Publications

When data is submitted to TCIA it undergoes an extensive curation process to assure completeness, proper formatting to facilitate discovery and data reuse and removal of all protected health information. Once data is released on the public TCIA repository it is **Published** to the world. This publication is associated with the creation of a Digital Object Identifier that allows direct access to the data.

In addition to data publication via TCIA we strongly urge researchers who submit data to TCIA to also submit a Data Descriptor publication to a journal such as *Nature Scientific Data*. In this type of publication the authors will describe the data acquisition process, the experiment that drove this data collection and value of the data for future research (see each journal for specific content requirements). A Data Descriptor is a scientific paper that includes the DOI to the data previously published on TCIA and helps to call the attention of the scientific community to the data you have submitted. The details provided in a Data Descriptor publication greatly enhance the value of your contribution.

A Data Descriptor is different from a scholarly paper in which you describe your experiment and present the results of your analysis. Many journals do not provide sufficient space for details of data acquisition. So today you can provide those details and the data you collected by making full use of TCIA and journals that support data publication. In summary we urge you to:

1. Submit your data to TCIA for publication.
2. Submit a Data Descriptor article including the TCIA provided DOI to describe your data and how it was acquired.
3. Submit a paper describing your experiment and results.

Please remember in all of your publications based on TCIA data to include appropriate references to TCIA so we can identify your publications, reference them, and make them easily available to other researchers from the TCIA web site. These citations are critical for providing continued justification of funding from the agencies that support TCIA, and are what allow us to provide this data to you free of charge. Guidelines for how to cite TCIA can be found on our Citation Guidelines wiki page. In addition we would like to list these publications here on our web site. If you have utilized TCIA in your research please contact us at help@cancerimagingarchive.net so that we can include your publications in the list below. The publication list below includes references to the original data collection as well as publications that specifically used data from TCIA.

A listing of published analysis results data sets based upon TCIA-hosted data is provided here.

**Download citation list (Endnote XML format)**

For convenience you can also obtain the publications specifically based on TCIA in Endnote XML format: Pubs_basedon_TCIA_1218.xml. This should be usable as input to your favorite reference management system.

**TCIA-Related Publication History**
Table of Contents

- TCIA General
- Radiogenomics
- Radiomics
- Quantitative Imaging: Pathology Microscopy
- Algorithm Development
- Radiation Oncology
- Theses
- TCIA DOI for Analysis Datasets
- QIN
- Publications relating to specific data collections:
  - Collection: CT Colonography
  - Collection: Head-Neck Cetuximab
  - Collection: LIDC-IDRI
  - Collection: Mouse-Mammary
  - Collection: NLST
  - Collection: NSCLC-Radiomics
  - Collection: Phantom FDA
  - Collection: QIN Breast
  - Collection: QIN Breast DCE-MRI
  - Collection: QIN GBM DCE-MRI
  - Collection: QIN HeadNeck
  - Collection: QIN Prostate
  - Collection: QIN Sarcoma
  - Collection: REMBRANDT
  - Collection: RIDER Collections
  - Collection: Soft-tissue-Sarcoma
  - Collection: SPIE-AAPM Lung CT Challenge
  - Collection: SPIE-AAPM-NCI PROSTATEx Challenges
- Collection: TCGA-BRCA
- Collection: TCGA-GBM
- Collection: TCGA-KIRC
- Collection: TCGA-LGG
- Collection: TCGA-LUAD
- Collection: TCGA-LUSC
- Collection: 4D-Lung
TCIA General


Radiogenomics


Radiomics


Quantitative Imaging: Pathology Microscopy


Algorithm Development


57. Tseng LY and Huang LC. Automatic fissure detection in CT images based on the genetic algorithm. Machine Learning and Cybernetics (ICMLC), International Conference. IEEE. 2010. 5: 2583 – 2588. DOI: 10.1109/ICMLC.2010.5580871


Radiation Oncology

**Theses**

TCIA DOI for Analysis Datasets

1. Aerts HJ, Velazquez ER, et al. (2014). Decoding tumour phenotype by noninvasive imaging using a quantitative radiomics approach. TCIA. Saint Louis, MO. (link)


Publications relating to specific data collections:


Collection:  Head-Neck Cetuximab


3. Ryalat MH, Laycock S, Fisher M, editors. Automatic Removal of Mechanical Fixations from CT Imagery with Particle Swarm Optimisation. International Conference on Bioinformatics and Biomedical Engineering; 2017: Springer. DOI: 10.1007/978-3-319-56148-6_37


10. Wang, D; Fong, S; Wong, RK.; Mohammed, S; Fiaidhi, J; Wong, KKL. Robust High-dimensional Bioinformatics Data Streams Mining by ODR-ioVFDT. Scientific Reports 7, article number 43167 DOI: 10.1038/srep43167


19. Messay T, Hardie RC, Tuinstra TR. **Segmentation of Pulmonary Nodules in Computed Tomography Using a Regression Neural Network Approach and its Application to the Lung Image Database Consortium and Image Database Resource Initiative Dataset.** Medical Image Analysis. 2015. ([paper](https://doi.org/10.1016/j.media.2015.02.006))


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The following refer to the LIDC Collection data, created before submission to TCIA


Collection: Mouse-Mammary

These refer to the Mouse-Mammary Collection data, created before submission to TCIA

Collection: NLST

Please see List of NLST Publications at NIH to browse publications from this Data Collection.
Collection: **NSCLC-Radiomics**


Collection: Phantom FDA


Collection: QIN Breast


13. Yankeelov TE. Integrating Imaging Data into Predictive Biomathematical and Biophysical Models of Cancer. ISRN Biomathematics, 2012; Article ID 287394. PMID: PMC3729405


27. Atuegwu NC, Li X, Arlinghaus LR, Abramson RG, Williams JM, Chakravarthy AB, Abramson V, Yankeelov TE. Longitudinal, Inter-modality Registration of Quantitative Breast PET and MRI Data Acquired Before and During Neoadjuvant Chemotherapy: Preliminary Results. Medical Physics, 2014; 41:052302. PMCID: PMC4000383

These refer to the QIN-Breast Collection data, created before submission to TCIA

2. Atuegwa NC, Gore JC, Yankeeov TE. **Using Quantitative Imaging Data to Drive Mathematical Models of Tumor Growth and Treatment Response.** Physics in Medicine and Biology, 2010; 55: 2429-49. PMCID: PMC2897238

3. Yankeeov TE, Arlinghaus L, Li X, Gore JC. **The role of magnetic resonance imaging biomarkers in clinical trials of treatment response in cancer.** Seminars in Oncology, 2011; 38:16-25. PMCID: PMC3073543


5. Arlinghaus LR, Welch EB, Chakravarthy AB, Farley JS, Gore JC, Yankeeov TE. **Motion and distortion correction in diffusion-weighted MRI of the breast at 3T.** Journal of Magnetic Resonance Imaging, 2011; 33:1063-70. PMCID: PMC3081111


Collection: QIN Breast DCE-MRI


**Collection:**  QIN HeadNeck


2. Ahmadvand P, Duggan N, Bénard F, Hamarneh G. *Tumor Lesion Segmentation from 3D PET Using a Machine Learning Driven Active Surface*. MLMI 2016 in conjunction with the 19th Int'l Conference on MICCAI. (link)


Collection: QIN Prostate


Collection: QIN Sarcoma


Collection: Rider Collections


These refer to the RIDER Collections data, created before submission to TCIA


Collection: Soft-tissue-Sarcoma


Collection: SPIE-AAPM Lung CT Challenge


4. Albiol, Alberto; Corbi, Alberto; Albiol, Francisco. Automatic intensity windowing of mammographic images based on a perceptual metric. Medical Physics, 2473-4209.10.1002/mp.12144

5. Wu, J; Sun, X; Wang, J; Cui, Y; Kato, F; Shirato, H; Ikeda, DM.; Li, R. Identifying relations between imaging phenotypes and molecular subtypes of breast cancer: Model discovery and external validation. Journal of Magnetic Resonance Imaging, 2586 DOI: 10.1002/jmri.25661


Collection: TCGA-GBM


Collection: TCGA-KIRC


Collection: **TCGA-LGG**


Collection: TCGA-LUAD


Collection: TCGA-LUSC

Collection: 4D-Lung

1. Woodruff, H. C., Shieh, C.-C., Hegi-Johnson, F., Keall, P. J. and Kipritidis, J. (2017), Quantifying the reproducibility of lung ventilation images between 4-Dimensional Cone Beam CT and 4-Dimensional CT. Med. Phys. DOI: 10.1002/mp.12199


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