

**Title : Role of MR Spectroscopy in Differentiating Tumor Recurrence and Post Radiation Changes in Treated Brain Tumors with Radiotherapy**

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**Asbtract :**

Introduction: Among the space occupying lesions of brain, gliomas are the most common primary malignant brain tumor and metastases are overall most common intracranial tumors in adults. Assessing the treatment response is routinely done by contrast magnetic resonance imaging (MRI), but MRI being an anatomic imaging technique cannot be accurate in predicting the response to treatment and presents a diagnostic dilemma in assessing the changes due to tumor progression or treatment effects specifically radiation induced changes. Aim: To evaluate the significance of MR Spectroscopy in differentiation between recurrent tumor and radiation necrosis in patients previously treated for brain tumor using alterations in the ratios of standard brain metabolites– Choline (Cho), Creatinine (Cr), and N-acetyl aspartate