

# 4TH CLINICAL TRIALS UPDATE PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING



FRIDAY – 11|14|25

## AGENDA

- 7:30 am**      **Check-In, Visit Exhibits, Abstract Poster Session and Breakfast**
- 8:00 am**      **Welcome and Introductions**  
Robert H. Vonderheide, MD, DPhil | Director, Abramson Cancer Center  
D. Gregory Farwell, MD, FACS, MAMSE | Chairman of Otorhinolaryngology - Head & Neck Surgery  
Ronald P. DeMatteo, MD, FACS | Chairman of Surgery  
Sunil Singhal, MD | Thoracic Surgery | Symposium Co-Chair

## KEYNOTE

- 8:15 am**      **ALA-PpIX: Multifaceted Theranostic**  
Brian W. Pogue, PhD | Biomedical Engineering | Dartmouth Health

## SESSION 1: FDA APPROVED

**Moderator:** Sunil Singhal, MD | Thoracic Surgery | Symposium Co-Chair

- 8:45 am**      **Further Analysis Of The Phase 3, Single-Dose, Open-Label Study to Investigate the Efficacy of Pafolacianine Injection (OTL38) for Intraoperative Imaging During Cytoreductive Surgery of Folate Receptor Positive Ovarian Cancer**  
Janos L. Tanyi, MD, PhD | Obstetrics and Gynecology Oncology | Penn Medicine
- 9:00 am**      **Fluorescent Imaging in Brain Tumor Surgery**  
John Y.K. Lee, MD, MSCE | Neurosurgery | Symposium Co-Chair
- 9:15 am**      **Fluorescence Guided Surgery in Thoracic Surgery**  
Jarrod D. Predina, MD, MTR | Thoracic Surgery | Penn Medicine

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**9:30 am**      **Molecular Endoscopic Imaging for Early Detection of Upper Gastrointestinal Tract Cancer**  
Andrew T. Chan, tMD, MPH | Gastroenterologist | Mass General Cancer Center

**9:45 am**      **Q&A Panel Discussion**

**10:05 am**      **Break, Visit Exhibits and Posters**

## SESSION 2: PHASE III CLINICAL TRIALS

**Moderator:** Andrew Tsourkas, PhD | Bioengineering | Penn Engineering

**10:25 am**      **Phase 2B Multi-center Clinical Trial of Intraoperative Molecular Imaging with Abenacianine During Lung Cancer Surgery**  
Jae Y. Kim, MD | Thoracic Surgery | City of Hope

**10:45 am**      **Phase III Trial of SGM-101 for Detection of Colorectal Cancer; Phase III Trial of Nizaracianine Triflutate for Ureter Identification**  
Alexander L. Vahrmeijer, MD | Oncologic Surgery | Leiden University Medical Center

**11:05 am**      **Q&A Panel Discussion**

**11:25 am**      **Lunch – Visit Exhibits and Posters**

## SESSION 3: PHASE II CLINICAL TRIALS

**Moderator:** E. James Petersson, PhD | Biochemistry & Biophysics | Penn Medicine

**12:20 pm**      **Alume Bioscience**  
Quyen Nguyen, MD, PhD | Head & Neck Surgery | University of California San Diego /UC San Diego Health

**12:40 pm**      **pH-Sensitive Dyes**  
Baran D. Sumer, MD, FACS | Head & Neck Surgery | UT Southwestern Medical Center

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**1:00 pm**      **EGFR-Targeted Fluorescent Contrast Agents**  
George A. Poultsides, MD, MS | Stanford University | Hepatobiliary Surgery

**1:20 pm**      **Q&A Panel Discussion**

## SESSION 4: PHASE I CLINICAL TRIALS

**Moderator:** Sofya A. Osharovich, PhD | Postdoctoral Fellow of Radiology | Penn Medicine

**1:40 pm**      **Integro Theranostics – LS301**  
Robert Honigberg, MD, MBA | Lung Surgery | Integro Theranostics

**2:00 pm**      **MEWER Imaging for Structure Depth Resolution**  
Eric R. Henderson, MD | Adult and Pediatric Orthopedics | Dartmouth Health

**2:20 pm**      **Fluoguide (uPAR)**  
Jane Skjøth-Rasmussen | Neurosurgery | University of Copenhagen

**2:40 pm**      **Phase I Pilot Study of Pafolacianine Injection for Intraoperative Imaging of GI Cancer Peritoneal Carcinomatosis**  
Maheswari Senthil, MD, FACS | Surgical Oncology | UC Irvine Center for Clinical Research (UCI-CCR)

**3:00 pm**      **Q&A Panel Discussion**

**3:20 pm**      **Break, Visit Exhibits and Posters**

## SESSION 5: STARTUPS

**Moderator:** Anand T.N. Kumar, MD | Otolaryngology Head and Neck Surgery | Harvard

**3:35 pm**      **Will Near Infrared Nerve-Specific Imaging Enable Precision Surgery?**  
Summer L. Gibbs, PhD | Biomedical Engineering | School of Medicine at the Oregon Health and Science University | Trace Biosciences





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- 3:50 pm**      **Optical Imaging to Improve Precision in Medical Endoscopy**  
Stephan Rogalla MD, PhD | Gastroenterology & Hepatology | Stanford University
- 4:05 pm**      **Choline Kinase Targeting Dyes for Lung Cancer Detection**  
Edward J. (Jim) Delikatny, PhD | Radiology/Optical Bioluminescence | Symposium Co-Chair
- 4:20 pm**      **Fluorescent Image Resection Enhancement in Prostate and Breast Cancer**  
James P. Babilion, PhD | Biomedical Engineering | Case Western Reserve University | Akrotome Imaging
- 4:35 pm**      **Intraoperative Real-Time Fluorescence Imaging Platform**  
Kyuyoung Kim, PhD (CTO) | Chief Technology Officer | VPIX Medical
- 4:50 pm**      **Q&A Panel Discussion**
- 5:05 pm**      **Conference Conclusions and Future Directions**  
Sunil Singhal, MD | Thoracic Surgery | Symposium Co-Chair
- 5:25 pm**      **Conference Concludes**

## AFTER THE CONFERENCE LINKS TO MEETING VIDEOS CAN BE FOUND:

Website: [PennMedicine.org/PSIMI2025](https://PennMedicine.org/PSIMI2025)

*\*Recordings from the meeting will be available Thursday, November 20, 2025, through November 2027*

# 4TH CLINICAL TRIALS UPDATE PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING



## 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.

## Target Audience

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.

## 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



# 4TH CLINICAL TRIALS UPDATE PRECISION SURGERY INTRAOPERATIVE MOLECULAR IMAGING



## FACULTY

### Activity Co-Directors

**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

**John Y.K. Lee, MD, MSCE**

Professor of Neurosurgery  
Medical Director, Gamma Knife Center  
Clinical Director, Center for Precision Surgery  
Director, Skull Base Surgery  
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine  
Philadelphia, PA, USA

**Sunil Singhal, MD**

William M. Measey Professor of Surgery  
Chief, Division of Thoracic Surgery  
Vice Chair, Translational Research, Department of Surgery  
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine  
Philadelphia, PA, USA





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## Speakers

### **James P. Basilion, PhD**

Co-Leader, Cancer Imaging Program, Case Comprehensive Cancer Center  
Professor, Department of Biomedical Engineering, Case School of Engineering School of Medicine  
Professor, Department of Radiology, School of Medicine  
Case Western Reserve University  
Cleveland, OH, USA

### **Andrew T. Chan, MD, MPH**

Chief of Clinical and Translational Epidemiology  
Daniel K. Podolsky Professor of Medicine, Harvard Medical School  
Professor of Immunology and Infectious Diseases, Harvard T.H. Chan School of Public Health  
Director of Epidemiology, Cancer Center and Stuart and Suzanne Steele MGH Research Scholar, Massachusetts General Hospital  
Boston, MA, USA

### **Ronald P. DeMatteo, MD, FACS**

John Rhea Barton Professor of Surgery  
Chair, Department of Surgery  
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine  
Philadelphia, PA, 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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**PRECISION SURGERY  
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**Summer L. Gibbs, PhD**

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

**Eric R. Henderson, MD**

Section Chief, Orthopedic Oncology  
Director, Surgical Cancer Research, Dartmouth Cancer Center  
Associate Professor of Orthopedics, Geisel School of Medicine, Dartmouth Health  
Hanover, NH, USA

**Robert Honigberg, MD, MBA**

Chief Medical Officer, Lung Surgery  
Integro Theranostics  
Chesterfield, MO, USA

**Jae Y. Kim, MD**

Chief of Thoracic Surgery  
Associate Professor of Thoracic Surgery  
City of Hope  
Duarte, CA, USA

**Kyuyoung Kim, PhD (CTO)**

Strategic Initiatives  
VPIX Medical  
Daejeon, Republic of Korea





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**Anand T.N. Kumar, PhD**

Atchinson Family Chair in Otolaryngology–Head and Neck Surgery  
Associate Professor of Otolaryngology–Head and Neck Surgery  
Director, Mike Toth Head and Neck Cancer Research Center  
Harvard Medical School / Massachusetts General Brigham Eye and Ear  
Boston, MA, USA

**Quyen Nguyen, MD, PhD**

Professor of Surgery (Otolaryngology)  
University of California San Diego /UC San Diego Health  
La Jolla, California, USA

**Sofya A. Osharovich, PhD**

Postdoctoral Fellow of Radiology  
Perelman School of Medicine at the University of Pennsylvania / Penn Medicine  
Philadelphia, PA, USA

**E. James Petersson, PhD**

Professor of Chemistry, Chair of Graduate Studies  
Professor of Biochemistry & Biophysics  
University of Pennsylvania, USA

**Brian W. Pogue, PhD**

Robert A. Pritzker Professor of Biomedical Engineering  
Dartmouth Health  
Hanover, NH, USA

**George A. Poultsides, MD, MS**

Section Chief of Surgical Oncology  
Professor of Surgery (General Surgery)  
Stanford Medicine  
Stanford, CA, USA



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**Jarrold Predina MD, MTR**

Assistant Professor of Surgery

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

**Stephan Rogalla, MD, PhD**

Assistant Professor, Medicine-Gastroenterology & Hepatology

Stanford Medicine

Stanford, CA, USA

**Maheswari Senthil, MD**

Surgical Oncology, General Surgery

University of California, Irvine

Orange, CA, USA

**Jane Skjoth-Rasmussen, MD, PhD**

Associate Professor Neurosurgery

Rigshospitalet /Copenhagen University Hospital / University of Copenhagen

Copenhagen, Denmark

**Baran D. Sumer, MD, FACS**

T.C. Lupton Family Professorship in Patient Care

In Honor of Dr. John Dowling McConnell and Dr. David Andrew Pistenmaa

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



**Penn Medicine**  
Abramson Cancer Center

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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





Penn Medicine  
Abramson Cancer Center

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## We Gratefully Acknowledge the Following Companies for Providing Support

### GRANTORS

Intuitive

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On Target

QUEL Imaging

Vergent Bioscience

### EXHIBITORS

Integro Theranostics

Medtronic

SpringWorks Therapeutics

Xeos

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