CORAR
The Council on Radionuclides and Radiopharmaceuticals, Inc.

500 North Capitol Street, NW
Suite 210
Washington, DC 20001-7407
(202) 547-6582
Fax: (202) 547-4658
michael.guastella@corar.org

Michael J. Guastella, MS, MBA
Executive Director

Via email March 8, 2016

Advisory Committee on the Medical Use of Isotopes (ACMUI)
Subcommittee on Training and Experience for Alpha and Beta Emitters
c/o Sophie Holiday
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission (NRC)
Washington, DC 20555-0001

Re: Draft Report on Training & Experience for Authorized Users of Alpha and Beta Emitters Under 10 CFR 35.390

Dear ACMUI Committee Members:

The members of the Council on Radionuclides and Radiopharmaceuticals (CORAR) have reviewed the Draft Report on Training & Experience for Authorized Users of Alpha and Beta Emitters Under 10 CFR 35.390 and are providing these comments in response. CORAR members include the manufacturers and distributors of both FDA approved Xofigo® (Radium Ra 223 dichloride) and Zevalin® (ibritumomab tiuxetan), as well as other therapeutic products that are still undergoing research and development. CORAR appreciates the ACMUI's and NRC's efforts to update the training and experience regulations, particularly to ensure patient access and to support technological advances and changes in medical procedures.

CORAR continues to believe that the current regulatory framework requiring 700 hours of training to become an Authorized User licensed to administer alpha- or beta- emitting radiopharmaceuticals is excessive and limiting patient access to radiopharmaceutical drugs such as Xofigo and Zevalin, as well as raising concerns about the future development of radiopharmaceuticals designed to treat or cure cancers. As such, we are concerned that the draft report (referenced above) does not address the important issues the ACMUI "Subcommittee on Training and Experience for Alpha and Beta Emitters" was charged to review. Specifically, their failure to recommend a modification to the excessive 700-hour Training and Experience

requirement within the current rule-making period will continue to place hardship on the patient community and restrict patient access to important therapeutic drugs.

The ACMUI subcommittee's draft report fails to adequately explain why the 700-hour Training and Experience requirement is necessary for patient-ready doses of alpha- and beta-emitters. As an alternative, CORAR recently provided comments to the ACMUI recommending a specific scope of training requirements for Radioisotope Handling and Radiation Safety for physicians wishing to administer intravenous therapeutic radiopharmaceuticals containing alpha- or beta- emitting radioisotopes, which have been prepared by a licensed nuclear pharmacist in a state-licensed radiopharmacy and dispensed to physicians as patient-ready doses. In determining the appropriate amount of time (and scope of content) for Radioisotope Handling and Radiation Safety training that physicians, such as medical oncologists and hematologists, should receive to enable them to safely administer these types of therapeutic drugs, we provided the following factors for the ACMUI to consider:

- The limited role in handling these radiolabeled drugs (which would be dispensed and delivered to them in patient-ready doses from a licensed radiopharmacy);
- The radiological safety profiles of radiopharmaceuticals containing alpha- and beta-emitting isotopes; and
- Physician's experience and training in handling toxic non-radioactive chemical therapies, e.g., cytotoxic chemotherapy agents.

CORAR continues to believe that the didactic training required to adequately prepare physicians to safely administer patient-ready doses of alpha- and beta- emitting drugs would entail about 70-80 hours of classroom and laboratory time. The ACMUI has received training statements from experts in radiation safety education which is consistent with this 70-80 hour recommendation. Also, the ACMUI subcommittee's draft report concluded that it has been "...nearly 15 years since the current requirements were established." The report continues by stating that, "Since that time new radiopharmaceuticals have been introduced and this is a trend that likely will continue. Appropriate T&E requirements for these agents need to be established."

It is encouraging that the subcommittee recognizes that a new Training and Experience framework is necessary and needs to be established, ostensibly for patient-ready doses of alpha- and beta- emitters like Xofigo and Zevalin, both of which have been launched over the last 15 years. However, we believe that the ACMUI subcommittee's decision to oppose reductions in the current Training and Experience framework and establish a standing subcommittee to address appropriate requirements in the future does not meet the charge given to the subcommittee and the current need of patients. Specifically, we believe the subcommittee failed to:

1. Explain why 700 hours of Training and Experience is necessary for patient-ready doses of alpha- and beta- emitters;
2. Offer specific safety concerns that would preclude the ACMUI from recommending modifications to the Training and Experience requirements for patient-ready doses of alpha- and beta- emitters;

3. Consider Training and Experience expert statements to safely administer alpha- and beta-emitting radiopharmaceuticals. For example, Nicki Hilliard, Kara Weatherman, and Kristina Wittstrom provided a tailored 80-hour didactic program recommendation to modify the Training and Experience requirements for Authorized Users who administer patient-ready alpha- and beta- emitter doses. Their recommendations included 25 hours on Nuclear Physics & Instrumentation, 20 hours on Radiation Biology, 25 hours on Regulations and Radiation Protection, and 10 hours on Mathematics Pertaining to Use & Measurement of Radioactivity;
4. Recognize that patient access to alpha- and beta- emitters in the community and rural settings remains problematic. In addition to CORAR, this has been communicated through testimony and comments to the ACMUI and NRC staff by organizations such as Leukemia and Lymphoma Society, Lymphoma Research Foundation, Community Oncology Alliance, American Society of Hematology, and Florida Cancer Specialists;
5. To establish a specific recommendation for the number of T&E hours for Authorized Users of alpha- and beta- emitters that appropriately balances safety with reasonable patient access.

In conclusion, CORAR believes it is critical that the NRC address the appropriate level of Training and Experience Requirements for Authorized Users of alpha- and beta-emitters in the current rulemaking on the ***Medical Use of Byproduct Material: Medical Event Definitions, Training and Experience***. Improved access to alpha- and beta- emitting drugs will improve the quality of life of cancer patients and support the continued innovation and development of new targeted anti-cancer therapies.

Thank you for your consideration of this letter and comments.

Sincerely,

Michael J. Guastella
Executive Director

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