

The Boice Report #5



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2013 NCRP Annual Meeting – Bethesda, Maryland Radiation Dose and the Impacts on Exposed Populations

You won't want to miss next year's National Council on Radiation Protection and Measurements (NCRP) annual meeting! You'll appreciate learning about the range of radiation doses people receive in medical, occupational, and environmental circumstances including accidents and the impact these exposures have on individuals and society. This will not be your father's NCRP meeting, but one chock full of innovations aimed to enhance and facilitate the experience. The meeting will be dedicated to the people of Fukushima who were affected by the reactor accident and the great 2011 earthquake. The kickoff keynote speaker will be Dr. Shunichi Yamashita, whose 10th Annual Warren Sinclair Lecture will summarize the health surveys being conducted in Japan in response to the reactor accident. These surveys include thyroid ultrasound scans of children, blood studies, mail questionnaires sent to nearly two million residents, surveys of women who were pregnant or nursing at the time of the accident, and special psychosocial evaluations of the evacuees ([Akiba 2012](#)). The bookend presentation to end the first day will be the 37th Lauriston S. Taylor Lecture, delivered by Dr. John E. Till, titled "When Does Risk Assessment Get Fuzzy?" Admiral Till will be introduced by his longtime friend and colleague Dr. F. Ward Whicker. Afterward there will be a reception in Till's honor sponsored by Landauer, Inc., and you are all invited. The meeting will be held in Bethesda, Maryland, and details will be forthcoming (<http://www.ncrponline.org/>). Remember also that continuing education credits have been approved by the American Academy of Health Physics and the American Board of Medical Physics.

- **Innovations:** NCRP plans to videotape the proceedings and make copies available after the meeting. Webinar live streaming of the presentations is anticipated. The Health Physics Society (HPS) is working with NCRP to fast-track the publication of the proceedings within six months of the meeting. HPS and the National Cancer Institute (NCI) (Division of Cancer Epidemiology and Genetics) are also working with NCRP to make the proceedings free of charge, and we are shooting for open access to the dedicated *Health Physics* Journal issue. The registration fee for all attendees will be waived. A new approach for questions and answers will follow the example of the [U.S. Nuclear Regulatory Commission](#). Written questions from the audience will be provided to session chairmen who will then distribute them to the appropriate speaker for a timely and orderly response. Questions and responses that are not addressed because of time constraints will be posted on the NCRP website. Selected Q&As will be published in the proceedings. As the webinar crystallizes, NCRP hopes to entertain emailed questions to be reviewed and answered in similar fashion. NCRP is encouraging a national effort to engage and retain young scientists in radiation professions. We are planning to host six to eight young scientists or students in partnership with the Radiation Research Society, the HPS, the NCI, the American College of Radiology, the American Association of Physicists in Medicine, and others. The young individuals, defined as under the age of 40, will attend lunch with NCRP staff and program participants and we hope they will be able to attend the dinner in honor of the Lauriston S. Taylor Lecturer and the Warren K. Sinclair Keynote Speaker.

- **Overview:** The stage is set by addressing key and thought-provoking questions. Who are the exposed people? We know that radiation causes cancer, so why study these people? What are the

impacts from exposure—not just disease, but psychosocial and societal? Presentations will be made by experts from the NCI, the Radiation Effects Research Foundation (RERF) in Hiroshima, and Stony Brook University. You won't want to miss the concluding presentation describing the mental disorders being experienced in Japan today, not only related to the distress caused by the death of loved ones from the tsunami and the stress of being evacuated from your home with diminished likelihood of being able to return, but also a debilitating fear of radiation and anxiety over potential and future health concerns ([Bromet 2012](#)).

- **Medical:** Coming to you from Memorial Sloan Kettering Cancer Center, Yale University, and the Rochester University Medical School will be the latest and most up-to-date evaluations of personnel performing radiological imaging, of patients undergoing diagnostic imaging procedures, and of patients with cancer treated with radiation. There will be coverage on the risk of lens opacities, which has arisen as an important radiation protection and health concern ([ICRP 2012](#)). The growth of computed tomography (CT) and nuclear medicine imaging procedures continues to skyrocket and there are over 85 million CT examinations performed each year in the United States today. In 2006, NCRP Report No. 160 listed the annual number of CT exams as 67 million, indicating that the number has increased by 26 percent overall in this short time and that the average increase was on the order of two to three million examinations per year ([NCRP 2009](#))! With the success of cancer treatments, patients are now living much longer and the risk for late effects has increased accordingly, not only for developing new second cancers, but also serious heart conditions. NCRP Report No. 170 provides a recent review ([NCRP 2011](#)).

- **Workers:** Three presentations will be made by scientists from the NCI, the National Institute for Occupational Safety and Health, and the Defense Threat Reduction Agency (U.S. Department of Defense). The latest overview of doses received by U.S. Department of Energy workers and the impact of compensation programs will be covered ([Neton et al. 2008](#)); check out [NCRP Report 171](#) ([NCRP 2012](#)) on the associated uncertainties in risk assessment. Nuclear power plant workers received increased exposures at Chernobyl and Fukushima as well as other facilities where accidents have occurred. An important and unique presentation will cover a wide range of exposed U.S. military populations that have been and are being monitored for possible adverse health outcomes, including complex dose reconstructions. These will include atomic veterans who participated at aboveground atmospheric weapons tests as well as the military personnel who were involved in the humanitarian response to the tsunami and great earthquake in 2011 in Japan (<http://www.defense.gov/news/newsarticle.aspx?id=117745>).

- **Public Exposures:** The general public has been exposed to increased levels of radiation from weapons tests and in Japan there is a renewed interest in the so-called “black rain” fallout ([Egbert and Kerr 2012](#)). In some areas of the former Soviet Union there was widespread contamination of the environment, particularly among those living on the Techa River downstream from the Mayak nuclear facility ([Degteva et al. 2012](#)). There is a current interest in studying populations living near nuclear power plants in the United States (http://www.nap.edu/catalog.php?record_id=13388). Finally, what impacts have radiation accidents had on the health of exposed individuals and on societal concerns? These presentations are to be delivered by specialists at RERF, the Pacific Northwest National Laboratory, the University of Southern California, and NCI.

- **Finale:** An attempt to synthesize the comprehensive and diverse topics of the annual meeting is left to the NCRP president (aka, me), and I will try to enumerate how radiation dose and the associated impacts on exposed populations and society should influence the nation as we tackle the challenges of radiation protection and guidance for workers, the public, and patients in this 21st century. Mark your calendars, make reservations, and don't miss out. Check out the [NCRP website](#) and *Health Physics News* for continual updates as we approach the March 2013 meeting. Chairmen are S.Y. Chen and Bruce Napier, with special thanks to Steve Simon.

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The NCRP meeting will be held at the Hyatt Regency in Bethesda, Maryland, 11–12 March 2013, and will be dedicated to the people of Fukushima affected by the reactor accident and the great Japanese earthquake of 2011.