our modeling studies, we have strived to make the public a partner in the process and we have actively worked with community stakeholders to set our decision levels and to make site-specific parameters for our screening calculations. Miller mentions that, in addition to the vital community feedback, quantitative uncertainty analyses are required for all of their dose reconstructions. He cautions that more work is needed when information is extrapolated from one time period to another.

Synergistic Estimates

Owen Devine, Ph.D., of the Risk Assessment and Communication Section of the CDC said that “one of our knowledge gaps is the relationship between the risks due to combinations of chemical and radiation exposures.” Devine suggests utilizing available health outcome data in conjunction with risk estimation so that the two give a synergistic, more reliable risk estimate.

Dave Utterback, Ph.D., of the National Institute of Occupational Safety and Health notes that there are, perhaps unfortunately, a host of mid-century radiation exposures that currently convey a cancer risk. “Nuclear weapons research geared up in the 1940s, reactor research intensified in the 1950s, as did military non-weapons use of nuclear power, and therapeutic treatments with nuclear radiation expanded in the 1960s as did accumulation of high and low level of nuclear waste. One of our problems, from a tracking viewpoint, is obtaining classified information on these exposures, some of which is often rather limited.”

So what are some good contemporaneous models from which these mid-century studies can draw? Charles Land, Ph.D., of the NCI’s Radiation Studies Branch notes that, in part, because of its thoroughness, a study of long-term, high-dose survivors of the Nagasaki A-bomb explosions is now “a gold standard for tumor registries.” When it comes to current studies, he says that an ongoing study in Kazakhstan in the former USSR yields exposures similar to those being studied at the Nevada test site. Due to high winds and other factors, the exposures in Kazakhstan reached up to 200 rads whereas the U.S. exposures were seldom above 2 rads. The USSR study is looking at a cohort of nearly 3,000 people who were under 16 years of age at the time of exposure and received their radiation in many ways that are similar to the children exposed to nuclear fallout in the 1950s in this country. This higher dose, better monitored study could help provide crucial modeling factors that could aid scientists in refining and expanding their study results.

More problematic but also a source of additional modeling possibilities is the Mayak facility on the Techa river in

First Lady of Hungary Tours NIH

Hungarian First Lady Aniko Lévai, who has spent much of her law career pushing for child health and welfare legislation, toured the National Institutes of Health pediatric oncology and AIDS clinics in early October while her husband, Prime Minister Viktor Orbán, met with President Clinton.

Lévai came to see the latest and the best in children’s health care — an issue she addressed 9 years ago by co-founding the International Association for the Protection of Children. The Association works to better the lives of poor and state-adopted children in Hungary and neighboring countries.

Although Hungarian doctors are generally well trained, Lévai said that too little funding, along with inefficient use of resources, denies Hungarians top-notch health care. Another problem, a dearth of new medical knowledge and technology, could be lessened by United States-sponsored doctor exchange and technology transfer programs, she said.

Corina Gonzalez, M.D., from the HIV and AIDS Malignancy Branch of the National Cancer Institute, led the tour and arranged for Lévai to visit a few patients. The tour ended with a trip to Children’s Inn, a home on the NIH campus that accommodates up to 37 families who have children undergoing NIH-sponsored treatments. About half of the young visitors to Children’s Inn are cancer patients.

— Brian Vastag