

## IN MEMORIAM

Elaine Ron  
1943–2010



Elaine Ron, Ph.D., a senior investigator and former Chief of the Radiation Epidemiology Branch at the National Cancer Institute, died on November 20, 2010. From her landmark doctoral dissertation on cancer risks and other late health effects in Israeli children treated with radiation for tinea capitis to the ground-breaking investigation that she led at the time of her death on cancer risks associated with pediatric computed tomography scans, Dr. Ron's work resulted in key breakthroughs in understanding of radiation-related cancer risks.

Dr. Ron was born in New York City and was educated at Case Western Reserve University (undergraduate), Yale University School of Public Health (master's degree), and Tel Aviv University School of Medicine (doctoral degree). After completing a postdoctoral fellowship at the National Cancer Institute, where she initiated a case-control study to examine risk factors for thyroid cancer, she returned to Israel, where she became Chief of the Cancer Unit in the Department of Clinical Epidemiology at the Chaim Sheba Medical Center.

Recruited to the Radiation Epidemiology Branch at NCI in 1986, Dr. Ron led the largest study to date on cancer mortality risks after treatment of adults with hyperthyroidism with  $^{131}\text{I}$ , collaborated in a long-term follow-up of children irradiated for benign conditions of the head and neck, and examined radiation dose-related thyroid cancer mortality risks from  $^{131}\text{I}$  released from above-ground nuclear tests at the Nevada Test Site. She played a pivotal role in the NCI-Columbia University studies of thyroid cancer and other thyroid diseases in 25,000 screened young residents of Ukraine and Belarus living near Chernobyl at the time of the accident. At the Radiation Effects Research Foundation in Hiroshima, Japan (1990–1991), Dr. Ron and colleagues used data from population-based tumor registries to launch the first studies to assess incident cancer risks among the atomic bomb survivors. Risk estimates from these and subsequent incidence studies are the basis for risk protection recommendations.

In studies of cancer risks associated with protracted low-dose radiation exposure, Dr. Ron and colleagues assessed cancer mortality risks in nearly 26,000 workers at the Mayak nuclear reprocessing facility in Ozyorsk, Russia and about 30,000 persons residing near the Techa River that was polluted by radioactive wastes from the Mayak facility. She fostered expansion of the NCI-University of Minnesota investigation of cancer risks in U.S. radiologic technologists and was a key advisor for a study of leukemia in Chernobyl clean-up workers.

Dr. Ron was the world's leading expert on thyroid cancer epidemiology. She spearheaded an international pooled analysis of external radiation and thyroid cancer risk that has served as the principal source of risk assessment data for radiological protection. Using the pooled studies of thyroid cancer, Dr. Ron and colleagues assessed the role of reproductive characteristics, hormone use, non-malignant thyroid diseases and other postulated risk factors. Using population-based NCI cancer registry data, Dr. Ron and colleagues found increasing incidence over time of papillary thyroid carcinoma in all racial/ethnic groups that was greatest for small, localized tumors but also apparent for large and more advanced malignancies. Concluding that improved medical surveillance alone could not explain the rising rates, Dr. Ron initiated a new large pooled analysis to assess potential modifiers of radiation-related thyroid cancer risk and collaborated in prospective cohort studies to assess the role of body mass index, physical activity, diet, specific medical conditions, and environmental and reproductive factors in thyroid cancer risk.

Dr. Ron was a passionate advocate for women scientists and a beloved mentor. Her generosity of spirit and devotion to family, friends and colleagues were defining features of her life. Dr. Ron's son Ariel was her greatest joy.

Martha Linet  
Ruth Kleinerman  
Kiyohiko Mabuchi

*Division of Cancer Epidemiology and Genetics  
National Cancer Institute  
National Institutes of Health*