6th Annual Brain Tumor Symposium:
Imaging the Brain for Diagnosis and Treatment Response in Neuro-Oncology

Friday, October 28, 2016

At the conclusion of this CME activity, participants will be able to:

- Summarize the original CT-based MacDonald criteria and analyze the effectiveness of the modern MR-based measures in assessing treatment response.

- Identify the current structure of the NIH as it relates to the neuroradiology and genomics disciplines and evaluate the impact of integrated data banks on neuroradiology.

- Describe the significance of the IDH-1 mutation in malignant gliomas and assess the impact of the integration of clinical data with imaging tools to the biology of tumors infiltrating the brain.

- Examine the modern MR imaging tools, emphasizing the role of pulse sequences and how the integration of these different imaging tools can impact results.

- Analyze the tools that provide quantitative physiologic measurements and cite evidence as to how these measurements provide new information about treatment responses after immunotherapy.

- Appraise the current immunotherapy platforms in cancer treatment and evaluate the challenges associated with treatment options and the recent innovations.

- Discuss the radiographic features of CNS lymphoma and evaluate the prevalence, diagnosis, and impact of a trial on the treatment of this disease.

- Differentiate various imaging techniques routinely used in minimally invasive cranial base surgery (MICBS) highlighting the indications and challenges of endoscopic cranial base surgery and the advances that have broadened the scope and indications.

- Analyze the principles of Laser Interstitial Thermal Therapy (LITT), and examine the indications and treatment outcomes related to this procedure.

- Appraise the imaging techniques required for characterization and treatment of pituitary tumors and critique the milestones that have changed practice patterns and improved patient outcomes.

- Critique the recent advances in the treatment of benign brain tumors and challenges as it relates to the histology, size and location of the tumor and post-treatment, after standard treatments have been exhausted.

- Summarize the recent breakthroughs in neuro-imaging and evaluate the implications of the latest MRI scan applications to diagnostic methods and treatment responses.

- Examine the imaging characteristics of both cranial and spinal axis pathologies and demonstrate the importance of communicating the relevant clinical information to the interpreting radiologist.

- Appraise common applications of MRI scans in establishing a differential diagnosis or treatment response.

- Analyze the history of neuro-oncology and appreciate recent innovations in treatment and outcomes that have improved patient care.

- Recognize the value of imaging data to the design of research protocols and understanding the role it has as inclusion/exclusion criteria and stop/end points.

- Describe the essential imaging modalities and how they are applied in the practice of radiosurgery.

- Assess their individual practice in light of the information and discussions during the course, and identify specific strategies to implement as part of a continuing improvement process for their practices.