


OMED COLORECTAL CANCER SCREENING COMMITTEE MEETING

Saturday, May 30, DDW Chicago, 2009

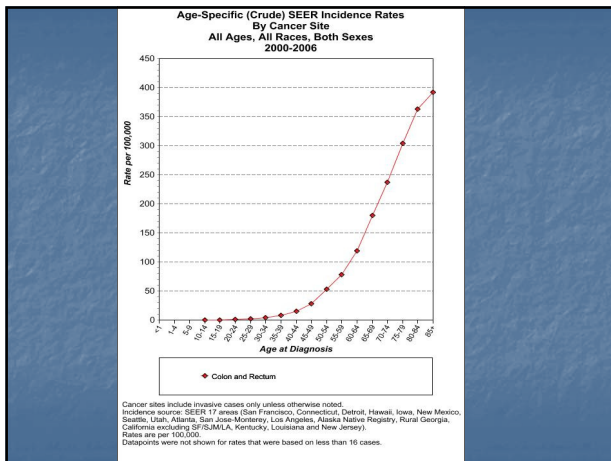
Presenter: Jack Mandel



**Screening for Colorectal Cancer:
Age-Specific Effects**

Jack Mandel
Dalla Lana School of Public Health
University of Toronto
May 30, 2009

**Timothy R. Church
Susan M. Moss
Ole Kronborg
Steven J. Mongin
Robert A. Smith
Jack S. Mandel**



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Screening

Persuasive evidence from randomized controlled clinical trials for gFOBT

Features of the RCTs

Study	Age range	Start date	Maximum follow-up	Screens offered	Full compliance	Complied at least once
Funen, Denmark	45-75	1985	17 years	9	46%	67%
Minnesota, USA	50-80	1975	18 years	6	60%	90%
Nottingham UK	45-74	1981	23 years	6	38%	60%

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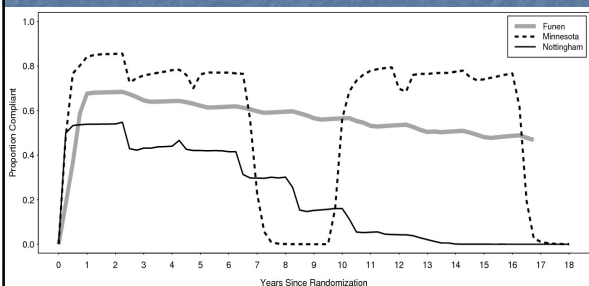
Results From Randomized Trials

	<u>% Reduction In CRC Mort</u>	<u>Av. Percent Compliance</u>
Minnesota		
Annual	33	75
Biennial	21	75
Nottingham	15	50
Funen	18	57
<i>Goteborg</i>	12	62
Burgundy	16	55

Overall Benefit

- For the three trials the mortality reduction ranged from 15 to 21%
- The compliance adjusted mortality reduction ranged from 21 to 30%

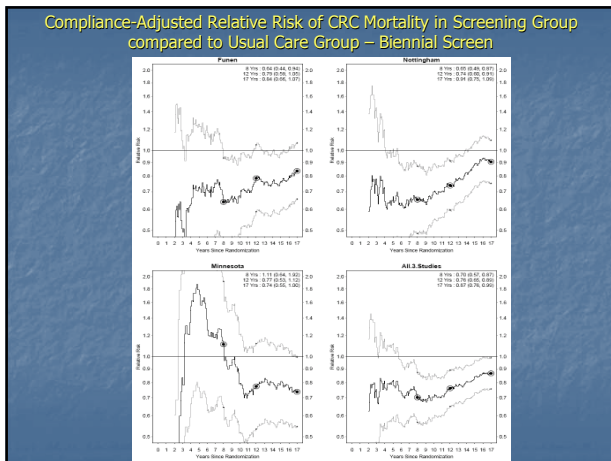
Screening Compliance

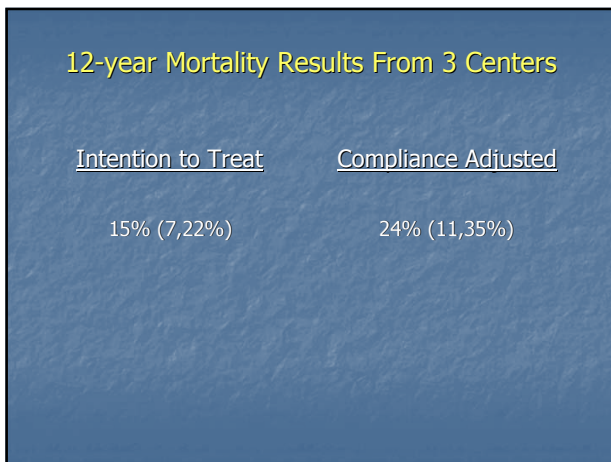


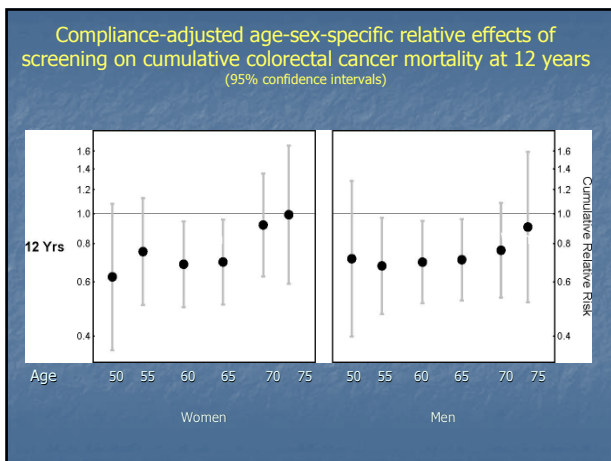
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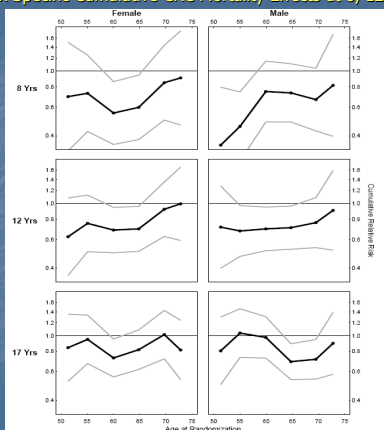


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Age-Sex Specific Cumulative CRC Mortality Effects at 8, 12, and 17 Years



These analyses suggest that those who began screening at age 60 or older benefited most and that the optimum age for men and women may differ



CRC Screening

Average risk individuals

Recommends that men and women age 50 and over have a fecal occult blood test (FOBT) at least every 2 years.

Follow-up for a positive test could include a colonoscopy or double contrast barium enema and sigmoidoscopy.

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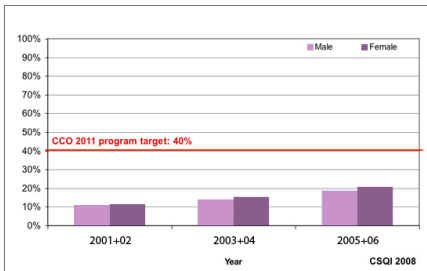
High risk individuals

Those who are at higher than average risk of developing colorectal cancer should discuss an individual plan of surveillance with their doctor. High risk individuals include those with:

- a first-degree relative with colorectal cancer
- a personal history of colorectal cancer
- inflammatory bowel disease such as ulcerative or Crohn's disease
- inherited syndromes such as FAP (familial adenomatous polyposis) or HNPCC (hereditary non-polyposis colon cancer)
- benign polyps of the colon or rectum

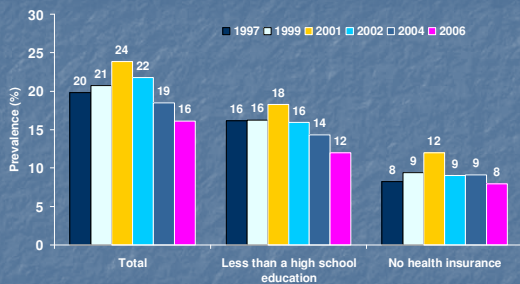
Colorectal Cancer Screening (FOBT)

Percent of men and women (ages 50-74) who received a fecal occult blood test (FOBT) in the past two years, 2001-2006, by sex



Sources: Ontario Health Insurance Plan database; Registered Persons Database; Statistics Canada population estimates
Analysis conducted by scientists in the Cancer Program at the Institute for Clinical Evaluative Sciences (ICES) in Toronto
Note:
1. Rates are standardized to the 1991 Canadian population

Recent* Fecal Occult Blood Test Prevalence (%), by Education and Health Insurance Status, Adults 50+ Years, US, 1997-2006



*A fecal occult blood test within the past year. Note: Data from participating states and the District of Columbia were aggregated to represent the United States.
Source: Behavioral Risk Factor Surveillance System CD-ROM (1996-1997, 1999) and Public Use Data Tape (2001, 2002, 2004, 2006), National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention and Prevention, 1999, 2000, 2002, 2003, 2005, 2007.

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New CRC Screening Program in Ontario

Ontario introduces \$193M colon cancer screening program

Minister of Health,
George Smitherman

January 23, 2007





FOR IMMEDIATE RELEASE Celebrities "Get Behind Your Behind" In support of Colon Cancer Canada

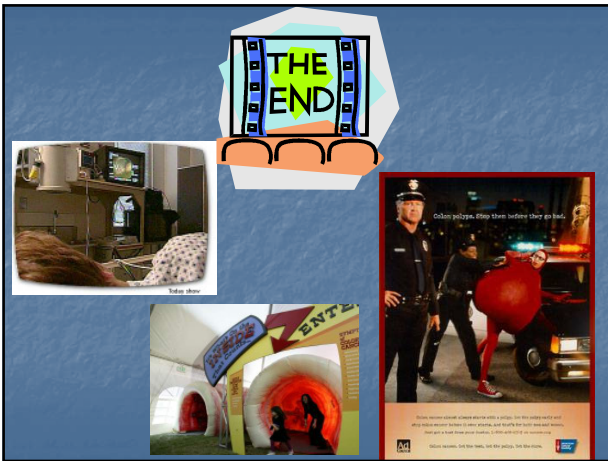
Monday, March 2nd, 2009

Toronto, Ontario...Colon Cancer Canada today kicked off Colon Cancer Awareness Month with the assistance of 6 high profile Canadians; Actress, Emmanuelle Chriqui, Actor, Neil Crone, Canadian Music Icon, Anne Murray, former Toronto Maple Leaf Darryl Sittler, Olympic Medalist Adam van Koeverden, and Senator Pamela Wallin. All have taken part in officially launching Colon Cancer Awareness Month and Colon Cancer Canada's newest PSA Campaign. "It is just thrilling to have these celebrities support our cause. They all have a personal story that brought them to Colon Cancer Canada - we just couldn't be more proud of them," explained Bunnie Schwartz, founder of Colon Cancer Canada. Both Neil Crone and Pamela Wallin are colon cancer survivors. Adam van Koeverden supported his father with his winning battle against colon cancer and Emmanuelle Chriqui, Anne Murray and Darryl Sittler all lost loved ones to the disease.

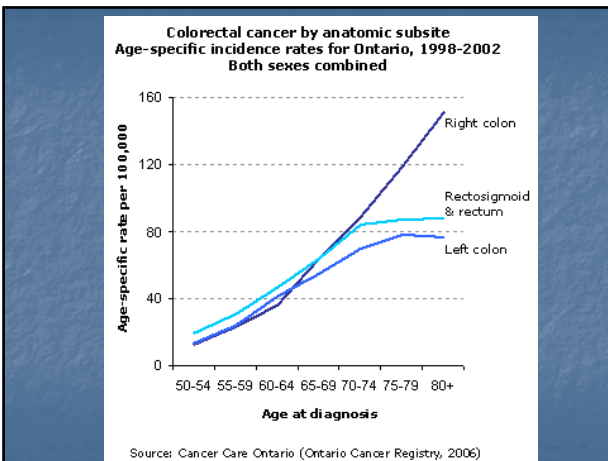
Current Screening Recommendations for FOBT

- US – over age 50 annually
- UK – England – biennial screening age 60-69 with plans to extend to age 75 in 2010. (50-74 in 2007 in Scotland, Wales will begin screening some people aged 50-74 in 2009).
- Denmark – considering biennial age 50-75, recently completed pilot study with 50% compliance

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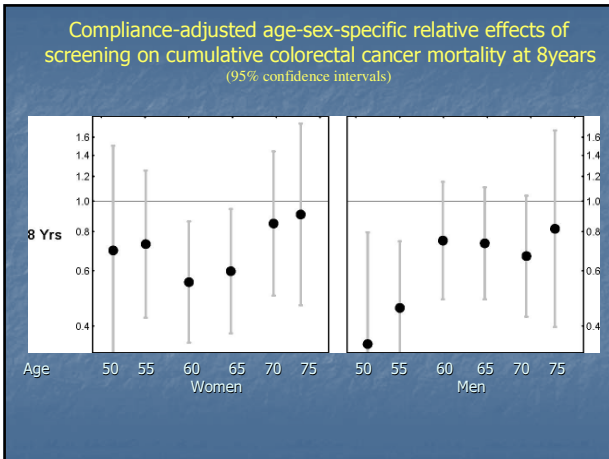


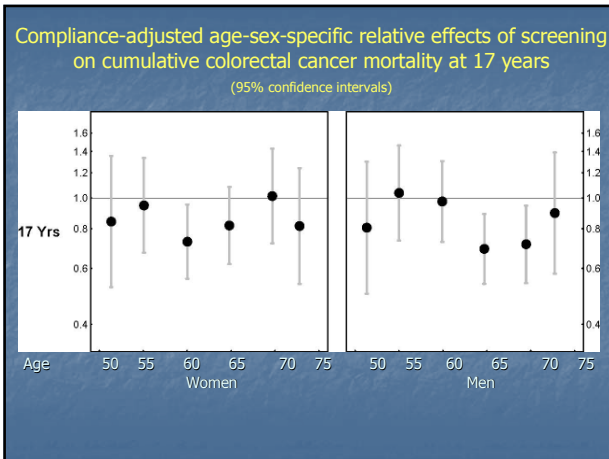


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American Cancer Society Guidelines for CRC Screening of Average Risk Adults Age 50+

- Guaiac or immunochemical fecal occult blood test (gFOBT or iFOBT) annually 
- Flexible sigmoidoscopy (FSIG) every 5 yrs 
- FOBT annually + FSIG every 5 yrs
- Colonoscopy every 10 yrs 
- CT colonography 
- Double contrast barium enema every 5 yrs

*All positive tests should be followed up with colonoscopy

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Association between subject factors and colorectal cancer screening participation in Ontario, Canada

Ramji F, Cotterchio M, Manno M, Rabeneck L, Gallinger S. Association between subject factors and colorectal cancer screening participation in Ontario, Canada. *Cancer Detect Prev.* 2005; 29 (3): 221-226.

This population-based study was conducted to evaluate: (i) the association between subject factors and colorectal screening participation; and, (ii) the lifetime prevalence of colorectal screening among the general population of Ontario, Canada.

Population-based controls were recruited by the Ontario Familial Colorectal Cancer Registry between 1998 and 2000. The 1,944 persons completed an epidemiologic questionnaire. Descriptive statistics were computed and step-wise multivariate logistic regression was used to estimate odds ratios and 95% confidence intervals.

Overall, 23% of persons greater than 50 years of age reported ever having had colorectal cancer screening; 17% reported fecal occult blood test (FOBT); 6% sigmoidoscopy; and 4% colonoscopy. Family history of colorectal cancer, increased age, higher household income, and use of hormone replacement therapy (among women) were all significantly associated with ever having had colorectal cancer screening.

The low prevalence of colorectal cancer screening among the target population suggests the need for an increased awareness of the public health importance of colorectal cancer screening.

Association of Colonoscopy and Death From Colorectal Cancer: A Population-Based, Case-Control Study

Nancy N. Baxter, MD, PhD, Meredith A. Golinwischer, ScD, Lawrence F. Passat, MD, MS, Refik Sackin, MSc, David R. Urbach, MD, MSc, and Linda Rabeneck, MD, MPH

Ann Intern Med January 2009 | Volume 150 Issue 1

Background: Colonoscopy is advocated for screening and prevention of colorectal cancer (CRC), but randomized trials supporting the benefit of this practice are not available.

Objective: To evaluate the association between colonoscopy and CRC deaths.

Design: Population-based, case-control study, Ontario, Canada.

Patients: Age 52- 90 yrs who received CRC diagnosis from 1996-2001 and died of CRC by Dec 2003. Five controls matched by age, sex, geographic location, and sex randomly selected for each case.

Measurements: Administrative claims data used to detect any colonoscopy and complete colonoscopy from Jan 1992 to an index date 6 months before diagnosis in each case and same assigned date in matched controls. Exposures in cases and controls compared by using conditional logistic regression to control for comorbid conditions.

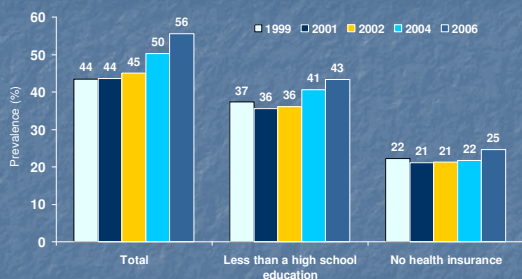
Results: 10,292 cases and 51,460 controls identified; 719 cases (7.0%) and 5031 controls (9.8%) had colonoscopy. Cases less likely to have any attempted colonoscopy (OR, 0.69 95% CI, 0.63 to 0.74) or complete colonoscopy (OR, 0.63 CI, 0.57 to 0.69). Complete colonoscopy strongly associated with fewer deaths from left-sided CRC (OR, 0.33 CI, 0.28 to 0.39) but not from right-sided CRC (OR, 0.99 CI, 0.86 to 1.14).

Limitation: Screening could not be differentiated from diagnostic procedures.

Conclusion: In usual practice, colonoscopy is associated with fewer deaths from CRC. This association is primarily limited to deaths from cancer developing in the left side of the colon.

Funding: Canadian Institutes of Health Research and Am Soc of Clinical Oncology.

Recent* Flexible Sig or Colonoscopy Prevalence (%), by Education and Health Insurance Status, Adults 50+ Years, US, 1997-2006



*A flexible sigmoidoscopy or colonoscopy within the past ten years. Note: Data from participating states and the District of Columbia were aggregated to represent the United States.
Source: Behavioral Risk Factor Surveillance System CD-ROM (1996-1997, 1998) and Public Use Data Tape (2001, 2002, 2004, 2005), National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 1999, 2000, 2002, 2003, 2005, 2007.
