

Application for QIBA Project Funding

Title of Proposal: Biologic and Reader Repeatability of FDG and CT Volumetric Parameters (ACRIN 6678 & MERCK)		
QIBA Committee/Subgroup: FDG PET/CT Biomarker Committee		
NIBIB Task Number(s) which this project addresses: Repeatability and reader reproducibility		
PI (Project Coordinator or Lead Investigator Information)		
Last Name: Subramaniam	First Name: Rathan	Degree(s): MD, PhD, MPH
e-mail:		Tel #:
Institution/Company: Johns Hopkins University		
Total Amount Requested (including indirect costs):		

1. Project Description:

The FDG PET and CT tumor volumetric parameters are valuable prognostic and predictive imaging biomarkers. There is no multicenter data on the biologic and reader repeatability of these parameters. This project investigates these properties of using the ACRIN 6678 and MERCK data that are held in ACRIN headquarters. Three readers (inter reader assessment) will perform segmentations and each reader will repeat the segmentations (intra reader assessment), > 90 days interval, in a random order, using threshold and gradient segmentations.

2. Primary goals and objectives:

- To establish the biologic repeatability of FDG PET metabolic tumor volume (MTV) and total lesion glycolysis (TLG) using the arm C data of ACRIN 6678 and MERCK data.
- To establish the intra reader and inter reader reproducibility and variability of MTV and TLG using arm C data of ACRIN 6678 and MERCK data
- To establish the reproducibility using digital reference object (DRO) for volumetric parameters (MTV and TLG) – Collaboration with Dr. Paul Kinahan