

**Cancer Center Support Grant – CCSG 2014**

“Restriction spectrum imaging as a biomarker for monitoring disease progression and early response to therapy in patients with high-grade glioma”

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Our goals are to determine whether a novel magnetic resonance imaging (MRI) diffusion method, restriction spectrum imaging (RSI), (1) improves the evaluation of treatment response following initiation of antiangiogenic agents and (2) can better differentiate true progression from pseudoprogression in patients with high-grade glioma relative to standard diffusion-weighted imaging (DWI). Furthermore, we will test whether RSI improves multispectral imaging models designed to predict treatment response. This study is of great importance to brain cancer research, utilizing an innovative imaging tool that may enable earlier detection of glioma and improved monitoring of treatment response and tumor progression relative to existing MRI.