

PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING

3rd Clinical Trials Update | A CME-accredited Conference

FRIDAY, NOVEMBER 11, 2022



AGENDA

- 7:00 am** **In-Person: Check-In, Visit Exhibits and Continental Breakfast**
Virtual: Log-In to Virtual Conference - Visit Virtual Exhibit Hall
- 7:30 am** **Welcome and Introductions**
Sunil Singhal, MD // Thoracic Surgery // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- John Y.K. Lee, MD, MSCE** // Neurosurgery // Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
- Edward J. (Jim) Delikatny, PhD** // Radiology/Optical Bioluminescence // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- Robert H. Vonderheide, MD, DPhil** // Abramson Cancer Center // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- Daniel Yoshor, MD** // Neurosurgery // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- D. Gregory Farwell, MD, FACS** // Otorhinolaryngology – Head and Neck Surgery // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- SESSION 1: CLINICALLY APPROVED AND PHASE III TRIALS**
Moderators: Eric R. Henderson, MD // Adult and Pediatric Orthopedics // Geisel School of Medicine, Dartmouth / Dartmouth Health
David E. Holt, BVSc // Surgery // University of Pennsylvania School of Veterinary Medicine
- 7:45 am** **5-ALA in EUROPE – FUTURE STEPS**
Walter Stummer, MD, PhD // Neurosurgery // Münster University Hospital

PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING

3rd Clinical Trials Update | A CME-accredited Conference



- 8:00 am** **PAFOLACIANINE for Ovarian Cancer**
Janos L. Tanyi, MD, PhD // Gynecologic Oncology // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- 8:15 am** **PAFOLACIANINE for Lung Cancer: Phase 3 US Trial**
Linda W. Martin, MD, MPH // Thoracic Surgery // University of Virginia School of Medicine
- 8:35 am** **CEA Colon Cancer Trial: Phase 3 European Trial**
Alexander L. Vahrmeijer, MD // Oncologic Surgery // Leiden University Medical Center
- 8:55 am** **Protease Activated Dye in Breast Cancer Surgery: Phase 3 US Trial**
Barbara L. Smith, MD, PhD // Breast Surgery // Harvard Medical School // Massachusetts General Hospital
- 9:15 am** **Q&A Panel Discussion**
- 9:25 am** **Break and Visit Exhibits**

SESSION 2: PHASE II CLINICAL TRIALS

- Moderator: Karthik Rajasekaran, MD, FACS** // Head and Neck Oncologic & Microvascular Reconstructive Surgery // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- 9:45 am** **Anti-EGFR Antibody Imaging Strategies for Real-Time Surgical and Pathologic Guidance**
Eben Rosenthal, MD // Otolaryngology - Head & Neck Surgery // Vanderbilt University Medical Center

PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING

3rd Clinical Trials Update | A CME-accredited Conference



- 10:05 am** **Phase II Trial of Intraoperative Molecular Imaging of Lung Cancer with Cathepsin Imaging**
Sunil Singhal, MD // Thoracic Surgery // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- 10:25 am** **pH Sensitive Dyes in Peritoneal Surface Malignancy**
Patrick Wagner, MD, FACS // Surgical Oncology // Allegheny Health Network (AHN) Cancer Institute
- 10:45 am** **pH Sensitive Dyes in Phase II Lung Cancer Trial**
David C. Rice, MB, BCh, FRCSI // Thoracic Surgery // M.D. Anderson Cancer Center // Houston, Texas
- 11:05 am** **Q&A Panel Discussion**

SESSION 3: PEDIATRIC HOUR

Moderators: Tracy Ma Flanders, MD, MSCE // Pediatric Neurosurgery // Children's Hospital of Philadelphia

Andrew M. Davidoff, MD // Pediatric Surgery // St. Jude Children's Research Hospital

- 11:15 am** **Tumor Paint™ Imaging – Pediatric Brain Tumors – PHASE TWO**
Amy Lee, MD // Pediatric Neurosurgery // University of Washington // Seattle Children's Hospital
- 11:30 am** **Clinical Experience Using ICG**
Abdelhafeez H. Abdelhafeez, MD // Pediatric Surgery // St. Jude Children's Research Hospital
- 11:45 am** **Pre-Clinical Experience on Targeted Agents for Pediatric Solid Tumors**
Marcus M. Malek, MD, FAAP // Pediatric Surgical Oncology // University of Pittsburgh // UPMC

PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING

3rd Clinical Trials Update | A CME-accredited Conference



12:00 pm Q&A Panel Discussion

12:10 pm Lunch and Visit Exhibits

Session 4: PILOT AND PHASE I CLINICAL TRIALS

Moderator: Andrew Tsourkas, PhD // Bioengineering // Perelman School of Medicine at the University of Pennsylvania / Penn Medicine

12:55 pm **EGFR Affibody: Design & Implementation of Novel Targeted Tumor Dye**
Eric R. Henderson, MD // Adult and Pediatric Orthopedics // Geisel School of Medicine, Dartmouth // Dartmouth Health

1:10 pm **uPAR-Targeting Dye (Fluoguide) For Surgery of Gliomas**
Jane Skjoth-Rasmussen, MD, PhD // Adult and Pediatric Neurosurgery // Rigshospitalet / Copenhagen University Hospital / University of Copenhagen

1:25 pm **TumorGlow™ Second Window ICG in Brain Tumors**
John Y.K. Lee MD, MSCE // Neurosurgery // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine

1:40 pm Q&A Panel Discussion

SESSION 5: NORMAL TISSUE DYES

Moderators: E. James Petersson, PhD // Chemistry // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine

Sofya A. Osharovich, PhD // Pharmacology // Perelman School of Medicine at the University of Pennsylvania / Penn Medicine

1:50 pm **Nerve Specific Dyes – Normal Tissue Identification**
Ryan K. Orosco, MD // Otolaryngology // University of New Mexico

PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING

3rd Clinical Trials Update | A CME-accredited Conference



2:05 pm **Near Infrared Nerve-Specific Probes for Intraoperative Nerve Visualization**
Summer L. Gibbs, PhD // Biomedical Engineering // Oregon Health & Science
University (OSHU) School of Medicine / OSHU Knight Cancer Institute

2:20 pm **Ureter Dyes During Urologic Cancer Surgery – Normal Tissue Identification**
Richard W. Farnam, MD // Gynecology // Las Palmas Del Sol Healthcare

2:35 pm **Q&A Panel Discussion**

SESSION 6: HOW TO GET FROM BENCH TO BEDSIDE

Moderator: Mark Anthony Sellmyer, MD, PhD // Radiology // Perelman School of
Medicine at the University of Pennsylvania / Penn Medicine

2:45 pm **Choline Kinase Dyes**
Edward J. (Jim) Delikatny, PhD // Radiology / Optical Bioluminescence // Perelman
School of Medicine at the University of Pennsylvania // Penn Medicine

3:00 pm **NIH Perspective of Clinical Trials in Intraoperative Molecular Imaging**
Lalitha K. Shankar, MD, PhD // Cancer Imaging Clinical Trials Branch// National
Cancer Institute // Division of Cancer Treatment and Diagnosis

3:15 pm **Q&A Panel Discussion**

SESSION 7: ALTERNATIVE IMAGING STRATEGIES

Moderator: Wesley B. Baker, PhD // Pediatric Neurology / Biomedical Optical
Devices // Children's Hospital of Philadelphia

3:25 pm **Fluorescence Lifetime Imaging with Dyes**
Anand Kumar, PhD // Radiology / Optical Molecular Imaging // Harvard Medical
School // Massachusetts General Hospital

3:40 pm **Label-Free Fluorescence Lifetime Imaging**
Laura Marcu, PhD // Biomedical Engineering / Neurological Surgery // University of
California

PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING

3rd Clinical Trials Update | A CME-accredited Conference



- 3:55 pm** **Photoacoustic Imaging**
Lei Li, PhD // Medical Engineering // California Institute of Technology // Caltech
- 4:10 pm** **MultiSpectral Camera Imaging**
Viktor Gruev, PhD // Electrical and Computer Engineering // University of Illinois at Urbana-Champaign
- 4:25 pm** **Q&A Panel Discussion**
- 4:35 pm** **PANEL DISCUSSION – FUTURE UNMET NEEDS (all moderators)**
Moderator: Sunil Singhal, MD // Thoracic Surgery // Perelman School of Medicine at the University of Pennsylvania // Penn Medicine
- 5:00 pm** **CME Concludes**
- 5:05 pm** **Refreshments | Break | Visit Exhibits**
- 5:35 pm** **pH Sensitive Dyes**
Baran Sumer, MD // Otorhinolaryngology // University of Texas // UT Southwestern Medical Center
- 6:00 pm** **Conference Concludes**

Post Conference Details

After the conference has concluded, all attendees will receive an **email from Penn CME** with instructions on how to complete the post-test, evaluation, claim credit and obtain a certificate.

Look for the email early NEXT WEEK.

If you missed the Pre-Test, you will still be eligible to obtain your certificate after you complete the Post-Test and Evaluation.

A Certificate of Participation is available to attendees who are not physicians or nurses.

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AFTER THE CONFERENCE LINKS TO MEETING VIDEOS CAN BE FOUND:

Website: PennMedicine.org/Abramson/PSIMI2022

**Recordings from the meeting will be available Thursday, November 17th through November 2023*

Overview

Penn's Abramson Cancer Center and Center for Precision Surgery present this activity to review and discuss recent progress and future challenges in clinical trials for intraoperative molecular imaging during cancer surgery. Lectures and interactive participation will encourage a dynamic exchange of ideas between faculty and attendees.

Learning Objectives

At the completion of this course, participants should be able to:

- Describe the status of ongoing or completed clinical trials in the field of intraoperative molecular imaging for cancer surgery
- Define indications and endpoints for intraoperative imaging trials in clinical cancer surgery
- Identify differences in camera imaging systems and advantages/disadvantages of various engineering and technology solutions

Who Should Attend

This activity is designed for surgeons and researchers interested in learning about intraoperative molecular imaging. This includes surgical oncologists, neuro-surgeons, thoracic surgeons, gynecologic oncology surgeons, gastrointestinal surgeons, otorhinolaryngologists/head and neck cancer surgeons, and other healthcare professionals involved in intraoperative molecular imaging for cancer such as radiologists, physicists, engineers, research scientists, and technologists.

Accreditation

In support of improving patient care, Penn Medicine is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING

3rd Clinical Trials Update | A CME-accredited Conference



Designation of Credit

PHYSICIANS: Penn Medicine designates this live activity for a maximum of **8.5 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

PHYSICIAN ASSISTANTS: AAPA accepts certificates of participation for educational activities certified for *AMA PRA Category 1 Credits™* from organizations accredited by ACCME or a recognized state medical society. PAs may receive a maximum of **8.5** Category 1 credits for completing this activity.

FACULTY

Activity Directors

Sunil Singhal, MD

William Maul Measey Professor in Surgical Research
Chief, Division of Thoracic Surgery
Vice Chair, Translational Research, Department of Surgery
Director, Center for Precision Surgery, Abramson Cancer Center
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

John Y.K. Lee, MD, MSCE

Professor of Neurosurgery
Professor of Otorhinolaryngology: Head and Neck Surgery
Medical Director, Gamma Knife Center
Clinical Director, Center for Precision Surgery
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

Edward J. (Jim) Delikatny, PhD

Research Professor of Radiology
Director, Optical Bioluminescence Sub-Core, Small Animal Imaging Facility
Director, Small Animal Imaging Facility
Director of Translational Research, Center for Precision Surgery
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

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Speakers

Abdelhafeez H. Abdelhafeez, MD

Pediatric Surgeon
St. Jude Children's Research Hospital
Memphis, TN, USA

Wesley B. Baker, PhD

Pediatric Neurology / Biomedical Optical Devices
Director, Biomedical Optical Devices to Monitor Cerebral Health Frontier Program
Children's Hospital of Philadelphia
Philadelphia, PA, USA

Andrew M. Davidoff, MD

St. Jude Endowed Chair in Surgical Research
Chair, Surgery Department
Director, Surgical Research
St. Jude Children's Research Hospital
Memphis, TN, USA

Richard W. Farnam, MD

Clinical Associate Professor
Director of the Southwest Robotic Epicenter
Texas Tech University and Burrell College of Medicine
Las Palmas Del Sol Healthcare
El Paso, TX, USA

D. Gregory Farwell, MD, FACS

Gabriel Tucker Professor of Otorhinolaryngology
Chair, Department of Otorhinolaryngology – Head and Neck Surgery
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

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Tracy Ma Flanders, MD, MSCE

Pediatric Neurosurgery
Co-Director for Prenatal and Neonatal Neurosurgery
Children's Hospital of Philadelphia
Philadelphia, PA, USA

Summer L. Gibbs, PhD

Associate Professor of Biomedical Engineering
Oregon Health & Science University (OSHU) School of Medicine / OSHU Knight Cancer Institute
Portland, OR, USA

Viktor Gruev, PhD

Professor, Department of Electrical and Computer Engineering
University of Illinois at Urbana-Champaign
Champaign, IL, USA

Eric R. Henderson, MD

Assistant Professor of Orthopedics
Geisel School of Medicine, Dartmouth / Dartmouth Health
Hanover, NH, USA

David E. Holt, BVSc

Professor of Surgery, University of Pennsylvania School of Veterinary Medicine
Diplomate, American College of Veterinary Surgeons
University of Pennsylvania School of Veterinary Medicine
Philadelphia, PA, USA

Anand Kumar, PhD

Associate Professor in Radiology
Assistant in Physics
Harvard Medical School / Massachusetts General Hospital
Boston, MA, USA

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3rd Clinical Trials Update | A CME-accredited Conference



Amy Lee, MD

Associate Professor of Neurological Surgery
Seattle Children's Hospital and University of Washington
Seattle, WA, USA

Lei Li, PhD

Postdoctoral Scholar Research Associate in Medical Engineering
Andrew and Peggy Cherng Dept of Medical Engineering
California Institute of Technology / Caltech
Pasadena, CA, USA

Marcus M. Malek, MD, FAAP

Professor of Surgery
Director, Pediatric Surgical Oncology
University of Pittsburgh / UPMC
Pittsburgh, PA, USA

Laura Marcu, PhD

Professor of Biomedical Engineering
Biomedical Engineering / Neurological Surgery
University of California
Davis, CA, USA

Linda W. Martin, MD, MPH

Associate Professor of Surgery
University of Virginia School of Medicine
Charlottesville, VA, USA

Ryan K. Orosco, MD

Assistant Professor of Surgery (Otolaryngology)
University of New Mexico
Albuquerque, NM, USA

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Sofya A. Osharovich, PhD

Pharmacology
Penn Medicine
Philadelphia, PA, USA

E. James Petersson, PhD

Associate Professor of Chemistry
University of Pennsylvania
Philadelphia, PA, USA

Karthik Rajasekaran, MD, FACS

Professor of Otorhinolaryngology: Head and Neck Surgery (Head and Neck Oncologic & Microvascular Reconstructive Surgery)
Co-Director, Head and Neck Oncology
Fellowship Director, Microvascular Reconstruction
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

David C. Rice, MB, BCh, FRCSI

Professor, Department of Thoracic and Cardiovascular Surgery, Division of Surgery
The University of Texas MD Anderson Cancer Center
Houston, TX, USA

Eben Rosenthal, MD

Professor and Chair Otolaryngology - Head & Neck Surgery
Vanderbilt University Medical Center
Nashville, TN, USA

Mark Anthony Sellmyer, MD, PhD

Assistant Professor of Radiology
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

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Lalitha K. Shankar, MD, PhD

Chief Clinical Trials Branch, Cancer Imaging Program
National Cancer Institute / Division of Cancer Treatment and Diagnosis
Bethesda, MD, USA

Jane Skjoth-Rasmussen, MD, PhD

Associate Professor Neurosurgery
Rigshospitalet /Copenhagen University Hospital / University of Copenhagen
Copenhagen, Denmark

Barbara L. Smith, MD, PhD

Professor of Surgery, Harvard Medical School
Director, Breast Program
Massachusetts General Hospital
Boston, MA, USA

Walter Stummer, MD, PhD

Professor and Chairman of Neurosurgery, Münster University Hospital
President, German Society for Neurosurgery
Münster, Germany

Baran Sumer, MD, FACS

T.C. Lupton Family Professorship in Patient Care (Otorhinolaryngology)
Chief of Head and Neck Oncology Division
University of Texas / UT Southwestern Medical Center
Dallas, TX, USA

Janos L. Tanyi, MD, PhD

Associate Professor of Obstetrics and Gynecology
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

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Andrew Tsourkas, PhD

Professor Bioengineering
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

Alexander L. Vahrmeijer, MD

Oncologic Surgeon
Research Leader Image-Guided Surgery
Leiden University Medical Center
Leiden, The Netherlands

Robert H. Vonderheide, MD, DPhil

Director, Abramson Cancer Center
John H. Glick Abramson Cancer Center's Director Professor
Vice Dean for Cancer Programs, Perelman School of Medicine
Vice President for Cancer Programs, UPHS
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

Patrick Wagner, MD, FACS

Assistant Professor of Surgery (Surgical Oncology Division)
Assistant Professor of Pathology and Laboratory Medicine
Drexel University College of Medicine
Director, AHNCI Division of Complex General Surgical Oncology
Program Co-Director, Complex General Surgical Oncology Fellowship
Allegheny Health Network (AHN) Cancer Institute
Pittsburgh, PA, USA

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3rd Clinical Trials Update | A CME-accredited Conference



Daniel Yoshor, MD

Charles Harrison Frazier Professor of Neurosurgery
Chair, Department of Neurosurgery
Vice President, Clinical Integration and Innovation
Surgical Director of Penn Pituitary Center
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine
Philadelphia, PA, USA

Disclosure of Relevant Financial Relationships

Staff in the Office of Continuing Medical and Interprofessional Education (CMIE) (Bruce Brod, MD, Vaughn Wurst and Belinda Rose, CHCP), and the listed Planning Committee Members (Cynthia Griffo, MS, RN, Barbara Lopez and Lynn Schuchter, MD) have reported that they have no relevant financial relationships with any ineligible companies related to the content of this educational activity.

The following faculty members have disclosed that they have no relevant financial relationships with any ineligible companies related to the content of this educational activity:

Abdelhafeez H. Abdelhafeez, MD
Wesley B. Baker, PhD
Andrew M. Davidoff, MD
Edward J. (Jim) Delikatny, PhD
Richard W. Farnam, MD
D. Gregory Farwell, MD, FACS
Tracy Ma Flanders, MD, MSCE
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John Y.K. Lee, MD, MSCE
Lei Li, PhD
Marcus M. Malek, MD, FAAP

Laura Marcu, PhD
Ryan K. Orosco, MD, FACS
Sofya Alexandrovna Osharovich, PhD
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Karthik Rajasekaran, MD, FACS
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Lalitha K. Shankar, MD, PhD
Sunil Singhal, MD
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Daniel Yoshor, MD

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Faculty Name

The following faculty and planning committee members have reported the relevant financial relationship with ineligible companies related to the content of their presentation. Mitigation has been done.

Faculty Name	Name of Commercial Interest	Relationship
Eric R. Henderson, MD	Stryker	Consultant
Jane Skjoth-Rasmussen, MD, PhD	FluoGuide	Consultant
Mark Anthony Sellmyer, MD, PhD	Bristol-Myers Squibb	Grant/Research Support
	Vellum Biosciences	Ownership
Linda W. Martin, MD, MPH	Johnson & Johnson	Speakers Bureau
	Astra Zeneca, Genentech	Advisor
	On Target Laboratories	Advisory/Review Panel
Walter Stummer, MD, PhD	Medexus, Zeiss Meditec, Photonamic	Grant/Research Support
	SBIALAPharma	Consulting Fees
	Medac	Speakers Bureau
Andrew Tsourkas, PhD	AlphaThera, Inc.	Royalties or patent beneficiary
	Prescient Therapeutics	



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