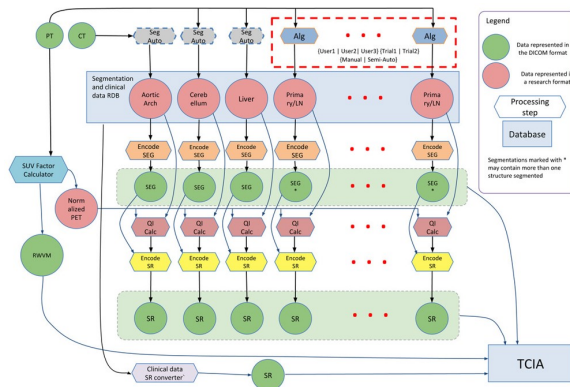


QIN-HEADNECK

Summary

This collection is a set of head and neck cancer patients' multiple positron emission tomography/computed tomography (PET/CT) 18F-FDG scans—before and after therapy—with follow up scans where clinically indicated. The data was provided to help facilitate research activities of the National Cancer Institute's (NCI's) Quantitative Imaging Network (QIN). This collection was supported by Grants: U24 CA180918 (<http://qiicr.org>) and U01 CA140206.

The following schematic summarizes much of the work done within the QIICR grant to augment the PET/CT scans with segmentations and clinical data using the DICOM standard: (click to enlarge)



About the NCI QIN

The mission of the QIN is to improve the role of quantitative imaging for clinical decision making in oncology by 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. More information is available on the [Quantitative Imaging Network Collections](#) page. Interested investigators can apply to the QIN at: [Quantitative Imaging for Evaluation of Responses to Cancer Therapies \(U01\) PAR-11-150](#).

Data Access

Data Access

Click the **Download** button to save a ".tcia" manifest file to your computer, which you must open with the [NBIA Data Retriever](#). Click the **Search** button to open our Data Portal, where you can browse the data collection and/or download a subset of its contents.

Data Type	Download all or Query /Filter
Images and Segmentations (DICOM, 103.5 GB)	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="background-color: #007bff; color: white; padding: 5px 15px; border-radius: 5px; margin-bottom: 5px;"> Download </div> <div style="background-color: #ffc107; color: white; padding: 5px 15px; border-radius: 5px;"> Search </div> </div>

DICOM Metadata Digest (CSV)	Download
Clinical data	(See Detailed Description tab)

Click the Versions tab for more info about data releases.

Detailed Description

Detailed Description

Collection Statistics	
Modalities	PET, CT, SR, SEG, RWV
Number of Patients	156
Number of Studies	651
Number of Series	2993
Number of Images	353,408
Image Size (GB)	103.5

Associated Clinical Metadata

Structured Report DICOM objects (Modality SR), are available in the DICOM downloads, and can be distinguished from image files by the series description "Clinical Data." Note, there is no image preview thumbnail for a Structured Report.

Citations & Data Usage Policy

Citations & Data Usage Policy

This collection is freely available to browse, download, and use for commercial, scientific and educational purposes as outlined in the [Creative Commons Attribution 3.0 Unported License](#). See TCIA's [Data Usage Policies and Restrictions](#) for additional details. Questions may be directed to help@cancerimagingarchive.net.

Please be sure to include the following citations in your work if you use this data set:

Data Citation

Beichel R R, Ulrich E J, Bauer C, Wahle A, Brown B, Chang T, Plichta K A, Smith B J, Sunderland J J, Braun T, Fedorov A, Clunie D, Onken M, Magnotta VA, Menda Y, Riesmeier J, Pieper S, Kikinis R, Graham M M, Casavant T L, Sonka M, Buatti J M. (2015). Data From QIN-HEADNECK. The Cancer Imaging Archive. DOI: [10.7937/K9/TCIA.2015.K0F5CGLI](https://doi.org/10.7937/K9/TCIA.2015.K0F5CGLI)

i Publication Citation

Fedorov A, Clunie D, Ulrich E, Bauer C, Wahle A, Brown B, Onken M, Riesmeier J, Pieper S, Kikinis R, Buatti J, Beichel RR. (2016) DICOM for quantitative imaging biomarker development: a standards based approach to sharing clinical data and structured PET/CT analysis results in head and neck cancer research. PeerJ 4:e2057 DOI: [10.7717/peerj.2057](https://doi.org/10.7717/peerj.2057)

i TCIA Citation

Clark K, Vendt B, Smith K, Freymann J, Kirby J, Koppel P, Moore S, Phillips S, Maffitt D, Pringle M, Tarbox L, Prior F. **The Cancer Imaging Archive (TCIA): Maintaining and Operating a Public Information Repository**, Journal of Digital Imaging, Volume 26, Number 6, December, 2013, pp 1045-1057. DOI: [10.1007/s10278-013-9622-7](https://doi.org/10.1007/s10278-013-9622-7)

Other Publications Using This Data

TCIA maintains [a list of publications](#) that leverage our data, including citations of this Collection. If you have a publication you'd like to add please [contact the TCIA Helpdesk](#). Some publications that have used this dataset as a resource include

1. Taghanaki et al. [Segmentation-free direct tumor volume and metabolic activity estimation from PET scans](#). Comput Med Imaging Graph 2018 [link to article](#)
2. Sinha et al. [Towards automatic initialization of registration algorithms using simulated endoscopy images](#). [link to article](#)
3. Ghattas, Andrew Emile [Medical Imaging Segmentation Assessment via Bayesian Approaches to Fusion, Accuracy and Variability Estimation with Application to Head and Neck Cancer 2017 Thesis](#) [link](#)
4. Stoll et al. [Comparison of Safety Margin Generation Concepts in Image Guided Radiotherapy to Account for Daily Head and Neck Pose Variations](#) PLoS One 2016 [link to article](#)
5. Ahmadvand et al. [Tumor Lesion Segmentation from 3D PET Using a Machine Learning Driven Active Surface](#) 2016 MLMI Conference Proceedings [link to article](#)

Versions

Version 3 (Current) : Updated 2019/07/24



Data Type	Download all or Query/Filter
Images (DICOM, 103.5 GB)	<div style="display: flex; gap: 10px;"> <div style="background-color: #007bff; color: white; padding: 5px 10px; border-radius: 3px; display: flex; align-items: center; justify-content: center;"> ↓ Download </div> <div style="background-color: #ffc107; color: white; padding: 5px 10px; border-radius: 3px; display: flex; align-items: center; justify-content: center;"> 🔍 Search </div> </div>

DICOM Metadata Digest (CSV)	
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Lifted restriction from SR object data download.


Version 2: Updated 2017/12/06

Downloads require the [NBIA Data Retriever](#).

Data Type	Download all or Query/Filter
Images (DICOM, 104 GB)	
DICOM Metadata Digest (CSV)	

Added associated DICOM SEG, SR, and RWV objects

Version 1: Updated 2015/08/20

Data Type	Download all or Query/Filter
Images (DICOM, 102.76 GB)	
DICOM Metadata Digest (CSV)	