

Image Data Used in the Simulations of "The Role of Image Compression Standards in Medical Imaging: Current Status and Future Trends" (Image-Compression-Simulation)

Summary

These are the 3D image data used in the simulations of the paper "The Role of Image Compression Standards in Medical Imaging: Current Status and Future Trends". 10 series per collection were selected from [ACRIN 6664 \(CT COLONOGRAPHY\)](#), [Data from The Lung Image Database Consortium \(LIDC\)](#) and [Image Database Resource Initiative \(IDRI\): A completed reference database of lung nodules on CT scans \(LIDC-IDRI\)](#), [The Cancer Genome Atlas Breast Invasive Carcinoma Collection \(TCGA-BRCA\)](#), and [The Cancer Genome Atlas Glioblastoma Multiforme Collection \(TCGA-GBM\)](#) for analysis. Lossless and lossy compression algorithms, including JPEG, JPEG-LS, JPEG-XR, JPEG2000, HEVC, are used to compress and decompress the images. Their performances are compared in the paper.

Data Access

Data Access

Collections Used in this Third Party Analysis

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

Data Type	Download all or Query/Filter	License
Corresponding Original Images from CT COLONOGRAPHY (DICOM)	Download (Download requires NBIA Data Retriever)	CC BY 3.0
Corresponding Original Images from LIDC-IDRI (DICOM)	Download (Download requires NBIA Data Retriever)	CC BY 3.0
Corresponding Original Images from TCGA-BRCA (DICOM)	Download (Download requires NBIA Data Retriever)	CC BY 3.0
Corresponding Original Images from TCGA-GBM (DICOM)	Download (Download requires NBIA Data Retriever)	TCIA Restricted

- [TCGA-GBM](#)
- [TCGA-BRCA](#)
- [LIDC-IDRI](#)
- [CT COLONOGRAPHY](#)

Detailed Description

Detailed Description

This Collection used subsets of existing TCIA data.

Collection Statistics	Radiology
Modalities	MR,CT
Number of Participants	37
Number of Studies	40
Number of Series	40
Number of Images	9,252
Image Size (GB)	3.9

manifest (note: includes limited-access data): [metadata.csv](#)

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

Liu, F., Hernandez-Cabrero, M., Sanchez, V., Marcellin, M. W., & Bilgin, A. (2016). **Image Data Used in the Simulations of The Role of Image Compression Standards in Medical Imaging: Current Status and Future Trends (Image-Compression-Simulation) [Data set]**. The Cancer Imaging Archive. <https://doi.org/10.7937/K9/TCIA.2016.xHs>

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<https://doi.org/10.7937/K9/TCIA.2016.xHsOkCdcOkCdc>



Publication Citation

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TCIA Citation

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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 1 (Current): 2016/12/08

Data Type	Download all or Query/Filter	License
CT Images (DICOM)	Download (Download requires the NBIA Data Retriever)	CC BY 3.0
LIDC images (DICOM)	Download (Download requires the NBIA Data Retriever)	CC BY 3.0
TCGA-BRCA images (DICOM)	Download (Download requires the NBIA Data Retriever)	CC BY 3.0
TCGA-GBM images (DICOM)	Download (Download requires the NBIA Data Retriever)	TCIA Restricted