Application for Round 3 QIBA Project Funding

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| Title of Proposal: FDG-PET/CT Digital Reference Object (DRO) Extension | | |
| QIBA Committee/Subgroup: NM/FDG-PET/CT | | |
| NIBIB Task Number(s) which this project addresses: 2.3.3 (Objective 3: procedures and processes) | | |
| **Project Coordinator or Lead Investigator Information:** | | |
| Last Name: Kinahan | First Name: Paul | Degree(s): PhD |
| e-mail: | Tel #: | |
| Institution/Company: University of Washington | | |
| Amount Requested: | | |

**Project Description**

This project will provide necessary extensions (i.e. features) to the FDG-PET/CT Digital Reference Object (DRO) to expand the testing capabilities. These capabilities will include measurements of ROI (region of interest) fidelity, SUVpeak, and PET-CT display alignment. After these extensions are incorporated and validated, the DRO will be field-tested and at multiple sites and display stations as successfully done previously. The multiple testing sites will be selected from FDG-PET/CT Technical Committee members. The primary site will coordinate testing procedures, DRO distribution, and data analysis. The project will start with experienced quantitative imaging centers first (partnering with core labs if possible), then expand to community centers (if budget and time allow).

This will include a formal process description, publication of broad-spectrum testing results in a peer-reviewed scientific journal, distributing announcements presentations and/or other advertising, providing a user manual and expected results and tolerance ranges, and providing a DRO check-out and result check-in process.

**Primary goals and objectives**

The primary goal is to both extend and formalize the FDG-PET/CT Digital Reference Object (DRO) as a reference standard for verification of SUV measurements by equipment and software platforms vendors. The primary mechanism for this will be continued incorporation into the FDG-PET/CT Profile and by presentation to manufacturers of PET/CT display systems.