



# RIDER Lung PET-CT

## Summary

The RIDER Lung PET-CT collection was shared to facilitate the RIDER PET/CT subgroup activities. The PET/CT subgroup was responsible for: (1) archiving de-identified DICOM serial PET/CT phantom and lung cancer patient data in a public database to provide a resource for the testing and development of algorithms and imaging tools used for assessing response to therapy, (2) conducting multiple serial imaging studies of a long half-life phantom to assess systemic variance in serial PET/CT scans that is unrelated to response, and (3) identifying and recommending methods for quantifying sources of variance in PET/CT imaging with the goal of defining the change in PET measurements that may be unrelated to response to therapy, thus defining the absolute minimum effect size that should be used in the design of clinical trials using PET measurements as end points.

## About the RIDER project

The Reference Image Database to Evaluate Therapy Response (RIDER) is a targeted data collection used to generate an initial consensus on how to harmonize data collection and analysis for quantitative imaging methods applied to measure the response to drug or radiation therapy. The National Cancer Institute (NCI) has exercised a series of contracts with specific academic sites for collection of repeat "coffee break," longitudinal phantom, and patient data for a range of imaging modalities (currently computed tomography [CT] positron emission tomography [PET] CT, dynamic contrast-enhanced magnetic resonance imaging [DCE MRI], diffusion-weighted [DW] MRI) and organ sites (currently lung, breast, and neuro). The methods for data collection, analysis, and results are described in the new Combined RIDER White Paper Report (Sept 2008):

- [RIDER White Paper: Combined contracts report \( Sept 2008\) PDF](#)

The long term goal is to provide a resource to permit harmonized methods for data collection and analysis across different commercial imaging platforms to support multi-site clinical trials, using imaging as a biomarker for therapy response. Thus, the database should permit an objective comparison of methods for data collection and analysis as a national and international resource as described in the first RIDER white paper report (2006):

- [RIDER White Paper: Executive Summary PDF](#)
- [RIDER White Paper: Editorial in Nature.com](#)

### 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 (DICOM, 83.27GB)	<a href="#">Download</a> <a href="#">Search</a>
DICOM Metadata Digest (CSV)	<a href="#">Download</a>

Click the Versions tab for more info about data releases.

### Detailed Description

## Detailed Description

Collection Statistics	
Modalities	CT, PET
Number of Patients	244
Number of Studies	275
Number of Series	1349
Number of Images	269,511
Image Size (GB)	83.27

### 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](mailto:help@cancerimagingarchive.net).

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

#### Data Citation

Muzi, Peter, Wanner, Michelle, & Kinahan, Paul. (2015). Data From RIDER Lung PET-CT. The Cancer Imaging Archive. <http://doi.org/10.7937/K9/TCIA.2015.OFIP7TVM>

### 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. ([paper](#))




## Other Publications Using This Data

TCIA maintains [a list of publications](#) which leverage our data. At this time we are not aware of any additional publications based on this data. If you have a publication you'd like to add please [contact the TCIA Helpdesk](#).

### Versions

## Version 2: Updated 2015/12/29

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

Data Type	Download all or Query/Filter
Images (DICOM, 78.7GB)	 
DICOM Metadata Digest (CSV)	

It was brought to our attention that RIDER-1817358092 and RIDER-2617411955 appeared to be the same patient. We have gone back to University of Washington and confirmed this is to be true. RIDER-1817358092 has been removed as RIDER-2617411955 contained a couple additional series that were absent from the patient ID we removed.

## Version 1: Updated 2011/09/14

Initial upload of data set.