



JOINT PROGRAM IN NUCLEAR MEDICINE

HARVARD MEDICAL SCHOOL DEPARTMENT OF RADIOLOGY

BETH ISREAL DEACONESS MEDICAL CENTER • BRIGHAM & WOMEN'S HOSPITAL

CHILDREN'S HOSPITAL • DANA-FARBER CANCER INSTITUTE



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Secretary

U.S. Nuclear Regulatory Commission

Washington, DC 20555

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USNRC

March 10, 2006 (1:42pm)

Attention: Rulemaking and Adjudication Staff

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

RE: NRC Docket No. PRM-35-18

Peter G. Crane; Receipt of Petition for Rulemaking.

Federal Register Vol. 70, No 244, December 21, 2005.

I was astonished to read the inaccurate and ill conceived Petition for Rulemaking filed by Peter G. Crane to the Federal Register. I am a Ph.D. chemist who has conducted research and teaching in a Medical center for over 18 years. I am not a physician but I have clinical responsibilities in the field of radiopharmacy that affect the health and safety of patients, those who provide treatment and care for them, the public and patient family members.

Although, it appears that the petitioner's amendment would apply only to therapeutic I-131 administered orally, in reality it will NOT be interpreted or limited as such by Institutional Radiation Safety Committees or Hospital administrators. It has been reported¹ that in 2004, approximately 122,000 procedures were performed in the U.S. to treat hyperthyroidism, Grave's Disease and thyroid cancer using therapeutic I-131. The additional cost to require extended Hospital stays associated with such treatments is excessive and is not appropriate to minimize exposure potential to the public. The first thing we learn about reducing radiation exposure is consider the exposure time, shielding and distance to the radioactive source. Of the three variables, only distance from the source decreases exposure exponentially, that is distance for the source of radioactivity is the most efficient protection. Retaining treated patients in the Hospital dramatically increases the exposure by hospital staff. Much more importantly, increased hospital stays dramatically increase ones exposure to opportunistic bacteria and viruses. In short hospitalization should be reserved for the critically ill. Having worked in a Hospital for over 18 years and been a brain tumor survivor myself, I assure you I speak with first hand knowledge and experience.

Please contact me by e-mail if you have any doubts as to my motivation or sincerity.

Respectfully,

James F. Kronauge, Ph.D.

Assistant Professor of Radiology

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¹ Arlington Medical Resources, Inc. (2005). *The Imaging Marketing Guide - United States Edition Book One: Procedure reports.*