gross Pathologic and CT Findings in a Swine Model. Radiology, 2009, 251, 705-711.	7.3	178
11	Thermal Tumor Ablation in Clinical Use. IEEE Pulse, 2011, 2, 28-38.	0.3	174
12	Microwave Ablation Technology: What Every User Should Know. Current Problems in Diagnostic Radiology, 2009, 38, 61-67.	1.4	165
13	Expanded modeling of temperature-dependent dielectric properties for microwave thermal ablation. Physics in Medicine and Biology, 2011, 56, 5249-5264.	3.0	151
14	Tissue Contraction Caused by Radiofrequency and Microwave Ablation: A Laboratory Study in Liver and Lung. Journal of Vascular and Interventional Radiology, 2010, 21, 1280-1286.	0.5	137
15	Microwave ablation with a triaxial antenna: results in ex vivo bovine liver. IEEE Transactions on Microwave Theory and Techniques, 2005, 53, 215-220.	4.6	109
16	Microwaves create larger ablations than radiofrequency when controlled for power in <i>ex vivo</i> tissue. Medical Physics, 2010, 37, 2967-2973.	3.0	106
17	Microwave Ablation with Multiple Simultaneously Powered Small-gauge Triaxial Antennas: Results from an in Vivo Swine Liver Model. Radiology, 2007, 244, 151-156.	7.3	105
18	Microwave Ablation versus Radiofrequency Ablation in the Kidney: High-power Triaxial Antennas Create Larger Ablation Zones than Similarly Sized Internally Cooled Electrodes. Journal of Vascular and Interventional Radiology, 2009, 20, 1224-1229.	0.5	94

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19	Microwave Ablation with a Single Small-Gauge Triaxial Antenna: In Vivo Porcine Liver Model. Radiology, 2007, 242, 435-440.	7.3	91
20	Microwave ablation in primary and secondary liver tumours: technical and clinical approaches. International Journal of Hyperthermia, 2017, 33, 15-24.	2.5	91
21	Unintended Thermal Injuries from Radiofrequency Ablation: Protection with 5% Dextrose in Water. American Journal of Roentgenology, 2006, 186, S249-S254.	2.2	88
22	Hepatic Thermal Ablation: Effect of Device and Heating Parameters on Local Tissue Reactions and Distant Tumor Growth. Radiology, 2016, 281, 782-792.	7.3	86
23	Early Small-Bowel Ischemia: Dual-Energy CT Improves Conspicuity Compared with Conventional CT in a Swine Model. Radiology, 2015, 275, 119-126.	7.3	81
24	A Comparison of Direct Heating During Radiofrequency and Microwave Ablation in Ex Vivo Liver. CardioVascular and Interventional Radiology, 2013, 36, 505-511.	2.0	80
25	Microwave Ablation of Hepatic Malignancy. Seminars in Interventional Radiology, 2013, 30, 056-066.	0.8	80
26	Optimizing the Protocol for Pulmonary Cryoablation: A Comparison of a Dual- and Triple-Freeze Protocol. CardioVascular and Interventional Radiology, 2010, 33, 1180-1185.	2.0	77
27	Microwave versus Radiofrequency Ablation Treatment for Hepatocellular Carcinoma: A Comparison of Efficacy at a Single Center. Journal of Vascular and Interventional Radiology, 2016, 27, 631-638.	0.5	77
28	Computational modelling of microwave tumour ablations. International Journal of Hyperthermia, 2013, 29, 308-317.	2.5	76
29	Liver Ablation. Radiologic Clinics of North America, 2015, 53, 933-971.	1.8	75
30	Multiple-Electrode Radiofrequency Ablation Creates Confluent Areas of Necrosis: In Vivo Porcine Liver Results. Radiology, 2006, 241, 116-124.	7.3	73
31	Microwave Ablation: Comparison of Simultaneous and Sequential Activation of Multiple Antennas in Liver Model Systems. Radiology, 2016, 278, 95-103.	7.3	69
32	Effect of Tumor Complexity and Technique on Efficacy and Complications after Percutaneous Microwave Ablation of Stage T1a Renal Cell Carcinoma: A Single-Center, Retrospective Study. Radiology, 2017, 284, 272-280.	7.3	67
33	Dualâ€slot antennas for microwave tissue heating: Parametric design analysis and experimental validation. Medical Physics, 2011, 38, 4232-4240.	3.0	66
34	High-Powered Microwave Ablation of T1a Renal Cell Carcinoma: Safety and Initial Clinical Evaluation. Journal of Endourology, 2014, 28, 1046-1052.	2.1	62
35	Radiofrequency Ablation: Simultaneous Application of Multiple Electrodes via Switching Creates Larger, More Confluent Ablations than Sequential Application in a Large Animal Model. Journal of Vascular and Interventional Radiology, 2009, 20, 118-124.	0.5	59
36	Microwave Ablation with Triaxial Antennas Tuned for Lung: Results in an in Vivo Porcine Model. Radiology, 2008, 247, 80-87.	7.3	58

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37	Thermal Ablation of Lung Tumors. Surgical Oncology Clinics of North America, 2011, 20, 369-387.	1.5	58
38	Percutaneous Microwave Ablation of Hepatocellular Carcinoma with a Gas-Cooled System: Initial Clinical Results with 107 Tumors. Journal of Vascular and Interventional Radiology, 2015, 26, 62-68.	0.5	57
39	CT imaging during microwave ablation: Analysis of spatial and temporal tissue contraction. Medical Physics, 2014, 41, 113303.	3.0	52
40	Percutaneous microwave ablation of T1a and T1b renal cell carcinoma: short-term efficacy and complications with emphasis on tumor complexity and single session treatment. Abdominal Radiology, 2016, 41, 1203-1211.	2.1	48
41	Numerical simulation of microwave ablation incorporating tissue contraction based on thermal dose. Physics in Medicine and Biology, 2017, 62, 2070-2086.	3.0	47
42	Temperature Isotherms during Pulmonary Cryoablation and their Correlation with the Zone of Ablation. Journal of Vascular and Interventional Radiology, 2010, 21, 1424-1428.	0.5	46
43	Temperature-dependent dielectric properties of liver tissue measured during thermal ablation: Toward an improved numerical model. , 2008, 2008, 230-3.		44
44	High-powered Microwave Ablation with a Small-gauge, Gas-cooled Antenna: Initial Ex Vivo and In Vivo Results. Journal of Vascular and Interventional Radiology, 2012, 23, 405-411.	0.5	44
45	Contrast Mediaâ€"Doped Hydrodissection During Thermal Ablation: Optimizing Contrast Media Concentration for Improved Visibility on CT Images. American Journal of Roentgenology, 2012, 199, 677-682.	2.2	43
46	Interstitial microwave treatment for cancer: historical basis and current techniques in antenna design and performance. International Journal of Hyperthermia, 2017, 33, 3-14.	2.5	43
47	High-Powered Gas-Cooled Microwave Ablation: Shaft Cooling Creates an Effective Stick Function Without Altering the Ablation Zone. American Journal of Roentgenology, 2012, 198, W260-W265.	2.2	42
48	Effects of Microwave Ablation on Arterial and Venous Vasculature after Treatment of Hepatocellular Carcinoma. Radiology, 2016, 281, 617-624.	7.3	42
49	Young's Modulus Reconstruction for Radio-Frequency Ablation Electrode-Induced Displacement Fields: A Feasibility Study. IEEE Transactions on Medical Imaging, 2009, 28, 1325-1334.	8.9	40
50	Microwave ablation energy delivery: Influence of power pulsing on ablation results in an <i>ex vivo</i> and <i>in vivo</i> liver model. Medical Physics, 2014, 41, 123301.	3.0	39
51	Multiple-Electrode Radiofrequency Ablation of Hepatic Malignancies: Initial Clinical Experience. American Journal of Roentgenology, 2007, 188, 1485-1494.	2.2	35
52	Modeling and Validation of Microwave Ablations With Internal Vaporization. IEEE Transactions on Biomedical Engineering, 2015, 62, 657-663.	4.2	34
53	Combination transarterial chemoembolization and microwave ablation improves local tumor control for 3- to 5-cm hepatocellular carcinoma when compared with transarterial chemoembolization alone. Abdominal Radiology, 2018, 43, 2497-2504.	2.1	34
54	Electrode displacement strain imaging of thermallyâ€ablated liver tissue in an <i>in vivo</i> animal model. Medical Physics, 2010, 37, 1075-1082.	3.0	33

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55	Microwave Ablation of Hepatic Tumors Abutting the Diaphragm Is Safe and Effective. American Journal of Roentgenology, 2015, 204, 197-203.	2.2	33
56	Microwave ablation of malignant hepatic tumours: Intraperitoneal fluid instillation prevents collateral damage and allows more aggressive case selection. International Journal of Hyperthermia, 2014, 30, 299-305.	2.5	31
57	A Dual-Slot Microwave Antenna for More Spherical Ablation Zones: Ex Vivo and in Vivo Validation. Radiology, 2013, 268, 382-389.	7.3	30
58	Microwave Ablation for the Treatment of Hepatic Adenomas. Journal of Vascular and Interventional Radiology, 2016, 27, 244-249.	0.5	29
59	Radiofrequency and microwave ablation of subcapsular hepatocellular carcinoma accessed by direct puncture: Safety and efficacy. European Journal of Radiology, 2016, 85, 739-743.	2.6	29
60	Ultrasound-based relative elastic modulus imaging for visualizing thermal ablation zones in a porcine model. Physics in Medicine and Biology, 2010, 55, 2281-2306.	3.0	28
61	Visualizing <i>ex vivo</i> radiofrequency and microwave ablation zones using electrode vibration elastography. Medical Physics, 2012, 39, 6692-6700.	3.0	27
62	Multiple-electrode Radiofrequency Ablation: Simultaneous Production of Separate Zones of Coagulation in an In Vivo Porcine Liver Model. Journal of Vascular and Interventional Radiology, 2005, 16, 1727-1735.	0.5	26
63	Analysis of microwave ablation antenna optimization techniques. International Journal of RF and Microwave Computer-Aided Engineering, 2018, 28, e21224.	1.2	25
64	Radiofrequency ablation with a high-power generator: Device efficacy in anin vivoporcine liver model. International Journal of Hyperthermia, 2007, 23, 387-394.	2.5	23
65	Flow-dependent vascular heat transfer during microwave thermal ablation. , 2012, 2012, 5582-5.		23
66	Multiple-electrode Radiofrequency Ablation: Comparison with a Conventional Cluster Electrode in an In Vivo Porcine Kidney Model. Journal of Vascular and Interventional Radiology, 2007, 18, 1005-1010.	0.5	22
67	Safety and Efficacy of Percutaneous Microwave Hepatic Ablation Near the Heart. Journal of Vascular and Interventional Radiology, 2017, 28, 490-497.	0.5	22
68	Quantifying Local Stiffness Variations in Radiofrequency Ablations With Dynamic Indentation. IEEE Transactions on Biomedical Engineering, 2012, 59, 728-735.	4.2	21
69	Hepatic Tumor Ablation. Surgical Clinics of North America, 2016, 96, 315-339.	1.5	21
70	Evaluation of tissue deformation during radiofrequency and microwave ablation procedures: Influence of output energy delivery. Medical Physics, 2019, 46, 4127-4134.	3.0	21
71	Multiple-Antenna Microwave Ablation: Spatially Distributing Power Improves Thermal Profiles and Reduces Invasiveness. Journal of Interventional Oncology, 2009, 2, 65-72.	1.0	21
72	Analysis and experimental validation of a triaxial antenna for microwave tumor ablation. , 2004, 3, 1437-1440.		20

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73	Monitoring Microwave Ablation of ExÂVivo Bovine Liver Using Ultrasonic Attenuation Imaging. Ultrasound in Medicine and Biology, 2017, 43, 1441-1451.	1.5	20
74	Tissue Dielectric Measurement Using an Interstitial Dipole Antenna. IEEE Transactions on Biomedical Engineering, 2012, 59, 115-121.	4.2	18
75	Predictors of Thrombosis in Hepatic Vasculature during Microwave Tumor Ablation of an In Vivo Porcine Model. Journal of Vascular and Interventional Radiology, 2014, 25, 1965-1971.e2.	0.5	18
76	Creation of Short Microwave Ablation Zones: In Vivo Characterization of Single and Paired Modified Triaxial Antennas. Journal of Vascular and Interventional Radiology, 2014, 25, 1633-1640.	0.5	18
77	Electrical isolation during radiofrequency ablation: 5% dextrose in water provides better protection than saline. , 2006, 2006, 5021-4.		17
78	Percutaneous Microwave Ablation of Renal Angiomyolipomas. CardioVascular and Interventional Radiology, 2016, 39, 433-440.	2.0	16
79	Ultrasound-Guided Microwave Ablation for the Management of Inguinal Neuralgia: A Preliminary Study with 1-Year Follow-up. Journal of Vascular and Interventional Radiology, 2019, 30, 242-248.	0.5	15
80	Design and validation of a thermoreversible material for percutaneous tissue hydrodissection. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2013, 101, 1400-1409.	3.4	14
81	Pulmonary Microwave Ablation Near the Heart: Antenna Positioning Can Mitigate Cardiac Complications in a Porcine Model. Radiology, 2017, 282, 892-902.	7.3	14
82	Bronchoscopically-Guided Microwave Ablation in the Lung. Chest, 2013, 144, 87A.	0.8	13
83	Evaluation of a Thermoprotective Gel for Hydrodissection During Percutaneous Microwave Ablation: In Vivo Results. CardioVascular and Interventional Radiology, 2015, 38, 722-730.	2.0	12
84	Does Selective Intubation Increase Ablation Zone Size during Pulmonary Cryoablation?. Journal of Vascular and Interventional Radiology, 2008, 19, 1497-1501.	0.5	10
85	Thermal Ablation for the Treatment of Abdominal Tumors. Journal of Visualized Experiments, 2011, , .	0.3	10
86	Combination Therapies: Quantifying the Effects of Transarterial Embolization on Microwave Ablation Zones. Journal of Vascular and Interventional Radiology, 2018, 29, 1050-1056.	0.5	10
87	Radiofrequency and microwave ablation in a porcine liver model: non-contrast CT and ultrasound radiologic-pathologic correlation. International Journal of Hyperthermia, 2020, 37, 799-807.	2.5	10
88	Microwave ablation of the liver in a live porcine model: the impact of power, time and total energy on ablation zone size and shape. International Journal of Hyperthermia, 2020, 37, 668-676.	2.5	10
89	Development of Water Content Dependent Tissue Dielectric Property Models. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 105-110.	3.4	9
90	An Analysis of Open-Ended Coaxial Probe Sensitivity to Heterogeneous Media. Sensors, 2020, 20, 5372.	3.8	9

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91	Featureâ€based automated segmentation of ablation zones by fuzzy câ€mean clustering during lowâ€dose computed tomography. Medical Physics, 2021, 48, 703-714.	3.0	9
92	Comparison of Conventional and Cone-Beam CT for Monitoring and Assessing Pulmonary Microwave Ablation in a Porcine Model. Journal of Vascular and Interventional Radiology, 2018, 29, 1447-1454.	0.5	8
93	Periodic contrast-enhanced computed tomography for thermal ablation monitoring: A feasibility study. , 2009, 2009, 4299-302.		7
94	Potential Mechanisms of Vascular Thrombosis after Microwave Ablation in anÂinÂVivo Liver. Journal of Vascular and Interventional Radiology, 2017, 28, 1053-1058.	0.5	7
95	Quantitative 4D-Digital Subtraction Angiography to Assess Changes in Hepatic Arterial Flow during Transarterial Embolization: A Feasibility Study in a Swine Model. Journal of Vascular and Interventional Radiology, 2019, 30, 1286-1292.	0.5	7
96	Twoâ€dimensional ultrasoundâ€computed tomography image registration for monitoring percutaneous hepatic intervention. Medical Physics, 2019, 46, 2600-2609.	3.0	7
97	Tumor Boundary Estimation Through Time-Domain Peaks Monitoring: Numerical Predictions and Experimental Results in Tissue-Mimicking Phantoms. IEEE Transactions on Biomedical Engineering, 2009, 56, 2634-2641.	4.2	6
98	Heat transfer within hydrodissection fluids: An analysis of thermal conduction and convection using liquid and gel materials. International Journal of Hyperthermia, 2015, 31, 551-559.	2.5	6
99	Race in mind: race, IQ, and other racisms. Choice Reviews, 2003, 41, 41-0630-41-0630.	0.2	6
100	Design of a dual slot antenna for small animal microwave ablation studies. , 2016, 2016, 348-351.		5
101	Ablation zone visualization enhancement by periodic contrast-enhancement computed tomography during microwave ablation. Medical Physics, 2017, 44, 2132-2140.	3.0	5
102	Analysis of iodinated contrast delivered during thermal ablation: is material trapped in the ablation zone?. Physics in Medicine and Biology, 2016, 61, 6041-6054.	3.0	4
103	Quantifying optical properties with visible and near-infrared optical coherence tomography to visualize esophageal microwave ablation zones. Biomedical Optics Express, 2018, 9, 1648.	2.9	4
104	Percutaneous Microwave Tumor Ablation Is Safe in Patients with Cardiovascular Implantable Electronic Devices: A Single-Institutional Retrospective Review. Journal of Vascular and Interventional Radiology, 2019, 30, 396-400.	0.5	4
105	Computed Tomography-Based Modeling of Water Vapor-Induced Changes in Permittivity During Microwave Ablation. IEEE Transactions on Biomedical Engineering, 2020, 67, 2427-2433.	4.2	4
106	Microwave Ablation of the Lung in a Porcine Model: Vessel Diameter Predicts Pulmonary Artery Occlusion. CardioVascular and Interventional Radiology, 2017, 40, 1609-1616.	2.0	3
107	Contrast-enhanced CT immediately following percutaneous microwave ablation of cT1a renal cell carcinoma: Optimizing cancer outcomes. Abdominal Radiology, 2022, 47, 2674-2680.	2.1	3
108	Elastic modulus imaging (EMI) for visualizing thermal ablation zone: Initial experience in a porcine model. , 2009, , .		2

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109	In vivo ultrasound electrode displacement strain imaging. , 2009, , .		2
110	MR visible localization device for radiographic-pathologic correlation of surgical specimens. Magnetic Resonance Imaging, 2017, 37, 159-163.	1.8	1
111	Development of a Tissue Dielectric Properties Model Based on Maxwell-Fricke Mixture Theory. , 2018, , .		1
112	Effect of Metabolic Syndrome on Anatomy and Function of the Lower Urinary Tract Assessed on MRI. Urology, 2022, 159, 176-181.	1.0	1
113	Learning Assessment in a Design-Throughout-the-Curriculum Program. , 0, , .		1
114	Hydrous ointment: potential confusion. Clinical and Experimental Dermatology, 2006, 31, 819-819.	1.3	0
115	Quantifying local stiffness variations in radiofrequency ablations with dynamic indentation. , 2011, , .		0
116	Microwave tumor ablation: cooperative academic-industry development of a high-power gas-cooled system with early clinical results. , 2013, , .		0
117	Inducing valvular regurgitation in mice via thermal ablation of cardiac valves. , 2014, 2014, 5663-6.		0
118	PD16-12 HIGH POWERED MICROWAVE ABLATION OF T1A RENAL CANCER: PRELIMINARY SAFETY AND CLINICAL EFFICACY. Journal of Urology, 2014, 191, .	0.4	0
119	Reply to: "Indication of Percutaneous Microwave Ablation for the Treatment of Hepatic Adenomas: Squaring the Circle". Journal of Vascular and Interventional Radiology, 2016, 27, 933-934.	0.5	0
120	TU-E-201C-05: Electrode Displacement Strain Imaging for Monitoring In-Vivo Ablative Therapies. Medical Physics, 2010, 37, 3405-3405.	3.0	0
121	Split-bolus CT urography after microwave ablation of renal cell carcinoma improves image quality and reduces radiation exposure. Abdominal Radiology, 2022, , 1.	2.1	0
122	Electrical isolation during radiofrequency ablation: 5% dextrose in water provides better protection than saline. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0