



Application for QIBA Project Funding

Title of Proposal: DCE-MRI Phantom Fabrication, Data Acquisition and Analysis, and Data Distribution		
QIBA Committee/Subgroup: DCE-MRI Technical Committee / MRI Modality Committee		
NIBIB Task Number(s) which this project addresses: 2 (primary), 1 & 9 (secondary)		
<b>Project Coordinator or Lead Investigator Information:</b>		
Last Name: Jackson	First Name: Edward	Degree(s): PhD
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Institution/Company: The University of Texas M.D. Anderson Cancer Center		
Amount Requested:		

**Project Description**

The DCE-MRI Technical Committee has developed a prototype DCE-MRI phantom that is proposed for use in DCE-MRI clinical trial site qualification as well as ongoing quality control processes. When it was initially formed, the DCE-MRI Technical Committee identified the need for such a robust DCE-MRI contrast response phantom as a top priority. Since that time, the committee developed a "generic" DCE-MRI acquisition protocol, developed a protocol for quality control / initial site qualification, each process a key component of the first DCE-MRI Profile, and has evaluated the use of a modified ADNI MagPhan phantom and, upon initial multicenter testing of two copies of this phantom design, found the phantom to be insufficiently robust to shipping and handling, too limited in its evaluation of  $R_1$  (longitudinal relaxation rate) contrast response assessment, and not time efficient in routine application. A new phantom design was proposed to address each identified weakness of the modified ADNI MagPhan phantom for DCE-MRI contrast response characterization, relaxometry, and quality control.