



THE DEPARTMENT OF EPIDEMIOLOGY, BIostatISTICS AND OCCUPATIONAL HEALTH, - SEMINAR SERIES IS A SELF-APPROVED GROUP LEARNING ACTIVITY (SECTION 1) AS DEFINED BY THE MAINTENANCE OF CERTIFICATION PROGRAM OF THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA

SPECIAL SEMINAR

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Cancer Mortality Among Workers In The International Nuclear Workers Study (INWORKS)

MONDAY, 18 DECEMBER 2017 / 12:00pm – 1:00pm
Purvis Hall

1020 Pine Avenue West—Room 25

ALL ARE WELCOME

ABSTRACT

The initiation of the Manhattan project in 1943 marked the emergence of the discipline of health physics and an expansion of research on the health effects of ionizing radiation. The health effects of occupational exposure to radiation were viewed from different perspectives by different members of the Atomic Energy Commission. There were those with immediate concerns and a focus on issues related to wartime production and health effects which were definite biological changes which are immediately evident or are of prognostic importance to health. Others had an interest in a more general understanding the effects of radiation on human health, including long term and genetic consequences. There were also managerial concerns related to potential lawsuits or demands for workers' compensation. These concerns motivated a large scale epidemiological program of research on nuclear workers. Beginning in the mid-1980's, numerous publications on cancer

among workers at nuclear facilities appeared, mostly in the US and UK. Risk estimates from individual studies were uncertain, with wide confidence intervals; and, positive associations between radiation and cancer were observed in some, but not all cohorts. To summarize results across studies and improve statistical precision, projects that pooled data were undertaken. I will briefly review the history of these studies and then present results from the most recent, largest, and most informative of these analyses, known as INWORKS. This is a combined study of 308,297 nuclear workers from the United Kingdom, France, and the United States of America. Quantitative results will be presented and the strengths and limitations of INWORKS will be discussed.

OBJECTIVES

1. An introduction to some of the major epidemiological studies of radiation exposed populations;

2. Understand how radiation exposures are assessed in occupational settings;
3. Learn about the types of health effects associated with ionizing radiation exposures.

BIO

David B. Richardson, is Associate Professor of Epidemiology in the School of Public Health at the University of North Carolina at Chapel Hill. He has served as a visiting scientist at the World Health Organization's International Agency for Research on Cancer, the French Institute for Radiological Protection and Nuclear Safety, and at the Radiation Effects Research Foundation in Hiroshima, Japan. Since 2007, he has served as Director of the National Institute of Occupational Safety and Health-funded training program in occupational epidemiology at the University of North Carolina-Chapel Hill. For more info please see: [CV](#)