

# Colorectal Cancer Screening in the Elderly at an Ambulatory Clinic

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## A. Introduction

The population of the United States is aging. Those aged 65 to 85 years constitute 13%, and those over 85 constitute 2% of the entire population.<sup>1</sup> These percentages have doubled over the past two decades. Factors responsible for this phenomenon include improved nutrition and medical care. Although the average life expectancy at birth in the United States is 75.7 years, once an individual reaches 80 years, the life expectancy is 8.3 years and at age 85, the average life expectancy is 6 years.<sup>2</sup> Thus, the elderly population will require on-going, medical care and it is relative to address disease prevention in this population.

Among the diseases that have a significant affect on the elderly is cancer. Cancer is second only to heart diseases as the leading cause of death in the United States in those over the age of 75, and colon cancer specifically is the most commonly occurring cancer in elderly Americans of both genders.<sup>3</sup> The American Cancer Society estimates that 148,300 new cases will be diagnosed in 2002. Among those over 75 years, more than 26,000 died as a result of colorectal cancer.<sup>4</sup> This is tragic as many of these deaths are preventable. When colon cancer is discovered and treated early in those with localized disease (disease confined to the mucosa or muscularis) 5-year survival is approximately 90%. Lastly, in those with distant metastasis, estimated 5-year survival is decreased to 5%.

Screening for colon cancer has been proven cost-effective for average risk patients, i.e. those without personal or family risk of the disease inflammatory bowel disease or any inherited genetic mutation whose syndrome includes an increased risk of colon cancer. Screening methods involve discovery and removal of the benign adenomatous polyps that are thought to be the precursors to most carcinomas. The most recent cancer screening guidelines for average-risk patients about 50 include:

- 1) fecal occult blood testing (FOBT) every year, or
- 2) sigmoidoscopy every 5 years, or
- 3) FOBT annually and sigmoidoscopy every 5 years (preferred by the American Cancer Society)
- 4) Double-contrast barium enema every 5-10 years, or
- 5) Colonoscopy every 10 years.<sup>5</sup>

Despite evidence that screening for colon cancer reduces mortality from disease, recommendations for colon cancer screening have not been widely implemented. In a recent study of patients 64,000 persons over 50 conducted by the Centers for Disease Control in 1999, 40% of respondents reported having had FOBT at some time and 44% reported having had a sigmoidoscopy or colonoscopy. 20% reported having had a FOBT within the year, and 34% reported having had a sigmoidoscopy within 5 years.<sup>6</sup> Education is needed for both the public and health care providers to increase their compliance with current guidelines.

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<sup>1</sup> United States Bureau of the Census (1996) Population projections for the United States.

<sup>2</sup> Ibid.

<sup>3</sup> American Cancer Society, Facts and Figures.

<sup>4</sup> Ibid.

<sup>5</sup> Anderson, J. Review of recommendations for colorectal screening. *Geriatrics*, 2000.

<sup>6</sup> Seeff et al, Are we doing enough to screen for cancer? *Journal of Family Practice* 2002.

## **B. Objective and Hypothesis**

The objective for this study is to determine current rates of use of FOBT, sigmoidoscopy, and colonoscopy, and to determine the patient and clinician factors associated with screening for colorectal cancer among those over 65 in the ambulatory clinics of Columbia Presbyterian Medical Center. It is hypothesized that there are significant differences in clinician and patient sociodemographic measures that account for those who are screened and those who are not screened for colon cancer. A questionnaire will address the following-

- a. How are the elderly being screened?
- b. Why are they not elderly being screened?
- c. What are the attitudes/knowledge and beliefs concerning colon cancer, and screening?
- d. What are the barriers to screening?
- e. What strategies for motivating and supporting behavior change are necessary?

## **C. Methods**

### **Study design**

This will be a retrospective observational study using medical records and computer data for eligible patients during a one year time period. Data will be reviewed for incidence of annual FOBT documented in the chart or webcis, as well as whether sigmoidoscopy is also documented in the chart or via webcis within the past 5 years, or colonoscopy documented within the past 10 years. Further documentation of follow-up for positive results will be assessed. Questions to be considered are the timeliness of studies/follow-up, predictors of screening (age, ethnicity, number of visits, provider type ie. resident/attending/NP, and personal or family history of cancer).

### **Conceptual and operational definitions**

The proportion of patients having had a documented FOBT and sigmoidoscopy/colonoscopy within recommended time intervals will be assessed. The FOBT will be assessed within the past one year, sigmoidoscopy in the past 5 years, or colonoscopy in the past 10 years.

### **Statistical analysis**

Descriptive statistics and chi-square tests will be used to analyze the data. A series of multiple regression models using age, ethnicity, number of visits, type and gender of provider, and personal and family history of cancer as predictor variables will be performed.

### **Sample size**

Patients will be selected from Columbia Presbyterian's primary care clinics which include the Associates in Internal Medicine (AIM) and the Ambulatory Care Network Clinics (ACNC). It is estimated that 10,000 patients are seen annually in this clinic setting. Approximately 65% are over the age of 55 years. Thus, approximately 6,500 patients will be screened for this study.

## **D. Subject Selection**

Inclusion criteria include age >65, and at least .2 documented visits within the one year time period. Patients will be excluded if they are not at average risk for cancer. There will be no restriction by gender or race.

## **E. Study Procedures**

There are no experimental procedures.

#### **F. Study Drugs**

There are no study drugs.

#### **G. Medical Devices**

There are no medical devices.

#### **H. Study questionnaire**

A questionnaire in English and Spanish will be written and sent to all patients eligible for the study. The questionnaire will address patient' awareness of cancer, their compliance with screening, and their reasons for non-compliance.

#### **I. Recruitment of Subjects**

Patients will be referred to the study by the primary health care provider if they meet inclusion criteria.

#### **J. Confidentiality of Study Data**

Patients will be assigned a number code and data will be secured in a computer file accessible to the investigators.

#### **K. Potential Conflict of Interest**

There is no potential conflict of interest from this study.

#### **L. Location of Study**

This study will take place in the AIM and ACNC clinics at Columbia Presbyterian Medical Center.

#### **M. Potential Risks**

There are no possible risks to those participatino in the study.

#### **N. Potential Benefits**

The participants of this study will benefit by obtaining improved awareness of colorectal cancer, and will ultimately contribute to efforts to improve future screening efforts in their community.

#### **O. Alternative Therapies**

There are no alternative therapies involved in this study.

#### **P. Compensation**

There will be no compensation for participation in this study.

**Q. Costs to Subjects**

There will be no costs associated with this study.

**R. Minors as research subjects**

There will be no person under the age of 65 in this study.

**S. Radiation or Radioactive Substances**

No radiation or radioactive substances will be involved with this study.

**T. References**

The American Cancer Society, [www.cancer.org](http://www.cancer.org).

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