
Outcomes and cost evaluation of the first two rounds of a colorectal cancer screening program based on immunochemical fecal occult blood test in northern Italy.


Source
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Abstract
BACKGROUND AND STUDY AIMS:
Colorectal cancer (CRC) screening aims to reduce mortality by detecting cancers at an early stage and removing adenomatous polyps at an acceptable cost. The aim of the current study were to assess the outcomes and costs of the first two biennial rounds of a population-based CRC screening program using the immunochemical fecal occult blood test (i-FOBT) in a northern Italian province.

METHODS:
All residents aged 50-69 years were invited to take part in a biennial screening program using a 1-day i-FOBT, followed by colonoscopy in positive individuals. The i-FOBT uptake, compliance to colonoscopy, detection rate for cancer or advanced adenomas according to age and sex, and direct cost analysis were carried out separately for the 1st and 2nd rounds of screening.

RESULTS:
In 78083 (1st round) and 81619 (2nd round) individuals who were invited to screening, the participation rates were 49.7% and 54.4% and i-FOBT positivity rates were 6.2% and 5.8%, respectively. Detection rates for cancer and advanced adenomas were lower in the 2nd screening compared with the 1st one (1.6‰ vs. 2.5‰ for cancers and 15.8‰ vs. 17.9‰ for advanced adenomas, respectively), whereas positive predictive values for cancer and advanced adenoma were similar in both rounds. In 165 adenocarcinomas detected, 52% were Dukes’ stage A and 21% were stage B. All cost indicators were slightly higher in the 1st round of screening compared with the 2nd. The direct cost per cancer or advanced adenoma detection was similar in the two rounds (€1252 and €1260, respectively).

CONCLUSIONS:
Compliance and diagnostic yield of i-FOBT screening were satisfactory. Most detected cancers were at a very early stage. Program costs were reasonable and did not increase with repeat screening. Screening could contribute to decreasing the cost of CRC care by improving the stage at diagnosis.

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