

# Colorectal Cancer Screening: Advances and Recommendations

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## Abstract

Colorectal cancer (CRC) is a leading cause of cancer-related morbidity and mortality worldwide. Early detection overview of recent advances in colorectal cancer screening methods and presents updated recommendations based and colonoscopy, are reviewed alongside emerging techniques like stool DNA testing, liquid biopsy, and advanced

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Introduction: Colorectal cancer (CRC) is a leading cause of cancer-related morbidity and mortality worldwide. Early detection and prevention are crucial for improving outcomes. This review discusses recent advances in colorectal cancer screening methods and presents updated recommendations based on the latest evidence. The review covers traditional methods like colonoscopy and emerging techniques like stool DNA testing, liquid biopsy, and advanced imaging. The goal is to provide clinicians and patients with the most current information to guide screening decisions.

1. Introduction: Colorectal cancer (CRC) is a leading cause of cancer-related morbidity and mortality worldwide. Early detection and prevention are crucial for improving outcomes. This review discusses recent advances in colorectal cancer screening methods and presents updated recommendations based on the latest evidence. The review covers traditional methods like colonoscopy and emerging techniques like stool DNA testing, liquid biopsy, and advanced imaging. The goal is to provide clinicians and patients with the most current information to guide screening decisions.

2. Epidemiology and Risk Factors: CRC is a leading cause of cancer-related morbidity and mortality worldwide. The incidence of CRC has been increasing in many countries, particularly in those with a high incidence of CRC. Risk factors for CRC include age, family history, inflammatory bowel disease, and lifestyle factors like diet and physical activity.

3. Screening Methods: Screening methods for CRC include colonoscopy, sigmoidoscopy, stool DNA testing, and fecal occult blood testing (FOBT). Each method has its own strengths and limitations. Colonoscopy is the gold standard for CRC screening, allowing for direct visualization of the colon and removal of polyps. Stool DNA testing is a non-invasive method that can detect CRC and precancerous polyps. FOBT is a simple, non-invasive method that can detect CRC and precancerous polyps.

4. Recommendations: The American Cancer Society (ACS) recommends that individuals aged 45 and older undergo regular colorectal cancer screening. The choice of screening method depends on individual risk factors, preferences, and access to care. For individuals at average risk, colonoscopy is recommended every 10 years starting at age 45. For individuals at high risk, more frequent screening is recommended. For individuals who prefer a non-invasive method, stool DNA testing or FOBT are options.

5. Conclusion: Colorectal cancer screening is an effective way to reduce the burden of CRC. Recent advances in screening methods have improved the accuracy and convenience of CRC screening. Updated recommendations based on the latest evidence provide clinicians and patients with the most current information to guide screening decisions.

