

## The Boice Report #50



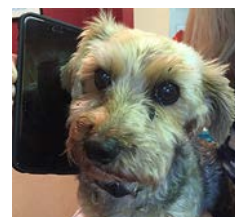
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ICRP Main Commissioner  
UNSCEAR U.S. Alternate Representative  
Vanderbilt Professor of Medicine



### Boice Report at 50

The Boice Reports appear to reflect “*Life [and Times] in the Fast Lane*” (apologies to the *Eagles*). In an eye blink, there are now 50 columns, the first about International Commission on Radiological Protection activities in 2012 and the fiftieth about United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) in 2016. They’ve covered the most recent initiatives of the National Council on Radiation Protection and Measurements (NCRP), National Aeronautics and Space Administration, Health Physics Society, Nuclear Navy, and U.S. Nuclear Regulatory Commission, touching on linear no-threshold (LNT), cataracts, radiofrequency, Fukushima, the Veterans’ Advisory Board on Dose Reconstruction, technologically enhanced naturally occurring radioactive material, regulations, “Where are the Radiation Professionals?”, the Million Person Study, emergency response, and atomic veterans. Here’s my self-review of my most . . .

- Fun to write: The Buster Report ([#49](#)) on mobile phones (Buster’s photo reproduced with his permission).
- Inspirational: Mars Matters ([#46](#)).
- Experientially thrilling: Under the Sea With the Nuclear Navy ([#31](#)).
- Sobering: When Bad Things Happen—Emergency Responders ([#29](#)).
- Important: Where Are the Radiation Professionals and Where Are You? ([#44](#)).
- Comments received: LNT 101 ([#40](#)).
- Favorite topic: The Million Person Study ([#37](#)).
- Relevant to Protection: Changing Times and Paradigms—Regulations You Might Live With ([#32](#)).



Buster discussing cell phone study of rats and mice  
Photo courtesy of John Boice

Now if you missed any, no problemo! I’m planning to compile “Boice Reports at 50,” sorted by topics, with a brief introduction and update for each topical area, and a reference section (with hyperlinks) for each topical area. Stayed tuned for more information on where to find “Boice Reports at 50.”

### UNSCEAR 2016

**Overview.** UNSCEAR held its 63<sup>rd</sup> session in Vienna from 27 June to 1 July 2016. Recent documents available free are (1) *Attributing Health Effects to Ionizing Radiation Exposure and Inferring Risks* and (2) *Uncertainties in Risk Estimates for Radiation-Induced Cancer*. Don’t be deceived that they are part of [UNSCEAR 2012](#)—they were published together in December 2015 and available in 2016. The annex on uncertainties in radiation risk complements [NCRP Report No. 171](#) (2012) on uncertainty.

An overview of UNSCEAR activities will be provided in the upcoming report to the general assembly but the previous [report in 2015](#) provides a good summary of these ongoing activities:

- An epidemiology review of low-dose-rate exposures from environmental radiation, covering the [Techa River](#) studies following exposure to nuclear waste contamination from the Mayak Radiochemical Plant and high natural background radiation studies in [India](#), [China](#), and [other](#) countries.
- More on levels and effects following the [Fukushima](#) Daiichi reactor accident.
- Collection of data on medical and occupational exposures.

- Radiation exposures from electricity generation.
- Biological effects of selected internal emitters (uranium and tritium).

**The U.S. Delegation to UNSCEAR.** The delegation remains in a state of transition. Julian Preston has been a superb leader over the past three years as our official U.S. representative appointed by the Department of State. He and a number of us senior citizens are considering riding into the sunset. Six more-youthful scientists (see photo) now have two to three years of experience and will be able to carry the mantle of U.S. leadership. Hopefully their involvement will bode well for the future of the U.S. delegation with enhanced recognition and support from the United States and Department of State.

**A Final Legacy.** I've been on the U.S. delegation every year since 1993 and was involved in each of the annexes on epidemiologic studies of radiation and cancer: [UNSCEAR 1994](#) (my favorite), [UNSCEAR 2000](#), and [UNSCEAR 2006](#). Ten years have lapsed since UNSCEAR's last review. New data have been published on atomic bomb survivors ([mortality](#) and soon incidence), [Chernobyl](#), [medical imaging](#), [multiple spinal x rays for scoliosis](#), [Massachusetts](#) and [Canadian](#) tuberculosis fluoroscopy studies, [Mayak](#), [nuclear weapons testing](#), [Techa River](#), [radiological technologists](#), and combined worker studies ([INWORKS](#), [U.S. combined studies](#), the [Million Person Study](#)). So on behalf of the U.S. delegation, I presented a proposal for future work on an annex of epidemiological studies of radiation and cancer. It was approved and will begin after the next UNSCEAR session (29 May to 2 June 2017), after further elaboration (i.e., fleshing out the table of contents and selecting the multiple consultants needed). The 2006 volume was such a huge undertaking for Mark Little, the principle, that Roger Cox and I recruited 12 epidemiologists to support him (John Boice, Ethel Gilbert, David Hoel, Peter Inskip, Charles Land, Jay Lubin, Colin Muirhead, Dale Preston, Elaine Ron, Roy Shore, Lois Travis, and Richard Wakeford). Once begun, it should take five years to complete. This will follow on the NCRP activities of Scientific Committee 1-25 on [Recent Epidemiologic Studies and Implications for the Linear-Nonthreshold Model](#).

So while it seems that we're "Already Gone" and there are "New Kids in Town," there's still a bit left "To Take It to the Limit" before we're gonna "Take It Easy" ([Eagles](#), R.I.P. [Glenn Frey](#)).

### U.S. Delegation to UNSCEAR in Vienna, Austria—June 2016



Front row, left to right: John Boice (NCRP), Lynn Anspaugh (University of Utah, retired), Helen Grogan (Cascade Scientific), Gayle Woloschak (Northwestern University), David Pawel (U.S. Environmental Protection Agency), Naomi Harley (New York University Medical Center)

Back row, left to right: Vincent Holahan (U.S. Nuclear Regulatory Commission), Bruce Napier (Pacific Northwest National Laboratory), Julian Preston (U.S. Environmental Protection Agency, retired), Wesley Bolch (University of Florida), Armin Ansari (Centers for Disease Control and Prevention)

Photo courtesy of John Hunt (Brazilian Representative)