

2010 University of Virginia Advanced Gamma Knife Course

Wednesday, October 27, 2010

- 7:15-8:00 a.m. Breakfast
- 8:00-8:15 a.m. **Dr. Mark Shaffrey** – Opening Remarks
- 8:15-8:25 a.m. **Dr. Edward Nemergut** – Monitored Anesthesia for GK frame placement
- 8:45-10:00 a.m. **Hands on in the OR for Frame Placement and description of changes w/ Frame Application and Use**
Dr. Sheehan
- 10:00-10:10 a.m. Break
- 10:10-10:30 a.m. **Dr. Prashant Ragahavan** – Neuro-Imaging for GKRS of Pituitary Adenomas
- 10:30-11:00 a.m. **Dr. Mary Lee Vance** – Endocrine considerations for Cushing's Disease, Nelson's, and Nonfunctioning Adenomas; Patient Selection for the GK
- 11:00-11:30am **Dr. Michael Thorner**
Endocrine considerations for Acromegaly And Prolactinomas; Patient Selection for the GK
- 11:30-12:00 **Dr. Steve Newman**
Ophthalmological considerations for Pituitary Patients Undergoing Gamma Knife surgery (GKS)
- 12:00-1:00 p.m. Lunch
- 1:00-1:30 p.m. **Dr. John Jane Jr.**
Endoscopic Resection of Pituitary Adenomas versus GKS
- 1:30- 2:00 p.m. **Dr. Edward Oldfield** – Transsphenoidal, Microcapsular Resection of Pituitary Adenomas versus GKS

- 1:30- 2:15 p.m. **Dr. Jason Sheehan** – Gamma Knife Surgery for Pituitary Adenomas & Methods to Avoid Damage To the Optic Apparatus
- 2:15-2:45 p.m. Roundtable Discussion on GKS for Pituitary Adenomas with **Drs. Oldfield, Newman, Jane Jr, Jason Sheehan, Thorner, and Mary Lee Vance**
- 2:45-3:00 p.m. Break
- 3:00-4:00 p.m. **Drs. David Schlesinger, Sheehan, and Chun-Po Yen** --
Hands-on Dose Planning Strategy w/ the Perfexion
Dynamic beam shaping and shielding
Composite shots
Conformality index
Dose Gradient
Discussion of Participants' Cases
- 6:30 p.m. Course Dinner.

Transportation will be provided from to the dinner.

Thursday, October 28, 2010

- 6:30-8:30 a.m. Breakfast
- 7:00-8:00 a.m. **Hands on Perfexion Unit Technical Description**
Drs. Schlesinger and Aqualino
Radiation Unit Safety
Calibration and Practical Physics
Patient Positioning system
Control System
Pertinent NRC Regulations
Commissioning a Perfexion
- 8:00-8:30 a.m. **Dr. Prashant Ragahavan** – Neuroimaging of AVMs for GKRS
Image Distortion in radiosurgery
- 8:30-9:00 a.m. **Dr. Aaron Dumont** – Embolization of AVMs prior to GKRS
- 9:00-9:30 a.m. **Dr. Neal Kassell** – Surgical Resection versus GKRS of AVMs
- 9:30-10:00 a.m. **Dr. Mark Quigg** – Epilepsy in AVM GK patients
- 10:00-10:15am Break
- 10:15-11:00 a.m. **Dr. Ladislau Steiner** –
GKS for Arteriovenous Malformations
--Value of Embolization before Gamma Knife Surgery
--Patient Selection for GKRS
--Treatment of Large AVMs
--Adverse Effects
- 11:00-11:30 a.m. Roundtable Discussion on Gamma Knife surgery for Vascular Lesions with **Drs. Dumont, Sheehan, Neal Kassell, and Ladislau Steiner**
- 11:30-12:30 p.m. Lunch
- 12:30-1:00 p.m. **Dr. Neal Kassell**
High Intensity Focused Ultrasound Applications for Intracranial Pathology
OPTIONAL Tour of HIFU center at UVa
- 1:00-2:00 p.m. **Drs. Sheehan, David Schlesinger, and Chun-Po Yen** –
Discussion of Participants Cases
Hands-on Dose Planning with Gamma Plan PFX

2:00-3:00 p.m. **Demonstration of Gamma Knife
Perfexion**

**Workflow and Presentation of Unit
Effect on Physician Efficiency**

By Dr. Schlesinger and Dr. Sheehan

3:00 p.m. Historical Tour of the University of Virginia

6:30 p.m. Course Dinner.

Friday, October 29, 2010

6:30-8:00 a.m. Breakfast

7:00-8:00 a.m. **Hands-on with the Perfexion**

Drs. Schlesinger and Aqualino
Quality Assurance
Clearance Procedures
Emergency Procedures
Radiation Safety
Basic Workflow

8:00-8:30 a.m. **Dr. Benjamin Purow**

Medical Management of Brain Metastasis Patients

8:30- 9:00 a.m. **Dr. Mark Shaffrey –**

Surgical Resection versus GKS of Brain Metastasis

9:00-9:30 a.m. Break

9:30-10:00 a.m. **Dr. James Larner**

Radiobiology of Radiosurgery
WBRT versus GKS for Brain Metastasis

10:00-10:30 a.m. **Dr. Tyvin Rich –**

--circadian alterations in cell-cycle profile and
radiosensitivity
--radiation toxicity with WBRT and GKS

10:30-11:00 am **Dr. Jason Sheehan**

Gamma Knife Surgery (GKS) for Brain Metastasis

11:00-11:30 a.m. Round Table Discussion on Gamma Knife
Surgery For Brain Metastasis with **Drs. Sheehan,
Shaffrey, Purow, Larner, and Rich**

11:30-12:30pm Lunch

12:30-1:30 p.m. **Drs. Sheehan, Schlesinger, and Yen –**

--Hands-on Dose Planning Strategy with the Perfexion
--Discussion of Participant's Cases

1:30-2:30 pm **Sophie Yu**

Coding and Reimbursement for the GK Perfexion

2:30-3:00 p.m. **Dr. Sheehan –**Review and Concluding
Remarks

OPTIONAL Tour of Monticello

