ROI Masks Defining Low-Grade Glioma Tumor Regions In the TCGA-LGG Image Collection (TCGA-LGG-Mask)

Summary

This collection contains 406 ROI masks in MATLAB format defining the low grade glioma (LGG) tumour region on T1-weighted (T1W), T2-weighted (T2W), T1-weighted post-contrast (T1CE) and T2-flair (T2F) MR images of 108 different patients from the TCGA-LGG collection. From this subset of 108 patients, 81 patients have ROI masks drawn for the four MRI sequences (T1W, T2W, T1CE and T2F), and 27 patients have ROI masks drawn for three or less of the four MRI sequences. The ROI masks were used to extract texture features in order to develop radiomic-based multivariable models for the prediction of isocitrate dehydrogenase 1 (IDH1) mutation, 1p/19q codeletion status, histological grade and tumour progression.

Clinical data (188 patients in total from the TCGA-LGG collection, some incomplete depending on the clinical attribute), VASARI scores (188 patients in total from the TCGA-LGG collection, 178 complete) with feature keys, and source code used in this study are also available with this collection. Please contact Martin Vallières (mart.vallieres@gmail.com) of the Medical Physics Unit of McGill University for any scientific inquiries about this dataset.

Data Access

Data Access

Some data in this collection contains images that could potentially be used to reconstruct a human face. To safeguard the privacy of participants, users must sign and submit a TCIA Restricted License Agreement to help@cancerimagingarchive.net before accessing the data.

Data Type	Download all or Query/Filter	License
Images (DICOM, 9.03 GB)	*Download* Note: Limited Access. Please request both TCGA-LGG-Mask and TCGA-LGG in your Agreement. Download requires the NBIA Data Retriever.	TCIA Restricted
Clinical data (CSV)	*Download*	CC BY 3.0
VASARI information (CSV)	*Download*	CC BY 3.0
VASARI MR feature key (PDF)	*Download*	CC BY 3.0
Matlab Segmentations (109 subjects, 406 files, MAT, ZIP, 18MB)	*Download*	CC BY 3.0

Additional Resources for this Dataset

The following external resources have been made available by the data submitters. These are not hosted or supported by TCIA,but may be useful to researchers utilizing this collection.

- source code used in this study on Github

Collections Used in this Third Party Analysis

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

- TCGA-LGG Note: Limited Access. You may need to request both TCGA-LGG-Mask and TCGA-LGG.

Detailed Description

Detailed Description

Per 2024/02/21, Access to this collection's MATLAB ROI masks has been opened to the public. Please properly acknowledge this dataset when it is useful in your current or planned research project.

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

Su, C., Vallières, M., & Bai, H. (2017). **ROI Masks Defining Low-Grade Glioma Tumor Regions In the TCGA-LGG Image Collection** [Data set]. The Cancer Imaging Archive. https://doi.org/10.7937/K9/TCIA.2017.BD7SGWCA

Publication Citation

Zhou, H., Vallières, M., Bai, H. X., Su, C., Tang, H., Oldridge, D., Zhang, Z., Xiao, B., Liao, W., Tao, Y., Zhou, J., Zhang, P., & Yang, L. (2017). **MRI features predict survival and molecular markers in diffuse lower-grade gliomas**. Neuro-Oncology, 19(6), 862–870. https://doi.org/10.1093/neuonc/now256

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, 26(6), 1045–1057. https://doi.org/10.1007/s10278-013-9622-7

Other Publications Using This Data

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

Versions

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Version 1 (Current): 2017/03/17

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Images (DICOM, 9.03 GB)	Download
Clinical data (CSV)	Download
VASARI information (CSV)	Download
VASARI MR feature key (PDF)	Download
Matlab Segmentations	Please contact help@cancerimagingarchive.net to request access. More information is here and in the Detailed Description for this Collection.