

To Screen or Not to Screen: Prevention Decisions and Competing Risks

Principal Investigator: Hsu, J.
Institution/Partners: Massachusetts General Hospital
Project Period: 06/01/14-11/30/15
Grant Number: R01 HS023128-01

Description

Routine cancer screening can lead to early detection of disease, potentially reducing the morbidity and mortality associated with more advanced disease. These screening benefits tend to accrue in the future, thus persons with shorter life expectancies are less likely to experience them. Older Americans in particular often have competing health risks created by comorbid medical conditions, which could impact both their life expectancy and the likelihood that they would benefit from screening. Current guidelines also provide recommendations based only on age and only for some ages, in large part because of the paucity of relevant trial data. Moreover, it may be infeasible to conduct randomized controlled trials that are able to address when individuals should consider stopping routine screening because of advanced age or increasing numbers of comorbid conditions. The absence of clear recommendations or rigorous evidence arguably contributes to the difficulty that patients and their physicians have when making these decisions. The project will use existing large datasets to emulate clinical trials of mammography and colonoscopy screening for breast and colorectal cancer (CRC). Through three aims, the study will examine the impact of screening on three outcomes among Medicare beneficiaries with varying starting ages and number of comorbid conditions.

Specific Aims

1. Cancer detection
2. Survival
3. Medical spending

Main Objective

Evaluate alternative cancer screening strategies among older Americans with varying numbers of comorbid medical conditions

Chronic Conditions Considered

Not specified

Study Design, Data Sources & Sample Size

2002-2012 data from a 20% random sample of Medicare fee-for-service beneficiaries (Parts A, B, and D), Area Resource file, US Census-American Community Survey, and SEER (integrated using NCI and NIA funding).

Strategies Addressed from the HHS Strategic Framework on Multiple Chronic Conditions

- 4.B. Understand the epidemiology of multiple chronic conditions.
- 4.C. Increase clinical health research.