



## 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

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#### 2016

Athelogou MA, Kim HJ, Dima AD, et al. **Algorithm variability in the estimation of lung nodule volume from phantom CT scans: results of the QIBA 3A public challenge.** *Academic Radiology.* 2016; 23(8):940-52. doi: 10.1016/j.acra.2016.02.018

Rodriquez A, Chen-Mayer H, Fuld M, et al. **Harmonization of dose reduction protocols across vendor platforms for measures of CT density of the lungs.** *American Thoracic Society International Conference Abstracts.* A79. 2016; A79. Lung Imaging: CT and Beyond: A2503-A2503. doi:10.1164/ajrccm-conference.2016.193.1\_MeetingAbstracts.A2503

Rodriquez A, Chen-Mayer H, Fuld M, et al. **The effects of iterative reconstruction techniques and high resolution kernels on quantitative computed tomography (qCT).** *American Thoracic Society International Conference Abstracts.* A79. 2016; A79. Lung Imaging: CT and Beyond: A2502-A2502. doi:10.1164/ajrccm-conference.2016.193.1\_MeetingAbstracts.A2502

#### 2015

Sullivan DC, Obuchowski NA, Kessler LG, et al. **Metrology standards for quantitative imaging biomarkers.** *Radiology.* 2015; 277(3):831-825. doi: 10.1148/radiol.2015142202.

Buckler AJ. **Inter-method performance study of tumor volumetry assessment on computed tomography test-retest data.** *Academic Radiology.* 2015; 22(11):1393-1408. <http://dx.doi.org/10.1016/j.acra.2015.08.007>

Deng Y, Rouze NC, Palmeri ML, Nightingale KR. **System-dependent sources of uncertainty and bias in quantitative shear-wave imaging.** *Ultrasonic Imaging and Tissue Characterization Symposium, Arlington, VA.* 2015; 63(3):381-93. doi:10.1109/TUFFC.2016.2524260

Graham MM, Wahl RL, Hoffman JM, et al. **Summary of the UPICT protocol for 18F-FDG PET/CT imaging in oncology clinical trials.** *J Nucl Med.* 2015; 56(6):955-961. doi: 10.2967/jnumed.115.158402; PubMed Citation

Hall TJ, Palmeri M, Carson P, Milkowski, A, Chen S, Lynch T, et al. **Comparison of shear-wave speed estimates among commercial ultrasound systems with liver-mimicking phantoms.** *Ultrasonic Imaging and Tissue Characterization Symposium, Arlington, VA.* June 22 – 24, 2015.

Mulshine JL, Gierada DS, Armato SG 3<sup>rd</sup>, Avila RS, Yankelevitz DF, Kazerooni EA, McNitt-Gray MF, Buckler AJ, Sullivan DC. **Role of the Quantitative Imaging Biomarker Alliance in optimizing CT for the evaluation of lung cancer screen-detected nodules.** *J Am Coll Radiol.* 2015; 12(4):390-5. doi: 10.1016/j.jacr.2014.12.003

Pierce LA, Elston BF, Clunie DA, Nelson D, Kinahan PE. **A digital reference object to analyze calculation accuracy of PET standardized uptake value.** *Radiology*. 2015;277(2). doi: 10.1148/radiol.2015141262

Quak E, Le Roux PY, Hofman MS, et al. **Harmonizing FDG PET quantification while maintaining optimal lesion detection: prospective multicentre validation in 517 oncology patients.** *Eur J Nucl Med Mol Imaging*. 2015; 42(13):2072-2082. PubMed Citation

### **QIBA Metrology Papers**

Sullivan DC, Bresolin L, Seto B, Obuchowski NA, Raunig DL, Kessler LG. **Introduction to Metrology Series.** *Stat Methods Med Res.* 2015; 24(1):3 – 8. doi: 10.1177/0962280214537332. PubMed Citation

Huang EP, Wang XF, Choudhury KR, McShane LM, Gönen M, Ye J, Buckler AJ, Kinahan PE, Reeves AP, Jackson EF, Guimaraes AR, Zahlmann G. **Introduction to Metrology Series: Meta-Analysis of the Technical Performance of an Imaging Procedure: Guidelines and Statistical Methodology.** *Statistical Methods in Medical Research.* 2015;24(1):141-74. doi: 10.1177/0962280214537394 PubMed Citation

Kessler LG, Barnhart HX, Buckler AJ, Choudhury KR, Kondratovich MV, Toledano A, Guimaraes AR, Filice R, Zhang Z, Sullivan DC. **Introduction to Metrology Series: The Emerging Science of Quantitative Imaging Biomarkers: Terminology and Definitions for Scientific Studies and Regulatory Submissions.** *Statistical Methods in Medical Research.* 2015;24(1):9-26. doi: 10.1177/0962280214537333 PubMed Citation

Obuchowski NA, Reeves AP, Huang EP, Wang XF, Buckler AJ, Kim HJ, Barnhart HX, Jackson EF, Giger ML, Pennello G, Toledano AY, Kalpathy-Cramer J, Apanasovich TV, Kinahan PE, Myers KJ, Goldgof DB, Barboriak DP, Gillies RJ, Schwartz LH, Sullivan DC. **Introduction to Metrology Series: Quantitative Imaging Biomarkers: A Review of Statistical Methods for Computer Algorithm Comparisons.** *Statistical Methods in Medical Research.* 2015;24(1):68-106. doi:10.1177/0962280214537390; PubMed Citation

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Raunig DL, Pennello G, Gatsonis C, McShane LM, Carson PL, Voyvodic JT, Wahl RL, Kurland BF, Schwarz AJ, Gönen M, Zahlmann G, Kondratovich M, O'Donnell K, Petrick N, Cole PE, Garra B, Sullivan DC. **Introduction to Metrology Series: Quantitative Imaging Biomarkers: A Review of Statistical Methods for Technical Performance Assessment.** *Statistical Methods in Medical Research.* 2015;24(1):27-67. doi:10.1177/0962280214537344; PubMed Citation

## **2014**

Huang W, Li X, Chen Y, Chang MC, et. al., **Variations of Dynamic Contrast-Enhanced Magnetic Resonance Imaging in Evaluation of Breast Cancer Therapy Response: A Multicenter Data Analysis Challenge.** *Translational Oncology*, 2014; 7(1):153-66. PubMed Citation

Kinahan PE, Wahl RL, Shao LX, Frank RA, Perlman ES. **Oncology: Basic, Translational & Therapy, MTA I: Technical Advances & Quantification Posters: The QIBA Profile for Quantitative FDG-PET/CT Oncology Imaging.** *J Nucl Med.* 2014; 55 (Supplement 1):1520.

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.

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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

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## II. ARTICLES THAT REFERENCE QIBA

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Chen-Mayer HH, Fuld MK, Hoppel B, Judy PF, Sieren JP, Guo J, et al. **Standardizing CT Lung Density Measure Across Scanner Manufacturers.** *Medical Physics*. epub ahead of print Jan 2017. doi: 10.1002/mp.12087

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Meiburger KM. **Quantitative Ultrasound and Photoacoustic Imaging for the Assessment of Vascular Parameters.** Ghione G, In: *PoliTO Springer Series*, 1<sup>st</sup> ed. Torino: Springer International Publishing, publisher, 2017. doi: 10.1007/978-3-319-48998-8.

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Boellaard R. **The Engagement of FDG PET/CT Image Quality and Harmonized Quantification: from Competitive to Complementary.** *European Journal of Nuclear Medicine and Molecular Imaging*. 2016; 43(1):1-4. doi: 10.1007/s00259-015-3182-7; PubMed Citation

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