Colorectal Cancer in Adults
Under Age 50

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Introduction

• Public health policy recommends colonoscopy screening beginning at age 50.

• Nationally, 10% of adults diagnosed with colorectal cancer are under age 50.

• Is there an increase in the incidence of colorectal cancer in adults under age 50?
Purposes of the study

- Identify adults who have been diagnosed with colorectal cancer under age 50.
- Identify adults who have been diagnosed with colorectal cancer age 50 and older.
- Evaluate the common risk factors that each group exhibits.
• Evaluate the number of risk factors exhibited by each group (<50, 50 and>).
• Compare/contrast the risk factors exhibited by each group.
RQ 1

- How many adults under age 50 will be diagnosed with colorectal cancer, in this sample?
RQ 2

• What are the common risk factors and the number that are exhibited by adults under age 50 and age 50 and older who are diagnosed with colorectal cancer?
RQ 3

• What are the similarities and differences between adults under age 50 and age 50 and older in risk factors that are exhibited?
Background and Significance

- Colorectal cancer is the 4th most common cancer diagnosis in the U.S.
- 155,000 new cases annually
- 50,000 deaths annually
• 10% of adults diagnosed with colorectal cancer are under age 50.

• Known risk factors are: a prior history of cancer, a family or personal history of colorectal cancer, a history of IBD, age and adenomatous polyps.
Theoretical framework

• Theory guiding the research is the Health Promotion Model, developed by Nola Pender.
• Advocacy of shared partnerships among nurses, physicians and the community.
• Health is not simply the absence of illness.
Adult develops rectal bleeding → Discusses options with nursing professional

Discusses options with nursing professional → Adult chooses to undergo colonoscopy

Adult chooses to undergo colonoscopy → Adult develops rectal bleeding
Theory of planned behavior: adult develops rectal bleeding and seeks information.

Theory of reasoned action: adult discusses options with nursing professional.

Social cognitive theory: adult discusses risks and benefits with health care provider and chooses to undergo colonoscopy. (Healthy behavior).
Operational Definition

- The Data Collection Instrument (DCI) developed to gather data such as: geography, age at diagnosis, personal/family history of any cancer, BMI, gender, history of IBD, history of polyps, stage at diagnosis and site of colorectal cancer (rectum, sigmoid, transverse or right colon).
Assumptions

• The medical record is a reasonable source of individuals health information.
• Colonoscopies can prevent colorectal cancer through polypectomy and/or early detection.
• Individuals can partner and be guided by nursing professionals to adopt healthy behaviors.
• Individuals often want to feel that they have control over their own behaviors.
Limitations of the study

- A small sample from one hospital in a suburb of New York state.
- The results are not generalizable.
- The DCI has not been validated.
Review of the literature

• Imperiale, et al evaluated 906 adults aged 40-49. None of the asymptomatic participants were diagnosed with colorectal cancer.

• Regula, et al evaluated 50,000 participants in Poland: 3.4% of adults aged 40-49 and 5.9% of adults aged 50-66 were diagnosed with colorectal cancer.
• Lai, et al conducted an epidemiological study to determine incidence rates and risk factors for nine geographic areas of the U.S. The highest incidence of colorectal cancer was confirmed to be the Northeast U.S. The lowest incidence was found in the central mountain region.
• Loeve, et al, in a study from The Netherlands, evaluated 553 patients who had undergone polypectomy for adenomatous polyps. None of the patients studied developed colorectal cancer.

• This can perhaps be explained by polypectomy removing the source of a cancer and preventing development.
• The CINAHL, PubMed, National Cancer Institute (NCI), and Access Medicine databases accessed.

• Keywords: colorectal cancer, adenoma and adenocarcinoma.
Methodology

- Retrospective chart review.
Design

• Descriptive/evaluative retrospective chart review.
Setting

- A large teaching hospital in a suburb of L.I., N.Y.
Sample

- Adults admitted to this suburban hospital, who have been diagnosed with colorectal cancer.
- The charts requested, by colorectal cancer diagnosis, from the Cancer Registry.
- The charts accessed in the Medical Records department.
Procedure

- Obtained approval from the IRB’s @ Case Western Reserve University and NSUH-Manhasset.
- The DCI developed by the investigator and approved by the IRB’s.
- Requested the charts of individuals who had been admitted and diagnosed with colorectal cancer.
• The individual charts were requested from the Cancer Registry, by the diagnosis of colorectal cancer.

• Employees of the Medical Records department obtained the charts.

• Data access was performed by the investigator, only.
• 257 individual charts were obtained.
• Data entry onto the DCI was performed by the investigator, only.
• The data collected was inputted into SPSS version 15.
Inclusion criteria

- Adults aged 18 and over.
- Diagnosis of colorectal cancer in these adults.
- Patients admitted to NSUH-Manhasset during the calendar year of 2007.
Instrumentation

- The DCI, developed by the investigator.
- Evaluated: gender, age, geographic area of residence, site of cancer, stage at diagnosis, prior history of cancer, family history of cancer, family history of colorectal cancer, history of polyps, history of IBD, BMI, history of tobacco smoking and current tobacco use.
- Answered Yes/No; or subscales numbered 1-5; number 9 for missing data.
Statistical Analysis

• Descriptive statistics: frequencies and crosstabs.

• Crosstabs compared under age 50 to age 50 and older, in relation to the items on the DCI, that pertained to risk factors.
Findings

- 10.5% of the sample was under age 50.
- Relatively evenly divided between male (48.2%) and female (51.4%).
- 36.9% of the sample was aged 60-69.
- The most frequent sites of cancer were the right colon (36.3%) and the sigmoid (left) colon (33.1%).
• More than half the sample were residents of L.I., N.Y. (59.1%).
• 22.6% of the sample had a prior history of cancer.
• 36.6% of the sample had a family history of cancer.
• 10.5% of the sample reported a family history of colorectal cancer.
• 49% of the sample reported a history of smoking.
• 35.6% of the sample had a BMI of 25-29.9 (overweight).
• 31.6% of the sample had a BMI of 30 or > (obese).
Discussion of findings

- Adults under age 50 exhibited three common risk factors: a family history of cancer, a history of smoking and obesity.
- Adults aged 50 and older exhibited five common risk factors: a prior history of cancer, a family history of cancer, a family history of colorectal cancer, a history of smoking and obesity.
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<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 and &gt;</th>
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</thead>
<tbody>
<tr>
<td>Male:</td>
<td>51.9%</td>
<td>48%</td>
</tr>
<tr>
<td>Female:</td>
<td>48.1%</td>
<td>52%</td>
</tr>
<tr>
<td>FHX-CRC:</td>
<td>7.7%</td>
<td>11.7%</td>
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<tr>
<td>FHX-CAN:</td>
<td>46.2%</td>
<td>38.1%</td>
</tr>
<tr>
<td>PHX-CAN:</td>
<td>7.4%</td>
<td>24.6%</td>
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<tr>
<td>H smoking:</td>
<td>37%</td>
<td>51.3%</td>
</tr>
<tr>
<td>Obesity:</td>
<td>46.2%</td>
<td>38.5%</td>
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• The common risk factors are: a family history of cancer, a history of smoking and obesity
• Adults aged 50 and older additionally reported a personal history of cancer and a family history of colorectal cancer.
- This study evaluated a small sample (257).
- One geographic area was represented.
- The patients of one hospital were evaluated.
There is no reason to recommend a change in public health policy. Colonoscopy should still be recommended to adults beginning at age 50.
Future

• A multicenter study involving more geographic regions of the U.S.
• A larger sample.
• Nursing professionals partnering with the community to prevent the development of colorectal cancer.