

# 4TH SYMPOSIUM ON PARATHYROID FLUORESCENCE

February 25-26, 2022  
San Francisco, California

# Hours of Operation

## Registration

**Friday, February 25th 7:00am-6:00pm**

**Saturday, February 26th 7:00am-6:00pm**

**Yosemite Foyer; Ballroom Level**

## Breakfast

**Friday, February 25th 7:00am-8:00am**

**Saturday, February 26th 7:00am-8:00am**

**Yosemite Ballroom; Ballroom Level**

## Symposium

**Friday, February 25th 8:00a-6:00p**

**Saturday, February 26th 8:00a-6:00p**

**Imperial Ballroom; Ballroom Level**

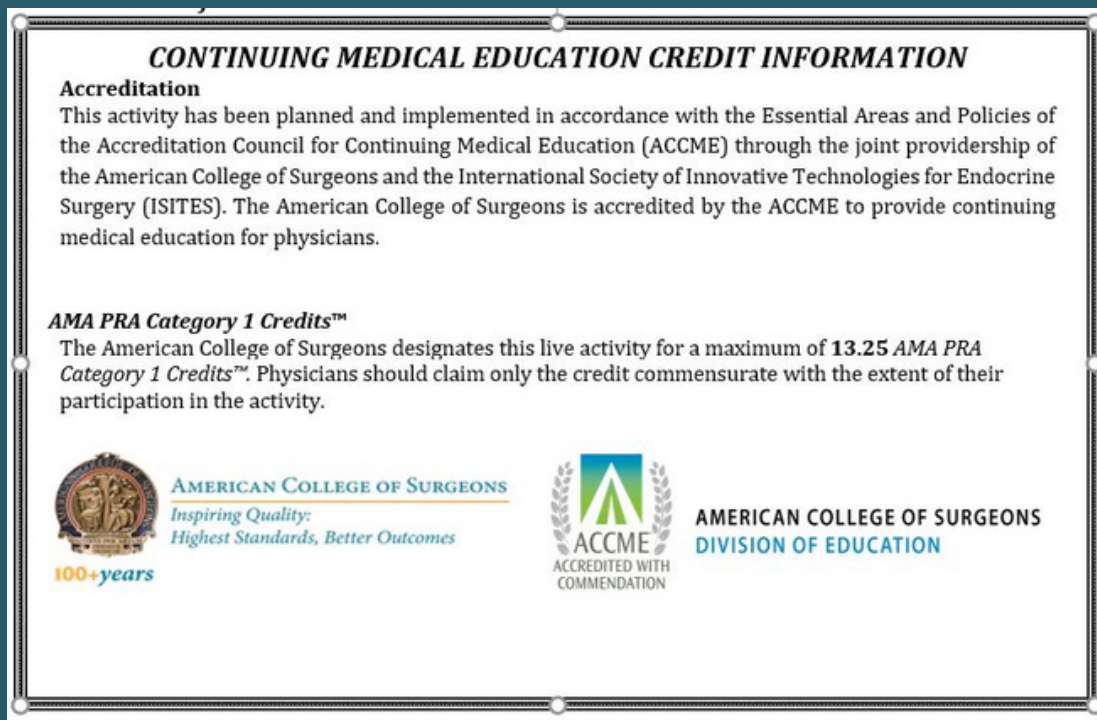
## Exhibitors

**Friday, February 25th 6:30a-6:00p**

**Saturday, February 26th 7:00a-1:00p**

**Yosemite Foyer; Ballroom Level**

# CME Credit Information



## PROGRAM OBJECTIVES

- The participants will gain knowledge on image-based and probe-base technology to identify parathyroid glands and the various techniques if contrast-enhanced fluorescence evaluation of perfusion
- Specific techniques will be shown and discussed to allow the participants to start using them or to improve their current practice

## Disclosure Information

In compliance with the ACCME Accreditation Criteria, the American College of Surgeons must ensure that anyone in a position to control the content of the educational activity has disclosed all relevant financial relationships with any commercial interest. All reported conflicts are managed by a designated official to ensure a bias-free presentation. Please see the insert to this program for the complete disclosure list. Visit our website for the complete disclosure list.

# CME Credit Information

## Credit Claiming and Certificates

Please visit the CME Claiming page on our website to review credit claiming instructions, complete evaluations, and collect your certificate.

Additionally, you may scan the QR code to complete the electronic Evaluation Forms to claim CME credit for each lecture you participated in.

All evaluations must be completed on or before March 4, 2022. CME certificates will not be issued for submissions received after this deadline.

If you have any questions regarding CME, please contact Danielle Taylor at [isites@facs.org](mailto:isites@facs.org).



# Agenda

## 4th Symposium on Parathyroid Fluorescence

General Session

February 25, 2022

8:00- 8:15 AM

### **Inauguration and Welcome**

Introduce International Society of Innovative Technologies for Endocrine Surgery (ISITES) and invite membership  
Quan-Yang Duh, Anita Mahadevan-Jansen and Frédéric Triponez

### **Session 1:**

#### **Challenges in parathyroid identification and preservation Moderator: Quan-Yang Duh**

8:15 - 8:40 AM

**The burden of post-thyroidectomy hypoparathyroidism (15 min + 10 min Q&A)**  
Electron Kebebew, Stanford

8:40 - 9:05AM

**Medical management of hypoparathyroidism (15 min + 10 min Q&A)**  
Dolores Shoback, UCSF

9:05 - 9:30AM

**Current techniques and results of parathyroid preservation and auto-transplantation (15 min + 10 min Q&A)**  
Jessica Gosnell, UCSF

9:30 - 9:55AM

**Vascular anatomy of the parathyroid glands (15 min + 10 min Q&A)**  
Frédéric Triponez, HUG, Geneva

**9:55 - 10:30AM**

### **Coffee Break**

### **Session 2:**

#### **Basics on light-based detection techniques Moderator: Frédéric Triponez**

10:30 - 10:55 AM

**Basic optical techniques for endocrine surgery (15 min + 10 min Q&A)**  
Anita Mahadevan-Jansen, Vanderbilt University Medical Center

10:55 - 11:20 AM

**The use of Indocyanine Green and other contrast agents in surgical procedures (15 min + 10 min Q&A)**  
Sam Achilefu, UT-Southwestern

11:20 - 11:45 AM

**Label-free angiography (15 min + 10 min Q&A)**  
Richard Cha, George Washington U

11:45 - 12:10 PM

**Application of fluorescent techniques for parathyroid identification and assessment of perfusion and function (15 min + 10 min Q&A)**  
Giju Thomas, Vanderbilt University Medical Center

# Agenda

## 4th Symposium on Parathyroid Fluorescence

General Session

February 25, 2022

12:10 - 1:30PM

**Lunch Break**

**Session 3:**

**Current techniques for fluorescence-based parathyroid detection and perfusion assessment**  
**Moderator: Anita Mahadevan-Jansen**

1:30 - 1:50 PM

**Probe-based detection of parathyroid (15 min + 5 min Q&A)**  
Carmen Solorzano, Vanderbilt University Medical Center

1:50 - 2:30 PM

**Panel Discussion | Image-based detection of parathyroid**  
**Panelists:**  
Eren Berber (Fluobeam), | Cleveland Clinic  
John Phay (PDE-Neo) | Ohio State  
Anton Engelsman (Quest Spectrum) | Amsterdam  
Frédéric Triponez (Elevison) | Geneva

2:30 - 2:50 PM

**Perfusion detection of parathyroid (15 min + 5 min Q&A)**  
Frédéric Triponez, Geneva, Switzerland

2:50 - 3:15 PM

**Coffee Break**

**Session 4:**

**Clinical applications of parathyroid detection**  
**Moderator: Carmen Solorzano**

3:15 - 3:40 PM

**Thyroid Disease (15 min + 10 min Q&A)**  
Fares Benmiloud, Marseille, France

3:40 - 4:05 PM

**Primary HPT, localized and non-localized (15 min + 10 min Q&A)**  
Colleen Kiernan, Vanderbilt University Medical Center

4:05 - 4:30 PM

**Renal hyperparathyroidism (15 min + 10 min Q&A)**  
Marco Demarchi, Geneva, Switzerland

**Session 5:**

**Oral presentations (selected abstracts – 8 min + 2 min Q&A)**  
**Moderator: Anita Mahadevan-Jansen/Frédéric Triponez/Quan-Yang Duh**

# Agenda

## 4th Symposium on Parathyroid Fluorescence

General Session

February 25, 2022

4:30 - 4:40 PM

**Autofluorescence and Indocyanine Green in Thyroid Surgery: A Systematic review and Meta-Analysis**

Diego Barbieri, IRCCS San Raffaele Hospital, Milan, Italy

4:40 - 4:50 PM

**Description of Parathyroid Vasculature Based on Intraoperative Angiographies Using Indocyanine Green and Fluorescence Imaging**

Fares Benmiloud, Hopital Europeen, Marseille, France

4:50 - 5:00 PM

**Benefits of near Infrared autofluorescence detection for parathyroid identification during bilateral neck exploration parathyroidectomy**

Colleen M. Kiernan, Vanderbilt University Medical Center

5:00 - 5:10 PM

**Tissue perfusion analysis of ICG during thyroidectomy using probe-based fluorescence detection**

Parker Willmon, Vanderbilt University Medical Center

5:10 - 5:20 PM

**A co-axial excitation, dual-RGB/NIR paired imaging system toward computer-aided detection (CAD) of parathyroid glands in situ**

Yoseph Kim, Johns Hopkins University

5:20 - 5:30 PM

**Investigating the Clinical Utility of Near-Infrared Autofluorescence in Distinguishing Adrenal Neoplasms: A Pilot Study**

Timothy Ullmann, University of California, San Francisco

# Agenda

## 4th Symposium on Parathyroid Fluorescence

General Session

February 25, 2022

5:30 - 5:40 PM

**Use of Probe-Based Parathyroid Autofluorescence Detection and its Impact on Resident Education**

Taylor St. Amour, Vanderbilt University Medical Center

5:40 - 5:50 PM

**Autofluorescence detection & perfusion assessment of parathyroid glands in transoral thyroid excision (Video Presentation)**

Jordi Vidal Fortuny, Clinique Cecil, Lausanne, Switzerland

5:50 - 6:00 PM

**Autofluorescence imaging - effect on postoperative hypoparathyroidism and autotransplantation rate of parathyroids (Video Presentation)**

Stefan Schopft, RoMed Bad Aibling, Germany

6:00 - 6:10 PM

**Autofluorescence guides parathyroid cryopreservation and parathyroidectomy in patients with multiple endocrine neoplasia type I (Video Presentation)**

Patricia Conroy, University of California, San Francisco

6:15- 7:30 PM

**Reception**



# Agenda

## 4th Symposium on Parathyroid Fluorescence

General Session

February 26, 2022

### Session 6:

#### **Clinical impact of fluorescence techniques for thyroidectomy and parathyroidectomy outcomes**

**Moderator: John Phay, Ohio State**

8:00 - 8:25 AM

#### **Impact of using autofluorescence techniques (probe and imaging) on thyroidectomy outcomes (15 min + 10 min Q&A)**

Eren Berber, Cleveland Clinic

8:25 - 8:50 AM

#### **Impact of using autofluorescence techniques (probe and imaging) on parathyroidectomy outcomes (15 min + 10 min Q&A)**

Paul Gauger, Michigan

8:50 - 9:15 AM

#### **Impact of angiography and perfusion assessment on thyroidectomy and parathyroidectomy outcomes (15 min + 10 min Q&A)**

Michael Bouvet, UCSD

9:15 - 9:40 AM

#### **Increasing the quality and impact of the clinical studies using fluorescence techniques (15 min + 10 min Q&A)**

Saba Balasubramanian, Sheffield, UK

9:40 - 10:10 AM

**Coffee Break**

### Session 7:

#### **Expert use of fluorescence techniques**

**Moderator: Janice Pasioka, Calgary**

10:10 - 10:30 AM

#### **Parathyroid angiography/vascular anatomy during thyroidectomy (10 min + 10 min Q&A)**

Fares Benmilloud, Marseille, France

10:30 - 11:00 AM

#### **Use of fluorescence techniques in pediatric thyroidectomy patients (10 min + 10 min Q&A)**

Kerstin Lorenz, Halle, Germany and Ryan Belcher, Vanderbilt

# Agenda

## 4th Symposium on Parathyroid Fluorescence

General Session

February 26, 2022

11:00 - 11:20 AM

**Use of fluorescence techniques in Trans-oral endoscopic thyroidectomy vestibular approach (TOETVA) (10 min + 10 min Q&A)**

Angkoon Anuwong, Bangkok, Thailand

11:20 - 11:40 AM

**Use of fluorescence techniques in robotic thyroidectomy (10 min + 10 min Q&A)**

Hyunsuk Suh, Tampa

11:40 - 12:00 PM

**Ex vivo applications of fluorescence techniques for parathyroid identification (10 min + 10 min Q&A)**

Quan-Yang Duh, University of California, San Francisco

12:00 - 12:15 PM

**Course evaluation and meeting review**

12:15 - 12:30 PM

**ISITES Business Meeting**

Anita Mahadevan-Jansen/Frédéric Triponez/Quan-Yang Duh

12:30 - 1:30 PM

**Lunch Break**

**Session 8:**

**Other endocrine surgery applications**

**Moderator: Electron Kebebew**

1:30 - 1:50 PM

**Using near infrared autofluorescence (probe and imaging and ICG) for guidance of adrenal surgery (10 min + 10 min Q&A)**

Carmen Solorzano and Giju Thomas, Vanderbilt University Medical Center

1:50 - 2:10 PM

**Nerve imaging: Near-UV Autofluorescence (10 min + 10 min Q&A)**

Fernando Dip, Buenos Aires, Argentina

2:10 - 2:30 PM

**Nerve imaging: Diffuse reflectance (10 min + 10 min Q&A)**

Graham Throckmorton, Vanderbilt University Medical Center

2:30 - 2:50 PM

**Nerve imaging: Using contrast agents (10 min + 10 min Q&A)**

Summer Gibbs, Oregon Health & Science University

# Agenda

## 4th Symposium on Parathyroid Fluorescence

General Session

February 26, 2022

2:50 - 3:10 PM

### **ICG Perfusion Assessment: Integrating Standardization and Quantification (10 min + 10 min Q&A)**

Milou Noltes, Groningen, Netherlands

3:10 - 3:30 PM

### **Identification of the thoracic duct with ICG (10 min + 10 min Q&A)**

John Phay, Ohio State

3:30 - 4:00 PM

### **Coffee Break**

#### **Session 9:**

#### **Future directions**

**Moderator: James Lee, Columbia**

4:00 - 4:15 PM

### **Parathyroid organoids, (10 min + 5 min Q&A)**

Naira Baregamian, Vanderbilt University Medical Center

4:15 - 4:30 PM

### **Single cell functional and 'omics profiling of parathyroid (10 min + 5 min Q&A)**

James Koh, University of California, San Francisco

4:30 - 4:45 PM

### **Low cost autofluorescence detection (10 min + 5 min Q&A)**

Sam Wiseman, Vancouver, Canada

#### **Special Session :**

#### **Thermal ablation for the treatment of thyroid disease**

5:00 - 5:10 PM

### **The science and technique of thermal ablation (Laser and Radio Frequency)**

Stefano Spiezia, Naples, Italy

# Agenda

## 4th Symposium on Parathyroid Fluorescence

General Session

February 26, 2022

5:10 - 5:20 PM

**Clinical Indications of thermal ablation for the treatment of thyroid nodules**

Chelsey Baldwin, New York University

5:20 - 5:30 PM

**Clinical outcome and challenges in using ablation for thyroid surgery**

Jonathon O. Russell, The Johns Hopkins University

5:30 - 5:40 PM

**Current and future directions of thermal ablation for endocrine surgery**

Jennifer H. Kuo, Columbia University

5:40 - 6:00 PM

**Panel Discussion**

Stefano Spiezia, Chelsey Baldwin, Jonathon O. Russell, Jennifer H. Kuo

**Adjourn to the Exhibit Hall and Conference Concludes**

# Leadership Members

## 4th Symposium on Parathyroid Fluorescence

General Session

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### **Quan-Yang Duh, MD**

Section Chief of Endocrinology, University of California, San Francisco

Dr. Quan-Yang Duh is Professor of Surgery and Chief of Section of Endocrine Surgery at the University of California, San Francisco (UCSF) and Attending Surgeon at the Veterans Affairs Medical Center, San Francisco. Dr. Duh specializes in surgery for tumors of the thyroid, parathyroid and adrenal glands, as well as endocrine pancreas and gastrointestinal tumors. Dr. Duh is Past President of the American Association of Endocrine Surgeons (AAES) and was a recipient of the AAES Oliver Cope Meritorious Achievement Award. Dr. Duh was the American Thyroid Association (ATA) Paul Starr Award Lecturer in 2017. Dr. Duh is a Past President of the Pacific Coast Surgical Association (PCSA) and the First Vice Present of the American College of Surgeons (ACS).



### **Anita Mahadevan-Jansen, PhD**

Professor, Vanderbilt University Medical Center

Dr. Mahadevan-Jansen translates optical techniques for clinical detection of tissue physiology and pathology. Her primary research at the Vanderbilt Biophotonics Center, is to investigate the applications of optical spectroscopies and imaging for disease diagnosis and guidance of therapy. She is currently the Orrin H. Ingram Professor of Biomedical Engineering at Vanderbilt University and holds a secondary appointment in the Departments of Surgery, Neurological Surgery and Otolaryngology. She is the founding Director of the Vanderbilt Biophotonics Center, a collaborative research center that is focused on the development and translation of light and light-based technologies. She is the 2022 President of SPIE, the International Society of Optics and Photonics and is a fellow of SPIE, Optical Society of America (Optica), American Institute of Medical and Biological Engineering (AIMBE) and was recently inducted into the National Academy of Inventors.



### **Frédéric Triponez, MD**

Chairman, Department of Surgery, University Hospital of Geneva, Switzerland

Frédéric Triponez finished his medical school in Geneva in 1996. He completed his residency in general surgery in Geneva and then specialized in endocrine surgery, spending one year in Lille, France by prof C.A. Proye, and one year in San Francisco by prof O. Clark. When returning in Geneva in 2005, he developed the endocrine surgery unit, making it the biggest center for endocrine surgery in Switzerland. He also specialized in thoracic surgery and spent 2 years in Paris by prof J.F. Regnard.

# Moderators & Presenters

## 4th Symposium on Parathyroid Fluorescence

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**Gregory Randolph, MD FACS FACE FEBS**

Professor, Harvard University

Specialty: Thyroid cancer, benign thyroid surgery and hyperparathyroidism



**John Phay, MD**

Professor of Surgery, Ohio State

Specialty: Image guided surgical techniques for the detection of the thoracic duct



**Janice Pasieka, MD, FRCSC, FACS**

Professor of Surgery and Oncology, University of Calgary

Specialty: Neuroendocrine tumors, adrenal disease, thyroid cancer, hyperparathyroidism



**James Lee, MD**

Professor of Surgery and Surgical Oncology, Columbia University

Specialty: Thyroid, parathyroid, and adrenal disorders



**Electron Kebebew, MD, FACS**

Division Chief, Stanford University

Specialty: Endocrine Oncology

# Moderators & Presenters

## 4th Symposium on Parathyroid Fluorescence

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**Dolores Shoback, MD**

Professor of Medicine, University of California, San Francisco

Specialty: Metabolic bone diseases, parathyroid disorders, and osteoporosis



**Jessica Gosnell, MD**

Professor, Assoc Clerkship Director, University of California, San Francisco

Specialty: Clinical and research potential for parathyroid cells



**Sam Achilefu, PhD**

Professor and Department Chair, Biomedical Engineering, UT-Southwestern

Specialty: Molecular imaging with an emphasis on portable device development



**Richard Cha, PhD**

Assistant Professor, Children's National Hospital / GWU-SMHS

Specialty: Optical system design and image processing



**Giju Thomas, PhD**

Research Assistant Professor, Vanderbilt University Medical Center

Specialty: Surgical guidance using optical techniques such as NIR autofluorescence detection

# Moderators & Presenters

## 4th Symposium on Parathyroid Fluorescence

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**Carmen Solorzano, MD, FACS**

Chair, Department of Surgery, Vanderbilt University Medical Center

Specialty: Minimally invasive techniques for parathyroid and adrenal tumors



**Eren Berber, MD**

Vice-Chair, Dept of Endocrine Surgery, Cleveland Clinic

Specialty: Conventional and minimally invasive endocrine surgery, minimally invasive liver surgery



**Anton Engelsman, MD PhD MSc FEBS (endocrine)**

Endocrine Surgeon, Amsterdam UMC

Specialty: Endocrine malignancies and improving patient outcomes



**Fares Benmiloud, MD**

Endocrine Surgeon, Hôpital Européen Marseille, Marseille, France

Specialty: Endocrine, parathyroid, adrenal, and thyroid surgeries



**Colleen Kiernan, MD, MPH**

Assistant Professor, Vanderbilt University Medical Center

Specialty: Thyroid disease and thyroid cancer, parathyroid disease, GI surgical oncology



# Moderators & Presenters

## 4th Symposium on Parathyroid Fluorescence

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**Marco Demarchi, MD**

Chef de clinique, Hôpitaux universitaires de Geneve, Switzerland

Specialty: Endocrine surgery with interest in fluorescence guided surgical procedures



**Paul Gauger, MD**

Division Head - Endocrine Surgery, Michigan Medicine

Specialty: Benign and malignant thyroid conditions, Hyperparathyroidism, endocrine neoplasia syndromes



**Michael Bouvet, MD**

Professor of Surgery, University of California San Diego

Specialty: Benign and cancerous thyroid nodules; whipple procedures for pancreatic cancer



**Saba Balasubramanian, MS FRCS DMI PhD**

Surgeon, Sheffield Teaching Hospitals NHS Foundation Trust Sheffield, UK

Specialty: Post-surgical hypoparathyroidism (PoSH) and thyroid cancer epidemiology



**Kerstin Lorenz, MD**

Director Endocrine Surgery, University of Halle-Wittenberg, Halle, Germany

Specialty: GI Tumor and Endocrine Surgery

# Moderators & Presenters

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**Angkoon Anuwong, MD**

Bangkok Hospital, Bangkok, Thailand

Specialty: Endoscopic Thyroidectomy, Laparoscopic, & Endocrine Surgery



**Hyunsuk Suh, MD, FACS**

Chief Surgeon, Hospital for Endocrine Surgery

Specialty: Minimally invasive and robotic surgeries



**Fernando Dip, MD, FACS**

Staff Physician, Surgical Oncology, Buenos Aires, Argentina

Specialty: Endocrine surgery and surgical oncology



**Graham Throckmorton, BS**

Graduate Research Assistant, Vanderbilt University Medical Center

Specialty: Neurophotonic technologies with label-free imaging modality for intraoperative nerve visualization



**Summer Gibbs, PhD**

Associate Professor, Oregon Health & Science University

Specialty: Novel fluorescence imaging technologies for fluorescence guided surgery

# Moderators & Presenters

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**Milou Noltes, ME**

MD/PhD Student, University Medical Center Groningen

Specialty: Endocrine surgery and innovative imaging modalities, optical/optoacoustic imaging



**Naira Baregamian, MD**

Assistant Professor, Vanderbilt University Medical Center

Specialty: Surgical treatment of benign & malignant conditions of the endocrine glands



**James Koh, PhD**

Associate Professor, University of California, San Francisco

Specialty: Molecular genetics of human cancers



**Sam Wiseman, BSc, MD, FRCSC, FACS**

Professor, St. Paul's Hospital & University of British Columbia

Specialty: Thyroid disease (especially thyroid cancer) and parathyroid gland disease



**Ryan Belcher, MD, MPH**

Assistant Professor, Vanderbilt University Medical Center

Specialty: Pediatric head & neck oncologic surgery, cleft lip and palate repair

# Moderators & Presenters

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**Stefano Spiezia, MD**

Head of Endocrine Surgery Division, "Ospedale del Mare" Hospital

Specialty: Minimally invasive, laparoscopic, robotic-assisted surgery of the thyroid



**Chelsey Baldwin, MD**

Assistant Professor, NYU Langone Medical Center

Specialty: Head and neck ultrasonography and minimally invasive techniques



**Jonathon O. Russell, MD**

Associate Professor, The Johns Hopkins University

Specialty: remote access thyroid surgery, radiofrequency ablation, parathyroid autofluorescence.



**Jennifer H. Kuo, MD, MS**

Associate Professor, Columbia University

Specialty: Surgical treatment of thyroid, Parathyroid, & Adrenal diseases

The International Society of Innovative Technologies for Endocrine Surgery (ISITES) wishes to recognize and thank the following companies for their commercial promotion towards this educational activity.

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