



## **DELAWARE VALLEY SOCIETY FOR RADIATION SAFETY**

### ***A Chapter of the Health Physics Society***

## **Program**

# **Rob Forrest Memorial Medical Health Physics Symposium June 2, 2017**

- 08:30 – 09:00 Registration and continental breakfast
- 9:00 – 09:15 Welcome and Opening Remarks
- 09:15 – 10:00 “Lutathera and Why We Should Care”  
*Bryan Edwards, BS, Health Physicist, and Jessica Kendrick, M.S., Health Physicist, Fox Chase Cancer Center, Philadelphia, Pa.*
- 10:00 – 10:45 Smart Tunable Nanomaterials for Photothermal Radiation Therapy  
*Tabbetta Dobbins, Ph.D.; Assistant Professor, Biophysics Coordinator, & Associate Chair, Department of Biophysics, Rowan University*
- 10:45 – 11:00 Break
- 11:00 – 11:40 Radiation Safety and Liver Transplantation Involving Patients Treated with Y-90 Microspheres  
*John Keklak, M.S. Hyg., CHP, Radiation Safety Officer, and Patrick Hann, M.S., Senior Health Physicist (presenter), Thomas Jefferson University Hospital*
- 11:40 – 12:30 Expanding the Limits of Your HP-Ness – Unexpected Challenges Encountered During the Radioiodine Treatment of a Hemodialysis Patient  
*Karen Colucci, M.S., Radiation Safety Officer, Lehigh Valley Health Network*
- 12:30 – 01:30 Lunch
- 1:30 – 02:10 Estimating Peak Skin Dose with Limited Resources  
*Kendall Berry, M.S., Radiation Safety Officer, Fox Chase Cancer Center*
- 02:10 – 02:50 CT Protocol Management: Clinically Relevant CTQA & Recommendations  
*Joseph G. Och, M.S. DABMP, System Director, Medical & Health Physics, Geisinger Health System*
- 02:50 – 03:05 Break
- 03:05 – 03:35 Current USP 797 Requirements as They Relate to Nuclear Medicine Practices  
*Richard Hughes, Radiation Health Physicist, Pa. Bureau of Radiation Protection*
- 03:35 – 04:25 Overview of Proposed Changes to Pennsylvania X-ray Regulations  
*John C. Keklak, M.S. Hyg., Certified Health Physicist, Radiation Safety Officer, Thomas Jefferson University Hospital, and Chairman, Pa. Radiation Protection Advisory Committee*
- 04:25 – 04:30 Closing remarks and Adjournment



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## **2017 Rob Forrest Memorial Medical Health Physics Symposium Presentation Abstracts**

### **1. Lutathera and Why We Should Care...**

Lutathera (Lu-177) is an increasingly common treatment for neuroendocrine tumors. This presentation will walk through radiation safety problems and solutions and seek to stimulate discussion for dealing with potential future eventualities

### **2. Smart Tunable Nanomaterials for Photothermal Radiation Therapy**

Gold nanoparticles (AuNPs) are able to conjoin with biological molecules and efficiently absorb light for conversion into heat energy. Therefore, they are being investigated for treatment of near surface carcinomas. Research into different methods to synthesize AuNPs to yield variation in particle size and monodispersity will be described. Future direction of this work to synthesize a variety of nanoparticles in order to determine the optimal shape, size and composition for photothermal radiotherapy treatment will also be addressed.

### **3. Radiation Safety and Liver Transplantation Involving Patients Treated with Y-90 Microspheres**

Overly conservative recommendations and practices may deny recently treated Y-90 patients the opportunity for liver transplant. Realistic recommendation will be discussed.

### **4. Expanding the Limits of Your HP-Ness – Unexpected Challenges Encountered During the Radioiodine Treatment of a Hemodialysis Patient**

An unusual event wherein good health physics practice identified a significant infection control issue will be reviewed.

### **5. Estimating Peak Skin Dose with Limited Resources**

Medical Health Physicists/Medical Physicist are often presented with situations where there is a need to calculate peak skin dose to a patient from fluoroscopy procedures but using commercially available systems for peak skin dose monitoring/calculation was not an option. An actual experience with just such a situation and the methodology for estimating peak skin dose without commercially available technology that was developed will be presented.

### **6. CT Protocol Management: Clinically Relevant CTQA & Recommendations**

There is increasing regulatory and accreditation focus on CT protocol review. However, this has not long been a component of the physicist's activities, and there is no clear explanation of the concept. This talk will present a novel, robust way to evaluate clinical performance through objective review of clinical images, and to establish a QA/protocol management program based on it. In addition, several recommendations will be made concerning practical CT protocol review.

### **7. Current USP 797 Requirements as They Relate to Nuclear Medicine Practices**

Even though USP 797 went into effect in 2008, many nuclear pharmacies and hospital nuclear medicine departments did not institute major changes. What nuclear pharmacy companies have been doing, how new radiopharmaceutical products that are hitting the market will be impacted, and what healthcare facilities are (or should) be doing will be discussed.

### **8. Overview of Proposed Changes to Pennsylvania X-ray Regulations**

Proposed changes to Pennsylvania regulations related to the use of x-rays have been published in the Pennsylvania Bulletin on May 12, 2017. The public comment period is now open and will close on June 26, 2017. Areas where significant changes are proposed will be highlighted in this presentation.