Ann Intern Med. 2003 Dec 16;139(12):959-65.

Comment in:
Ann Intern Med. 2003 Dec 16;139(12):1034-5.
Ann Intern Med. 2003 Dec 16;139(12):I10.

Using risk for advanced proximal colonic neoplasia to tailor endoscopic screening for colorectal cancer.

Imperiale TF, Wagner DR, Lin CY, Larkin GN, Rogge JD, Ransohoff DF.

Indiana University School of Medicine, Indiana University, Roudebush Veterans Affairs Medical Center, Indianapolis, Indiana, USA.

BACKGROUND: Colonoscopic screening for colorectal cancer has been suggested because sigmoidoscopy misses nearly half of persons with advanced proximal neoplasia. OBJECTIVE: To create a clinical index to stratify risk for advanced proximal neoplasia and to identify a subgroup with very low risk in which screening sigmoidoscopy alone might suffice. DESIGN: Cross-sectional study. SETTING: A company-based program of screening colonoscopy for colorectal cancer. PATIENTS: Consecutive persons 50 years of age or older undergoing first-time screening colonoscopy between September 1995 and June 2001. MEASUREMENTS: A clinical index with 3 variables was created from information on the first 1994 persons. Points were assigned to categories of age, sex, and distal findings. Risk for advanced proximal neoplasia (defined as an adenoma 1 cm or larger or one with villous histology, severe dysplasia, or cancer) was measured for each score. The index was tested on the next 1031 persons from the same screening program. RESULTS: Of 1994 persons, 67 (3.4%) had advanced proximal neoplasia. A low-risk subgroup comprising 37% of the cohort had scores of 0 or 1 and a risk of 0.68% (95% CI, 0.22% to 1.57%). Among the validation group of 1031 persons, risk for advanced proximal neoplasia in the low-risk subgroup (comprising 47% of the cohort) was 0.4% (upper confidence limit of 1.49%). Application of this index detected 92% of persons with advanced proximal neoplasms and, if applied following screening sigmoidoscopy, could reduce the need for colonoscopy by 40%. The marginal benefit of colonoscopy among low-risk persons was small: To detect 7 additional persons with advanced proximal neoplasia, 1217 additional colonoscopies would be required. CONCLUSIONS: This clinical index stratifies the risk for advanced proximal neoplasia and identifies a subgroup at very low risk. If it is validated in other cohorts or groups, the index could be used to tailor endoscopic screening for colorectal cancer.