



The 40th Annual  
High Country  
Nuclear  
Medicine  
Conference

March 2-6, 2019  
Vail Marriott, Vail, CO

Saturday, March 2, 2019

6:30 am – 7:00 am

**Breakfast with the Vendors**

7:00 am – 9:30 am

**Future of Nuclear Medicine:**

**Moderators: Michael Wissmeyer, MD and Hans Vija, PhD**

Nuclear Medicine is a mature clinical field has been regarded as one in small and steady decline, with low reimbursement and slow evolving technology. However, much has happened in the last few years, from the advent of Theranostics and quantitative SPECT in multi-modal SPECT/CT systems to direct conversion detectors in commercial imagers to the Omni-present promise of Artificial Intelligence that could be applied to many areas of nuclear medicine. This session intends to highlight the latest trends and to spark discussion among the participants long after the session ended on the future of nuclear medicine.

**Presenters and Topics:**

**Radiomics, Machine learning**

*Speaker: TBD*

**Declining SPECT and the Antidote**

*Speaker: TBD*

**Academics vs. Clinics**

*Speaker: TBD*

**How to Create Leadership**

*Speaker: TBD*

1:00 pm – 3:00 pm

**Roundtable Discussion: TBD**

**Moderator: TBD**

4:00 pm – 7:30 pm

**Prostate Cancer Theragnostics**

**Moderators: Dominique Delbeke, MD**

Several radiopharmaceuticals have recently been investigated to image and treat prostate cancer. The normal patterns of uptake and performance are addressed in this session.

## Presenters and Topics

### **Cellular Metabolism with Choline and 18F-Fluciclovine**

*Speaker: Jon McConathy, UAB (Confirmed)*

### **Receptor and Membrane Protein Imaging with <sup>68</sup>Ga-PSMA and <sup>18</sup>F-radiopharmaceuticals: Normal Patterns and Pitfalls**

*Speaker: Gary Ulaner, MD, PhD, FACNM (confirmed)*

### **Receptor and Membrane Protein Imaging with <sup>68</sup>Ga-PSMA and <sup>18</sup>F-radiopharmaceuticals with PET/CT and PET/MRI**

*Speaker: Jeremie Calais, MD, MSc (Confirmed)*

### **Imaging Gastrin Releasing Peptide Receptors with Bombesin**

*Speaker: Hong Song, MD, PhD (Confirmed)*

### **<sup>68</sup>Ga-PSMA Ligands: Impact on Therapy**

*Speaker: Johannes Czernin (Confirmed)*

### **Radionuclide Therapy including targeted Alpha Therapy with <sup>225</sup>Actinium and <sup>213</sup>Bismuth**

*Speaker: Hossein Jadvar, MD, PhD, MPH, MBA, FACNM, FSNMMI (Confirmed)*

## **Panel Discussion**

**Sunday, March 3, 2019**

6:30 am – 7:00 am

**Breakfast with the Vendors**

7:00 am – 9:30 am

**Neuroendocrine Tumors Theragnostics**

**Moderator: Andreas Kjaer, MD**

## Presenters and Topics

**ASTRO-Involvement or the Future of NM**

*Speaker: TBD*

1:00 pm – 3:00 pm

**Roundtable Discussion: Regulatory Session**

**Moderator: Ernest Garcia, PhD**

4:00 pm – 6:30 pm

**Nuclear Cardiology's Role in the Diagnosis and Management of Cardiac Amyloidosis**

**Moderator: Daniel Berman, MD and Ernest Garcia, PhD**

Cardiac amyloidosis is a progressive condition with high morbidity and mortality. The two major types—light chain (AL) and transthyretin (ATTR)—have different pathophysiology and treatment. For ATTR, prevalent in a substantial proportion of elderly patients with heart failure, an effective new treatment shows a marked reduction in mortality and improved quality of life. Myocardial uptake of Tc-99m PYP, highly sensitive and specific for ATTR, plays a pivotal role in diagnosis and distinguishing ATTR from AL. PET methods for imaging both forms of cardiac amyloidosis are also likely to play an increasing role. Optimizing nuclear methods for

early detection of cardiac amyloidosis, differentiation of its types, and monitoring therapy provide a major opportunity for nuclear cardiology in 2019.

#### **Presenters and Topics**

##### ***Overview of the Pathophysiology, Diagnosis, Phenotyping and Treatment***

*Speaker: Ed Miller, MD*

##### ***Planar Tc-99m PYP Imaging***

*Speaker: Ernest Garcia, PhD*

##### ***SPECT/CT Tc-99m Myocardial Imaging***

*Speaker: Ed Ficaro, PhD*

##### ***Simultaneous Dual Isotope Tc-99m PYP/Tl-201 SPECT Imaging***

*Speaker: Daniel Berman, MD*

##### ***PET and MRI Approaches***

*Speaker: Sharmila Dorbala*

##### ***Panel Discussion***

***Moderators: Ernie Garcia, PhD, Daniel Berman, MD***

7:00pm – 10:00pm

#### **Dinner**

**Monday, March 4, 2019**

6:30 am – 7:00 am

#### **Breakfast with the Vendors**

7:00 am – 9:30 am

#### **Regulatory and Legislative Update**

***Session Chairs: Ira Goldman, MA***

***Moderator: Bob Hendel, MD***

Although legislative efforts to repeal and replace the Affordable Care Act are “so 2017,” there continues to be a daily barrage of healthcare developments from the Administration, ranging from efforts at drug pricing reduction, to reform of physician payments, and administration actions to fundamentally change the ACA in the absence of legislative repeal. Increasingly, the major healthcare legislation passed by Congress in past years (PAMA, MACRA) fade from prominence, although the 2019 MPFS proposed has re-emphasized the need for Appropriate Use Criteria (AUC) and Clinical Decision-Support (CDS) systems. Coverage and payment continue to be a major challenge for the future of nuclear medicine, highlighted by CMS’s recent decision to continue not to cover NaF. Thus, this session will provide updates regarding an overview of ongoing legislative and regulatory changes impacting the nuclear medicine sector.

#### **Presenters and Topics**

##### **Medical Societies Initiatives on Reimbursement (coverage and payment) and Health Care Policy**

*Speaker: Gary L Dillehay, MD, FACNM, FACR, FSNMMI (confirmed)*

*Speaker: Kathy Flood (ASNC) (Confirmed)*

##### **FDA – Update on FDA Radiopharmaceuticals Review**

*Speaker: Lou Marzella, MD, PhD, FDA (Confirmed)*

## **Recent Developments Regarding NRC Training and Education Requirements for Alpha and Beta Emitters**

*Speaker: Dr. Darlene Metter, University of Texas Health Science Center, San Antonio*

### **AUC Status Report – What’s in the Pipeline?**

*Speaker: Kevin Donohoe, MD (Confirmed)*

**Comments/Perspective: Bob Hendel**

*PANELISTS: Bob Hendel, Kathy Flood, Kevin Donohoe, Denise Merlino, et. al.*

1:00 pm – 3:00 pm

### **Roundtable Discussion: Future of NM, Prostate Cancer, Neuroendocrine Tumors**

**Moderator: Michael Wissmeyer, MD**

4:00 pm – 7:30 pm

### **Targeted Radionuclide Therapy, Selection of Radioisotope/Radiopharmaceutical**

**Moderator: Alan Packard, PhD, and Kevin Donohoe, MD**

Targeted radionuclide therapy is an area of increasing interest within the nuclear medicine community: For the first time since the introduction of radioiodine therapy, novel radiopharmaceuticals are being developed that allow nuclear medicine physicians not only to diagnose, but to treat, disease. Accompanying this increased interest, however, is a fundamental question: Which radionuclide(s) are the most effective at treating disease. While previous discussions focused on the relative merits of high-energy versus lower-energy  $\beta$ - emitters, the question has now broadened to include the relative merits of  $\alpha$  emitters vs.  $\beta$ - emitters and Auger and conversion electron emitters such as  $^{117}\text{Sn}$ . This session will focus on the underlying principles necessary to address these questions, from the challenges of attaching alpha emitters to targeting vectors, to the relative merits of high LET versus lower LET particles, to the challenges of moving these new agents into the clinic.

### **Presenters and Topics**

#### **Radionuclide Supply**

*Speaker: Roy W. Brown, BS, MBA (Confirmed)*

#### **$^{177}\text{Lu}$ -, $^{90}\text{Y}$ - and $^{212}\text{Pb}$ -Labeled Alpha-Melanocyte-Stimulating Hormone Peptides for Melanoma Therapy**

*Speaker: Yubin Miao, PhD (confirmed)*

#### **Alpha emitters: moving from basic radiochemistry to GMP production**

*Speaker: Diane Abou*

#### **Clinical Experience with Targeted Alpha-Emitting Radiopharmaceuticals**

(tentative title)

*Speaker: Brenda Sandmaier, MD (Confirmed)*

#### **Targeted Radiopharmaceutical Therapy – Phoenix Rising or Plus la Môme Chose?**

*Speaker: Chaitanya Divgi, MD*

## Discussion Panel

Alan Packard, Kevin Donohoe, Steven Liang, Chaitanya Divgi, Yubin Miao, Roy W. Brown, and Brenda Sandmaier

**Tuesday, March 5, 2019**

6:30 am – 7:00 am

**Breakfast with the Vendors**

7:00 am – 9:30 am

**Imaging the Immune System and Infection**

**Moderators: Dominique Delbeke, MD, PhD and Andreas Kjaer, MD**

**Presenters and Topics:**

***Molecular Imaging of Immunotherapy Targets in Cancer***

*Speaker: René Raavé, PhD*

***Non-invasive Molecular Imaging Using Reporter Genes***

*Speaker: Ronald G. Blasberg, M.D.*

***CAR T-cell Therapy: Toxicity and Management***

*Speaker: TBD*

***Dendritic Cell Vaccine***

*Speaker: TBD*

***Immunodeficiency and Infections***

*Speaker: Sanjay Jain (confirmed)*

1:00 pm – 3:00 pm

**Roundtable Discussion: Amyloidosis, Therapy, Neuro**

**Moderator: TBD**

4:00 pm – 7:30 pm

**Which PET Instrumentation and Reconstruction Options for Neuronuclear Imaging?**

**Moderator: Daniel Silverman, MD, PhD**

**Presenters and Topics:**

***PET/CT vs. PET/MRI?***

*Speaker: TBD*

***Dedicated Head PET vs. Hybrid Imaging?***

*Speaker: TBD*

***Attenuation Correction Algorithms -- Calculated and Measured?***

*Speaker: TBD*

6:30 am – 7:00 am

**Breakfast with the Vendors**

7:00 am – 9:30 am

**Technical, Scientific and Clinical Considerations for Measuring MBF and MFR with SPECT Tracers:**

**Moderator: Ernest V Garcia, PhD a and Hans Vija, PhD**

SPECT MPI's clinical approach to quantifying hypoperfusion has depended on normal databases where a patient's left ventricular perfusion pattern is statistically compared to an expected normal perfusion pattern generated from patients with a low likelihood of CAD. Recent innovations are poised to bring SPECT MPI to the next level by using dynamic SPECT with a SPECT/CT camera to measure absolute myocardial blood flow (MBF) and MBF reserve (MFR). The speakers in this session will address whether the SPECT flow quantitation method is a clinically effective approach to enhancing CAD detection. Specifically, this session will address whether existing SPECT cameras, tracers, protocols and image analysis are adequate to increase the accuracy of CAD evaluation beyond the present relative techniques. This session will ask whether SPECT measurements of MBF and MBFR are ready for clinical use, and how will the SPECT measurements compare to PET MBF and MFR?

**Presenters and Topics:**

**Technical Considerations**

*R. Glenn Wells, PhD (Confirmed)*

**Cameras' Performance**

*Piotr Slomka, PhD (Confirmed)*

**Imaging Protocols**

*Ernest V Garcia, PhD*

**Reconstruction and Flow Measurements**

*Edward Ficaro, PhD (Confirmed)*

**Clinical SPECT Applications/ Comparisons to PET**

*Venkatesh Murthy, MD (Confirmed)*

**Panel: Are SPECT measurements of MBF and MFR ready for clinical use?**

*Karin Knešaurek, DABR*