

AbstractID: 3057 Title: Role of Imaging in Drug Response: Challenges and Opportunities

Advances in biomedical imaging technology such as anatomical, functional and molecular imaging methods permit new protocols and informatics tools to be developed for measuring drug response. There is, however, an increasing need to harmonize methods for data collection and analysis to provide a greater acceptance of these methods by the clinical community, and in particular, the pharmaceutical industry community. Recently the NCI and the FDA have entered into a broad inter agency agreement, referred to as the Interagency Oncology Task Force (IOTF) to review how to accelerate the use of biomarkers for measurement of drug response. Biomedical imaging is an integral part of this IOTF. NCI is also reviewing its drug trial infrastructure, including web accessible methods to access trial data to enhance the development of informatics tools to measure drug response. <http://iotftraining.nci.nih.gov/>

NCI Cancer Imaging Program (CIP) therefore has an interest in challenging the cancer center, academic and industry communities to engage in research that may lead to harmonization of imaging protocols, related quality assurance methods and data analysis methods as required to measure drug response across different imaging platforms and clinical sites. NCI is actively engaged, for example, in providing web accessible reference image data sets collected from drug response investigations. These efforts include providing annotated data to permit more standardized methods for measuring the performance of related informatics tools, such as change analysis. They are part of an overall development of a large data archive and web query systems referred to as caBIG. <http://imaging.cancer.gov/programsandresources/InformationSystems>
<http://cabig.nci.nih.gov/>

This presentation will outline example scientific and NCI programmatic opportunities in this area. The intent of this presentation is to challenge investigators to consider this area of research.

Learning Objectives:

1. Understanding NCI Imaging Initiatives