

QIN multi-site collection of Lung CT data with Nodule Segmentations

Data Citation

Jayashree Kalpathy-Cramer, Sandy Napel, Dmitry Goldgof, Binsheng Zhao. (2015). Multi-site collection of Lung CT data with Nodule Segmentations. The Cancer Imaging Archive. <http://doi.org/10.7937/K9/TCIA.2015.1BUVFJR7>

Description

This dataset (also known as the “moist run” among QIN sites) contains CT images (41 total scans) of non-small cell lung cancer from: the Reference Image Database to Evaluate Therapy Response (RIDER), the Lung Image Database Consortium (LIDC), patients from Stanford University Medical Center and the Moffitt Cancer Center, and the Columbia University/FDA Phantom. In addition, 3 academic institutions (Columbia, Stanford, Moffitt-USF) each ran their own segmentation algorithm on a total of 52 tumor volumes. Segmentations were performed 3 different times with different initial conditions, resulting in 9 segmentations formatted as DICOM Segmentation Objects (DSOs) for each tumor volume, for a total of 468 segmentations. This collection may be useful for designing and comparing competing segmentation algorithms, for establishing acceptable ranges of variability in volume and segmentation borders, and for developing algorithms for creating cancer biomarkers from features computed from the segmented tumors and their environments.

Publication Citation

Kalpathy-Cramer, J., Zhao, B., Goldgof, D., Gu, Y., Wang, X., Yang, H., ... Napel, S. (2016, February 3). A Comparison of Lung Nodule Segmentation Algorithms: Methods and Results from a Multi-institutional Study. *Journal of Digital Imaging*. Springer Nature. <http://doi.org/10.1007/s10278-016-9859-z>

Download

Version 3

Note: In December 2018 it was discovered that an update to [NSCLC Radiogenomics](#) mistakenly resulted in the deletion of the segmentation data for this analysis set. We are currently investigating whether it is possible to restore the data. In the meantime this dataset can be downloaded using the links below which exclude the Stanford NSCLC Radiogenomics subset of the analyses.

- Image Data — Save/open this file to initiate our Java Web Start download manager to begin your download
 - [CT Images \(31 series\)](#)
 - [Segmentations \(378 series\)](#)
 - [CT Images + Segmentations \(409 series\)](#)
- Nodule Location Documentation (spreadsheets)
 - [Lung Phantom Nodule Locations](#)
 - [QIN Lung Nodule Locations](#)
 - [RIDER Lung CT Nodule Locations](#)
 - [LIDC-IDRI Nodule Locations](#)

Version 2

- Image Data — Save/open this file to initiate our Java Web Start download manager to begin your download
 - [CT Images \(41 series\)](#)
 - [Segmentations \(468 series\)](#)
 - [CT Images + Segmentations \(509 series\)](#)
- Nodule Location Documentation (spreadsheets)
 - [Lung Phantom Nodule Locations](#)
 - [QIN Lung Nodule Locations](#)
 - [RIDER Lung CT Nodule Locations](#)
 - [NSCLC Radiogenomics Nodule Locations](#)
 - [LIDC-IDRI Nodule Locations](#)

Version 1

NOTE: On 9/14/2015 this DOI was updated to resolve problems with 9 of the segmentations being incorrectly labeled. The Series Instance UIDs in the original data set which have since been deleted from TCIA are:

1.2.276.0.7230010.3.1.3.0.34323.1424694723.968333
1.2.276.0.7230010.3.1.3.0.34343.1424694769.748096
1.2.276.0.7230010.3.1.3.0.32279.1424660367.640148
1.2.276.0.7230010.3.1.3.0.3373.1415292738.832393
1.2.276.0.7230010.3.1.3.0.32259.1424660332.352116
1.2.276.0.7230010.3.1.3.0.32238.1424660298.604243
1.2.276.0.7230010.3.1.3.0.3306.1415292638.342990
1.2.276.0.7230010.3.1.3.0.3345.1415292685.22320
1.2.276.0.7230010.3.1.3.0.34303.1424694693.127541

These have been replaced with the following new segmentation series:

1.2.276.0.7230010.3.1.3.0.21757.1437749726.319319
1.2.276.0.7230010.3.1.3.0.21734.1437749686.271681
1.2.276.0.7230010.3.1.3.0.21713.1437749624.694944
1.2.276.0.7230010.3.1.3.0.95052.1441388220.839236
1.2.276.0.7230010.3.1.3.0.95027.1441388189.267094
1.2.276.0.7230010.3.1.3.0.95003.1441388142.544126
1.2.276.0.7230010.3.1.3.0.3233.1437599346.502866
1.2.276.0.7230010.3.1.3.0.3210.1437599318.624213
1.2.276.0.7230010.3.1.3.0.3180.1437599282.481700