Nancy A Obuchowski

List of Publications by Citations

140 papers	5,266 citations	37 h-index	71 g-index
156 ext. papers	6,402 ext. citations	5.6 avg, IF	6.15 L-index

#	Paper	IF	Citations
140	Receiver operating characteristic curves and their use in radiology. *Radiology*, **2003**, 229, 3-8	20.5	610
139	. *Wiley Series in Probability and Statistics*, **2011**,	1.3	295
138	Nonparametric Analysis of Clustered ROC Curve Data. *Biometrics*, **1997**, 53, 567	1.8	272
137	Metrology Standards for Quantitative Imaging Biomarkers. *Radiology*, **2015**, 277, 813-25	20.5	237
136	ROC curves in clinical chemistry: uses, misuses, and possible solutions. *Clinical Chemistry*, **2004**, 50, 1118-25	3.5	237
135	ROC analysis. *American Journal of Roentgenology*, **2005**, 184, 364-72	5.4	231
134	Sample size determination for diagnostic accuracy studies involving binormal ROC curve indices. *Statistics in Medicine*, **1997**, 16, 1529-42	2.3	205
133	Linearity, Bias, and Precision of Hepatic Proton Density Fat Fraction Measurements by Using MR Imaging: A Meta-Analysis. *Radiology*, **2018**, 286, 486-498	20.5	151
132	Hypothesis testing of diagnostic accuracy for multiple readers and multiple tests an anova approach with dependent observations. *Communications in Statistics Part B: Simulation and Computation*, **1995**, 24, 285-308	0.6	141
131	On the comparison of correlated proportions for clustered data. *Statistics in Medicine*, **1998**, 17, 1495-507	2.3	134
130	Receiver operating characteristic (ROC) curves: review of methods with applications in diagnostic medicine. *Physics in Medicine and Biology*, **2018**, 63, 07TR01	3.8	120
129	Quantitative imaging biomarkers alliance (QIBA) recommendations for improved precision of DWI and DCE-MRI derived biomarkers in multicenter oncology trials. *Journal of Magnetic Resonance Imaging*, **2019**, 49, e101-e121	5.6	112
128	A comparison of the Dorfman-Berbaum-Metz and Obuchowski-Rockette methods for receiver operating characteristic (ROC) data. *Statistics in Medicine*, **2005**, 24, 1579-607	2.3	108
127	Ten criteria for effective screening: their application to multislice CT screening for pulmonary and colorectal cancers. *American Journal of Roentgenology*, **2001**, 176, 1357-62	5.4	105
126	Sample size tables for receiver operating characteristic studies. *American Journal of Roentgenology*, **2000**, 175, 603-8	5.4	104
125	Quantitative imaging biomarkers: a review of statistical methods for computer algorithm comparisons. *Statistical Methods in Medical Research*, **2015**, 24, 68-106	2.3	99
124	Quantitative classification of breast tumors in digitized mammograms. *Medical Physics*, **1996**, 23, 1337-45	4.4	86

123	An ROC-type measure of diagnostic accuracy when the gold standard is continuous-scale. *Statistics in Medicine*, **2006**, 25, 481-93	2.3	80
122	Effect of computer-aided detection for CT colonography in a multireader, multicase trial. *Radiology*, **2010**, 256, 827-35	20.5	78
121	Estimating and comparing diagnostic testsSaccuracy when the gold standard is not binary. *Academic Radiology*, **2005**, 12, 1198-204	4.3	75
120	Multireader receiver operating characteristic studies: a comparison of study designs. *Academic Radiology*, **1995**, 2, 709-16	4.3	75
119	Data analysis for detection and localization of multiple abnormalities with application to mammography. *Academic Radiology*, **2000**, 7, 516-25	4.3	67
118	Effect of reduced radiation exposure and iterative reconstruction on detection of low-contrast low-attenuation lesions in an anthropomorphic liver phantom: an 18-reader study. *Radiology*, **2014**, 272, 154-63	20.5	65
117	Repeated head trauma is associated with smaller thalamic volumes and slower processing speed: the Professional FightersSBrain Health Study. *British Journal of Sports Medicine*, **2015**, 49, 1007-11	10.3	65
116	Repeatability of MR Elastography of Liver: A Meta-Analysis. *Radiology*, **2017**, 285, 92-100	20.5	63
115	Assessing physiciansSaccuracy in diagnosing paediatric patients with acute abdominal pain: measuring accuracy for multiple diseases. *Statistics in Medicine*, **2001**, 20, 3261-78	2.3	60
114	Validation of the Patient Health Questionnaire-9 (PHQ-9) for depression screening in adults with epilepsy. *Epilepsy and Behavior*, **2014**, 37, 215-20	3.2	56
113	How many observers are needed in clinical studies of medical imaging?. *American Journal of Roentgenology*, **2004**, 182, 867-9	5.4	55
112	Prospective studies of diagnostic test accuracy when disease prevalence is low. *Biostatistics*, **2002**, 3, 477-92	3.7	49
111	Determination of Radiation Absorbed Dose to Primary Liver Tumors and Normal Liver Tissue Using Post-Radioembolization (90)Y PET. *Frontiers in Oncology*, **2014**, 4, 255	5.3	45
110	Multi-slice computed tomography as a screening tool for colon cancer, lung cancer and coronary artery disease. *European Radiology*, **2001**, 11, 1975-85	8	44
109	Statistical issues in the comparison of quantitative imaging biomarker algorithms using pulmonary nodule volume as an example. *Statistical Methods in Medical Research*, **2015**, 24, 107-40	2.3	43
108	Safety and efficacy of sonographic-guided random real-time core needle biopsy of the liver. *Journal of Clinical Ultrasound*, **2009**, 37, 138-43	1	42
107	Reversibility of Cardiac Function Predicts Outcome After Transcatheter Aortic Valve Replacement in Patients With Severe Aortic Stenosis. *Journal of the American Heart Association*, **2017**, 6,	6	41
106	MR evaluation of epidural fibrosis: proposed grading system with intra- and inter-observer variability. *Neurological Research*, **1999**, 21 Suppl 1, S23-6	2.7	41

105	Power estimation for multireader ROC methods an updated and unified approach. *Academic Radiology*, **2011**, 18, 129-42	4.3	39
104	Special Topics III: bias. *Radiology*, **2003**, 229, 617-21	20.5	35
103	Imaging of Arthroplasties: Improved Image Quality and Lesion Detection With Iterative Metal Artifact Reduction, a New CT Metal Artifact Reduction Technique. *American Journal of Roentgenology*, **2016**, 207, 378-85	5.4	34
102	Multi-reader ROC studies with split-plot designs: a comparison of statistical methods. *Academic Radiology*, **2012**, 19, 1508-17	4.3	33
101	Diagnostic Accuracy of CT Enterography for Active Inflammatory Terminal Ileal Crohn Disease: Comparison of Full-Dose and Half-Dose Images Reconstructed with FBP and Half-Dose Images with SAFIRE. *Radiology*, **2016**, 280, 436-45	20.5	33
100	Prognostic Impact of Ischemic Mitral Regurgitation Severity and Myocardial Infarct Quantification by Cardiovascular Magnetic Resonance. *JACC: Cardiovascular Imaging*, **2020**, 13, 1489-1501	8.4	32
99	Multireader, multicase receiver operating characteristic analysis: an empirical comparison of five methods. *Academic Radiology*, **2004**, 11, 980-95	4.3	31
98	Atherosclerotic Plaque Tissue: Noninvasive Quantitative Assessment of Characteristics with Software-aided Measurements from Conventional CT Angiography. *Radiology*, **2018**, 286, 622-631	20.5	30
97	Image Noise, CNR, and Detectability of Low-Contrast, Low-Attenuation Liver Lesions in a Phantom: Effects of Radiation Exposure, Phantom Size, Integrated Circuit Detector, and Iterative Reconstruction. *Radiology*, **2016**, 280, 475-82	20.5	29
96	Manual, semiautomated, and fully automated measurement of the aortic annulus for planning of transcatheter aortic valve replacement (TAVR/TAVI): analysis of interchangeability. *Journal of Cardiovascular Computed Tomography*, **2015**, 9, 42-9	2.8	28
95	Bias, underestimation of risk, and loss of statistical power in patient-level analyses of lesion detection. *European Radiology*, **2010**, 20, 584-94	8	25
94	The QIBA Profile for FDG PET/CT as an Imaging Biomarker Measuring Response to Cancer Therapy. *Radiology*, **2020**, 294, 647-657	20.5	23
93	Effect of observer instruction on ROC study of chest images. *Investigative Radiology*, **1990**, 25, 230-4	10.1	22
92	Statistical Issues in Testing Conformance with the Quantitative Imaging Biomarker Alliance (QIBA) Profile Claims. *Academic Radiology*, **2016**, 23, 496-506	4.3	22
91	Reducing the number of reader interpretations in MRMC studies. *Academic Radiology*, **2009**, 16, 209-17	4.3	21
90	Testing for interchangeability of imaging tests. *Academic Radiology*, **2014**, 21, 1483-9	4.3	20
89	Predictors and Prognostic Impact of Progressive Ischemic Mitral Regurgitation in Patients With Advanced Ischemic Cardiomyopathy: A Multimodality Study. *Circulation: Cardiovascular Imaging*, **2016**, 9,	3.9	19
88	A multiobserver study of the effects of including point-of-care patient photographs with portable radiography: a means to detect wrong-patient errors. *Academic Radiology*, **2014**, 21, 1038-47	4.3	19

87	Electromagnetic Navigational Bronchoscopy versus CT-guided Percutaneous Sampling of Peripheral Indeterminate Pulmonary Nodules: A Cohort Study. *Radiology*, **2018**, 286, 1052-1061	20.5	19
86	Algorithm Variability in the Estimation of Lung Nodule Volume From Phantom CT Scans: Results of the QIBA 3A Public Challenge. *Academic Radiology*, **2016**, 23, 940-52	4.3	18
85	Total-body screening: preliminary results of a pilot randomized controlled trial. *Journal of the American College of Radiology*, **2007**, 4, 604-11	3.5	18
84	Can Digital Breast Tomosynthesis Replace Full-Field Digital Mammography? A Multireader, Multicase Study of Wide-Angle Tomosynthesis. *American Journal of Roentgenology*, **2019**, 1-7	5.4	15
83	Cross-Disciplinary Analysis of Lymph Node Classification in Lung Cancer on CT Scanning. *Chest*, **2017**, 151, 776-785	5.3	15
82	Comparison of a Fast 5-Minute Shoulder MRI Protocol With a Standard Shoulder MRI Protocol: A Multiinstitutional Multireader Study. *American Journal of Roentgenology*, **2017**, 208, W146-W154	5.4	14
81	Statistics and methodology. *Skeletal Radiology*, **2008**, 37, 393-6	2.7	14
80	Hippocampal Sclerosis Detection with NeuroQuant Compared with Neuroradiologists. *American Journal of Neuroradiology*, **2020**, 41, 591-597	4.4	14
79	Do myocardial PET-MR and PET-CT FDG images provide comparable information?. *Journal of Nuclear Cardiology*, **2016**, 23, 1102-1109	2.1	13
78	Radiology order decision support: examination-indication appropriateness assessed using 2 electronic systems. *Journal of the American College of Radiology*, **2015**, 12, 349-57	3.5	13
77	Comparison of a fast 5-min knee MRI protocol with a standard knee MRI protocol: a multi-institutional multi-reader study. *Skeletal Radiology*, **2018**, 47, 107-116	2.7	13
76	What's the control in studies measuring the effect of computer-aided detection (CAD) on observer performance?. *Academic Radiology*, **2010**, 17, 761-7	4.3	12
75	Statistical considerations for testing an AI algorithm used for prescreening lung CT images. *Contemporary Clinical Trials Communications*, **2019**, 16, 100434	1.8	11
74	Repeatability of Quantitative Diffusion-Weighted Imaging Metrics in Phantoms, Head-and-Neck and Thyroid Cancers: Preliminary Findings. *Tomography*, **2019**, 5, 15-25	3.1	11
73	Interpreting Change in Quantitative Imaging Biomarkers. *Academic Radiology*, **2018**, 25, 372-379	4.3	10
72	Sample size tables for computer-aided detection studies. *American Journal of Roentgenology*, **2011**, 197, W821-8	5.4	10
71	Linearity and Bias of Proton Density Fat Fraction as a Quantitative Imaging Biomarker: A Multicenter, Multiplatform, Multivendor Phantom Study. *Radiology*, **2021**, 298, 640-651	20.5	10
70	Comparison of Fit for Sealed and Loose-Fitting Surgical Masks and N95 Filtering Facepiece Respirators. *Annals of Work Exposures and Health*, **2021**, 65, 463-474	2.4	10

69	Differences in the Lateral Compartment Joint Space Width After Anterior Cruciate Ligament Reconstruction: Data From the MOON Onsite Cohort. *American Journal of Sports Medicine*, **2018**, 46, 876-882	6.8	9
68	Accuracy of Cyst Versus Solid Diagnosis in the Breast Using Quantitative Transmission (QT) Ultrasound. *Academic Radiology*, **2017**, 24, 1148-1153	4.3	9
67	Dose Reduction With Dedicated CT Metal Artifact Reduction Algorithm: CT Phantom Study. *American Journal of Roentgenology*, **2018**, 210, 593-600	5.4	9
66	Quantitative imaging biomarkers: Effect of sample size and bias on confidence interval coverage. *Statistical Methods in Medical Research*, **2018**, 27, 3139-3150	2.3	8
65	Scar burden is an independent and incremental predictor of cardiac resynchronisation therapy response. *Open Heart*, **2019**, 6, e001067	3	8
64	Radiological Society of North America/Quantitative Imaging Biomarker Alliance Shear Wave Speed Bias Quantification in Elastic and Viscoelastic Phantoms. *Journal of Ultrasound in Medicine*, **2021**, 40, 569-581	2.9	8
63	Multivariate statistical methods. *American Journal of Roentgenology*, **2005**, 185, 299-309	5.4	7
62	Can electronic medical images replace hard-copy film? Defining and testing the equivalence of diagnostic tests. *Statistics in Medicine*, **2001**, 20, 2845-63	2.3	7
61	Statistical Considerations for Planning Clinical Trials with Quantitative Imaging Biomarkers. *Journal of the National Cancer Institute*, **2019**, 111, 19-26	9.7	7
60	Anatomy-Correlated Breast Imaging and Visual Grading Analysis Using Quantitative Transmission Ultrasound. *International Journal of Biomedical Imaging*, **2016**, 2016, 7570406	5.2	6
59	Dual-energy CT arthrography: a feasibility study. *Skeletal Radiology*, **2021**, 50, 693-703	2.7	6
58	The QIBA Profile for MRI-based Compositional Imaging of Knee Cartilage. *Radiology*, **2021**, 301, 423-432	20.5	6
57	Ultrasound evaluation of infrapatellar fat pad impingement: An exploratory prospective study. *Knee*, **2018**, 25, 279-285	2.6	5
56	Measures of Diagnostic Accuracy. *Wiley Series in Probability and Statistics*, **2011**, 13-55	1.3	5
55	Correcting for Multiple Testing During Diagnostic Accuracy Studies. *Statistics in Biopharmaceutical Research*, **2017**, 9, 243-248	1.2	4
54	Comparison of Clinical and Semiquantitative Cartilage Grading Systems in Predicting Outcomes After Arthroscopic Partial Meniscectomy. *American Journal of Roentgenology*, **2020**, 215, 441-447	5.4	4
53	Inter- and intra-software reproducibility of computed tomography lung density measurements. *Medical Physics*, **2020**, 47, 2962-2969	4.4	4
52	Evaluation of diagnostic accuracy in free-response detection-localization tasks using ROC tools. *Statistical Methods in Medical Research*, **2019**, 28, 1808-1825	2.3	4

51	Comparing the Accuracy of Two Diagnostic Tests. *Wiley Series in Probability and Statistics*, **2011**, 165-192	1.3	4
50	The effect of misclassification in screening trials: a simulation study. *Contemporary Clinical Trials*, **2008**, 29, 125-35	2.3	4
49	Total body screening: predicting actionable findings. *Academic Radiology*, **2006**, 13, 480-5	4.3	4
48	Stenting for Inferior Vena Cava Stenosis After Liver Transplant. *American Journal of Roentgenology*, **2019**, 213, 1381-1387	5.4	4
47	Role of Doppler Sonography in Early Detection of Splenic Steal Syndrome. *Journal of Ultrasound in Medicine*, **2016**, 35, 1393-400	2.9	3
46	Methods for Correcting Imperfect Gold Standard Bias. *Wiley Series in Probability and Statistics*, **2011**, 389-433	1.3	3
45	Quantitative imaging metrics derived from magnetic resonance fingerprinting using ISMRM/NIST MRI system phantom: An international multicenter repeatability and reproducibility study. *Medical Physics*, **2021**, 48, 2438-2447	4.4	3
44	Location Bias in ROC Studies. *Statistics in Biopharmaceutical Research*, **2016**, 8, 258-267	1.2	3
43	Quantitative imaging biomarkers alliance (QIBA) recommendations for improved precision of DWI and DCE-MRI derived biomarkers in multicenter oncology trials. *Journal of Magnetic Resonance Imaging*, **2019**, 49, i-i	5.6	2
42	Radiographic evaluation of knee osteoarthritis in predicting outcomes after arthroscopic partial meniscectomy. *Knee*, **2020**, 27, 1238-1247	2.6	2
41	Three-dimensional US for Quantification of Volumetric Blood Flow: Multisite Multisystem Results from within the Quantitative Imaging Biomarkers Alliance. *Radiology*, **2020**, 296, 662-670	20.5	2
40	Utility of hand-held devices in diagnosis and triage of cardiovascular emergencies. Observations during implementation of a PACS-based system in an acute aortic syndrome (AAS) network. *Journal of Cardiovascular Computed Tomography*, **2015**, 9, 524-33	2.8	2
39	Appendix B: Jackknife and Bootstrap Methods of Estimating Variances and Confidence Intervals. *Wiley Series in Probability and Statistics*, **2011**, 477-480	1.3	2
38	Estimation and Hypothesis Testing in a Single Sample. *Wiley Series in Probability and Statistics*, **2011**, 103-164	1.3	2
37	Incidence of advanced symptomatic disease as primary endpoint in screening and prevention trials. *American Journal of Roentgenology*, **2007**, 189, 19-23	5.4	2
36	Pathologic Correlation of Cellular Imaging Using Apparent Diffusion Coefficient Quantification in Patients with Brain Metastases After Gamma Knife Radiosurgery. *World Neurosurgery*, **2020**, 134, e903-e912	2.1	2
35	Statistics for Radiology Research. *Seminars in Musculoskeletal Radiology*, **2017**, 21, 23-31	1.8	1
34	Measurement Accuracy of Atherosclerotic Plaque Structure on CT Using Phantoms to Establish Ground Truth. *Academic Radiology*, **2017**, 24, 1203-1215	4.3	1

33	Combined Dual-Energy and Single-Energy Metal Artifact Reduction Techniques Versus Single-Energy Techniques Alone for Lesion Detection Near an Arthroplasty. *American Journal of Roentgenology*, **2020**, 215, 425-432	5.4	1
32	Cost Analysis of the Addition of Hyperacute Magnetic Resonance Imaging for Selection of Patients for Endovascular Stroke Therapy. *Interventional Neurology*, **2017**, 6, 183-190	3	1
31	Statistical Analysis for Meta-analysis. *Wiley Series in Probability and Statistics*, **2011**, 435-448	1.3	1
30	Design of Diagnostic Accuracy Studies. *Wiley Series in Probability and Statistics*, **2011**, 57-101	1.3	1
29	Sample Size Calculations. *Wiley Series in Probability and Statistics*, **2011**, 193-229	1.3	1
28	Introduction to Meta-analysis for Diagnostic Accuracy Studies. *Wiley Series in Probability and Statistics*, **2011**, 231-260	1.3	1
27	Regression Analysis for Independent ROC Data. *Wiley Series in Probability and Statistics*, **2011**, 261-296	1.3	1
26	Predicting readersSdiagnostic accuracy with a new CAD algorithm. *Academic Radiology*, **2011**, 18, 1412-9	4.3	1
25	Estimating sample size for a randomized clinical trial of lung cancer screening. *Contemporary Clinical Trials*, **2008**, 29, 466-77	2.3	1
24	Left Ventricular Longitudinal Strain in Characterization and Outcome Assessment of Mixed Aortic Valve Disease Phenotypes. *JACC: Cardiovascular Imaging*, **2021**, 14, 1324-1334	8.4	1
23	Comparison of CT Lung Density Measurements between Standard Full-Dose and Reduced-Dose Protocols. *Radiology: Cardiothoracic Imaging*, **2021**, 3, e200503	8.3	1
22	Occupational and patient radiation doses in a modern cardiac electrophysiology laboratory. *Journal of Interventional Cardiac Electrophysiology*, **2019**, 56, 183-190	2.4	1
21	Importance of incorporating quantitative imaging biomarker technical performance characteristics when estimating treatment effects. *Clinical Trials*, **2021**, 18, 197-206	2.2	1
20	Improving the Robustness of Diagnostic Accuracy Results By Asking Study Readers to Further Distinguish Subjects Who Appear to be Without the Condition Of Interest. *Academic Radiology*, **2021**,	4.3	1
19	Objective Task-Based Evaluation of Artificial Intelligence-Based Medical Imaging Methods:: Framework, Strategies, and Role of the Physician. *PET Clinics*, **2021**, 16, 493-511	2.2	1
18	Sex-based differences in left ventricular remodeling in patients with chronic aortic regurgitation: a multi-modality study.. *Journal of Cardiovascular Magnetic Resonance*, **2022**, 24, 12	6.9	0
17	Multireader Diagnostic Accuracy Imaging Studies: Fundamentals of Design and Analysis.. *Radiology*, **2022**, 211593	20.5	0
16	Imaging technology assessment **2016**, 1-9		

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15	Clinical trials of therapy **2016**, 10-28	
14	Clinical trials of image-guided interventions including radiotherapy studies **2016**, 29-56	
13	Imaging as a predictor of therapeutic response **2016**, 57-75	
12	Screening trials and design **2016**, 76-90	
11	Practicalities of running a clinical trial **2016**, 91-102	
10	Methods for studies of diagnostic tests **2016**, 147-169	
9	Response. *Chest*, **2017**, 152, 1355-1356	5.3
8	Appendix A: Case Studies and Chapter 8 Data. *Wiley Series in Probability and Statistics*, **2011**, 449-476	1.3
7	Methods for Correcting Verification Bias. *Wiley Series in Probability and Statistics*, **2011**, 329-387	1.3
6	Analysis of Multiple Reader and/or Multiple Test Studies. *Wiley Series in Probability and Statistics*, **2011**, 297-328	1.3
5	Calcium scoring: criteria for evaluating its effectiveness. *Seminars in Ultrasound, CT and MRI*, **2003**, 24, 39-44	1.7
4	A pilot study of patient-specific cardiovascular MDCT dose maps and their utility in estimating patient-specific organ and effective doses in obese patients. *Journal of Cardiovascular Computed Tomography*, **2016**, 10, 265-8	2.8
3	Introduction to cost-effectiveness analysis in clinical trials **2016**, 189-207	
2	Statistical practice and transparent reporting in the neurosciences: Preclinical motor behavioral experiments.. *PLoS ONE*, **2022**, 17, e0265154	3.7
1	Meniscal Treatment as a Predictor of Worse Articular Cartilage Damage on MRI at 2 Years After ACL Reconstruction: The MOON Nested Cohort.. *American Journal of Sports Medicine*, **2022**, 50, 951-961	6.8