risk. It can be shown that the total risk estimated by this method is larger by up to a factor of two than the risk obtained by simple summation of individual organ risks, depending on the number of organs for which the dose response is available. (This number changes when the data is reanalyzed with a different grouping of cancers in the Japanese A-bomb survivors cohort, and also changes as more follow-up years are added to the cohort.)

TPM-D.6

A WEB-BASED CALCULATOR FOR ESTIMATING INDIVIDUAL THYROID RADIATION DOSE AND CANCER RISK FROM NEVADA TEST SITE FALLOUT. S.L. Simon, A. Bouville, R. Weinstock, C. Land, C. Lafond, and C. Farrell (National Cancer Institute, Division of Cancer Epidemiology and Genetics, 6120 Executive Blvd., Room 7089, Bethesda, MD 20892-7238)

The National Cancer Institute (NCI) has developed a web-based calculator for use by members of the public to estimate their individual thyroid dose from ^{131}I in radioactive fallout from the Nevada Test Site during the years 1951 through 1971, and the associated risk of developing thyroid cancer. The calculator was developed in response to recommendations for improving risk communication from a National Academy of Sciences/Institute of Medicine committee that reviewed the 1997 NCI report on exposure of the American people to radioactive fallout. The calculator software was developed under NCI direction by SENES Oak Ridge and is based on dose assessment models published by the NCI in 1997, and recent age-specific estimates of thyroid cancer risk per unit dose developed by the NCI for the Veterans Administration. Calculations are performed in real-time via Monte Carlo simulation using user provided personal information on gender, date of birth, places of residence, and milk consumption during the years of fallout. Because of many dose- and risk-related uncertainties, the estimates of radiation dose and cancer risk are displayed as a best estimate with uncertainty limits. This presentation reviews the dose and risk models, demonstrates the calculator and gives details about web access to it, and summarizes the main issues in communicating information about radiation dose and cancer risk to the public.

TPM-D.7

LIFETIME RISK ASSESSMENT FOR TRANSURANIC INTAKE AS A FUNCTION OF AGE FOR CONTINUOUS AND ACUTE INTAKES. S.M. Bernal and K.J. Kearfott (University of Michigan, 1001 South Forest, #105, Ann Arbor, MI 48104)

Currently, little is known about the effects of age on lifetime risk and dose assessment for transuranic intake, especially for those persons exposed as children. The relatively small number of cases of both childhood and adult exposures as well as differences in anatomy and physiology between children and adults has made estimating dose and lifetime risk from a childhood exposure difficult to do. The International Committee of Radiation Protection (ICRP) has modeled the behavior of inhaled transuranic particles within the bodies of both children and adults by combining age-specific biokinetic models with age-specific intake and dosimetric respiratory tract models. This paper will build upon this current body of knowledge to provide estimates of both dose and lifetime risk as a function of age of first exposure. ICRP Publication 71's age specific inhalation dose coefficients are used to estimate the committed effective dose per unit intake as a function of age of first exposure for the following transuranic elements: ^{241}Am, ^{243}Am, ^{237}Np, ^{239}Pu, ^{238}Pu, ^{240}Pu, ^{241}Pu, ^{242}Cm, and ^{244}Cm. An estimate of excess relative risk (ERR) of lung cancer per unit intake as a function of age of first exposure was also made for the above radionuclides using ERR values taken from the published literature. The results are plots of dose and risk as a function of age, starting from 3 mo and following up to an age of 25+ y. These plots reveal features of the current models and knowledge of the behavior of inhaled transuranics in children and adults for both continuous and acute intakes.

TPM-D.8

U.S. ARMY GUIDANCE FOR DEPLOYED PREVENTIVE MEDICINE PERSONNEL ON RADIOLOGICAL HEALTH RISK MANAGEMENT. S. Goodison and S. Dunston (U.S. Army Center for Health Promotion and Preventive Medicine, 5158 Blackhawk Road, APG, MD 21010-5403)

This presentation will discuss the process and tools that can be used to make appropriate decisions based on the medical threat from ionizing radiation. Risk management is a process that assists decision makers in reducing or offsetting risk and making decisions that weigh risk against mission benefits. Military operations are inherently complex, dynamic, dangerous, and , by nature, involve the acceptance of risk. Traditional Army risk doctrine was developed to address radiological conditions on a battlefield, such as with the use of nuclear weapons that might lead to the degradation of the soldiers' performance. While this doctrine is still a priority, the publication of *Presidential Review Directive – 5, Force Health Protection Concept of Operations*, which directs the Department of Defense to "identify and minimize or eliminate the short- and long-term effects of