

Colorectal Cancer Screening Guideline

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Last guideline approval: May 2020

Guidelines are systematically developed statements to assist patients and providers in choosing appropriate health care for specific clinical conditions. While guidelines are useful aids to assist providers in determining appropriate practices for many patients with specific clinical problems or prevention issues, guidelines are not meant to replace the clinical judgment of the individual provider or establish a standard of care. The recommendations contained in the guidelines may not be appropriate for use in all circumstances. The inclusion of a recommendation in a guideline does not imply coverage. A decision to adopt any particular recommendation must be made by the provider in light of the circumstances presented by the individual patient.

Major Changes as of May 2020

- Update of screening recommendations for patients at high risk, including starting at age 40 for certain populations per 2017 Multi-Society guidelines
- Expanded section on African American screening age
- Expanded guidance on FIT-DNA
- Updated follow-up of abnormal screening results per 2020 Multi-Society guidelines

Background

Colorectal cancer (CRC) is the fourth most commonly diagnosed cancer and the second leading cause of cancer deaths in the United States. There is good evidence that CRC-related morbidity and mortality can be reduced through early detection and treatment of early-stage disease and through the identification and removal of adenomas, the precursor of colorectal cancers.

Screening

Colorectal cancer risk groups

Average risk: Patients aged 50 years or older with no personal history of CRC or adenomas, no inflammatory bowel disease, and with a negative first- and second-degree family history for CRC.

Increased risk: Patients with a personal or family history of CRC or related conditions. (See Table 4.)

CRC screening recommendations by age group

Table 1. Colorectal cancer screening recommendations by age group	
Age	Recommendation
30 through 49 years	Review family history to identify patients at increased risk for CRC (Table 4) or at high risk for inherited cancer syndromes (see Referral to Genetics). For African American patients whose family history is not known, consider beginning routine screening at age 45. (See Note below.)
50 through 75 years	Provide routine screening for patients at average risk (Table 2) and at increased risk (Table 4).
76 through 85 years	Consider routine screening only for patients who have not been up to date with screening prior to age 76 years and/or who are healthy enough to undergo treatment if CRC is detected and have a life expectancy of 10 years or more.
86 years and older	Screening is not recommended.

Note: Screening age for African Americans

African Americans in every age range have higher colorectal cancer incidence and mortality rates compared to other races. Because of this, some guidelines have recommended routine screening of all African American patients beginning at age 45.

KPWA recommends **shared decision-making** with African American patients about beginning routine screening at age 45, because:

- There are no randomized controlled trials to demonstrate that early screening leads to reduction in incidence or mortality.

- The risk of colorectal cancer in African Americans aged 45–49 is approximately equal to the risk of colonoscopy perforations (3.8/10,000 and 4.0/10,000, respectively).
- While FIT testing carries little risk, positive FIT tests must be followed by colonoscopy.

Decisions about earlier screening should be individualized to patient history and preferences, and should balance estimated risks and benefits.

Recommended screening tests at KPWA medical facilities

Fecal immunochemical test (FIT)

Average-risk patients: Annual FIT is a simple method for screening average-risk patients as its net benefit is similar to the more invasive and resource-intensive recommended techniques. FIT is a simple and rapidly performed test that does not require preparation, sedation, or a doctor appointment. Its cost is minimal and conserves colonoscopy resources for patients who are at higher risk and for those who test positive on stool-screening tests. However, screening with FIT is effective only when performed annually and is not suitable for patients unable to adhere to the annual testing cycle. FIT is not the appropriate test for patients at increased risk for CRC because of family or personal history of cancer or other high-risk conditions (e.g., ulcerative colitis). A positive FIT **must** be followed by a colonoscopy.

Colonoscopy

Average-risk patients: Colonoscopy at 10-year intervals is an acceptable screening method for patients who prefer this approach or those who may have difficulty with adhering to an annual FIT testing regimen. Patients should be informed of the differences in potential risks associated with colonoscopy compared with annual FIT testing. For questions about colonoscopy coverage, patients can contact Member Services.

Increased-risk patients: Colonoscopy is the only screening method recommended for patients with a personal or family history of CRC or related conditions. See Table 4 for recommended screening frequency and age at initial screening.

Other acceptable screening tests

The following additional screening tests are less-preferred options. However, an adult who has had one of these tests is considered screened. Follow-up screening using a preferred option is recommended.

Stool DNA test (FIT-DNA, Cologuard)

The stool DNA test incorporates multiple molecular biomarkers with FIT. It was approved by the U.S. Food and Drug Administration (FDA) in 2014 for screening men and women aged 50 or older with an average risk of CRC. The test is covered by Medicare at 3-year intervals, as it is considered an acceptable testing modality by USPSTF. Coverage criteria may vary among health plans, so members should check with Member Services to be certain about coverage.

The USPSTF reviewed the evidence on the stool DNA test in its 2016 recommendation and noted that it had a higher single-test sensitivity than FIT alone in detecting colorectal cancer. However, it has a lower specificity than FIT alone, which leads to increased false-positives and a higher risk of harms from follow-up colonoscopies. In addition, it has not been evaluated in randomized controlled trials or longitudinal prospective studies, and there is uncertainty surrounding the appropriate screening interval. Both screening colonoscopy every 10 years and annual FIT are more effective and less costly than stool DNA.

As of January 2020, there are no new published studies to provide additional evidence on the accuracy and optimal screening interval of stool DNA tests for CRC screening in asymptomatic adults. There is low- to moderate-quality evidence from one prospective cohort study (Cooper 2018) showing that there is no significant difference in the performance of either FIT or stool DNA among white and African American patients referred to colonoscopy.

CT colonography/virtual colonoscopy

Virtual colonoscopy is not preferred for primary screening. It may be considered for patients who have relative contraindications to colonoscopy or who have attempted a colonoscopy that was unsuccessful. See [Clinical Review Criteria for Virtual Colonoscopy or CT Colonography](#). The USPSTF recommendation (2016) concludes that the evidence is insufficient to assess the benefits and harms of computed tomography as a screening modality for colorectal cancer. CT colonography recommendations will be revisited when more evidence becomes available.

Screening recommendations for patients at AVERAGE risk

Table 2. Colorectal cancer screening for patients at AVERAGE risk		
“Average risk” is defined as aged 50 years or older with no personal history of CRC or adenomas, no inflammatory bowel disease, and with a negative first- and second-degree family history for CRC.		
Test	Age at initial screening	Frequency
Fecal immunochemical test (FIT)	50 years	Annually through age 75
Colonoscopy	50 years	Every 10 years through age 75

Shared decision-making

Due to the lack of head-to-head trials comparing the net benefits of the different tests, efforts to reduce CRC deaths should focus on implementing strategies that maximize the number of patients who get screening of some type. The different CRC screening options are variably acceptable to patients; eliciting patient preferences is one step in improving adherence. Ideally, shared decision-making between clinicians and patients incorporates information on local test availability and accuracy, as well as patient preference (USPSTF 2016).

Table 3. Shared decision-making about CRC screening options—patients at AVERAGE risk	
Advantages/benefits	Disadvantages/risks
FIT (fecal immunochemical test) – KPWA preferred option	
<ul style="list-style-type: none"> • Can be done at home. • Quick. • Noninvasive. No risk of bowel tears or infections. • Does not require a doctor appointment or sedation. • Requires no advance preparation, dietary modification, or loss of time from work. • Minimal handling of stool. • There is direct evidence that stool screening test (followed by colonoscopy when positive) decreases CRC mortality. • Single specimen required. 	<ul style="list-style-type: none"> • Some patients have discomfort with the thought of handling stool. • Colonoscopy is required if FIT is positive. • Must be done annually to be an effective screening method—adherence is important to the effectiveness of the program. • Cannot visually identify polyps.
Colonoscopy – KPWA preferred option	
<ul style="list-style-type: none"> • Views entire colon. Direct visualization techniques offer greater sensitivity for detection of adenomas of all sizes. • Requires testing only every 10 years (presuming no polyps or other abnormalities). • Only screening method with the potential to prevent CRC, as it allows not only for the detection but also the removal of polyps and precancerous lesions. 	<ul style="list-style-type: none"> • Requires full bowel prep. Effectiveness of colonoscopy diminished if bowel prep is incomplete. • Sedation needed. • May require loss of time from work. • May be associated with a potential risk of bowel tears. • The evidence on the benefit of colonoscopy is indirect.
Stool DNA test (FIT-DNA, Cologuard) – non-preferred	
<ul style="list-style-type: none"> • Has same benefits as FIT test: non-invasive, no dietary change needed, and done at home. • Sensitivity may be higher than FIT. 	<ul style="list-style-type: none"> • Specificity is lower than FIT, resulting in more false-positives and more follow-up colonoscopies, which increases the risk of harms. • FIT-DNA sensitivity was compared to the sensitivity of a single FIT test, rather than to 3 annual FIT tests (e.g., the recommended FIT screening frequency), so it is unknown whether the increase in sensitivity holds true in standard clinical practice.

Screening recommendations for patients at INCREASED risk

Table 4. Colorectal cancer screening for patients at INCREASED risk “Increased risk” is defined as a personal or family history of CRC or related conditions. Recommendations are based on 2017 U.S. Multi-Society Task Force on Colorectal Cancer Screening.			
Eligible population	Test	Age at initial screening	Frequency if colonoscopy negative
Personal history			
CRC or adenomatous polyps ¹	Colonoscopy	Consult with Gastroenterology.	Consult with Gastroenterology.
Inflammatory bowel disease (Crohn’s disease, ulcerative colitis)	Colonoscopy	Consult with Gastroenterology.	Every 1–2 years
Family history			
1 first-degree relative ² with CRC or advanced adenoma ³ diagnosed at age < 60 years or 2 first-degree relatives ² with CRC or advanced adenoma ³ diagnosed at any age	Colonoscopy	Whichever comes first: Age 40 or 10 years prior to earliest age of diagnosis	Repeat per colonoscopy findings.
1 first-degree relative ² with CRC or advanced adenoma ³ diagnosed at age ≥ 60 years	Colonoscopy	Age 40	Repeat per colonoscopy findings.
1 first-degree relative ² with advanced serrated adenoma ⁴ or advanced adenoma ³ diagnosed at any age	Colonoscopy	Whichever comes first: Age 40 or Age of diagnosis	Repeat per colonoscopy findings.
¹ Adenomatous polyps (also called adenomas) are growths with malignant potential and are the most common type of colorectal polyp. ² First-degree relative = parent, sibling, or child. ³ Advanced adenomas meet any of these criteria: high-grade dysplasia, ≥ 10 mm, any villous component. ⁴ Advanced serrated adenomas have diffuse and often mild cytological dysplasia, and are predominantly located in the distal colon. They have high malignant potential.			

Referral to Genetics

Refer patients with any of the following to Genetics for further risk evaluation/assessment for high-risk cancer syndromes:

- Personal history of CRC before age 50
- Personal history of CRC and endometrial cancer at any age
- Personal history of CRC and ovarian cancer at any age
- Personal history of CRC and two first-degree relatives with history of colorectal, endometrial, or ovarian cancer at any age
- Family history of inherited syndromes such as Lynch, familial adenomatous polyposis, or familial diffuse gastric cancer (include immune histochemistry or microsatellite instability changes detected on tumor testing)
- Personal history of 10 or more adenomatous polyps
- Personal history of multiple primary colon cancers at any age

Follow-up

Table 5. Follow-up of screening test results Recommendations are consistent with 2020 US Multi-Society Task Force Recommendations for Follow-up After Colonoscopy and Polypectomy (Gupta 2020).		
Test	Result	Follow-up testing
FIT	Negative	Screen again in 1 year with one of the options for average-risk patients (Table 2).
	Positive	Refer for colonoscopy .
FIT-DNA	Negative	Screen again in 3 years with one of the options for average-risk patients (Table 2).
	Positive	Refer for colonoscopy .
Colonoscopy ¹	Normal or ≤ 20 HPs ² < 10 mm	Screen again in 10 years with one of the options for average-risk patients (Table 2).
	Abnormal	Repeat colonoscopy at
	1–2 adenomas < 10 mm	7–10 years
	1–2 SSPs ³ < 10 mm	5–10 years
	3–4 adenomas < 10 mm; 3–4 SSPs ³ < 10 mm; HP ² ≥ 10 mm	3–5 years
	5–10 adenomas < 10 mm; 5–10 SSPs ³ < 10 mm; adenoma or SSP ≥ 10 mm; adenoma w/villous or tubulovillous histology; adenoma w/high-grade dysplasia; SSP w/dysplasia; traditional serrated adenoma	3 years
> 10 adenomas	1 year	
	Piecemeal resection of SSP or adenoma ≥ 20 mm	6 months
¹ Colonoscopy must be of high quality, defined as: complete to cecum, adequate bowel prep to detect polyps > 5 mm, adequate colonoscopist adenoma detection rate, and complete polyp resection ² Hyperplastic polyps (HP) are the most common type of polyp, usually small in size (< 5 mm), and predominantly located in the distal colon. They have low malignant potential. ³ Sessile serrated polyps (SSP) are typically seen in the proximal colon. SSPs with cytological dysplasia have very high malignant potential. (Rosty 2013)		

Evidence Summary

To develop and update the Colorectal Cancer Screening Guideline, the guideline team:

- Adapted recommendations from externally developed evidence-based guidelines and/or recommendations of organizations that establish community standards.
- Reviewed additional evidence using an evidence-based process, including systematic literature search, critical appraisal, and evidence synthesis.

External guidelines eligible for adapting

Gupta S, Lieberman D, Anderson JC, et al. Recommendations for Follow-Up After Colonoscopy and Polypectomy: A Consensus Update by the **US Multi-Society Task Force on Colorectal Cancer**. *Gastrointest Endosc*. 2020 Mar;91(3):463-485.e5.

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Key questions from KPWA review

Question 1. What interventions are effective in increasing the uptake of fecal tests for colorectal cancer screening in asymptomatic adults?

The overall results of published randomized controlled trials (RCTs) and systematic reviews (qualitative synthesis or quantitative with meta-analysis) (including Dougherty 2018, Isaaka 2019, Rat 2018, Davis 2018, Jager 2019) show the following:

- Fecal blood test mailed or visit-based outreach and patient navigation were the most frequently studied interventions and had the strongest evidence of effect.
- There is strong evidence showing that fecal blood test outreach significantly increases the colorectal cancer (CRC) screening rate by approximately 20% over usual care.
- A recent meta-analysis (Jager 2019) of RCTs mainly focusing on underserved populations showed a significantly higher CRC screening rate with mailed outreach versus usual care (clinic-based opportunistic offer of CRC screening), with an absolute increase of 28%. The addition of phone reminders did not significantly increase screening uptake.
- FIT-based CRC screening programs utilizing multilevel interventions (e.g., mailed FIT outreach followed by phone reminder, FIT provided with other preventive services such as vaccination) and reminders all have the potential of significantly increase screening participation, but fecal blood test mailed outreach appeared to be more effective than the other interventions in improving CRC screening rates.
- Mailed outreach is more effective in increasing CRC screening rates compared to usual care (office-based opportunistic offer), especially when combined with physician reminders or academic detailing, or when implemented as part of a multicomponent intervention in general.

- Other interventions shown to be effective in increasing rates of CRC screening were mailing of the fecal test kits, use of a pre-addressed stamped envelope, client reminders (written and telephone), and provider-ordered in-clinic distribution of the stool test kit.
- Narrative communication (personal stories or testimonials) may have a positive impact on cancer screening decision-making and uptake. Woudstra and Suurmond (2019) recommended that narrative interventions be tailored to cultural characteristics at the individual level, and not just at the group level. The authors also noted that narrative interventions may not work when system barriers such as cost or transportation are not addressed, when free test kits are not provided, when the narrative information is not implemented simultaneously with the screening test kit, or when the narrative is not culturally relevant.
- Limited evidence suggests that text message reminders may have a small effect on improving the rate of CRC screening (Uy 2017).
- Limited evidence from one KPWA study (Green 2019) showed that financial incentives significantly increase FIT uptake but not overall colorectal cancer screening.

Question 2. What interventions are effective in improving the rates of colorectal screening in minority groups, including African Americans, Hispanics, Asian Americans, Pacific Islanders, and Native American populations?

The overall results of the published studies and systematic reviews (with qualitative synthesis or meta-analysis) (including Degroff 2017, Davis 2018, Roland 2017, Sunny 2018, DuHamel 2019, Jager 2019, and Somsouk 2020) that comprised minority, multicultural, and ethnic groups (either representing the total populations studied or subgroups of the populations studied) show the following:

- There is strong evidence that mail outreach significantly increases CRC screening rates compared to usual care (clinic-based opportunistic offer of screening) in underserved and minority groups (absolute increase of 27% [95% CI, 23–30%]).
 - Highly effective strategies include providing screening kits by direct mail, use of a pre-addressed stamped envelope, client reminders, and provider ordered in-clinic distribution.
 - One randomized controlled trial (RCT) (Somsouk 2020) conducted in a public hospital and primary care practice system in San Francisco compared the effectiveness, costs, and cost-effectiveness of organized outreach using fecal immunochemical tests (mailed postcard and call, followed by a mailed FIT kit and a reminder phone call if the FIT kit was not returned) versus usual care among patients seen in primary care safety-net clinics. The results showed an increase in FIT participation in the outreach group versus usual care across all subgroups, but the highest was seen in the Asian and Hispanic populations, those who used non-English languages, and those who had had a prior FIT test.
 - A cluster RCT performed at 26 federally qualified health center clinics (STOP CRC [Coronado 2018 *JAMA Intern Med*]) showed that electronic health record–embedded mailed FIT outreach intervention significantly improved rates of FIT completion and rates of any colorectal cancer screening, and that higher rates of colorectal cancer screening occurred in clinics that successfully implemented the mailed outreach program.
 - Another RCT conducted at federally qualified health centers (Sea Mar in Washington state [Coronado 2018 *J Gen Intern Med*]) showed that mailed FIT plus live reminder phone calls were more effective than mailed FIT and mailed reminders in increasing the rate of FIT test completion in adults seen in Sea Mar community health centers in Washington state. The study also showed that for patients who preferred speaking Spanish, the combination of the automated and live phone calls produced the highest return rates. Individuals who received text-message reminders had significantly lower odds of returning their FIT kits than those who received mailed letters.
 - PROMPT, an RCT conducted at federally qualified health centers in Southern California (Coronado 2019), compared the effectiveness of automated and live prompts and reminders as part of a mailed FIT outreach program in patients receiving care in community health centers. The results showed that FIT completion rates were significantly

higher among the participants randomized to receive live phone call reminders either alone or in combination with automated prompts compared to automated approaches alone. The results also show differences in FIT completion rates according to patient language preference, number of clinic visits in the past year, and prior use of FIT.

- There is some evidence from one qualitative systematic review that narrative communication (personal stories or testimonials) may have a positive impact on cancer screening-decision making and uptake. Woudstra and Suurmond (2019) recommended that narrative interventions be tailored to cultural characteristics at the individual level, and not just at the group level. The authors also noted that narrative interventions may not work when system barriers such as cost or transportation are not addressed, when free test kits are not provided, when the narrative information is not implemented simultaneously with the screening test kit, or when the narrative is not culturally relevant.
- Narrative communication (personal stories or testimonials) may have a positive impact on cancer screening decision-making and uptake. There is strong evidence showing that patient navigation has a positive impact on increasing the uptake of CRC screening (FIT and colonoscopy) among racially diverse, low-income populations, including Latinos and African Americans (Degroff 2017, Roland 2017, Reuland 2017, Duhamel 2019, Sunny 2018).
- Limited published evidence suggests that text message reminders may have a small but statistically significant effect on increasing the rate of CRC screening in Alaska and Indian American natives (Muller 2017). Limited evidence from one KP Washington (Green 2019) trial indicates that financial incentives may significantly increase the completion rate of FIT, but not the overall rate of CRC screening. The subgroup analysis showed that Medicaid insurance patients were significantly more responsive to the incentives compared to non-Medicaid-insured individuals. African American, Hispanic, Asian were also more responsive to incentives than whites but the difference between groups in FIT completion rates did not reach statistical significance.

Question 3. What interventions are effective in improving the rate of diagnostic colonoscopy completion following an abnormal fecal test in asymptomatic adults?

- Published studies examining the barriers to follow-up colonoscopy after a positive CRC screening test identified several factors related to the patient, the provider, and/or the health system (Partin 2015, Partin 2017, Martin 2018, May 2019, and Jetelina 2019).
 - Patient-related factors include declining to undergo the colonoscopy procedure, missing appointments and failing to show up for the procedure, lack of transportation, concerns about risks or costs, competing health concerns, comorbidities, health literacy, culture, and other related or socioeconomic factors.
 - Provider-related factors include failure to inform the patient and/or notify a gastroenterologist of abnormal stool test, failure to order a colonoscopy, and/or failure to order any necessary pre-procedural labs or required evaluation before the procedure.
 - Health system/insurance-related factors include failure to process colonoscopy referral, failure to schedule colonoscopy appointment, cancellation, delay of procedure due to inadequate colonoscopy appointments, and/or limited endoscopic capacity.
 - Combination of factors.
- The results of published studies on the barriers to follow-up colonoscopy after positive stool test have to be cautiously interpreted considering the studies' design and settings. The studies were conducted in either VA or safety-net health systems, each with different patient characteristics that may limit generalization of the results. Their results, however, highlight the different barriers to follow-up colonoscopies after a positive FIT to consider in planning strategies for improving the uptake of colonoscopy after a positive CRC screening test.
- Studies addressing interventions to improve the rates of follow-up colonoscopy after abnormal CRC screening examined the effects of interventions at the patient, provider, and system levels (Selby 2017).

- Patient-level interventions used letters, emails, telephone calls, and navigators.
- Clinician-directed interventions included visit-based (reminder to clinician), non-visit-based (academic detailing, face-to-face to clinicians), and performance data.
- System and organization-level strategies included setting a goal of colonoscopy follow-up within 30 days of a positive FIT, early telephone contact to directly schedule follow-up colonoscopies, increasing colonoscopy capacity, implementing an organized outreach, and implementing standardized outreach by navigators.

Of these interventions, Selby found that patient navigators and giving providers reminders of performance data helped improved follow-up colonoscopy after abnormal FIT. Insufficient evidence was found about system-level interventions.

- Overall, there is moderate-quality evidence supporting patient navigators and provider-level interventions (Dougherty 2018).
- Low- to moderate-quality evidence from a long-term observational study (Selby 2019) suggests that serially implemented strategies at KP Northwest over 10 years significantly improved the uptake of colonoscopy after a positive FIT. Strategies implemented were integrating electronic health records across all sites, setting a goal of colonoscopy follow-up within 30 days of a positive FIT, tracking FIT-positive patients, early telephone contact to directly schedule follow-up colonoscopies, assigning the responsibility for follow-up tracking and scheduling to gastroenterology departments (versus primary care), increasing colonoscopy capacity, and implementing standardized outreach by navigators.

Question 4. Are there new published trials that would provide additional evidence on the use of stool DNA tests for CRC screening in asymptomatic adults, as regards the accuracy of the test and the optimal screening interval?

- There are new published studies to provide additional evidence on the accuracy and optimal screening interval of stool DNA tests for CRC screening in asymptomatic adults.
- The published studies confirm that a single stool DNA test may be more sensitive but less specific than one single FIT test in detecting colonic lesions. High sensitivity of a test is an important characteristic for CRC screening and other screening programs in order to detect lesions early and reduce death from CRC. However, it is also important that a CRC screening test have high specificity to reduce the need for follow-up colonoscopy.
- There is low- to moderate-quality evidence from one prospective cohort study (Cooper 2018) showing that there is no significant difference in the performance of either FIT or stool DNA among white and African American patients referred for colonoscopy.

Question 5. Is there direct evidence to support lowering the age of colorectal cancer screening in high- or average-risk adults?

The literature search did not identify any study that would provide direct evidence to support lowering the age for CRC screening in adult men or women. The American Cancer Society recommendation* of lowering the CRC screening age to 45 years for adults at average risk of colorectal cancer was based on a simulation model that used recent epidemiological data, showing a steady increase in CRC incidence in individuals younger than 50 years.

*This was a “Qualified recommendation”: *Indicating that there is clear evidence of benefit of screening but less certainty about the balance of benefits and harms, or about patients’ values and preferences, which could lead to different decisions about screening.*

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Guideline Development Process and Team

Development process

To develop the Colorectal Cancer Screening Guideline, the guideline team adapted recommendations from externally developed evidence-based guidelines and/or recommendations of organizations that establish community standards. The guideline team reviewed additional evidence in several areas. For details, see Evidence Summary and References.

This edition of the guideline was approved for publication by the Guideline Oversight Group in May 2020.

Team

The Colorectal Cancer Screening Guideline development team included representatives from the following specialties: family medicine, gastroenterology, and Kaiser Permanente Washington Health Research Institute.

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Disclosure of conflict of interest

Kaiser Permanente requires that team members participating on a guideline team disclose and resolve all potential conflicts of interest that arise from financial relationships between a guideline team member or guideline team member's spouse or partner and any commercial interests or proprietary entity that provides or produces health care–related products and/or services relevant to the content of the guideline.

Team members listed above have disclosed that their participation on the Colorectal Cancer Screening Guideline team includes no promotion of any commercial products or services, and that they have no relationships with commercial entities to report.