



**American Association of Physicists in Medicine**

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Annette Vietti-Cook, Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

March 6, 2006

Re: Comments to Petition for Rulemaking Submitted by Peter G. Crane, Docket No. PRM-35-18

Dear Ms. Vietti-Cook:

The American Association of Physicists in Medicine<sup>1</sup> (AAPM) offers the following comments on the Petition for Rulemaking (PRM) submitted by Mr. Crane (PRM-35-18). This PRM requests that the NRC partially revoke 10 CFR § 35.75, the “patient release criteria” rule, issued in 1997, to not allow patients to be released from radioactive isolation with more than 30 mCi of I-131 in their bodies. The AAPM is strongly opposed to this PRM and firmly supports the “patient release criteria” rule issued in 1997.

The current regulation does not mandate but allows patient release after a determination is made that the patient can comply with appropriate restrictions. Part of the determination includes calculation of the Effective Dose Equivalent (EDE) to others before a decision to release a patient is made. The immediate release is not authorized for all patients, only for those for whom the EDE to others will meet the regulations. Using the amount of radioactivity administered to a patient as the sole criterion is unjustified for deciding if the radiation dose to members of the public is likely to exceed 5 mSv (500 mrem). The administered dose will vary depending on each individual patient's physical and unique physiological characteristics, and the dose a caretaker or

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<sup>1</sup> AAPM's mission is to advance the practice of physics in medicine and biology by encouraging innovative research and development, disseminating scientific and technical information, fostering the education and professional development of medical physicists, and promoting the highest quality medical services for patients. Medical physicists contribute to the effectiveness of radiological imaging procedures by assuring radiation safety and helping to develop improved imaging techniques (e.g., mammography CT, MR, ultrasound). They contribute to development of therapeutic techniques (e.g., prostate implants, stereotactic radiosurgery), collaborate with radiation oncologists to design treatment plans, and monitor equipment and procedures to insure that cancer patients receive the prescribed dose of radiation to the correct location. Medical physicists are responsible for ensuring that imaging and treatment facilities meet the rules and regulations of the Nuclear Regulatory Commission and various State Health Departments. AAPM represents over 5,000 medical physicists.

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member of the public may receive will also depend on a variety of conditions too numerous to address in this letter.

This assessment required by the existing regulation involves both authorized physicians and medical physicists and includes a determination that the home environment provides conditions for the patient to follow directions for release. We believe that the existing regulation provides adequate protection of the public. There are patients who may not be candidates for release but that determination should continue to be based on an assessment by the authorized medical professionals involved, and not solely dictated by an overly simplistic regulation based on a defined quantity of administered radioactivity.

AAPM believes that the return to the 30-mCi rule (i.e., granting the PRM) would result in additional and unnecessary healthcare costs, and would unnecessarily limit access to treatment for thyroid cancer patients who cannot afford hospitalization. The existing regulations preclude these problems and permit patients returning to the care of their families and the comfort of their homes following their treatment.

Please contact Lynne Fairbent, AAPM's Manager of Legislative and Regulatory Affairs at 301.209.3364 or via email at [lynne@aapm.org](mailto:lynne@aapm.org) if you have additional questions.

Sincerely,

A handwritten signature in black ink, appearing to read "G. L. White, Jr.", written over a horizontal line.

Gerald L. White, Jr.  
Chair AAPM Professional Council