

# QIN multi-site collection of Lung CT data with Nodule Segmentations (QIN-LungCT-Seg)

## Summary

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.

**Note:** In December 2018 it was discovered that an update to [NSCLC Radiogenomics](#) mistakenly resulted in the deletion of the segmentation data from this analysis set. As a result, the 10 affected patients and related segmentations are no longer included in the download section below.

## Data Access

### Data Access

Data Type	Download	License
Segmentations (378 series, DICOM)	<a href="#">Download</a> (Requires <a href="#">NBIA Data Retriever</a> )	CC BY 3.0
CT Images & Segmentations Combined (409 series, DICOM)	<a href="#">Download</a> (Requires <a href="#">NBIA Data Retriever</a> )	CC BY 3.0
<a href="#">Lung Phantom</a> Nodule Locations Documentation (xls)	<a href="#">Download</a>	CC BY 3.0
<a href="#">QIN LUNG CT</a> Nodule Locations Documentation (xls)	<a href="#">Download</a>	CC BY 3.0
<a href="#">RIDER Lung CT</a> Nodule Locations Documentation (xls)	<a href="#">Download</a>	CC BY 3.0
<a href="#">LIDC-IDRI</a> Nodule Locations Documentation (xls)	<a href="#">Download</a>	CC BY 3.0

## Collections Used in this Third Party Analysis

Below is a list of the Collections used in these analyses:

Source Data Type	Download	License
Corresponding Original CT Images from <a href="#">Lung Phantom</a> , <a href="#">LIDC-IDRI</a> , <a href="#">QIN LUNG CT</a> , and <a href="#">RIDER Lung CT</a> - 31 series (DICOM)	<a href="#">Download</a> (Requires <a href="#">NBIA Data Retriever</a> )	CC BY 3.0

- [Lung Phantom](#)
- [LIDC-IDRI](#)
- [QIN LUNG CT](#)
- [RIDER Lung CT](#)

## Detailed Description

### Detailed Description

To download all DICOM source CT Images & Segmentations Combined - 409 series (DICOM) you can use this link : [QIN Multi-site Lung CTs and SEG \(minus Stanford\).tcia](#) (Download requires [NBIA Data Retriever](#))

## Citations & Data Usage Policy

### Citations & Data Usage Policy

Users must abide by the [TCIA Data Usage Policy and Restrictions](#). Attribution should include references to the following citations:



#### Data Citation

Kalpathy-Cramer, J., Napel, S., Goldgof, D., & Zhao, B. (2015). **Multi-site collection of Lung CT data with Nodule Segmentations (version 3) [Data set]**. The Cancer Imaging Archive. DOI: <https://doi.org/10.7937/k9/tcia.2015.1buvfjr7>



#### Publication Citation

Kalpathy-Cramer, J., Zhao, B., Goldgof, D., Gu, Y., Wang, X., Yang, H., Tan, Y., Gillies, R., & Napel, S. (2016). **A Comparison of Lung Nodule Segmentation Algorithms: Methods and Results from a Multi-institutional Study**. In Journal of Digital Imaging (Vol. 29, Issue 4, pp. 476–487). <https://doi.org/10.1007/s10278-016-9859-z>



#### 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. (2013). **The Cancer Imaging Archive (TCIA): Maintaining and Operating a Public Information Repository**. In Journal of Digital Imaging (Vol. 26, Issue 6, pp. 1045–1057). Springer Science and Business Media LLC. <https://doi.org/10.1007/s10278-013-9622-7> PMID: PMC3824915

## Other Publications Using This Data

TCIA maintains [a list of publications](#) that leverage our data. If you have a manuscript you'd like to add please [contact TCIA's Helpdesk](#).

### Versions

#### Version 3 (Current): 2018/12/18

Data Type	Download all or Query/Filter
CT Images - 31 series (DICOM)	<a href="#">Download</a>
Segmentations - 378 series (DICOM)	<a href="#">Download</a>
CT Images & Segmentations Combined - 409 series (DICOM)	<a href="#">Download</a>

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. As a result, version 3 excludes the Stanford NSCLC Radiogenomics subset of the analyses.

#### Version 2: 2015/12/21

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

**Previous version spreadsheets:**

- 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: 2015/09/15**

Original release of dataset.