Julie S. Ivy, PhD
Kathleen M. Diehl, MD
Breast Cancer Screening is Not One Size Fits All: Using Modeling to Personalize Breast Cancer Screening Policy

Monday, November 28, 2011 4:10-6PM FXB 1012

Julie Simmons Ivy is an Associate Professor in the Edward P. Fitts Department of Industrial and Systems Engineering and Fitts Faculty Fellow in Health Systems Engineering. She previously spent several years on the faculty of the Stephen M. Ross School of Business at the University of Michigan. She received her B.S. and Ph.D. in Industrial and Operations Engineering at the University of Michigan. She also received her M.S. in Operations Research at Georgia Tech. Her research interests are mathematical modeling of stochastic dynamic systems with emphasis on statistics and decision analysis as applied to health care, public health, manufacturing, and service environments. The focus of her research is decision making under conditions of uncertainty with the objective of improving the decision quality. Dr. Ivy's research program seeks to develop novel concepts of maintenance and monitoring policies and associated scientific theories, and apply them specifically to two important application domains: industrial and medical decision making. She has experience in medical decision making studying the cost-effectiveness of mammography screening, dynamic breast cancer screening policy development, and false positive prediction as a function of breast cancer screening policy. In addition, she is the NCSU PI for the one of four projects in the CDC sponsored NC PERRC.

Kathleen M. Diehl, M.D., is an Associate Professor in the Department of Surgery, Division of Surgery Oncology, at the University of Michigan Health System. Dr. Diehl received her M.D. degree at the University of Michigan Medical School in 1994 and completed her General Surgery residency, critical care fellowship, and breast care fellowship, also at the University of Michigan. Dr. Diehl is a member of the American College of Surgeons and a member of numerous societies including the American Medical Association, the American College of Surgeons, Association for Women Surgeons, American Society of Breast Surgeons, American Society of Breast Disease, Society of Surgical Oncology, Association for Academic Surgery, and American Society of Clinical Oncology. Dr.Diehl's clinical interests focus is treatment of elderly breast cancer patients, hormonal therapy in the prevention and treatment of breast cancer and screening and peri-operative care of geriatric patients.

Breast cancer is the most common noncutaneous cancer in American women. It is associated with high mortality risk; however mortality is strongly correlated with stage at detection, where cancers detected at an early stage have improved survival. There have been recent controversies regarding breast cancer mammography screening policies. In 2009 when the United States Preventive Services Task Force (USPSTF) recommended changing the screening policy from annual screening beginning at age 40 to biennial screening for women 50 to 75, it generated significant commentary and initiated discussion on the topic of over-diagnosis. In fact, many agencies including the American Cancer Society (ACS), did not adopt the USPSTF screening policy. We propose a decision modeling framework that addresses the issues of over-diagnosis and over-treatment.

The seminar series "Providing Better Healthcare through Systems Engineering" is presented by the U-M Center for Healthcare Engineering and Patient Safety: Our mission is to improve the safety and quality of healthcare delivery through a multi-disciplinary, systems-engineering approach.

Associated papers related to our speakers' presentations can be accessed at:
http://sitemaker.umich.edu/safety/home.
For additional information and to be added to the weekly e-mail for the series, please contact genehkim@umich.edu.