



# Welcome to the 5<sup>th</sup> Biennial Scientific Meeting of the **International Radiosurgery Research Foundation**

**October 27-29, 2023**

**The Ritz-Carlton Coconut Grove, Miami, Florida**

**Local Meeting Director – Manmeet Ahluwalia, M.D., MBA IRRF**

**Chair – Jason Sheehan, M.D.**

**IRRF Executive Director – Ajay Niranjana, M.D.**



**Miami Cancer  
Institute**

**BAPTIST HEALTH SOUTH FLORIDA**



**International Radiosurgery Research Foundation**

## GETTING STARTED

### **Sign in Daily for CME/CE Credits and Attendance Records**

Sign in at the beginning of each day to receive credit for attending the entire symposium.

### **Support and Contact Information**

#### **Baptist Health South Florida, Continuing Medical Education Department**

8900 North Kendall Drive, Miami, FL 33176  
Phone: 786-596-2398 | Email: [CME@BaptistHealth.net](mailto:CME@BaptistHealth.net)

#### **For questions regarding credits, please contact:**

Christine Baldwin, LMS Support | [ChristineB@BaptistHealth.net](mailto:ChristineB@BaptistHealth.net)

#### **For all other questions regarding the organization of this symposium, please contact:**

Eleanor Abreu, CME Program Manager | [EleanorA@BaptistHealth.net](mailto:EleanorA@BaptistHealth.net)  
Martha Tobin, IRRF Meeting Manager | [tobinm@ccf.org](mailto:tobinm@ccf.org)

#### **For questions regarding exhibits, please contact:**

Julie Zimmert, CME Development Specialist | [JulieZ@BaptistHealth.net](mailto:JulieZ@BaptistHealth.net)

**Stay Informed:** [BaptistHealth.net/CMEStayInformed](https://BaptistHealth.net/CMEStayInformed)

**IRRF Website:** [irr-f.org](http://irr-f.org)

## **MEETING DIRECTORS AND PLANNING COMMITTEE**

### **Manmeet Ahluwalia, M.D., MBA – Local Director**

Fernandez Family Foundation Endowed Chair in Cancer Research  
Chief of Medical Oncology  
Chief Scientific Officer & Deputy Director  
Baptist Health Miami Cancer Institute  
Miami, Florida

### **Jason Sheehan, M.D. – IRRF Chair**

Professor of Neurological Surgery  
University of Virginia  
Charlottesville, Virginia

### **Ajay Niranjana, M.D., MBA – IRRF Executive Director**

Professor of Neurosurgery  
University of Pittsburgh  
Pittsburgh, Pennsylvania

### **Veronica Chiang, M.D. – Planning Committee**

Professor of Neurosurgery  
Yale University  
New Haven, Connecticut

### **Christopher P. Cifarelli, M.D., Ph.D., MMM, FAANS, FACS – Planning Committee**

Director, Gamma Knife Associate Professor  
West Virginia University  
Morgantown, West Virginia

### **Alonso N. Gutierrez, Ph.D. – Planning Committee**

Vice Chair of Medical Physics and Dosimetry Associate Professor – Radiation  
Radiation Oncology  
Florida International University  
Miami, Florida

### **Rupesh Kotecha, M.D. – Planning Committee**

Chief of Radiosurgery  
Director of CNS Metastasis Program Radiation Oncology  
Miami Cancer Institute  
Miami, Florida

### **Matthew Shepard, M.D. – Planning Committee**

Director of Brain Tumor Research  
Allegheny Health Network  
Pittsburgh, Pennsylvania

### **John Suh, M.D. – Planning Committee**

Chairman, Department of Radiation Oncology  
Cleveland Clinic  
Cleveland, Ohio

### **Daniel Trifiletti, M.D. – Planning Committee**

Associate Professor  
Mayo Clinic  
Jacksonville, Florida

## KEYNOTE SPEAKERS

### **Gene Barnett, M.D.**

Director, Burkhardt Brain Tumor and Neuro-Oncology Center  
Cleveland Clinic  
Cleveland, Ohio

### **L. Dade Lunsford, M.D.**

Lars Leksell Professor and Distinguished Professor of Neurological Surgery  
University of Pittsburgh Medical Center  
Pittsburgh, Pennsylvania

## FACULTY

### **Joao Paulo Cavalcante de Almeida, M.D.**

Assistant Professor, Department of Neurosurgery  
Mayo Clinic  
Jacksonville, Florida

### **Greg Bowden, M.D.**

Assistant Clinical Professor of Surgery  
University of Alberta Hospital Edmonton  
Alberta, Canada

### **Carlos Carbini, MS**

Gamma Knife Medical Physicist  
Puerto Rico Medical Services Administration (ASEM)  
San Juan, Puerto Rico

### **Samuel Chao, M.D.**

Associate Director, Gamma Knife Center  
Cleveland Clinic  
Cleveland, Ohio

### **Jared Chen, M.D.**

Assistant Professor  
McGovern Medical School  
UT Health Houston, Texas

### **Dale Ding, M.D.**

Director of Cerebrovascular Program  
University of Louisville  
Louisville, Kentucky

### **John Flickinger, M.D., FACR**

Professor of Radiation Oncology and Neurological Surgery University of Pittsburgh School of Medicine  
Pittsburgh, Pennsylvania

### **Anthony Kaufman, M.D.**

Director of the Centre for Cranial Nerve Disorders  
University of Manitoba  
Winnipeg, Manitoba, Canada

### **Jonathan Knisely, M.D.**

Assistant Professor of Radiation Oncology  
Cornell University  
Ithaca, New York

**Douglas Kondziolka, M.D.**

Director, Center for Advanced Radiosurgery  
NYU Langone Health  
New York, New York

**Justin C.C. Lee, M.D.**

Attending Physician, Department of Surgery  
Taipei Veterans General Hospital  
Beitou, Taipei, Taiwan

**Eric J. Lehrer, M.D.**

Assistant Professor of Radiation Oncology  
Mayo Clinic  
Rochester, Minnesota

**Roberto Martinez-Alvarez, M.D.**

Head of Functional Neurosurgery and Radiosurgery  
Ruber International Hospital  
Madrid, Spain

**David Mathieu, M.D.**

Associate Professor  
University of Sherbrooke  
Quebec, Canada

**Minesh Mehta, M.D., FASTRO**

Deputy Director and Chief of Radiation Oncology, Miami Cancer Institute  
Member, Memorial Sloan Kettering Cancer Alliance  
Miami, Florida

**Eric Oermann, M.D.**

Assistant Professor of Neurosurgery, Radiology, and Data Science  
NYU Langone Health  
New York, New York

**Ian Paddick**

Consultant Physicist  
President of the BRSS  
Chair of the ISRS Certification Committee  
ISRS Fabrikant Award winner  
Honorary Research Fellow at UCL  
United Kingdom

**Joshua Palmer, M.D.**

Associate Professor James Cancer Hospital  
Ohio State University  
Columbus, Ohio

**David Peereboom, M.D.**

Director of Clinical Research, Burkhardt Brain Tumor and Neuro-oncology Center  
Cleveland Clinic, Cleveland, Ohio

**Jennifer Peterson, M.D.**

Associate Professor of Radiation Oncology  
Mayo Clinic  
Jacksonville, Florida

**Stefan Rykowski**

Vice President, Registries and Data Science  
American Association of Neurological Surgeons (AANS)  
Rolling Meadows, Illinois

**David Schlesinger, Ph.D., MBA**

Associate Professor of Radiation Oncology  
University of Virginia  
Charlottesville, Virginia

**Michael Schulder, M.D.**

Director, Brain Tumor Center  
Northwell-LIJ Health System  
New Hyde Park, New York

**Herwin Speckter, MSc**

Research & Quality Director Centro Gamma Knife Dominicano  
Santo Domingo, Dominican Republic

**Robert Starke, M.D.**

Associate Professor of Clinical Neurosurgery, Neuroradiology and Neurosciences  
University of Miami  
Miami, Florida

**Pallavi Tiwari, Ph.D.**

Associate Professor Department of Radiology  
University of Wisconsin School of Medicine and Public Health  
Madison, Wisconsin

**Ranjini Tolakanahalli, Ph.D.**

Director of Physics-Photon Miami Cancer Institute  
Miami, Florida

**Manjul Tripathi, M.D.**

Associate Professor  
Post-graduate Institute of Medical Education and Research  
Chandigarh, India

**Ronald Warnick, M.D.**

Co-director, Jewish Hospital Gamma Knife Center  
Mayfield Brain and Spine  
Cincinnati, Ohio

**Brian Williams, M.D.**

Associate Professor, Department of Neurosurgery  
University of Louisville  
Louisville, Kentucky

**Wade Huai-Che Yang, M.D.**

Taipei Veterans General Hospital  
New Taipei, Taiwan

## SCHEDULE

### IRRF Meeting October 27-29, 2023

#### Friday, October 27

- 1:00-4:00 Elekta User Session at Miami Cancer Institute  
5:00-7:30 Welcome Reception / Open House at the Ritz-Carlton – Isabelle’s Restaurant & Garden Terrace  
7:30-9:30 IRRF Board Meeting/Dinner at the Ritz-Carlton – Vivaldi/Puccini Rooms

#### Saturday, October 28 – IRRF Scientific Meeting Day 1 – Ritz-Carlton Ballroom

- 7:30 a.m. Welcome and Introductions  
Manmeet Ahluwalia, M.D., MBA and Jason Sheehan, M.D.

##### Session I – Brain Metastasis Tumors I

**Moderators: Matthew Shepard, M.D. and Veronica Chiang, M.D.**

- 7:40 a.m. Optimal Dose Planning for Brain Metastases Control - David Schlesinger, Ph.D., MBA  
7:55 a.m. Immunotherapy and SRS - David Peereboom, M.D.  
8:10 a.m. Targeted Therapy for Brain Metastases and SRS - Manmeet Ahluwalia, M.D., MBA  
8:25 a.m. Complementary Therapies to SRS (Review of LITT, Intraoperative Radiotherapy, FUS)  
Christopher Cifarelli, M.D.  
8:40 a.m. Medical and Surgical Management of Radiation Necrosis (Surgery, Steroids, Avastin, LITT)  
Brian Williams, M.D.  
8:55 a.m. Management of Recurrent Brain Metastases (Repeat SRS, LITT, Surgery, Gamma-Tile)  
Veronica Chiang, M.D.  
9:10 a.m. *Questions and Answers*  
9:30 a.m. *Break*

##### Session II – Primary Brain Tumors

**Moderators: Daniel Trifiletti, M.D. and Alonso Gutierrez, Ph.D.**

- 9:45 a.m. When Enough is Enough: Leaving Residual Meningioma or Vestibular Schwannoma at Surgery  
Joao Paulo Cavalcante de Almeida  
10:00 a.m. Predicting and Treating Post-SRS Edema in Meningioma - Sam Chao, M.D.  
10:15 a.m. Managing Grade 2-3 Meningioma - Matt Shepard, M.D.  
10:30 a.m. Timing of SRS in VS - David Mathieu, M.D.  
10:45 a.m. NF2 VS and SRS - Greg Bowden, M.D.  
11:00 a.m. SRS in Recurrent HGG - Ajay Niranjana, M.D., MBA  
10:15 a.m. LITT for HGG- Gene Barnett, M.D.  
11:30 a.m. Emerging Strategies for Gliomas - John Suh, M.D.  
11:45 a.m. **Keynote Introduction**  
11:50 a.m. **Keynote Lecture: The Meningioma Project - L. Dade Lunsford, M.D.**  
12:15 p.m. **Lunch Session: Disparate Fields That Will Impact Stereotactic Radiosurgery**  
**Moderator: Minesh Mehta, M.D.**  
Radiomics in Brain Tumors: Past Present and Future - Pallavi Tiwari, M.D.  
Artificial Intelligence and Potential Applications in Radiosurgery - Eric Oermann, M.D.  
Big Data and Registries: How to Improve Quality and Clinical Practice - Stefan Rykowski, M.D.

##### Session III - Big Data and Clinical Trials

**Moderators: Christopher Cifarelli, M.D. and Manmeet Ahluwalia, M.D., MBA**

- 1:15 p.m. Imaging Artificial Intelligence/Machine Learning in Prediction of Response Following SRS  
Herwin Speckter, MSc  
1:30 p.m. Use of Registries in Assessing Clinical Efficacy of SRS - Jason Sheehan, M.D.  
1:45 p.m. Clinical Trials - Manmeet Ahluwalia, M.D., MBA  
2:00 p.m. Radiomics and Radiosurgery - Justin C.C. Lee, M.D.  
2:15 p.m. AI for Radiation Planning - Jennifer Peterson, M.D.  
2:30 p.m. Automated Radiosurgery Planning: Fact or Fiction? - Alonso N. Gutierrez, Ph.D.  
2:45 p.m. *Break*

## **Session IV – Brain Metastasis Tumors II**

**Moderators: Rupesh Kotecha, M.D. and John Suh, M.D.**

- 3:15 p.m. Physics of Radiosurgery and Brachytherapy - Ranjini Tolakanahalli, Ph. D.
  - 3:30 p.m. Fractionated SRS - Eric Lehrer, M.D.
  - 3:45 p.m. Staged/Adaptive SRS - Rupesh Kotecha, M.D.
  - 4:00 p.m. Resection and Post-operative WBRT - Jonathan Knisely, M.D.
  - 4:15 p.m. Variations of Biological Effective Dose in SRS– Where Next? Ian Paddick
  - 4:30 p.m. Resection and Post-operative SRS - Joshua Palmer, M.D.
  - 4:45 p.m. Pre-operative SRS and Resection - Daniel Trifiletti, M.D.
  - 5:00 p.m. Panel Discussion
  - 5:15 p.m. **Keynote Introduction**
  - 5:20 p.m. **Keynote Presentation with Gene Barnett – Radiosurgery in the Time of a Pandemic**
  - 5:45 p.m. *Adjourn*
  - 7:00 p.m. *Conference Reception*
- Mr. C, 2988 McFarlane Road in Miami

## **Sunday, October 29 – IRRF Scientific Meeting Day 2 – Ritz-Carlton Ballroom**

### **Session V – Vascular Indications**

**Moderators: Ajay Niranjan, M.D. and Dale Ding, M.D.**

- 7:00 a.m. Taming a Lion: Multisession Gamma Knife Neurosurgery for Complex AVM – Manjul Tripathi, M.D.
- 7:15 a.m. GK Treatment for Dural Arteriovenous Fistula: Pitfall & Recent Advance – Wade Huai-Che Yang, M.D.
- 7:30 a.m. Physics of Staged SRS – Carlos Carbin, M.S.
- 7:45 a.m. Role of Embolization Before SRS – Jared Chen, M.D.
- 8:00 a.m. Treatment Options and Approaches for Cavernomas: A Role for SRS? – Doug Kondziolka, M.D.
- 8:15 a.m. Adverse Radiation Effects in Vascular SRS - John Flickinger, M.D.
- 8:30 a.m. Indications for AVM Treatment – Robert Starke, M.D.
- 8:45 a.m. Peri- and Intranidal Aneurysms Associated with AVMs – Dale Ding, M.D.
- 9:00 a.m. *Panel Discussion*
- 9:15 a.m. *Break*

### **Session VI – Functional**

**Moderators: Eric Lehrer, M.D. and David Mathieu, M.D.**

- 9:30 a.m. Relevance of BED vs. Physical Dose in GKRS for Trigeminal Neuralgia – Ronald Warnick, M.D.
- 9:45 a.m. Tremor and SRS in the World of DBS and FUS – Michael Schulder, M.D.
- 10:00 a.m. OCD and Gamma Knife Radiosurgery – Roberto Martinez-Alvarez, M.D.
- 10:15 a.m. Radiosurgery for Pain – Anthony Kaufmann, M.D.
- 10:30 a.m. Radiosurgery for Lesional Epilepsy – L. Dade Lunsford, M.D.
- 10:45 a.m. *Panel Discussion*
- 11:15 a.m. Conference Wrap-Up - Manmeet Ahluwalia, M.D. and Jason Sheehan, M.D.
- 11:30 a.m. *Meeting Adjourns*



## ACCREDITATION AND CREDITS

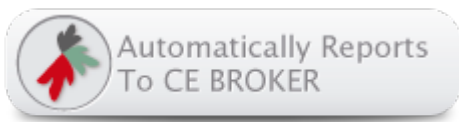
### ACCREDITATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Baptist Health South Florida and the International Radiosurgery Research Foundation. Baptist Health South Florida is accredited by the ACCME to provide continuing medical education for physicians.

Baptist Health South Florida designates this live activity for a maximum of 13.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This activity has been approved for a total of 13.75 credit hours, CE Broker Course #, by the Florida Boards of Medicine, Osteopathic Medicine and by the Florida Council of Physician Assistants.

The American Academy of Nurse Practitioners Certification Board (AANPCB) accepts CEs accredited by the ACCME. Individuals are responsible for checking with the AANPCB for further guidelines.



AMA PRA Category 1 Credits™ claimed by physicians attending live events certified and organized in the United States for AMA PRA Category 1 Credits™ can be claimed through the agreement on mutual recognition of credits between UEMS and AMA, considered as being equal to the European Continuous Medical Education Credits (ECMEC©) granted by the UEMS. One AMA PRA Category 1 Credit™ is equivalent to one (1) hour of European EACCME Credit (ECMEC©). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

### DISCLAIMER

Baptist Health South Florida presents this CME activity for use by healthcare professionals for educational purposes only. Opinions, perspectives, and information presented by the faculty represent their ideas and views, and participants should carefully consider all available scientific data before acting on knowledge gained through this activity. Additionally, participants should consult the U.S. Food and Drug Administration (FDA) for approved uses prior to prescribing medications or utilizing medical devices discussed in this activity.

While Baptist Health makes reasonable efforts to ensure that accurate information is presented, no warranty, expressed or implied, is offered. Participants should rely on their own clinical judgment, knowledge, and experience before applying information acquired to their professional use.



## Baptist Health South Florida

### Continuing Medical Education

#### DISCLOSURES AND RESOLUTION OF CONFLICTS OF INTEREST

The following faculty have indicated that they do not have any relevant financial relationships with ineligible companies\* to disclose, and that their presentation or discussion will not include off-label or unapproved product usage.

**Joao Paulo Almeida, M.D., Ph.D.**

**Greg Bowden, M.D.**

**Jared Chen, M.D.**

**Dale Ding, M.D.**

**John C. Flickinger, M.D.**

**Anthony Kauffman, M.D.**

**John Y.K. Lee, M.D.**

**Justin C.C. Lee, M.D.**

**Eric J. Lehrer, M.D.**

**Roberto Martinez-Alvarez, M.D.**

**David Mathieu, M.D.**

**Ajay Niranjana, M.D.**

**Jennifer Peterson, M.D.**

**Stefan Rykowski, M.D.**

**Pillavi Tiwari, M.D.**

**Michael Scholder, M.D.**

**Jason Sheehan, M.D.**

**Matthew Shepard, M.D.**

**Manjul Tripathi, M.D.**

**Ronald Warnick, M.D.**

**Huai-Che Yang, M.D.**

---

**Manmeet Ahluwalia, M.D.**, faculty and planner of this educational activity, has received a grant from Seagen. He is a consultant Bayer, Novocure, Kiyatec, Insightec, GSK, Xofig, NuVation, Cellularity, SDP Oncology, Apollomics, Prelude, Janssen, Tocagen, Voyager Therapeutics, Viewray, Caris Lifesciences, Pyramid Biosciences, Varian Medical Systems, Cairn Therapeutics, Anheart Therapeutics, Theraguix, Menarini Ricerche, Sumitomo Pharma Oncology, Autem therapeutics, and GT Medical Technologies. He is a member of the Scientific Advisory Board for Cairn Therapeutics, Pyramid Biosciences, Modifi biosciences, and Bugworks. He has individual stocks/stock options with Mimivax, Cytodyn, MedInnovate Advisors LLC, Trisalus Lifesciences.

**Gene Barnett, M.D.**, faculty of this educational activity is a consultant with Monteris Medical. He has indicated that the presentation or discussions will not include off-label or unapproved product usage.

**Carlos Carbini, M.S.**, faculty of this educational activity is an employee of Puerto Rico Medical Services Administration (ASEM) Gamma Knife. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Samuel Chao, M.D.**, faculty of this educational activity is a researcher for Blue Earth Diagnostics and on the speaker's bureau for Varian Medical Systems and Blue Earth Diagnostics. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Veronica Chiang, M.D.**, faculty for this educational activity is a consultant with Monteris Medical Inc. She has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Christopher P. Cifarelli, M.D.**, faculty of this educational activity is on the speaker's bureau with Carl Zeiss Meditec AG. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Alonso N. Gutierrez, Ph.D.**, faculty of this education activity is a consultant for Elekta AB, ViewRay Inc. and IBA AB. He has ownership/part ownership with uPlan/Atlantic Health Solutions and have indication that the presentations or discussions will not include off-label or unapproved product usage.

**Jonathan Kniseley, M.D.**, faculty of this educational activity is an advisor for GT MedTech. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Douglas Kondziolka, M.D.**, faculty of this educational activity is an editor for the Congress of Neurological Surgeons. He is a researcher with Brain Lab and has stocks with Chiefy (educational app). He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Rupesh Kotecha, M.D.**, faculty and planner for this educational activity, is a researcher for Medtronic, Blue Earth Diagnostics, Novocure, GT Medical Technologies, AstraZeneca, Exelixis, Viewray and Brainlab, consultant with Accuray, Elekta AB, Viewray, Novocure, Elsevier and Brainlab, on the speaker's bureau with Novocure. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**L. Dade Lunsford, M.D.**, faculty of this educational activity is a consultant with DSMB and Insightec Inc. He has individual stocks/stock options with AB Elekta. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Michael McDermott, M.D.**, faculty and planner for this educational activity, is a consultant with Deide, Stryker, Insightec, and ZAP Surgical. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Minesh Mehta, M.D.**, faculty and planner for this educational activity, is a consultant with Karyopharm, Mevion, ZAP, Sapience and Xofig. He has an executive role with Oncoceutics BOD and has individual stocks/stock options with Chimerix. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Eric K. Oermann, M.D.**, faculty of this educational activity is a consultant for Sofinnova, Inc. He has individual stocks/stock options with Artsight Inc. and his presentation will include off-label or unapproved product usage.

**Joshua Palmer, M.D.**, faculty of this educational activity is a researcher for Genentech, he is a consultant for Huron and MORE Health, he is an advisor for Novocure and on the speaker's bureau for Varian Medical Systems and DePuy Synthes. He is a pediatric brain tumor panel member. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**David Peereboom, M.D.**, faculty of this educational activity is a researcher for Apollomics, Bayer, Bristol-Myers Squibb, GCAR, Genentech/Roche, Karyopharm Therapeutics, Mimivax, Novartis, Novocure, Ono Pharmaceuticas, Orbus, Pfizer, Pharmacyclics, Stemline Therapeutics and Vigeo. He is a consultant for Novocure and Orbus. He is an advisor for IN8bio. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**David Schlesinger, Ph.D.**, faculty of this educational activity is an independent contractor (including contracted research) with Abbvie Inc. and Focused Ultrasound Foundation. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Herwin Speckter, M.D.**, faculty of this educational activity, is an employee of CEDIMAT, Domionican Gamma Knife Center, Santo Domingo, Dominican Republic. He is a researcher with INTEC University, Santo Domingo, Dominican Republic. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Robert Starke, M.D.**, faculty of this educational activity is a consultant and has teaching agreements with Penumbra, Abbott, Medtronic, Balt, InNeuroCo, Cerenovus, Naglreiter, Tonbridge, Von Medical and Optimize Vascular. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**John Suh, M.D.**, faculty of this educational activity is a consultant with Novocure, Philips, Neutron Therapeutics and EmpNia. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Ranjini Tolakanahalli, Ph.D.**, faculty of this education activity has individual stocks/stock options with Siemens Healthineers. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Daniel Trifiletti, M.D.**, faculty of this educational activity is a researcher with Varian Medical and a consultant with Boston Scientific. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

**Brian Williams, M.D.**, faculty of this educational activity is a consultant for Monteris Medical and Novocure. He has indicated that the presentation or discussion will not include off-label or unapproved product usage.

All of the relevant financial relationships listed for these individuals have been mitigated.

Non-faculty contributors and others involved in the planning, development and editing/review of the content do not have relevant financial relationships to disclose with ineligible companies\*.

*\*Ineligible companies - Companies whose primary business is producing, marketing, selling, re-selling or distributing healthcare products used by or on patients.*

## Available Credit

- **13.75** General certificate of attendance



## Learning Objectives

**Upon completion of this symposium, participants should be better able to:**

- Discuss radiosurgery in the overall context of options for the treatment of patients with benign intracranial tumors.
- Discuss radiosurgery in the overall context of options for the treatment of patients with metastatic tumors.
- Discuss radiosurgery in the care of vascular malformations and functional disorders.
- Describe the radiobiological implications of different radiosurgical technologies.

## **Exhibitors**

**We gratefully acknowledge these exhibitors:**

### **Diamond Sponsor**

**Elekta**

### **Gold Sponsor**

**Brainlab AG**

### **Silver Sponsor**

**Varian**

### **Bronze Sponsors**

**GE Healthcare**

**Novocure**

**Zap Surgical**

### **Bronze Exhibitors**

**GammaTile**

**Medexus MIM**

**Software**

**Omniscient**

**Varian**

**Zeiss**

**Thank you!**

We gratefully acknowledge educational grants from

***Brainlab AG***

***Monteris Medical***

**Thank you!**

**Baptist Health South Florida**  
**Continuing Medical Education Department**

8900 North Kendall Drive, Miami, Florida Phone: 786-596-2398

Fax: 786-533-9706

[BaptistHealth.net/CMEOnline](http://BaptistHealth.net/CMEOnline)

**For questions regarding this symposium, contact:**

Eleanor Abreu, CME Symposium Manager [EleanorA@Baptisthealth.net](mailto:EleanorA@Baptisthealth.net)

Christine Baldwin, CME Learning Management System Support [ChristineB@Baptisthealth.net](mailto:ChristineB@Baptisthealth.net)

Martha Tobin, IRRF Meeting Manager, [tobinm@ccf.org](mailto:tobinm@ccf.org)