

# Patient Compliance with Colorectal Cancer Screening: A Scoping Review

**Peyton Jackson BSN, RN and Brandon Crocker BSN, RN, NE-BC**

**Faculty Advisor: Margaret Harvey, PhD, APRN, ACNP-BC, CHFN**

**College of Nursing - The University of Tennessee Health Science Center - Memphis, TN**

## Purpose

The purpose of this DNP project is to examine the association between colorectal cancer screening modality and patient compliance.

## Background

- Colorectal cancer is the third leading cause of cancer death for both men and women in the United States, with an average of 150,000 new cases and 52,000 deaths each year (USPS, 2021).
- Routine screening for colorectal cancer can help find cancer at an early stage and decrease the number of deaths from the disease (USPS, 2021).
- Current guidelines provided by the United States Preventive Service Task Force (USPSTF) (2021) recommend colorectal screening begin at age 45.
- Screening modalities:
  - Direct Visualization Tests
    - Colonoscopy
    - Sigmoidoscopy
  - Stool-Based Screenings
    - Guaiac-based fecal occult blood test (gFOBT)
    - Fecal immunochemical test (FIT)(Centers for Disease Control and Prevention [CDC], 2021).
- Direct visualization via colonoscopy or sigmoidoscopy is recommended every five to ten years depending on familial history, personal medical history, or have a substantial risk for colon cancer. Fecal tests, on the other hand, screen for cancer DNA and antibodies that can be found in the stool. These screening tests are recommended every one to three years depending on the type of test the patient receives.
- Each screening modality has risks and benefits, but overall patient compliance remains low.

## Methods

### Literature Search

- A literature search was conducted in PubMed, EBSCO, and Medline from September 2020 to November 2022.

### Eligibility Criteria

- Articles must have been approved by the IRB and published in a medical or nursing journal.
- Inclusion criteria: Research must have been completed on human participants and met CRC screening guidelines and published within the past 10 years.

### Selection of Sources

- The literature search yielded 46 articles met the search criteria and were published within the last thirty years.
- 18 articles were chosen for rapid critical appraisal.
- 10 articles were chosen for this review.

## Results

- Six articles demonstrated an increase in colonoscopy compliance education and decrease in mortality rate.
- Seven articles indicated an increase in noninvasive testing compliance.
- All studies demonstrated statistically significant findings, except for one systematic review.
- Noninvasive stool-based tests have a higher compliance rate than colonoscopy and ultimately have an impact on decreasing mortality.

	1	2	3	4	5	6	7	8	9	10
Outcome #1 CC	NE	↑ <sup>b</sup>	NE	↑ <sup>a</sup>	NE	↑ <sup>a</sup>	↑ <sup>a</sup>	—	↑ <sup>a</sup>	↑ <sup>a</sup>
Outcome #2 NITC	↑ <sup>a</sup>	↓ <sup>b</sup>	↓	↑ <sup>a</sup>	↑ <sup>a</sup>	↓	↑ <sup>a</sup>	↑ <sup>a</sup>	↑ <sup>a</sup>	↑ <sup>a</sup>
Outcome #3 PCRC	↑ <sup>a</sup>	✓	✓	NE	NE	↑ <sup>a</sup>	✓	✓	↓	✓
Outcome #4 MR	↓	NE	↓ <sup>a</sup>	↓	NE	↓	NE	↓	↓	NE
Outcome #5 Education	↑ <sup>a</sup>	↑ <sup>b</sup>	NE	↑ <sup>a</sup>	↑ <sup>a</sup>	NR	NE	↑ <sup>a</sup>	↑ <sup>a</sup>	✓

### Symbol Key

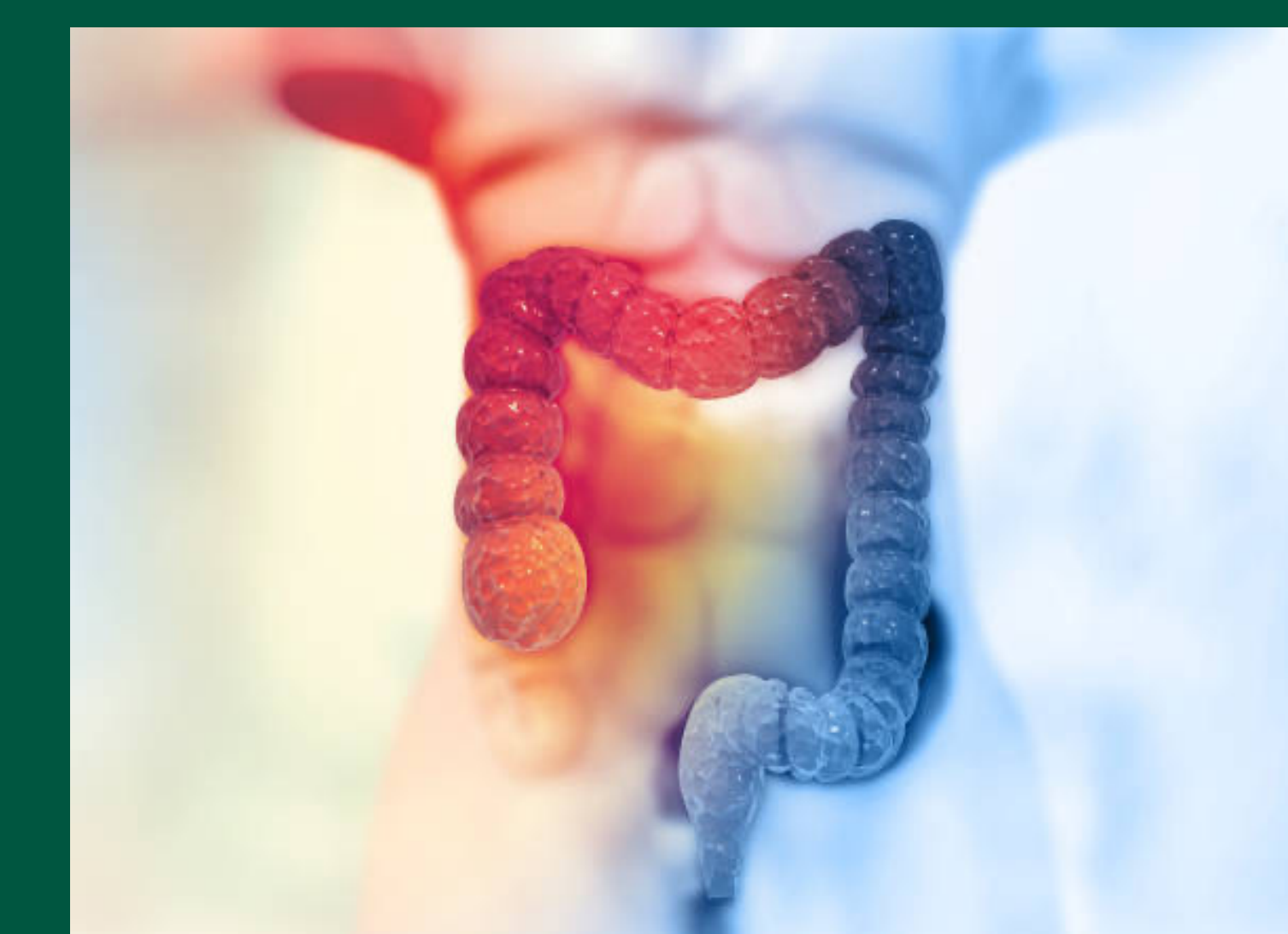
↑ = Increased, ↓ = Decreased, — = No Change, NE = Not Examined, NR = Not Reported, ✓ = applicable or present  
CC= colonoscopy/sigmoidoscopy compliance (direct visualization test), NITC= noninvasive testing compliance (stool-based tests), PCRC= positive for colorectal cancer, MR= mortality rate, a= statistically significant, b= not statistically significant

### Legend

1= Dougherty, et al. (2018); 2= Dalton (2018); 3= Murphy et al. (2020); 4= Peterson et al. (2016) 5= Hirko, et al. (2020); 6= Singal, et al. (2017); 7 = Gupta, et al. (2013); 8 = Charters, et al. (2013); 9 = Warren Anderson, et al. (2019); 10= Adler, et al. (2014)

## Implications for Practice

- Colorectal cancer screening compliance can decrease mortality.
- The choice for which screening modality must be individualized.
- Patient compliance can be improved by:
  - Comprehensive education from the healthcare team
  - Discussion of risks and benefits of screenings
  - Evaluating individual health beliefs or fears
  - Utilize patient navigators



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