

Cancer Imaging Program Grants – CIP 2015

“Radiation sparing of eloquent cortex in brain tumor patients using advanced quantitative neuroimaging and knowledge-based planning.”

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This application aims to reduce the morbidity associated with radiotherapy for human brain tumors, bringing together a multi-disciplinary investigative team of radiation oncologists, medical physicists, and computational neuroscientists. The research team proposes to develop and validate a novel knowledge-based treatment planning technique to spare cortical gray matter during brain radiation. This proposal has potential to revolutionize the concept of cognitive-sparing radiotherapy, uses advanced quantitative MRI technology and sophisticated computer models, addresses an important clinical question, is immediately applicable to human research studies, and was judged as having high likelihood of translation into clinical care and in multi-center clinical trials.