Mapping of Edema and Cellular Invasion to MR Phenotypes

Summary

This project sets out to present the first comprehensive radiogenomic analysis using quantitative magnetic resonance imaging (MRI) volumetrics and large-scale gene- and micro-RNA expression profiling in glioblastoma multiforme (GBM). This project was led by Pascal Zinn and Rivka Colen of the M.D. Anderson Cancer Center (MDACC) and *Brigh am and Women's Hospital* (BWH), respectively. The following publication was written on the subject and published in PLoS ONE: Radiogenomic Mapping of Edema/Cellular Invasion MRI-Phenotypes in Glioblastoma Multiforme.

Supporting Documentation and Metadata

Shared Lists

The following shared lists have been created to easily obtain the subset of The Cancer Genome Archive (TCGA)-GBM relevant to this study:

- **Radiogenomic Mapping of Edema/Cellular Invasion MRI-Phenotypes**: Consists of only the 78 subjects which were reviewed for their publication. From these cases, the PLoS ONE article indicates two sequences from each case were used for the study: 1) Fluid-Attenuated Inversion Recovery (FLAIR) for segmentation of the edema and 2) post-contrast T1-weighted imaging (T1WI) for segmentation of enhancement (defined as tumor) and necrosis.

Note: See Section 3.7 of The Cancer Imaging Archive's User Guide for help with shared lists.

3D Segmentations, Clinical, and Genetic Data

The corresponding clinical and genetic data for the study patients can be obtained from the TCGA Data Portal. The 3D segmentations were created in the slicer and may be made available upon request. Please contact us for more information: help@cancerimagingarchive.net.