

# Quantitative Imaging Network Collections

## Summary

The mission of the Quantitative Imaging Network (QIN) is to improve the role of quantitative imaging for clinical decision making in oncology by the developing and validating data acquisition, analysis methods, and tools to tailor treatment for individual patients and predict or monitor the response to drug or radiation therapy.

### Apply to the QIN: [Quantitative Imaging for Evaluation of Responses to Cancer Therapies \(U01\)](#)

Quantitative Imaging for Evaluation of Responses to Cancer Therapies promotes the research and development of quantitative imaging methods to measure tumor response to therapies in clinical trial settings with the overall goal of facilitating clinical decision making. Projects include the development and adaptation/implementation of quantitative imaging methods, imaging protocols, software solutions/tools (using existing commercial imaging platforms and instrumentation), and application of these methods in current and planned phase 1 and 2 clinical therapy trials. The projects are focusing on imaging-derived quantitative measurements of responses to drugs and/or radiation therapy, and /or image-guided interventions (IGI). The goals require multidisciplinary efforts, including oncologists as well as clinical and basic imaging scientists and the involvement of industrial partners in the development and adaptation /implementation of quantitative imaging methods to aid cancer therapies.

This network is one of several being developed within the Cancer Imaging Program. The main emphasis is on the support of the development and adaptation/implementation of quantitative imaging endpoints (including imaging methods and related software tools research, and/or informatics infrastructure). Any related clinical trials are not supported under this program.

Centers of imaging excellence have been selected through the National Institute of Health peer review process and more will be added as they pass through peer review. Five working groups address common issues to the various programs, including data collection, data evaluation, informatics, and potential clinical trials have been established. Various program staff from the National Cancer Institute (NCI) oversee the network through monthly phone calls. The network organizes activities such as consensus publications, cross-network activities, associate membership in the network, and annual face-to-face meetings.

# QIN Data Sharing Policy

To clarify rules of engagement and to encourage meaningful data sharing, QIN adopted a data sharing policy in November 2013. The spirit of this policy is one of collaboration and flexibility intended to introduce a minimal amount of oversight and/or committee work to QIN members. The QIN provides commercial and academic investigators with an opportunity to access data collected as part of QIN studies for purposes that are consistent with the missions of the QIN and the NCI. All QIN members, associate/affiliate members, external collaborators, and companies are made aware of the guiding principles of the QIN Resource Sharing Policy. The objective of the data sharing policy is to help maximize effectiveness by fostering an environment of collaboration and sharing, while addressing concerns of data being used without consent, either by a member of the QIN or an external collaborator. Concerns about inappropriate data use could hinder the multi-center collaborations within the QIN.

The guiding principles of the QIN data sharing policy are as follows:

## QIN Data Sharing Policy

1. Fairness, collegiality, and cooperation in the joint pursuit of scientific advancement. The QIN encourages use of resources generated within the QIN consistent with the missions of the QIN and the NCI.
2. The QIN has a responsibility to ensure that the use of QIN Resource is ethical and scientifically sound.
3. Data will be shared in a manner that allows good use to be made of them. This includes, for example, proper documentation, indexing, or curation/vetting of data where appropriate.
4. Appropriate attribution and acknowledgement for QIN Resources will be provided.
5. QIN data and images typically will not be released to individuals or companies prior to the publication of the projects primary aim manuscript.
6. Data sharing will not burden the QIN's resources such as to impede its ability to pursue its primary research.
7. Investigators interested in asking research questions of data collected as part of QIN projects are encouraged to do so as a collaborative effort within the QIN structure.
8. Investigators interested in using QIN data must agree to adhere to the QIN publication policy.

To facilitate data sharing, the QIN increasingly relies on The Cancer Imaging Archive (TCIA) as a resource, which addresses many of the principles set forth in the data sharing policy. Most importantly, TCIA provides a mechanism for access-controlled data sharing and extensive de-identification services, which comply with Health Insurance Portability and Accountability Act (HIPAA) regulations. This drastically reduces the burden on QIN sites when sharing their data. More information can be found in the following paper describing QIN data sharing activities:

## Citation

Kalpathy-Cramer, J., Freymann, J. B., Kirby, J. S., Kinahan, P. E., & Prior, F. W. (2014, February). Quantitative Imaging Network: Data Sharing and Competitive Algorithm Validation Leveraging The Cancer Imaging Archive. Translational Oncology. Elsevier BV. <http://doi.org/10.1593/tlo.13862>