



Introduction to workflows with Icon using Stereotactic CBCT to get the stereotactic reference:	Workflows with frameless immobilization; mask, Hands On	YES/NO:	
	Workflows with frame based G-frame, Hands On	YES/NO:	
Introduction to Leksell Gamma Plan 11:	Pre-planning Define Skull from MR-images Unreliable dose Co-registration Regions & Volumes Dose evaluation Treatment Delivery Evaluation Re-plan Convolution	YES/NO:	
Daily QA Plus procedures:	Image quality  QA tool plus	YES/NO:	
Emergency Procedure (theoretical discussion):	Emergency Procedures including worst case scenario: No lighting in the treatment room	YES/NO:	

Trainer Signature:

*Susan Rohman*

Date:

*9/8/16*

Trainee/Manager Signature:

Date:

*Sep 8, 2016*



ELEKTA

Doc No. 1519810	Date 20150603	Edition 1
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## Leksell Gamma Knife® Icon™ On Site Applications Training – Training Checklist

Name of Trainee: <i>Carlos H. Caegini</i>
Clinical Role: <i>Medical Physicist</i>
Hospital name: <i>University of Virginia</i>

If the trainee did not attend some of the modules or if some of the modules were not given fill in "content covered: NO" and explain the reason for the deviation.

Training Module:	Training content:	Content covered: If NO: fill in reason for deviation and let the customer sign	Reason for deviation:
Introduction to Icon:	Intended use	<input checked="" type="radio"/> YES / NO:	
	Introduction to high definition motion management system (HDMM)	<input checked="" type="radio"/> YES / NO:	
	Introduction to Stereotactic CBCT	<input checked="" type="radio"/> YES / NO:	
Introduction to Mask-fixation set up:	Hands On Creating Mask fixation set up Handle fixation (mark with patient ID & storage)	<input checked="" type="radio"/> YES / NO:	



**Introduction to Cranial Neurosurgery  
and Advanced Radiosurgery:  
Introductory Course**

**Participant's Manual**

*Presented by*

***Cleveland Clinic  
Gamma Knife Center***

**April 9-13, 2018**

# **Welcome to the Cleveland Clinic Introduction to Cranial Neurosurgery and Advanced Radiosurgery Training Program**

## **Special Announcements**

**Name Badge:** Please wear your name badge at all times.

**Evaluation Form:** In order to obtain your CME certificate, you must first complete the course evaluation online. Full instructions included in your course materials.

**Meals:** Continental breakfast and lunch will be provided each day.

**Phones & Pagers:** Please silence your cell phones and pagers during the lectures. You will have time to return calls during breaks.

**Gamma Knife Center Phone Number: 216-445-6640**  
**Fax Number: 216-445-6616**

*We sincerely hope that you find this postgraduate course a worthwhile learning experience.*



## **Accreditation Statement**

The Cleveland Clinic Foundation Center for Continuing Education is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Cleveland Clinic Foundation Center for Continuing Education designates this live activity for a maximum of 35.0 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association for Category 2 credit

## **American Association of Neurological Surgeons**

**This ACCME accredited activity is accepted by the AANS.**

## **Disclaimer**

The information in this educational activity is provided for general medical education purposes only and is not meant to substitute for the independent medical judgment of a physician relative to diagnostic and treatment options of a specific patient's medical condition. The viewpoints expressed in this CME activity are those of the authors/faculty. They do not represent an endorsement by The Cleveland Clinic Foundation. In no event will The Cleveland Clinic Foundation be liable for any decision made or action taken in reliance upon the information provided through this CME activity.

# **Introduction to Cranial Neurosurgery and Advanced Radiosurgery**

## **Course Description**

This education experience provides an opportunity to expand the practitioner's range of treatment options to include this precise form of stereotactic radiosurgery. The course will provide hands-on sessions with experts experienced in radiosurgery. At the conclusion of the week, participants will receive a certificate of course attendance.

### **Learning Objectives**

1. Identify the basic principles and biophysics of radiosurgery and how they apply to day-to-day patient treatment
2. Review the clinical indications, parameters of treatment, and outcomes of radiosurgery
3. Recognize radiation safety issues and principles, as well as become familiar with the emergency procedures as they pertain to radiosurgery.
4. Apply the principles of stereotactic frame application, imaging, and use of radiosurgery treatment hardware.

### **Target Audience**

Neurosurgeons, radiation oncologists, medical physicists, and neuro-otolaryngologists

### **Location**

Gamma Knife Center, Taussig Cancer Center, Cleveland, OH

# **The Cleveland Clinic Gamma Knife Center**

**Introduction to Cranial Neurosurgery and Advanced Radiosurgery**

**April 9-13, 2018**

## **Course Director**

**Gene Barnett, MD**

Director, Brain Tumor & Neuro-Oncology Center  
Director, Gamma Knife Center  
Cleveland Clinic

## **Course Co-Directors**

**Lilyana Angelov MD**

Brain Tumor & Neuro-Oncology Center  
Co-Director, Gamma Knife Center  
Cleveland Clinic

**Gennady Neyman, PhD**

Lead Gamma Knife Physicist  
Gamma Knife Center  
Co-Director, Gamma Knife Center  
Cleveland Clinic

**John Suh, MD**

Chairman, Department of Radiation Oncology  
Cleveland Clinic

## **Technical Support**

**Jay Forsythe**

Elekta, Inc

## **Cleveland Clinic Faculty**

**Ivana Bevanda, CPC**

Neurological Institute

**Hamid Borghei-Razavi, MD**

Brain Tumor & Neuro-Oncology Center

**Sam Chao, MD**

Brain Tumor & Neuro-Oncology Center

**Andrew Godley, PhD**

Radiation Oncology

**Betty Jamison, RN, BSN**

Brain Tumor & Neuro-Oncology Center

**Daria Krivosheya, MD**

Brain Tumor & Neuro-Oncology Center

**Alireza Mohammadi, MD**

Brain Tumor & Neuro-Oncology Center

**Thomas Pauer, MHP**

Environmental Health & Safety

**Peter Rasmussen, MD**

Cerebrovascular Center

**Michael Vogelbaum, MD, PhD**

Brain Tumor & Neuro-Oncology Center

**The Cleveland Clinic Center for Continuing Education  
Faculty Disclosure**

**Introduction to Cranial Neurosurgery and Advanced Radiosurgery  
04/09-13/2018**

In accordance with the Standards for Commercial Support issued by the Accreditation Council for Continuing Medical Education (ACCME), The Cleveland Clinic Foundation Center for Continuing Education requires resolution of all faculty conflicts of interest to ensure CME activities are free of commercial bias.

The following faculty have indicated that they may have a relationship, which in the context of their presentation(s), could be perceived as a potential conflict of interest:

<b>Gene Barnett, MD</b>	Elekta	Teaching and Speaking
<b>Samuel Chao, MD</b>	Novocure	Membership on advisory committee or review panels
	Varian Medical Systems	Teaching and Speaking
<b>Jay Forsythe</b>	Elekta	Employment
<b>Gennady Neyman, PhD</b>	Elekta	Consulting
<b>Peter Rasmussen, MD</b>	Medtronic	Membership on advisory committee or review panels
	Mehana Medical, LLC	Membership on advisory committee or review panels Ownership interest (stock, stock options)
	Nervive Inc.,	Membership on advisory committee or review panels Ownership interest (stock, stock options)
	Neurvana™	Ownership interest (stock, stock options)
	Perflow Medical	Membership on advisory committee or review panels Ownership interest (stock, stock options)
	Stryker Neurovascular	Membership on advisory committee or review panels
	<b>Michael Vogelbaum, MD</b>	Infuseon Therapeutics, Inc.
	Johnson & Johnson	Ownership interest (stock, stock options)

The following faculty have indicated they have no relationship which, in the context of their presentation(s), could be perceived as a potential conflict of interest:

**Lilyana Angelov, MD  
Ivana Bevanda, CPC  
Hamid Borghei-Razavi, MD  
Andrew Godley, PhD  
Betty Jamison, BSN**

**Daria Krivosheya, MD  
Alireza M Mohammadi, MD  
Thomas Pauer, BA  
John Suh, MD**

**GAMMA KNIFE CENTER**  
**CLEVELAND CLINIC**

**Privileging Criteria Guidelines**

**Level One**-Successful completion of approved Introduction to Cranial Neurosurgery and Advanced Radiosurgery course\* (including simulation of 5 or more radiosurgery cases) with no or little previous experience in radiosurgery.

Residency experience in radiosurgery of 20 or more cases or 10 as attending physician. If experience is linac based, then the candidate must still have successfully completed an approved Introduction to Cranial Neurosurgery and Advanced Radiosurgery course.

**Level Two**-Successful completion of approved Introduction to Cranial Neurosurgery and Advanced Radiosurgery course \* (including simulation of 5 or more radiosurgery cases) with prior experience as the attending in at least 20 cases of linac radiosurgery.

Residency experience in radiosurgery of 40 or more, or as attending physician with experience of 20 radiosurgery cases or more.

**Level Three**-Successful completion of approved Introduction to Cranial Neurosurgery and Advanced Radiosurgery course \* (including simulation of 5 or more radiosurgery cases) with experience in 80 or more linac radiosurgery cases.

Residency experience in radiosurgery of 80 or more cases, or as attending surgeon of 40 or more radiosurgery cases.

*\*Successful completion of Cleveland Clinic Introduction to Cranial Neurosurgery and Advanced Radiosurgery course, or equivalent (as determined by Cleveland Clinic Gamma Knife Center Directors). Course tuition is responsibility of applicant.*

*Cleveland Clinic Gamma Knife Center*

*The Cleveland Clinic Foundation Center for Continuing Education acknowledges  
an in-kind educational grant for partial support of this activity from:*

**Elekta, Inc.**

**Durable Equipment**

# The Cleveland Clinic Health System Gamma Knife Center

## Introductory Course Agenda

April 9-13, 2018

*All lectures will be presented but agenda is tentative pending clinic time.*

**Monday, April 9, 2018**

Group	Time	Presentation	Speaker
Intro	8:15	Meet on the third floor of the InterContinental Conference Center Hotel	
Intro	8:30	Continental Breakfast	
Intro	8:45	Welcome and Introductions	Gene Barnett
Intro	9:00	Evolution of Radiosurgery -Features and Benefits	Gene Barnett
Intro	9:45	Stereotactic Frame – Application and Use	Gene Barnett
Intro	10:30	Break	
Intro	10:45	Basic Principles of Radiosurgery	John Suh
Intro	11:30	Radiosurgery for Gliomas	John Suh
Intro	12:15	Lunch at IC North Coast Restaurant	
Intro	1:15	Radiosurgery for Brain Mets	Michael Vogelbaum
Intro	2:30	Radiosurgery Physics	Andrew Godley
Intro	3:30	Break	
Intro	3:45	Planning Strategy	Gene Barnett
Intro	4:45	Adjourn	
Intro	5:45 Van pick up at hotel	Dinner at Edwins 13101 Shaker Square Cleveland 44120 216-921-3333	Dinner at 6:00

Time will be allotted for questions and answers during each lecture and throughout the day as needed. Unless noted, course faculty are from the Cleveland Clinic.

# The Cleveland Clinic Health System Gamma Knife Center

## Introductory Course Agenda

April 9-13, 2018

*All lectures will be presented but agenda is tentative pending clinic time.*

**Tuesday, April 10, 2018**

Group	Time	Presentation	Speaker
Intro	7:15	Continental Breakfast	
Intro	7:30	Frame Placement	Faculty
Intro	7:45	Basic Radiobiology	Sam Chao
Intro	8:15	Planning Demonstration	Gene Barnett
Intro	10:00	Break	
Intro	10:15	Functional Neurosurgery	Gene Barnett
Intro	11:15	Radiosurgery and Benign Tumors	Lily Angelov
Intro	12:15	Lunch Break	
Intro	12:45	TPS Administration	Gennady Neyman
Intro	1:15	Calibration and Practical Physics	Gennady Neyman
Intro	1:45	Technical Description Radiation Unit Patient Positioning System Control System	Gennady Neyman
	2:15	Break	
Intro	2:30	Treatment Planning and Treatment Workflow	Faculty
Intro	5:00	Adjourn	

Time will be allotted for questions and answers during each lecture and throughout the day as needed. Unless noted, course faculty are from the Cleveland Clinic.

# The Cleveland Clinic Health System Gamma Knife Center

## Introductory Course Agenda

April 9-13, 2018

All lectures will be presented but agenda is tentative pending clinic time.

Wednesday, April 11, 2018

<b>C O N C U R R E N T</b>	<b>Icon and Perfixion Upgrade</b>	<b>7:20</b>	<b>Meet in Lobby of InterContinental Hotel</b>	
	<b>Icon Upgrade</b>	<b>7:30</b>	<b>Continental Breakfast, Welcome and Introductions – Room CA5-124</b>	<b>Gene Barnett</b>
	<b>Icon Upgrade</b>	<b>7:35</b>	<b>Evolution of Radiosurgery - Features and Benefits – Room CA5-124</b>	<b>Gene Barnett</b>
	<b>Icon Upgrade</b>	<b>8:20</b>	<b>Icon Work Flow – Room CA5-124</b>	<b>Jay Forsythe, Elekta (Technical Support)</b>
		<b>9:30</b>	<b>Return to GK Conference Room / Break</b>	
	<b>Intro</b>	<b>7:45</b>	<b>Continental Breakfast</b>	
	<b>Intro</b>	<b>8:00</b>	<b>Treatment of AVMs and Planning</b>	<b>Peter Rasmussen</b>
	<b>Intro</b>	<b>9:30</b>	<b>Break</b>	

All	10:00	Hands-On Safety - Clearance Procedures - Quality Assurance - Emergency Procedures	Gennady Neyman
All	11:00	Technical Session - CBCT - HDMM	Gennady Neyman
All	12:00	Lunch	
All	12:30	Practical Introduction to Radiosurgery with Imaging • Overview and frameless (mask) techniques	Jay Forsythe, Elekta (Technical Support)
All	1:30	Radiation Safety & NRC Regulations	Tom Pauer
All	2:15	Planning and Mock Case Preparation (Mask) Divide into 3 groups	Faculty
All	4:00	Van escorted tour of Harvey Cushing grave & city tour	
All	5:00	Adjourn	

Time will be allotted for questions and answers during each lecture and throughout the day as needed. Unless noted, course faculty are from the Cleveland Clinic.

# The Cleveland Clinic Health System Gamma Knife Center

## Introductory Course Agenda

April 9-13, 2018

Thursday, April 12, 2018

Group	Time	Presentation	Speaker
All	7:45	Continental Breakfast	
All	8:00	Planning and Console Hands-On by Group	Faculty
All	11:00	Stereotactic Image Distortion and Historical Errors	Gennady Neyman
All	11:45	Advanced Features of the Planning Software (Convolution, Inverse Planning, Retreatment)	Jay Forsythe Elekta <i>(Technical Support)</i>
All	12:30	Lunch	
All	1:00	Nursing Issues	Betty Jamison
All	2:00	Frameless SRS: Intratreatment Image Guidance and Fractionation	Sam Chao
All	2:45	Treatment Planning and Treatment Workflow	Faculty
All	4:30	Radiation Oncology Tour	John Suh
All	5:00	Adjourn	
All	5:30 Van pick up at hotel	Blue Point Grill 700 W St. Clair Cleveland 44113 216-975-7827	Dinner at 6pm

Friday, April 13, 2018

Group	Time	Presentation	Speaker
All	7:30	Continental Breakfast	
All	7:45	System Nuances	Gennady Neyman
All	8:15	Coding and Reimbursement – or – Commissioning (CA6-099)	Ivana Bevanda  Gennady Neyman
All	9:00	Break	
All	9:15	Treatment Planning and Treatment Workflow	Faculty
All	11:30	Working Lunch	
All	12:00	Course Review	Faculty
All	1:00	Course Evaluation and Presentation of Certificates	Faculty
All	1:30	Adjourn	

***All lectures will be presented but agenda is tentative pending clinic time.***

Time will be allotted for questions and answers during each lecture and throughout the day as needed. Unless noted, course faculty are from the Cleveland Clinic.



2017-2018

**GAMMA KNIFE TRAINING PROGRAM**

**CENTER FOR IMAGE GUIDED NEUROSURGERY**

**UNIVERSITY OF PITTSBURGH MEDICAL CENTER**

**Presbyterian Hospital**

Course Director: L. Dade Lunsford, M.D.

Co-Directors: Ajay Niranjana, MD, John C. Flickinger, MD

Course Manager: Charlene H. Baker

**Physician Faculty**

L. Dade Lunsford, MD (LDL)  
John C. Flickinger, MD (JCF)  
Ajay Niranjana, M.Ch., MBA (AN)  
Hideyuki Kano, MD, Ph.D. (HK)  
Peter Gerszten, MD, MPH (PG)  
James Greenberg, MD (JG)  
Edward A. Monaco, III, M.D., Ph.D.(EM)

**Elekta Instructors**

Susan E. Lohman, RN, CNOR (SL)  
Jay Forsythe, CMD, R.T.(JF)  
Andy Lunsford (AL)

**Medical Physics**

Kevin Fallon, M.S. (KF)  
Jong Kim, Ph.D. (JK)

**Nursing Instructors**

Jonet Vacsulka, RN, BSN  
Debra Jennette, RN  
Devorah Willaman, RN  
Mark Geminetti, RN  
Nancy Bastine, RN

**Mailing Address**

Suite F158  
200 Lothrop Street  
Pittsburgh, PA 15213  
Phone 412-647-6782  
FAX 412.647-6483



### **Target Audience**

This 5 day course is directed to neurosurgeons, neurotologist, radiation oncologists, medical physicists and nurses who are or will be working with a Perfexion or ICON gamma knife® radiosurgery unit.

### **Disclaimer Statement**

“The information presented at this CME program represents the views and opinions of the individual presenters, and does not constitute the opinion or endorsement of, or promotion by, the UPMC Center for Continuing Education in the Health Sciences, UPMC / University of Pittsburgh Medical Center or Affiliates and the University Of Pittsburgh School Of Medicine. Reasonable efforts have been taken intending for educational subject matter to be presented in a balanced, unbiased fashion and in compliance with regulatory requirements. However, each program attendee must always use his/her own personal and professional judgment when considering further application of this information, particularly as it may relate to patient diagnostic or treatment decisions including, without limitation, FDA-approved uses and any off-label uses.”

I understand that satisfactory completion of this course does not imply or confirm competency to perform gamma knife stereotactic radiosurgery.

Dr. Lunsford is a stockholder in AB Elekta, Stockholm, Sweden.



## **GAMMA KNIFE®RADIOSURGERY TRAINING PROGRAM**

### **Introduction/Intent**

Through attendance at this program, registrants should obtain knowledge about the practical aspects of stereotactic radiosurgery using the Leksell Gamma Knife®. The course provides training related to the Perfexion or ICON Gamma Knife models (five day course) for health care providers who have not previously performed Gamma Knife Radiosurgery or attended a prior 5 day course. Principles of medical physics and radiobiology, as they apply to single or multi-session, focused, small volume irradiation of cranial and selected head and neck targets will be covered. Registrants should be able to create radiosurgery dose plans for brain tumors, vascular malformations, and trigeminal neuralgia. At the close of the program, participants should be able to discuss those issues relevant to dose selection in individual patients and discuss the spectrum of complications after radiosurgery and their management. Registrants should be familiar with patient safety, radiation safety requirements, and emergency procedures for the use of these Gamma knife technologies.

### **CONTINUING MEDICAL EDUCATION CREDIT**

The University Of Pittsburgh School Of Medicine designates this educational activity for a maximum of 49.5 AMA PRA Category I Credit(s)<sup>TM</sup>. Each physician should claim credit commensurate with the extent of their participation in the activity.

Other health care professionals are awarded 4.9 Continuing Education Units which are equal to 49.5 contact hours.

The American Association of Neurological Surgeons attests that this educational activity has been recognized for co-sponsored/endorsement for 49.50 Category I CME credits of the American Association of Neurological Surgeon's Continuing Education Award in Neurosurgery.

Medical Physics attendees can apply for credits for 40.75 hours educational credits via CAMPEP.



## **Faculty Disclosure**

Faculty for this activity have been required to disclose all relationships with any proprietary entity producing health care goods or services, with the exemption of non-profit or government organizations and non-health care related companies.

The Following disclosures were made:

L. Dade Lunsford, M.D.	Stockholder	Elekta Instruments, Inc.
Susan E. Lohman, RN,CNOR	Employee	Elekta Instruments, Inc.
Andrew Lunsford	Employee	Elekta Instruments, Inc.
Jay Forsythe, CMD, R.T.	Employee	Elekta Instruments, Inc.

No significant financial relationships with commercial entities were disclosed by:

Michael Sheetz, M.S.  
Kevin Fallon, M.S.  
Jonet Vacsulka, RN, BSN  
John C. Flickinger, M.D.  
J. Greenberg, M.D.  
Edward A. Monaco, III, M.D., Ph.D.  
Jong Kim, Ph.D.



# GAMMA KNIFE® RADIOSURGERY TRAINING PROGRAM

**Monday April 23, 2018**

## **Introduction to the Gamma Knife Technologies**

## **Room**

8:00 - 8:15	Continental Breakfast	GK Suite F185
8:15 - 8:45	Welcome and Introduction to the Course (LDL)	GK Conf. Rm. F184
8:45 - 9:15	The Evolving field of Gamma Knife Radiosurgery (LDL)	GK Conf. Rm. F184
9:15 - 10:15	Fundamentals of the LGK SRS Procedure (LDL)	GK Conf. Rm. F184
10:15-10:30	Break	
10:30-10:45	Demo LGK Equipment: hands on (AN)	PFX Vault
10:45-11:30	Stereotactic Targeting and Imaging (AN)	GK Conf. Rm. F184
11:30 -12:30	Physics and Technology Overview (KF)	GK Conf. Rm. F184
12:30 - 1:30	Lunch	GK Suite F185
1:30 - 2:45	Hands on Function and Hardware of the Gamma Knife® Units	
	Perflexion (JK), ICON (/KF)	GK Suite F185
2:45 – 3:00	Break	
3:00 - 4:30	PFX/ICON QA and Calibrations	
	Part I for Physicists (KF/JK)	GK Suite F185
3:00 - 4:30	Clinical Case Review Conference (LDL, AN, HK, EM)	GK Conf. Rm. F184
4:30 - 5:00	Introduction to Gamma Plan® (LDL/SL)	GK Conf. Rm. F184
5:00 -	Adjournment	



# GAMMA KNIFE® RADIOSURGERY TRAINING PROGRAM

**Tuesday April 24, 2018**

## **CLINICAL RADIOSURGERY PART I**

	<b>Room</b>
6:30 - 8:00 GK SRS: Frames, Masks, Imaging, Planning (LDL/HK)	GK Suite F185
8:00 - 10:00 Introduction to LGK Dose Planning (JF)	GK Conf. Rm. F184
10:00-10:15 Break	
8:00 - 9:00 ICON Introduction (3 day course) (AN)	GK Conf. Rm. F151
9:00-11:00 ICON Dose Planning (3 day course) (SL)	GK Suite F185
10:15-11:00 Lecture: Brain Metastases (AN)	GK Conf. Rm. F184
11:00-11:45 Lecture: Schwannomas (LDL)	GK Conf. Rm. F184
11:45-12:00 Review of AM Cases	GK Conf. Rm. F184
12:00 – 1:00 Lunch	GK Suite F185
1:00 - 3:00 PFX & ICON QA and Calibrations – Part II for Physicists (KF/JK) (3 day course students hands on ICON)	GK Suite F185
3:00 – 3:15 Break	
1:00 -4:00 MD Dose Plan Practice (PFX) (LDL,AN,HK,EM,SL)	GK Conf. Rm. F184
1:00 - 3:00 MD LGP 11 ICON Dose Planning (SL) 3 day Icon students	GK ICON Area
3:15 - 4:00 ICON: Cone Beam (SL) (3&5 day course)	GK ICON Area
3:15 – 4:00 Physicist Dose Planning	GK Conf. Rm. F184
4:00- 5:00 Basic Physics and Radiobiology (JCF)	GK Suite F184
5:00 - Adjournment	



# GAMMA KNIFE® RADIOSURGERY TRAINING PROGRAM

**Wednesday April 25, 2018**

## **CLINICAL RADIOSURGERY - PART II**

## **Room**

6:30 – 8:00	GK SRS: Frames, Masks, Imaging, Planning: (AN/EM/HK)	GK Suite F185
8:00 - 10:00	Advanced Dose Planning (All students) (SL)	GK Conf. Rm. F184
10:00-10:15	Break	
10:15 - 11:00	Lecture: AVM Radiosurgery (LDL)	GK Conf. Rm. F184
11:00 - 11:30	Lecture: Meningioma Radiosurgery (LDL)	GK Conf. Rm. F184
11:30 - 12:00	Lecture: Rare Tumors (LDL)	GK Conf. Rm. F184
12:00 -12:30	Lecture: Spine Radiosurgery (PG)	GK Conf. Rm. F184
12:30 - 1:30	Lunch	GK Suite F185
1:30 - 2:00	Image Fusion /Co-Registration/Retreatment – PFX + ICON (SL)	GK Conf. Rm. F184
2:00 – 3:00	LGK ICON/PFX Procedures and Safety Tips (AL)	GK Suite F185
3:00 - 3:15	Group Photo	GK Suite F185
3:15-3:30	Break	
3:30-3:45	Review of Cases Treated Today (LDL/AN/EM)	GK Conf. Rm. F184
3:45 – 5:00	ICON Work Flow(ICON Users) (KF/SL/JK)	GK Suite F185
3:45 - 5:00	Dose Planning Practice 2- PFX (AN/EM/HK/SL)	GK Conf. Rm. F184
5:00 -	Adjournment	
6:00 -	Bus departs University Wyndham Hotel	
6:30 -	Dinner: Fox Chapel Golf Club	
9:00 -	Return Wyndham Hotel	



# GAMMA KNIFE® RADIOSURGERY TRAINING PROGRAM

**Thursday April 26, 2018**

## **CLINICAL RADIOSURGERY - PART III**

## **Room**

6:30 - 8:00	GK SRS: Frames, Masks, Imaging, Planning (LDL/HK, EM)	GK Suite F185
7:30 - 8:00	Practice Dose Planning PFX	GK Conf. Rm. F184
8:00 - 9:30	Advanced LGK Dose Planning: Part 2(PFX & ICON (SL)	GK Conf. Rm. F184
9:30 - 10:00	Lecture: Pediatric Anesthesia for Radiosurgery (JG)	GK Conf. Rm. F184
10:00-10:15	Break	
10:15 - 11:00	Lecture: Pituitary Tumors and Craniopharyngiomas (AN)	GK Conf. Rm. F184
11:00 - 11:15	Lecture: Patient Preparation, Teaching, Coding (JV)	GK Conf. Rm. F184
11:15 - 11:30	Review of Cases Treated Today (LDL/AN/EM)	GK Conf. Rm. F184
11:30 - 12:00	Lecture: Requirements of the Nuclear Regulatory Commission (M. Sheetz)	GK Conf. Rm. F184
12:00 - 1:00	Lunch	GK Suite F185
1:00 - 2:45	Advanced Planning Icon Radiosurgery (SL)	GK Suite F185
1:00 - 2:45	PFX dose Planning Practice 3 (AN/SL/EM/HK)	GK Conf. Rm. F184
2:45 - 3:15	LGK Final Exam (LDL)	GK Conf. Rm. F184
3:15 - 3:30	Break	
3:30 - 5:00	Lecture: Dose Selection & Informed Consent (JCF)	GK Conf. Rm. F184
5:00 -	Adjournment	



# GAMMA KNIFE® RADIOSURGERY TRAINING PROGRAM

**Friday April 27, 2018**

## **CLINICAL RADIOSURGERY - PART IV**

## **Room**

6:30 - 8:00	GK SRS: Frames, Masks, Imaging, Planning (LDL/HK, EM)	GK Suite F 185
8:00 - 8:30	Lecture: Gliomas (AN)	GK Conf. Rm. F184
8:30 - 9:15	Lecture: Trigeminal Neuralgia (AN)	GK Conf. Rm. F184
9:15 - 9:30	Break	
9:30 - 10:15	Lecture: Cavernous Malformation (EM)	GK Conf. Rm. F184
10:15 - 11:00	Lecture: Functional Radiosurgery (LDL)	GK Conf. Rm. F184
11:00 -	Graduation Pizza Party	GK Suite F 185
12:00 - 2:00	Dose Planning Practice 4 (Optional)	GK Conf. Rm. F184
2:00 -	Adjournment	