

# Colorectal Cancer Trends and Digital Interventions in Veterans



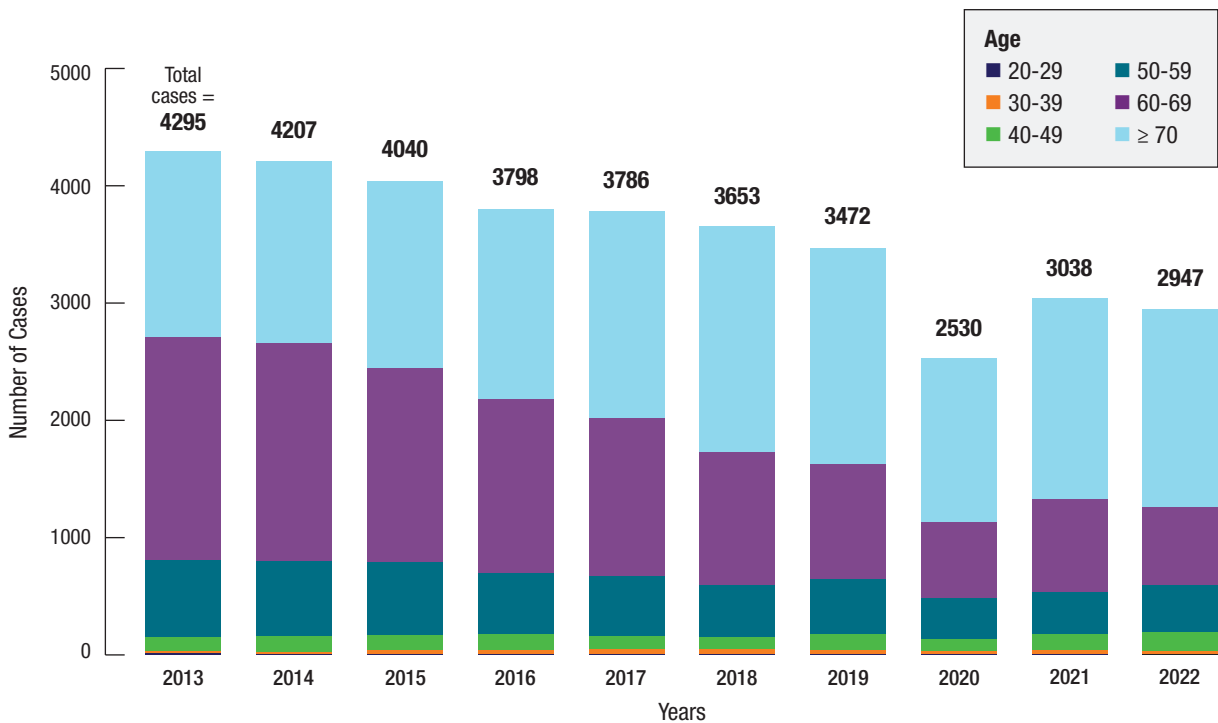
Aasma Shaukat, MD, MPH

**Colorectal cancer (CRC)** is one of the most commonly diagnosed cancers among US veterans, despite declining rates since 2013.<sup>1,2</sup> Screening is key to reducing risk, and veterans have higher CRC screening rates and less racial disparities in CRC screening compared to civilians.<sup>1-3</sup> This is potentially due to equal healthcare coverage within the VA.<sup>2,3</sup> Although most cases of CRC have been shown to occur in average-risk individuals within the guideline-designated screening age range, more than 12% of cases occur in high-risk individuals and those outside the recommended age range, highlighting a significant minority not covered by conventional screening.<sup>4</sup>

Screening quality is also important for lowering CRC rates. A large VA study recently found that within 3 years, the postcolonoscopy CRC (PCCRC) rate was 6.4%.<sup>5</sup> This finding was mainly due to missed lesions and incomplete resection during colonoscopy.<sup>5</sup>

The VA has strived to create programs to increase screening completion and improve bowel prep and surveillance rates.<sup>6-8</sup> Interventions, such as Annie, an informational texting app, aim to improve bowel preparation for screening colonoscopy, as well as adherence to repeat colonoscopies.<sup>7,8</sup> Other interventions have used phone calls or text messages to improve the fecal immunochemical test (FIT) screening return rate among veterans.<sup>6,9</sup>

## Prevalence of CRC in Veterans by Age<sup>1</sup>



The COVID-19 pandemic affected cancer reporting which could explain significantly lower rates during 2020.<sup>10,11</sup>

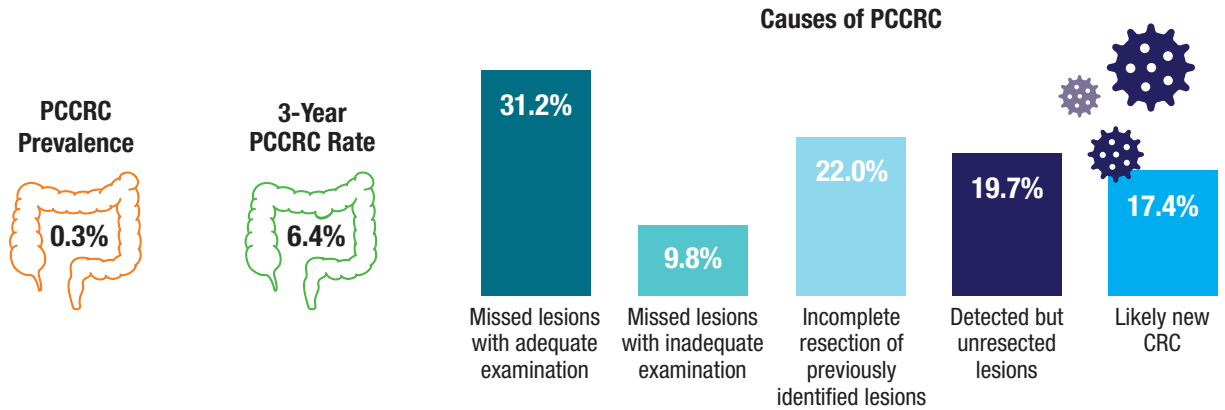


**From 2013 to 2022**, overall CRC cases in veterans have decreased by 31.4%. The most significant decrease in cases was seen in veterans aged 60-69 (-65.2%), while cases increased in veterans aged 30-49 years (+> 31%). Cases remain generally highest in veterans aged ≥ 70, rising 6.8% overall during this time.

## PCCRC Rates in FIT-Positive Individuals<sup>5</sup>



A study with > 52,000 VA patients, who were FIT-positive and had a colonoscopy from 2015 through 2022, assessed PCCRC rates and causes. PCCRC was defined as CRC found ≥ 6 months after colonoscopy.

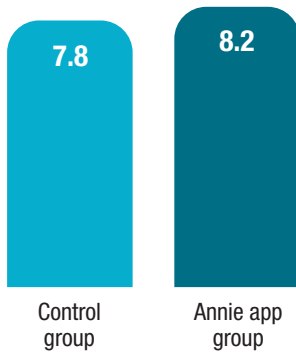


## Digital Interventions to Improve Bowel Preparation and FIT Return Rate<sup>7,9</sup>



A study with 640 veterans at the Minneapolis VA assessed the effectiveness of a texting application, Annie, on bowel preparation quality and patient satisfaction between 2019 and 2020. Annie provided a 6-day bowel preparation protocol via text message. Bowel preparation quality was measured by the Boston Bowel Preparation Scale, in which scores of 0 to 3 are given for each segment of the colon: left, transverse, and right. A total score of ≥ 6 with a minimum score of 2 per segment is considered adequate preparation; higher scores can facilitate better detection of small or flat polyps.

### Bowel Preparation Quality Score

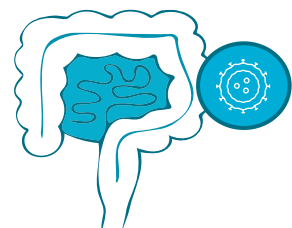
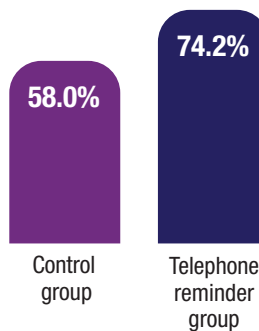


Differences were still present in bowel preparation scores after controlling for age and mental health diagnoses.

**Patient Satisfaction**

Participants reported **high satisfaction**, and **93% of survey respondents wanted to receive the text messages again for future procedures.**

### FIT Completion Rate



Another study of 800 patients at the Minneapolis VA in 2020 evaluated the effect of a telephone call reminder on FIT completion rates.