Cancer Imaging Phenomics Toolkit (CaPTk):
A Radio(gen)omics Platform for Quantitative Image Analytics
Christos Davatzikos, Despina Kontos, Paul Yushkevich, Russell Shinohara, Yong Fan, Ragini Verma
Center for Biomedical Image Computing and Analytics (CBICA), University of Pennsylvania
captk@cbica.upenn.edu

Primary Aim:
To enable swift and efficient translation of cutting-edge academic research into clinically useful tools.

Target Audience:
- [Clinical experts]: facilitating use of complex algorithms for clinically relevant studies through a user-friendly interface.
- [Computational experts]: allowing batch-processing of multiple subjects and integration of new algorithms.

-- General Purpose Tools --

- [Pre-processing[2]]
- [Graphical Interaction]
- [Segmentation[3,4]]

-- Specialized Applications --

- [GBM Recurrence Prediction[1,12]]
- [Radiogenomic Signature of EGFRvIII in GBM[13]]
- [Computational Study of Brain Connectivity[14,15]]
- [GBM Survival Prediction[16]]

-- Future Directions --

Cohort-Based Interface  |  Traditional Machine Learning Training Module  |  Multiscale Feature Extraction