

Colorectal Cancer Miss Rates in Practice

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Outline

- Nomenclature
- Frequency
- Colonoscopy effectiveness
- Explanations

Frontline Gastroenterology



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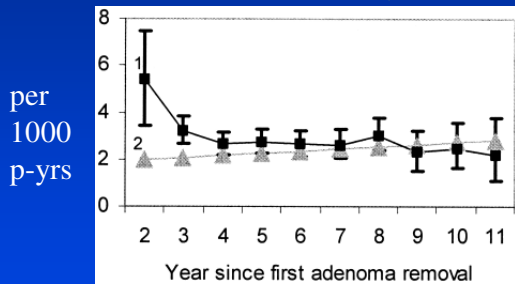
Post-Colonoscopy CRC (PCCRC)

- Definition: CRC not detected at colonoscopy, but diagnosed in the interval prior to the recommended subsequent colonoscopy

Post-Colonoscopy CRC

- No attribution: New vs missed
- Specify time period: PCCRC (1-yr)
- Specify indication (screening, etc)
- Facilitates comparison
- Avoids “interval”

CRC Incidence after Adenoma Removal (N=78,473)



Loeve F et al. Int J Cancer 2004;111:147-51.

Post-Colonoscopy CRC (3-yr)

- 20 Indiana hospitals (1988-1993)
- 941 CRC patients who had a colonoscopy within 3 yr prior to diagnosis
- Missed: 47/941 (5%)

Rex DK et al. Gastroenterology 1997;112:17-23.

Post-Colonoscopy CRC (3-yr)
(N=12,487)

- Rate: 2-6%
- Increased risk: older age, diverticular disease, right-sided or transverse CRC, internist/FP, non-hospital colonoscopy

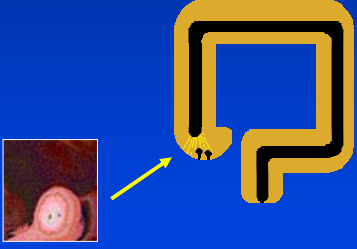
Bressler B et al. Gastroenterology 2007;132:96-102.

Post-Colonoscopy CRC
(3-yr) (N=69,591)

- Rate = 7.5%
- Increased risk: older age, African American, increasing co-morbidity, prior polypectomy, right-sided, non-hospital colonoscopy

Cooper G et al. DDW 2010.

Colonoscopy Effectiveness



The diagram shows a yellow outline of the human colon. A yellow arrow points from a small inset image of a polyp to a specific location on the colon. The inset image shows a pinkish, fleshy polypoid lesion protruding from the mucosal surface of the colon.

Colonoscopy Effectiveness: Post-Colonoscopy CRC

CLINICAL GASTROENTEROLOGY AND HEPATOLOGY 2008;6:1117-21

Risk of Developing Proximal Versus Distal Colorectal Cancer After a Negative Colonoscopy: A Population-Based Study

LEONARD LAKOFF, LAWRENCE F. FINKEL, FRANK S. DICKINSON, and LINDA RABENECK*

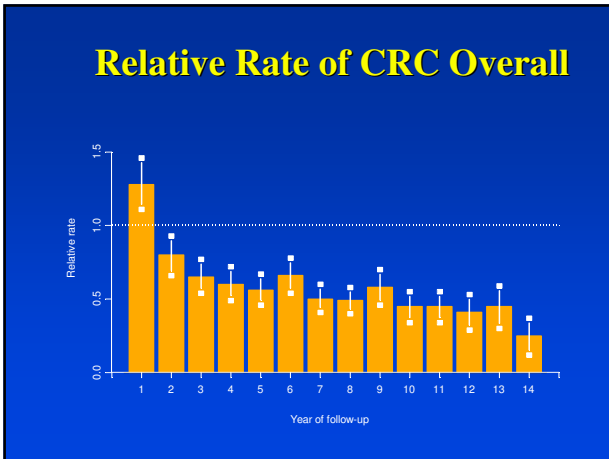
- Reduced risk of incident CRC overall, and incident distal CRC
- Reduced risk of incident proximal CRC occurred mainly after 7 yr

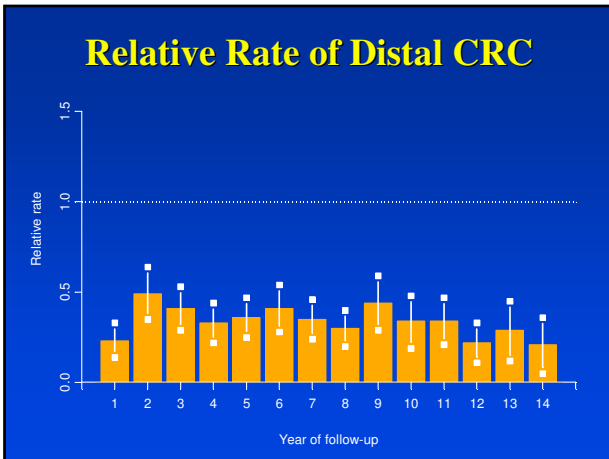
Lakoff J et al. Clin Gastroenterol Hepatol 2008;6:1117-21.

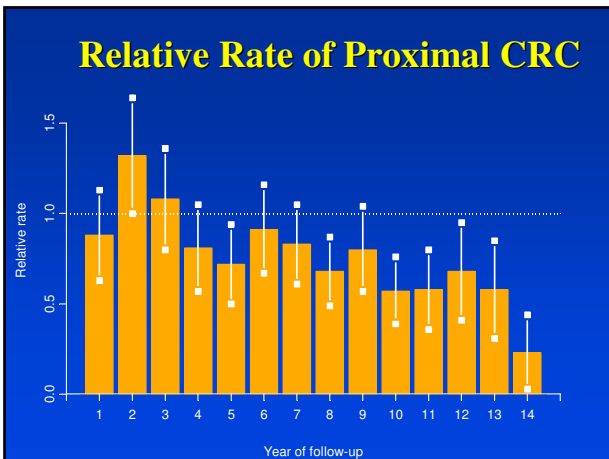
Study Cohort

- 110,402 persons with a negative complete colonoscopy
- 2,859,087 controls (Ontario population)

OMED COLORECTAL CANCER SCREENING COMMITTEE MEETING
Saturday, May 1, DDW New Orleans, 2010
Presenter: Linda Rabeneck







**Colonoscopy Effectiveness:
CRC Deaths**

Annals of Internal Medicine | ARTICLE
Association of Colonoscopy and Death From Colorectal Cancer
Nancy H. Baxter, MD, PhD; Meredith A. Goldwasser, ScD; Lawrence F. Paszat, MD, MS; Beth Siskin, MSc; David R. Urbach, MD, MSc; and Linda Rabeneck, MD, MPH

Baxter NN et al. Ann Intern Med 2009;150:1-8.

**Association Between
Colonoscopy and CRC Death**

Colonoscopy	All CRC
None	1.00
Complete	0.63 (0.57-0.69)

**Association Between
Colonoscopy and CRC Death**

Colonoscopy	Right	Left CRC
None	1.00	1.00
Complete	0.99 (0.86-1.14)	0.33 (0.28-0.39)

Explaining Post-Colonoscopy CRC

Explaining Post-Colonoscopy CRC

- Lesion not seen (technology; prep; technique)
- Prior incomplete excision (technique)
- Not there (rapid growth)

Is it Non-Polypoid Lesions?



Soetikno RM et al. JAMA 2008;299:1027-1035.

Microsatellite Instability in Post-Colonoscopy CRC

- 51/993 (5%) cancers diagnosed within 5 yr of a complete colonoscopy
- 3.7x more likely to be MSI+

Sawhney MS et al. Gastroenterology 2006;131:1700-05.

Conclusions: Clinical Practice

- Informed consent
- Attention to bowel prep
- Careful technique
- Measure and report on colonoscopy quality (QA)

Conclusions: Research

- Interventions to improve colonoscopy quality?
- Enhanced colonoscopy?
- Polypectomy best practice?
- Quality vs biology?

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