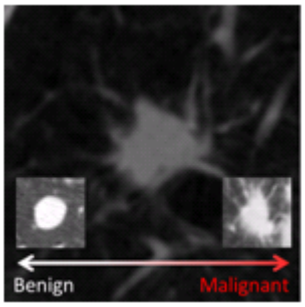
# SPIE-AAPM-NCI Lung Nodule Classification Challenge Dataset (SPIE-AAPM Lung CT Challenge)

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# Summary




As part of the 2015 SPIE Medical Imaging Conference, SPIE – with the support of American Association of Physicists in Medicine (AAPM) and the National Cancer Institute (NCI) – will conduct a "Grand Challenge" on quantitative image analysis methods for the diagnostic classification of malignant and benign lung nodules. The LUNGx Challenge will provide a unique opportunity for participants to compare their algorithms to those of others from academia, industry, and government in a structured, direct way using the same data sets.

- Release date of calibration set cases with truth: **November 21, 2014**
- Release date of test set cases without truth: **January 9, 2015**
- Submission date for participants to submit test set classification results: **February 6, 2015**
- SPIE Medical Imaging meeting: **February 21 to 26, 2015**

**For more information please refer to: LUNGx SPIE-AAPM-NCI Lung Nodule Classification Challenge, the related SPIE Guest Editorial, and corresponding scientific manuscript.**

**Data Access**

## Data Access

| Data Type | Download all or Query/Filter | License |
|---|---|---|
| Images (DICOM, 12.1GB) | *Download* *Search*<br>(Download requires the NBIA Data Retriever) | CC BY 3.0 |
| Nodule Locations/Diagnoses - Calibration Set (XLS, ) | *Download* | CC BY 3.0 |
| Nodule Locations/Diagnoses - Test Set (XLS, 55 kB) | *Download* | CC BY 3.0 |

Click the Versions tab for more info about data releases.

## Additional Resources for this Dataset

The NCI Cancer Research Data Commons (CRDC) provides access to additional data and a cloud-based data science infrastructure that connects data sets with analytics tools to allow users to share, integrate, analyze, and visualize cancer research data.

- Imaging Data Commons (IDC) (Imaging Data)

**Detailed Description**

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## Detailed Description

| Collection Statistics | |
|---|---|
| Modalities | CT |
| Number of Patients | 70 |
| Number of Studies | 70 |
| Number of Series | 70 |
| Number of Images | 22,489 |
| Images Size (GB) | 12.1 |

**For more information please refer to: LUNGx SPIE-AAPM-NCI Lung Nodule Classification Challenge, the related SPIE Guest Editorial, and the follow up scientific manuscript.**

Counts below reflect both the training set (10 subjects) and test set (60 subjects). The Patient IDs of the 10-subject training set begin **CT-Training**. The Patient IDs of the 60-subject test set begin **LUNGx**.

## Nodule locations and diagnoses

- CalibrationSet_NoduleData.xlsx - Nodule locations and diagnoses
- TestSet_NoduleData.xlsx - Nodule locations; diagnoses to be added after manuscript publication

**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**

Armato III, Samuel G.; Hadjiiski, Lubomir; Tourassi, Georgia D.; Drukker, Karen; Giger, Maryellen L.; Li, Feng; Redmond, George; Farahani, Keyvan; Kirby, Justin S.; Clarke, Laurence P. (2015). **SPIE-AAPM-NCI Lung Nodule Classification Challenge Dataset**. The Cancer Imaging Archive. https://doi.org/10.7937/K9/TCIA.2015.UZLSU3FL

**Publication Citation**

Armato III SG, Hadjiiski LM, Tourassi GD, Drukker K, Giger ML, Li F, Redmond G, Farahani K, Kirby JS, Clarke LP. (2015). **Guest Editorial: LUNGx Challenge for computerized lung nodule classification: reflections and lessons learned**. Journal of Medical Imaging. SPIE-Intl Soc Optical Eng. DOI: 10.1117/1.jmi.2.2.020103

**Publication Citation**

Samuel G. Armato, Karen Drukker, Feng Li, Lubomir Hadjiiski, Georgia D. Tourassi, Roger M. Engelmann, Maryellen L. Giger, George Redmond, Keyvan Farahani, Justin S. Kirby, Laurence P. Clarke. (2016) "**LUNGx Challenge for computerized lung nodule classification**," *J. Med. Imag.* **3**(4), 044506. DOI: 10.1117/1.JMI.3.4.044506

**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**, Journal of Digital Imaging, Volume 26, Number 6, pp 1045-1057. DOI: 10.1007/s10278-013-9622-7

## Other Publications Using This Data

TCIA maintains a list of publications which leverage our data. If you have a publication you'd like to add please contact TCIA's Helpdesk.

**Versions**

## Version 2 (Current): Updated 2016/09/23

| Data Type | Download all or Query/Filter |
|---|---|
| Images (DICOM, 12.1GB) | *Download* *Search*<br>(Download requires the NBIA Data Retriever) |
| Nodule Locations/Diagnoses - Calibration Set (XLS) | *Download* |
| Nodule Locations/Diagnoses - Test Set (XLS) | *Download* |

Added diagnosis data to test set XLS.

## Version 1: Updated 2014/11/21

| Data Type | Download all or Query/Filter |
|---|---|
| Images (DICOM, 12.1GB) | *Download*<br>(Download requires the NBIA Data Retriever) |
| Nodule Locations/Diagnoses - Calibration Set (XLS) | *Download* |
| Nodule Locations - Test Set (XLS) | *Download* |

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