AbstractID: 8005 Title: Imaging as a Biomarker for Therapy Response: Challenges, Opportunities and Initiatives

Imaging as a biomarker for drug and radiation therapy response is emerging as an important area of research. The NIH has formed a Biomarker Consortium with several agencies of the federal government to leverage NIH and Industry funds to develop standardized methods for biomarkers that includes imaging. (http://www.fnih.org/Biomarkers%20Consortium/Biomarkers_home.shtml ). The role of imaging as a biomarker poses unique problems for image data collection and analysis across different imaging platforms, as the latter factors increase the uncertainty of measurement, (NIST workshop agenda and report: http://usms.nist.gov/workshops/bioimaging.htm). The AAPM is well positioned to address standards for quality assurance for all imaging modalities, system performance, and development of clinical decision software tools for measurement of therapy response. For this symposium, speakers will discuss:
The role of imaging as a biomarker,

- Potential funding sources for this work at NIH,
- Leveraging therapy physics experience in the NCI's Radiation Research Program that can be applied to measurement of therapy response,
- How imaging societies can become engaged to address this research area and promote more standardized methods for biomedical imaging.