

QIBA Newsletter



QIBA Newsletter February 2021 • Volume 13, Number 1: J-QIBA Offers Update on Activities, Accomplishments, and Goals

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Improve the value and practicality of quantitative imaging biomarkers by reducing variability across devices, sites, patients, and time.

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QIBA Chair

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Alexander Guimaraes, MD, PhD

QIBA Chair

In My Opinion

J-QIBA Offers Update on Activities, Accomplishments, and Goals

By the Japan Quantitative Imaging Biomarker Alliance (J-QIBA)



The Japanese counterpart of RSNA-QIBA, JRS-QIBA (J-QIBA) functions as a subcommittee of the Research Committee of the Japan Radiologic Society (JRS).

Founded in 2015, J-QIBA (<http://www.radiology.jp/j-qiba/>) is motivated by enthusiastic efforts of RSNA-QIBA. The goal of J-QIBA is to establish effective standards for imaging biomarkers by conducting nationwide multicenter clinical trials and to improve the quality and outcome of the management of patients.

The J-QIBA organizational structure was originally set up with one-to-one correspondence to the RSNA-QIBA committee structure in order to establish quantitative imaging biomarkers by reducing variability in imaging conditions and the imaging environment.

Current J-QIBA chairpersons are Shigeki Aoki, MD, PhD, professor, Department of Radiology, Jyuntendo University, and Ukihide Tateishi, MD, PhD, Department of Diagnostic Radiology, Nuclear Medicine, Tokyo Medical and Dental University. J-QIBA has four coordinating committees and 15 biomarker subcommittees. Study groups (committees) are divided into 14 categories by specific imaging resources or modalities, and approximately 30 institutions in Japan are participating in these study groups.

An Overview of J-QIBA

Education: To promote biomarker usage in clinical trials, J-QIBA has presented several Japanese language versions of RSNA-QIBA Profiles on the home page. Anyone with access to this site can retrieve these materials. A special program about QIBA is conducted at JRS annual meetings and specialists from RSNA-QIBA are invited.

Research: Dr. Aoki coordinates Japan medical image database (J-MID) activities granted by the Japan Agency for Medical Research and Development (AMED). Dr. Mikio Suga, Associate Professor, Chiba University, Graduate School of Engineering Dept. of Medical Engineering, develops original Magnetic Resonance Elastography (MRE) phantoms and conducts a multicenter study of MRE by AMED. Dr. Tateishi conducts the MR Relaxometry and FDG-PET certification program funded by the Ministry of Economy, Trade, and Industry (METI).

Promotion: J-QIBA has conducted nationwide imaging authentication programs for [F^{18}] FDG PET/CT and amyloid PET supported in part by the National Cancer Center Research and Development Fund (2020-J-3) in the setting of clinical trial and clinical research by the Japanese Society of Nuclear Medicine (JSNM) and the Japanese Society of Nuclear Medicine Technology (JSNMT). In an Asian international multicenter phase II trial, [F^{18}] FDG PET/CT scanners in the facilities of all countries were standardized in advance using the [F^{18}]FDG PET/CT Profile developed by RSNA-QIBA (<https://www.rsna.org/QIBA/>). Results of standardization using phantom tests described in the RSNA-QIBA Profile were highlighted.

J-QIBA collaborates with RSNA-QIBA to address standardization and validation and with the Japanese Clinical Oncology Group (JCOG) <http://www.jcog.jp/en/>) to promote biomarker usage within the clinical trials arena.

There is cross-representation of members on the RSNA-QIBA and J-QIBA steering committees. J-QIBA also works closely with the Japanese Society for Magnetic Resonance in Medicine (JSMRM), the Japan Society of

Ultrasonics in medicine (JSUM), JSNM, and JSNMT to provide input into strategies for biomarker development within large consortia.

J-QIBA accords high priority to the roles that it plays as well as what should be done for patients in Japan and throughout the world. All members of J-QIBA strive toward greater improvement in the standardization of imaging biomarkers. J-QIBA will continue to progress toward the goal of achieving breakthroughs in outcomes.



Shigeki Aoki, MD, PhD

Shigeki Aoki, MD, PhD, professor, Department of Radiology, Jyuntendo University, President, Japan Radiological Society (JRS)



Ukihide Tateishi, MD, PhD

Ukihide Tateishi, MD, PhD, Department of Diagnostic Radiology, Nuclear Medicine, Tokyo Medical and Dental University, JRS Liaison to the QIBA Steering Committee

Introduction to QIBA Campaign 2021

Thanks to the dedication and efforts from all who participate in QIBA, we have made great progress in recent years. QIBA Profiles have been drafted and revised, tested, implemented, and publicized. The Accomplishments section below conveys summary observations and statistics from that activity.

To continue this impressive momentum, the QIBA Steering Committee developed a set of goals to assist QIBA Biomarker Committees in maintaining focus on the tasks most likely to increase the positive impact that QIBA Profiles can have on clinical research and practice. To reiterate, we believe those essential activities involve concentrating on Profile content, implementation, and communication.

The recommended goals, referred to as **QIBA Campaign 2021**, are listed below, following the Accomplishments.

We are very grateful for the QIBA community's continued commitment and diligence in reducing the variability associated with health care delivery.

QIBA Campaign 2021



All of us involved in QIBA can take great pride in the accomplishments of recent years.

Here are some of the latest highlights and statistics:

Accomplishments

1. There are 22 active Biomarker Committees

- [Link to committee pages](#)
- [Link to org chart](#)

2. Participants

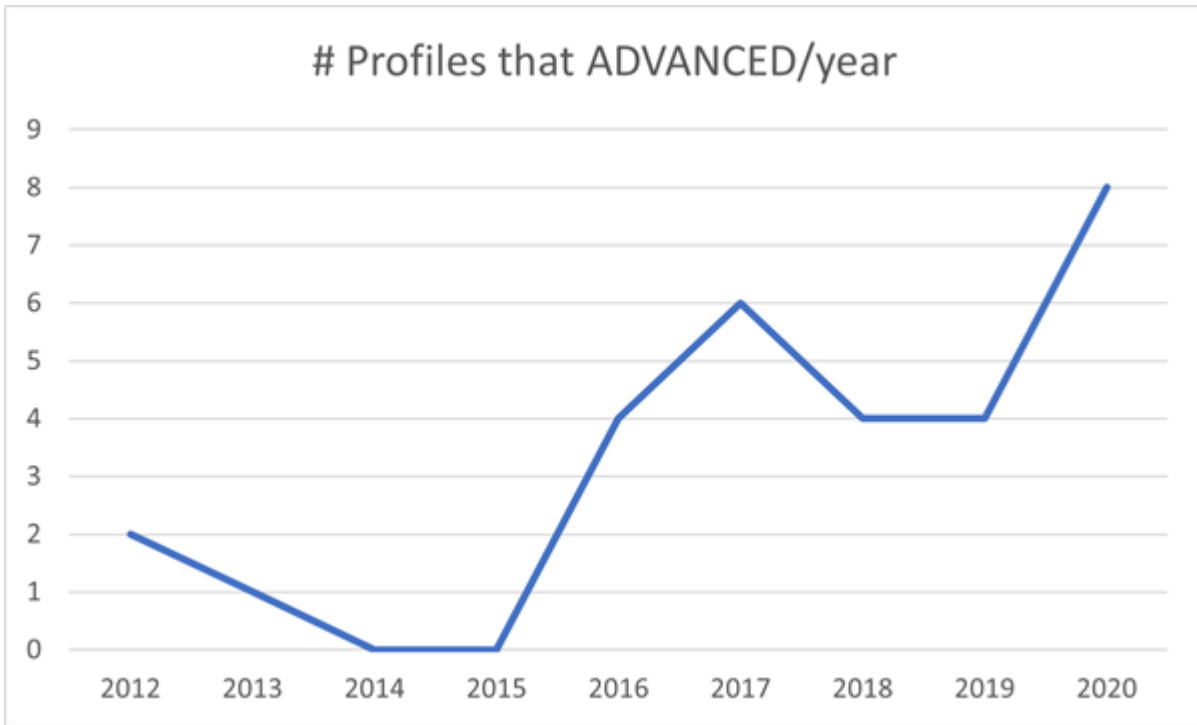
There are approximately **200 active participants** in QIBA committee representing numerous stakeholder groups:

- a. Physicists: **73**
- b. Clinicians: **51**
- c. Equipment: **17**
- d. Government: **13 (FDA, NIH, NIST)**
- e. Societies: **10**
- f. Informatics: **8**
- g. Pharma: **7**
- h. Statisticians/Technologists: **4**
- i. Contract Research Organizations: **3**

An additional 900 participants contribute to QIBA periodically, or are on email lists, at their request.

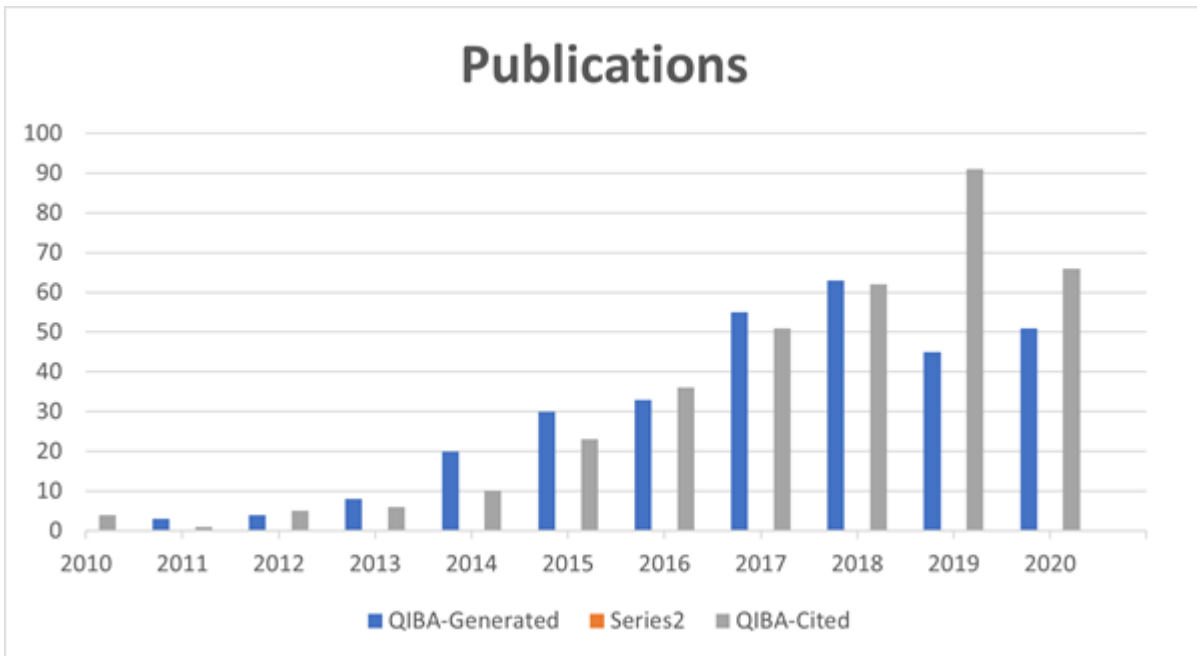
3. Profile Status

- **3** at **Stage 3**: Technically Confirmed
- **10** at **Stage 2**: Consensus
- **3** at **Stage 1**: Public Comment
- **9** In Early Development



4. Publications in 2020 (Q1-Q3)

- QIBA-Generated:**43**
- Publications citing QIBA:**62**





QIBA Campaign 2021 Goals

We have requested that each QIBA Biomarker Committee (BC) devote some of its meeting (conference call) time during 2021 to consider and discuss the following goals, to develop a strategy and/or plan to achieve or make progress toward each. Some of the goals may need to be adapted to be congruous with the BC's status.

- a. Obtain clinical-user input re: the potential clinical role (i.e., clinical relevance) of the imaging biomarker, and the appropriateness of the Profile Claim. The "clinical-user perspective" may reflect:
 - i. Clinical trial needs
 - ii. Clinical practice needs
 - iii. Payer perspective

- b. For Profiles that are:
 - i. In development, or Stage 1 or Stage 2, advance the Profile at least one Stage within the year.
 - ii. At Stage 3 (Technically Confirmed), write a concept proposal for clinical data collection that would help move the Profile to Stage 4 (Claim Confirmed).

- c. Draft at least one manuscript for a peer-reviewed publication.

- d. Write a concept proposal for a groundwork or clinical research project that could form the basis for an application to an external funding entity.
- e. Consider/discuss submitting a proposal to make a QIBA presentation at a professional meeting. Educationally oriented presentations to non-radiology organizations are particularly encouraged.
- f. Discuss committee leadership succession planning and recruiting new committee members, where relevant.

Questions or comments may be directed to: QIBA@rsna.org. Thank you!

Thank you to Dr. Sullivan

RSNA and QIBA leadership would like to thank Daniel Sullivan, MD, for stepping in to serve a second term as QIBA Chair, from November 2019 – December 2020. Working with RSNA leadership and senior administration, Dr. Sullivan, professor emeritus in the Duke University Department of Radiology and former member of Duke Cancer Institute (2007-2015), spearheaded the creation of QIBA in 2007. Since that time, QIBA has grown to include more than 1,400 members and stakeholders. The objectives and processes established by QIBA have expanded domestically and internationally. All who are associated with QIBA clearly owe a debt of gratitude to Dr. Sullivan for his vision, commitment, and leadership. We are greatly appreciative of his dedication to QIBA and wish him all the best.

QIBA Activities

QIBA Biomarker Committees are open to all interested persons. Meeting summaries, the [QIBA Newsletter](#) and other documents are available on the QIBA website RSNA.ORG/QIBA and wiki <http://qibawiki.rsna.org/>.

QIBA Resources:

- [QIBA News](#)
- [QIBA Webpage](#)
- [QIBA Wiki](#)
- [QIBA Biomarker Committees](#)
- [QIBA Organization Chart](#)
- [QIBA LinkedIn page](#)

Please contact QIBA@rsna.org for more information. We welcome your participation.

QIBA and QI/Imaging Biomarkers in the Literature

***Please note that the list of references has been migrated to EndNote.**

***To obtain access to the RSNA EndNote citations, please send an email request to: qiba@rsna.org.**

The list of references showcases articles that mention QIBA, quantitative imaging, or quantitative imaging biomarkers. In most cases, these are articles published by QIBA members or relate to a research project undertaken by QIBA members that may have received special recognition.

New submissions are welcome and may be directed to QIBA@rsna.org.