

QIBA and QI/ Imaging Biomarkers in the Literature

Articles are divided into two categories:

1. Articles that are generated by Quantitative Imaging Biomarkers Alliance (QIBA) research teams
2. Articles that reference QIBA

If available, links are provided to PubMed or journal landing pages.

I. QIBA-GENERATED ARTICLES

2014

Milkowski A, Hall TJ, Garra B, Nightingale K, Palmeri ML, Chen S, Carson PL. **Radiological Society of North America/Quantitative Imaging Biomarkers Alliance Ultrasound Shear Wave Speed Estimation in Elastic Phantoms: Sources and Magnitude of Variability in a Multicenter Study.** *American Institute of Ultrasound in Medicine Proceedings: J Ultrasound Med.* 2014; 33(suppl):S1–S124, 2014. [Link to conference proceedings paper](#)

Nightingale K, Palmeri ML, Deng Y, Rosenzweig S, Rouze N. **Shear Wave Speed Estimation in Calibrated Phantoms: Factors Affecting Bias.** *American Institute of Ultrasound in Medicine Proceedings: J Ultrasound Med.* 2014; 33(suppl):S1–S124, 2014. [Link to conference proceedings paper](#)

Palmeri ML, Garcia-Reyes K, Gupta R, Rosenzweig S, Miller Z, Glass T, Kauffman C, Polascik T, Nightingale K, A **Comparison of 3-Dimensional In Vivo Acoustic Radiation Force Impulse Imaging With Multiparametric Magnetic Resonance Imaging for Prostate Cancer Diagnosis.** *American Institute of Ultrasound in Medicine Proceedings: J Ultrasound Med.* 2014; 33(suppl):S1–S124, 2014. [Link to conference proceedings paper](#)

Petrick N, Kim HJG, Clunie D, Borradaile K, Ford R, Zeng R, Gavrielides M, McNitt-Gray M, Lu ZQJ, Fenimore C, Zhao B, Buckler AJ. **Comparison of 1D, 2D, and 3D Nodule Sizing Methods by Radiologists for Spherical and Complex Nodules on Thoracic CT Phantom Images.** *Academic Radiology.* 2014; 21(1):30-40. doi: <http://dx.doi.org/10.1016/j.acra.2013.09.020>. [Link to Science Direct](#); [PubMed Citation](#)

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Boss MA, Chenevert TL, Waterton JC, Morris DM, Hossein R, Jackson A, DeSouza N, Collins DJ, van Beers BE, Garteiser P, Doblas S, Russek SE, Keenan KE, Jackson EF, and Zahlmann G. **Temperature-controlled Isotropic Diffusion Phantom with Wide Range of Apparent Diffusion Coefficients for Multicenter Assessment of Scanner Repeatability and Reproducibility.** {Not yet published.}

Chen B, Barnhart H, Richard S, et al. **Volumetric Quantification of Lung Nodules in CT with Iterative Reconstruction (ASiR and MBIR).** *Med. Phys.* 2013; November; 40 (11): 111902. [Link to journal landing page](#)

Garra B, Hall TJ, Milkowski A, et al. **RSNA/QIBA: Shear Wave Speed as a Biomarker for Liver Fibrosis Staging.** 2013-IEEE International Ultrasonics Symposium (IUS), Joint IEEE-International Symposium on the Applications of Ferroelectrics (ISAF), and Piezoresponse Force Microscopy and Nanoscale Phenomena in Polar Materials (PFM), Joint IEEE-International Frequency Control Symposium (IFCS), and European Frequency and Time Forum (EFTF); 2013; July 21-25; Prague, Czech Republic. [Link to conference proceedings paper](#)

Gavrielides MA, Li Q, Zeng R, et al. **Minimum Detectable Change in Lung Nodule Volume in a Phantom CT Study.** *Academic Radiology.* 2013; 20 (11):1364-1370. doi: 10.1016/j.acra.2013.08.019. [PubMed Citation](#)

Kinahan P, Pierce L, Elston B, Nelson D, Clunie D. **PET/CT Digital Reference Object.** [PET/CT DRO User Guide](#) Not yet published. Publication of design methodology and results is planned for the future.

Sullivan DC, Schwartz LH, Zhao B. **The Imaging Viewpoint: How Imaging Affects Determination of Progression-Free Survival.** *Clin Cancer Res.* 2013; 19(10); 2621–8. doi: 10.1158/1078-0432.CCR-12-2936. [PubMed Citation](#)

Zacà D, Jovicich J, Nadar SR, Voyvodic JT, and Pillai JJ. **Cerebrovascular Reactivity Mapping in Patients with Low Grade Gliomas Undergoing Presurgical Sensorimotor Mapping with BOLD fMRI.** *J Magn Reson Imaging.* 2013; doi: 10.1002/jmri.24406. [Link to journal landing page](#)

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Voyvodic JT. **Reproducibility of Single-Subject fMRI Language Mapping with AMPLE Normalization.** *J Magn Reson Imaging.* 2012; September; 36(3): 569–580. doi: 10.1002/jmri.23686. [PubMed Citation](#)

Mozley PD, Bendtsen C, Zhao B, Schwartz LH, Thorn M, Rong Y, Zhang L, et al. **Measurement of Tumor Volumes Improves RECIST-based Response Assessments in Advanced Kung Cancer.** *Translational Oncology.* 2012; 5(1), 19–25. [PubMed Citation](#)

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Buckler AJ, Bresolin L, Dunnick NR, Sullivan DC; Group. **A Collaborative Enterprise for Multi-stakeholder Participation in the Advancement of Quantitative Imaging.** *Radiology.* 2011 Mar; 258(3):906-14. [PubMed Citation](#)

Buckler AJ, Boellaard R. **Standardization of Quantitative Imaging: The Time is Right, and 18F-FDG PET/CT is a Good Place to Start.** *J Nucl Med.* 2011 Feb; 52(2):171-2. Epub 2011 Jan 13. No abstract. [PubMed Citation](#)

McNitt-Gray MF, Kim HJ, Zhao B, Schwartz L, Clunie D, Borradaile K, Byrne K, Kaplan S, Barudin J, Sherman J, Slazak K, Petrick NP, Fenimore C, Lu J, Buckler, AJ, **Estimating the Minimum Detectable Change of Lung Lesions Using Patient Datasets Acquired Under a “No Change” Condition,** RSNA 2011.

Petrick NP, Kim HJ, Clunie D, Borradaile K, Ford R, Zeng R, Gavrielides MA, McNitt-Gray MF, Fenimore C, Lu J, Zhao B, Buckler AJ. **Evaluation of 1D, 2D and 3D Nodule Size Estimation by Radiologists for Spherical and Non-spherical Nodules Through CT Thoracic Phantom Imaging,** SPIE, February 2011.

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Buckler AJ, Mozley PD, Schwartz L, Petrick N, McNitt-Gray M, Fenimore C, O'Donnell K, Hayes W, Kim HJ, Clarke L, Sullivan D. **Volumetric CT in Lung Cancer: An Example for the Qualification of Imaging as a Biomarker.** *Acad Radiol.* 2010 Jan; 17(1):107-15. [PubMed Citation](#)

Buckler AJ, Mulshine JL, Gottlieb R, Zhao B, Mozley PD, Schwartz L. **The Use of Volumetric CT as an Imaging**

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II. ARTICLES THAT REFERENCE QIBA

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Abramson RG, Yankeelov TE. **Imaging Biomarkers and Surrogate Endpoints in Oncology Clinical Trials, Chapter 2.** In: *Functional Imaging in Oncology, Biophysical Basis and Technical Approaches.* Volume 1. New York, NY: Springer-Verlag Berlin Heidelberg; 2014: 29-42. [Link to publisher's landing page](#)

Krishnaraj A, Weinreb JC, Ellenbogen PH, Allen Jr B, Norbash A, Kazerooni EA. **The Future of Imaging Biomarkers in Radiologic Practice: Proceedings of the Thirteenth Annual ACR Forum.** *Journal of the American College of Radiology (JACR).* 2014; 11(1):20-23. doi: <http://dx.doi.org/10.1016/j.jacr.2013.08.017>
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Litmanovich DE, Hartwick K, Silva M, Bankier AA. **Multidetector Computed Tomographic Imaging in Chronic Obstructive Pulmonary Disease: Emphysema and Airways Assessment.** *Radiologic Clinics of North America.* 2014; 52 (1):137–154. doi: <http://dx.doi.org/10.1016/j.rcl.2013.09.002> [PubMed Citation](#)

Miller CG, Krasnow J, Schwartz LH, (eds). *Medical Imaging in Clinical Trials.* Springer-Verlag, London; 2014: pp 65-82. doi: http://dx.doi.org/10.1007/978-1-84882-710-3_4

Moyer BR, Cheruvu NPS, Hu T, Eds. **Chapter 13: Regulatory Considerations Involved in Imaging.** In: *Pharmaco-Imaging in Drug and Biologics Development. Fundamentals and Applications Series: AAPS Advances in the Pharmaceutical Sciences Series.* Vol. 8. New York, NY: AAPS Press, Springer; 2014: 355-390. ISBN 978-1-4614-8247-5 | doi: 10.1007/978-1-4614-8247-5_13. [Link to publisher's landing page](#)

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Andriantsimiavona R, Grimm S, Hatzakis H. **Harnessing the Global Brain in Medical Imaging: 3DnetMedical, Network-Centric Innovation in the Cloud—Our Experience.** The Authors and Future Technology Press 2013; In Impact: *The Journal of Innovation Impact.* 13-009:5(1):96–103. [Public Access article link](#)

Aronhime S, Calcagno C, Jajamovich GH, et al. **DCE-MRI of the Liver: Effect of Linear and Nonlinear Conversions on Hepatic Perfusion Quantification and Reproducibility.** *J Magn Reson Imaging.* 2013; 1522-2586. doi: 10.1002/jmri.24341. [Link to journal landing page](#)

Buckler AJ, Paik D, Ouellette M, Danagoulian J, et al. **A Novel Knowledge Representation Framework for the Statistical Validation of Quantitative Imaging Biomarkers.** *J Digit Imaging.* 2013; 26:614–629. DOI 10.1007/s10278-013-9598-3. [PubMed Citation](#)

Buckler AJ, Ouellette M, Danagoulian J, et al. **Quantitative Imaging Biomarker Ontology (QIBO) for Knowledge Representation of Biomedical Imaging Biomarkers.** *J Digit Imaging.* 2013; 26:630–641. doi: 10.1007/s10278-013-9599-2. [PubMed Citation](#)

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Gámez-Cenzano P, Pino-Sorroche F. **Standardization and Quantification in FDG-PET/CT Imaging for Staging and Restaging of Malignant Disease.** *PET Clinics.* Available online 4 December 2013, ISSN 1556-8598. doi: <http://dx.doi.org/10.1016/j.cpet.2013.10.003>. [Link to Science Direct](#)

Heye T, Boll DT, Reiner CS, Bashir MR, Dale BM and Merkle EM. **Impact of Precontrast T10 Relaxation Times on Dynamic Contrast-enhanced MRI Pharmacokinetic Parameters: T10 Mapping Versus a Fixed T10 Reference Value.** *J Magn Reson Imaging.* 2013; Oct 29. doi: 10.1002/jmri.24262. [Link to journal landing page](#)

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Kim N, Choi J, Yi J, et al. **An Engineering View on Megatrends in Radiology: Digitization to Quantitative Tools of Medicine.** *Korean J Radiol.* 2013; Mar-Apr; 14(2):139-153. doi: <http://dx.doi.org/10.3348/kjr.2013.14.2.139> [PubMed Citation](#)

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