7th Intraoperative Imaging Society Meeting

Wednesday, March 13, 2019

10:00-11:00 am  IOIS Board meeting
10:00  Registration
12:00 pm  Welcome, Opening Remarks and Introduction to Practical Course-
           Daniel Orringer, MD

Practical Course:
5 Stations, 5 Rotations with 10 Minute Break Between Rotations
5 Groups of Participants to Rotate Through all Five Stations for 40 Minutes Each

1:00-1:40  Rotation 1: Intraoperative Ultrasound
           Francesco Prada, MD and Geirmund Unsgård, MD

1:50-2:20  Rotation 2: Fluorescence - 5ALA and Fluorescein
           Constantinos Hadjipanayis, MD and Jeff Bruce, MD

2:30-3:00  Rotation 3: Stimulated Raman Histology
           Sandra Camelo-Piragua, MD and Daniel Orringer, MD

3:10-3:40  Rotation 4: Laser Interstitial Thermal Therapy
           Dan Curry, MD and Veronica Chiang, MD

3:50-4:20  Rotation 5: Use of Tubular Retractor Tractography and fMRI for Presurgical Planning/Intraop
           Functional Imaging
           Michael E. Sughrue, MD and Mitesh Shah, MD

5:00-7:00 pm  Welcome Reception

Thursday, March 14, 2019

8:00-8:30 am  Presidential Address and Opening Remarks
               Michael Chicoine, MD

Session 1: The Application of Intraoperative MRI to Glioma Surgery
Moderators: Christopher Nimsky, MD and Moshe Hadani, MD

8:30-8:45  TBD

8:45-9:00  Glioma Surgery in Smart Cyber Operating Theater Realized Through Internet of Things (IoT)
           Yoshihiro Muragaki, MD, PhD

9:00-9:15  Utility of iMRI for Non-Enhancing Low-Grade Gliomas:
           Why There are Implications also for Postoperative Surveillance
           Moritz Scherer, MD
9:15-9:30  **Intraoperative BOLD imaging**  
Oliver Bozinov, MD

9:30-10:00  **iMRI vs 5-ALA**  
Constantin Roder, MD

10:00-10:15  **iMRI for Gliomas of Eloquent Cortex**  
Marcos Malduan, MD

10:15-10:25  **Abstract Talk**

10:25-10:35  **Abstract Talk**

10:45-11:00  Break

11:00-11:30  **Image Guided Therapy Program at MD Anderson**  
Introduction: Jeffrey Weinberg, MD  
John Hazle, MD

11:30-11:40  **Question and Answer Session**

12:00-1:00 pm  Lunch (provided)

1:00-1:30  **IMAGING TOPIC**  
Introduction: Jeffrey Weinberg, MD  
Donald Pettit, PhD - NASA Representative

1:30-1:40  **Question and Answer Session**

1:40-2:15  Break

**Session 2: Advanced Imaging Modalities for Presurgical Planning**  
Moderators: Richard Bouchard, MD and Oliver Bozinov, MD

2:15-2:30  **PET in Glioma and Meningioma Surgery/ Statistics**  
Niklas Thon, MD

2:30-2:45  **Advanced Ultrasonography**  
Richard Bouchard, MD

2:45-3:00  **White Matter Tractography for Neurosurgical Planning**  
Lauren O’Donnell, MD

3:00-3:15  **Solutions and Challenges for Using fMRI to Plan Neurosurgical Procedures in Eloquent Locations**  
Alexandra Golby, MD

3:15-3:45  **Resting State and Surgical Planning for GBM in Intraoperative MRI Environment**  
Albert Kim, MD, PhD

3:45-3:55  **Abstract Talk**

3:55P-4:05  **Abstract Talk**

4:05-4:20  Break

**Session 3: Interpretation of Studies Evaluating Intraoperative Imaging Techniques**  
Moderators: Marcus Maldaun, MD and Zvi Cohen, MD

4:20-4:35  **An Evidence-Based Approach to the Application Intraoperative Imaging in Brain Tumor Surgery**  
Colin Watts, MD
Application of Intraoperative Imaging Techniques in the Molecular Era of Glioma Diagnosis
Christian Senft, MD

Twenty Year Experience Using Low Field iMRI for Intra-Axial Tumor Resection
Zvi Cohen, MD

iMRI Applications in Children
John Honeycutt, MD

Image Guidance Techniques as a Basis for a Surgical Education Curriculum
Arya Nabavi, MD

Abstract Talk

Abstract Talk

Adjourn

Friday, March 15, 2019

8:00-8:05 am Opening Remarks and Introduction of Keynote Speaker
Daniel Orringer, MD

8:05-8:35 Keynote
Optical Techniques to Improving Outcomes in Neurosurgery and the Development of 5-ALA and Future Directions for 5-ALA and FGS
Walter Stummer, MD

8:35-8:45 Question and Answer Session

8:45-9:05 Break

Session 4: Fluorescence Guided Surgery and Optical Imaging Techniques
Moderators: Daniel Orringer, MD and Walter Stummer, MD

9:05-9:20 The Application of Handheld Confocal Microscopy in Brain Tumor Surgery
Peter Nakaji, MD

9:20-9:35 Pushing Limits of Fluorescence-Guided Surgery
Linton Evans, MD

9:35-9:50 FT-IR
Mattias Kirsch, MD

9:50-10:05 Near Infrared Imaging for Brain Tumor Resection
John Y. K. Lee, MD

10:05-10:20 Stimulated Raman Histology
Todd Hollon, MD

10:20A-10:35 2HG Spectroscopy
Randy Jensen, MD

10:35-10:50 Fluorescence Guided Surgery
Costas Hadjipanayis, MD

10:50-11:00 Abstract Talk

11:00-11:10 Abstract Talk
11:10-11:20 Abstract Talk
11:20-11:35 Break
11:35-12:05 Keynote
Mass Spectrometry for Cancer Diagnosis and Detection
Introduction: Daniel Orringer, MD
Livia Eberlin, MD
12:05-12:20 pm Question and Answer Session
12:20-1:30 Lunch (provided)

Session 5: Intraoperative Ultrasound, Focused Ultrasound, Surgical Robotics, and other Modalities
Moderators: Richard Bucholz, MD and Daniel Orringer, MD

1:30-1:45 MR Guided Applications of High-Intensity Focused Ultrasound for Brain Tumor Ablation
Julie Pilitsis, MD
1:45-2:00 LITT-Emerging Applications
Eric Leuthardt, MD

2:15-2:30 Applications of Radiogenomics to Neurosurgical Practice
Rivka Colen, MD
2:30-2:45 Surgical Robotics
Garnette Sutherland, MD

2:45-3:00 Surgical Robotics/SCOT
Richard Bucholz, MD

3:00-3:30 Break

3:30-3:45 Intraoperative CT as a Registration Device
Christopher Nimsky, MD

3:45-4:00 iUS
Francesco Prada, MD

4:00-4:15 DBS
Richard Bucholz, MD

4:15-4:30 Surgical VR concepts, 3D Visualization and/or Open Abstracts
John Golfinos, MD

3:30-3:45 Break

6:30-9:30 pm George Ranch Dinner Event

Saturday, March 16, 2019

8:00-8:05 am Opening Remarks Jeff Weinberg

Session 6: LITT and other advanced therapeutics
Moderators: John Honeycutt, MD and Michael Schulder, MD

8:05-8:20 Review of Published Evidence for LITT
Michael Schulder, MD
8:20-8:35  LITT-Radiation Necrosis
         Veronica Chiang, MD

8:35-8:50  LITT-Brain Tumor- LITT for Radiation Necrosis in the Setting of Metastatic Disease
         Ian Lee, MD

8:50-9:05  LITT for Epilepsy
         Dan Curry, MD

9:05-9:20  LITT-Glioma
         Gene Barnett, MD

9:20-9:35  Applications of Focused Ultrasound in Neurosurgery
         Ying Meng, MD

9:35-9:45  Abstract Talk

9:45-9:55  Abstract Talk

9:55-10:20  Break

Session 7: Neuro Anesthesia, Robotics, Functional Neurosurgery, Cerebrovascular Imaging & Other Advances in the iMRI Environment:
         Moderators: Richard Bucholz, MD and Rene Bernays, MD

10:20-10:35  Delivering Anesthesia in the Setting of iMRI Environment
         Shreyas Bhasvar, MD

10:35-10:50  Delivering Anesthesia in the Setting of the iMRI Environment
         Sergio Bergese, MD

10:50-11:05  Anesthetic Considerations for Awake Craniotomies in iMRI Environment
         David Ferson, MD

11:05-11:20  ROSA Robot
         Nitin Tandon, MD

11:20-11:35  The Use of Image Guidance in Functional Neurosurgery
         Paul Larson, MD

11:35-11:50  Intraoperative Vascular Imaging
         Colin Derdeyn, MD

11:50-12:05  Indications for Use; Pitfalls; Utility of Extent of Resection
         Jan Coburger, MD

12:05-12:20pm  Augmented Reality
         Osamah Choudhry

12:20-12:30  Abstract Talk

12:30-12:40  Abstract Talk

12:40-1:00  Award Presentation for Top Abstract Presentations & Meeting Wrap-up

1:00 pm  Adjourn