

Radiobiology and Toxicology of Po-210

The assassination last year of the expatriate Russian Alexander Litvinenko added Po-210 to the short list of radionuclides that have caused the acute radiation syndrome in human beings via internal exposure. Polonium-210 is readily absorbed from the gastrointestinal tract and deposits in the reticuloendothelial system, where its alpha emission produces a high absorbed dose rate to tissues. This presentation discusses the biokinetics and internal radiation dosimetry of Po-210, and interprets Mr. Litvenenko's clinical course in terms of the acute radiation syndrome, most often seen in cases of high external exposure to gamma rays and/or neutrons.

Presentation Richard Toohey

President-Elect, Health Physics Society.

Director, Dose Reconstruction Programs, Oak Ridge Associated Universities

Biosketch:

Dick Toohey received his Ph.D. in physics from the University of Cincinnati in 1973. He spent the first part of his career at Argonne National Laboratory in both research and operational health physics. He has been at ORAU since 1994, where he has served as director of the Radiation Internal Dose Information Center, as Sr. Health Physicist for REAC/TS, and is currently the Director of dose reconstruction programs. He is certified in comprehensive practice by the ABHP, is a member of the National Council for Radiation Protection and Measurements, and has served as a Director, Secretary, and Treasurer of HPS. Dick has 130 publications in the open literature, and is a retired Lt. Col., US Army Reserve. He and his wife Beverly live in Oak Ridge, where they provide staff services to the resident cat.