Delaware Valley Society for Radiation Safety
A Chapter of the Health Physics Society

The 12th Annual Robert Forrest Memorial Medical Health Physics Symposium

Friday, June 13th, 2025

0800-1700

Program

Location: Temple University Morgan Hall D301, 1601 N Broad St Philadelphia, PA 19122

Check in and Light Breakfast 0800-0900
Welcome and Introduction 0900-0915
HPS's efforts towards advancing Medical Health Physics 0915-0940
Mike Lewandowski, HPS President-Elect
Standardizing Patient Instructions in Diagnostic Nuclear 0940-1025
Matt Williamson, Memorial Sloan Kettering Cancer Center
Break 1025-1040
^{177m}Lu Concentration Concerns 1040-1110
Cameron Liggitt, Student, UAB
Demonstration and applications of a state-of-the-art electronic dosimeter 1110-1155 (Virtual)
Pat LaFrate Jr., Thermo Fisher Scientific
Lunch 1155-1300
Election Results 1300-1315
Kicking off a clinical trial using 203Pb + 212Pb for melanoma 1315-1350
Kendall Berry, Fox Chase Cancer Center
Thrown to the Wolves: Tales of a Young Health Physicist 1350-1435
Andrew Najjar, Boston Children's Hospital
Break 1435-1450
RAVIN CAM and its Radiation Safety and Therapeutic Uses 1450-1525 (Virtual)
Jerimy Polf, M3D Imaging
Closing remarks 1525-1540

DRAFT DOCUMENT INFORMATION SUBJECT TO CHANGE

HPS's efforts towards advancing Medical Health Physics 0915-0940

Mike Lewandowski, HPS President-Elect

Standardizing Patient Instructions in Diagnostic Nuclear 0940-1025

Abstract:

In diagnostic nuclear medicine, a challenge lies in the development and communication of patient radiation safety instruction. Available on-line institutional post-examination precautionary instructions can range from no restrictions to recommendations spanning several hours to a full day. These inconsistencies highlight a critical gap in providing patient instructions, which are essential for ensuring safety and compliance with dose limits.

This research aimed to address that gap by conducting an analysis of the 10 most performed diagnostic nuclear medicine exams at Memorial Sloan Kettering Cancer Center, which later included additional exams. The analysis considered the diagnostic radiopharmaceutical, including the isotope, chemical form, and effective half-life. Specific exam parameters such as administered activity and exam duration are also considered when estimating the amount of time for precautions. By accounting for these characteristics, this approach ensures that patient instructions consistently developed and rooted in regulatory basis.

Using a conservative dose constraint of 0.5 mSv and the guidance in US NRC Reg Guide 8.39 Rev. 1 and NCRP 155, the findings revealed that half (8 out of 16) of the evaluated diagnostic exams recommended precautions for pregnant individuals or children. The longest precaution, lasting 37 hours (approximately 1.5 days), was associated with an I-124 thyroid scan. The remaining exams posed no restrictions, as exposure was below the dose constraint. To improve safety and clarity, patients receive a Radioactivity Card along with detailed travel and hygiene guidelines. Thorough educational materials outlining precautions and all essential information about the exam were also made available to patients.

This study underscores the need for a harmonized approach evaluating nuclear medicine diagnostic exam precautions. By using existing regulatory guidance and optimizing patient safety, this work represents a significant advancement in the standardization of nuclear diagnostic care.

Break 1025-1040

^{177m}Lu Concentration Concerns 1040-1110

Lutetium-177 (Lu-177) has been described as an upcoming workhorse in nuclear medicine departments; being compared to Technetium 99 metastable (Tc-99m). However, when produced via the carrier method, Lutetium-177 metastable (Lu-177m) will also be produced. We expect this to result in dose concerns due to the accumulation of waste, and contamination from spills resulting in Lu-177m accumulating due to the longer half-life and more energetic decay process. This research models the potential dose received by members of the public from both waste and spills contaminated over a range of Lu-177m concentrations and will be accomplished by creating a model that plots Lu-177m concentration versus dose received for a predetermined exposure scenario. Utilizing radiation transport software (EGSnrc) to simulate Lu-177m in the outlined exposure scenarios, a dose versus concentration model can be created by this work that allows for a more general understanding of the relation between Lu-177m concentration and its effect on public dose

Demonstration and applications of a state-of-the-art electronic dosimeter 1110-1155 (Virtual)

ABSTRACT

NetDose is a NVLAP accredited dosimetry service provided by Thermo Fisher Scientific for customers who need to monitor occupational radiation dose information for their employees.

- Netdose Introduction and System Components
- Technical Overview
- Mobile App Improvements
- Netdose Updates
- Netdose Improvements
- Future Program Enhancements
  - NetDose BGN Overview

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Lunch 1155-1300

Election Results 1300-1315

Kicking off a clinical trial using 203Pb + 212Pb for melanoma 1315-1350

Kendall Berry, Fox Chase Cancer Center

Thrown to the Wolves: Tales of a Young Health Physicist 1350-1435

Andrew Najjar, Boston Children's Hospital

Knowledge is power. Experience is essential. Support is necessary. When any or all of these aspects of professionalism are lacking, challenges with significant consequences may arise, the solutions of which may damage, strengthen or keep stagnant the vitally important safety culture in the workplace. This presentation will review unique scenarios in the workplace and tie in relevant regulations, publications and scientific knowledge used in the decision making process. Topics covered in this presentation include fluoroscopy and laser credentialing, 10 CFR 37, administrative structure at the department and committee level, actions to enhance safety culture, and opportunities to establish the voice for radiation safety at the staff, manager and leadership levels.

Break 1435-1450

RAVIN CAM and its Radiation Safety and Therapeutic Uses 1450-1525 (Virtual)

Jerimy Polf, M3D Imaging