BC CANCER COLON SCREENING
Provincial Health Services Authority

BC Cancer Colon Screening
2023 Program Results

Colon Screening Program Data Extraction Date: February 11, 2026

Date Published: February 2026

Table of Contents

Program Overview **3**

Program Results **4**

Program Uptake 4

FIT Results 14

Colonoscopy Results 15

Wait Times 22

Quality Assurance 23

Summary 23

Appendix: Performance Indicator Glossary **24**

PROGRAM OVERVIEW

Colon cancer screening in B.C. is organized under a partnership framework with regional health areas, laboratory service providers, primary care providers and specialists. BC Cancer provides oversight for organized cancer screening in B.C., and supports:

- development of provincial policies, guidelines and standards,
- strategies to increase public and health care provider awareness, including both benefits and limitations of screening,
- correspondence to eligible British Columbians about results, follow-up and rescreening,
- quality assurance and quality improvement, and
- reporting and monitoring of system performance and screening outcomes.

In B.C., regional health areas are responsible for the planning and delivery of healthcare services within their geographic areas. Regional health areas and community health service providers work with BC Cancer Screening to provide high quality screening and diagnostic services.

Primary care providers play the important role of identifying eligible individuals for screening. BC Cancer provides material to help primary care providers discuss the benefits and limitations of screening with their patients. Once the decision to screen is made, the primary care provider directs the patient to the appropriate screening test and supports them throughout their screening journey.

In addition, as part of the Indigenous Cancer Strategy, BC Cancer Screening works collaboratively with the First Nations Health Authority, Métis Nation British Columbia and the BC Association of Aboriginal Friendship Centres to improve cancer screening access and participation of Indigenous people.

At this time Northern Health followed their own colon screening processes for referral and recall and did not provide data to the provincial program. Therefore, no monitoring of the efficacy and quality of colon screening can be done for the people living in the area comprising Northern Health.

The Colon Screening Program started in B.C. in November 2013. The data provided in this report is based on screening results for British Columbians registered in the Colon Screening Program.

The screening pathway is initiated by primary care providers referring asymptomatic age eligible individuals for a screening test – either the fecal immunochemical test (FIT) or colonoscopy, depending on the patient's risk of developing colorectal cancer.

PROGRAM RESULTS

1. Program Uptake

Asymptomatic, age eligible British Columbians can enter into the Colon Screening Program by speaking with their primary care provider. The primary care provider assesses the individual's risk of developing colorectal cancer and orders the appropriate screening test – FIT for an average risk individual ages 50-74 and colonoscopy for higher than average risk. Family history colonoscopy screening begins at age 40 or 10 years prior to the age of diagnosis of the youngest affected relative, whichever comes first. Those with a personal history of precancerous lesions can enter the program at any age.

Primary care providers enroll asymptomatic average risk individuals by selecting the appropriate option on the laboratory requisition form. Colonoscopy referrals for higher than average risk individuals are sent directly to the Colon Screening Program.

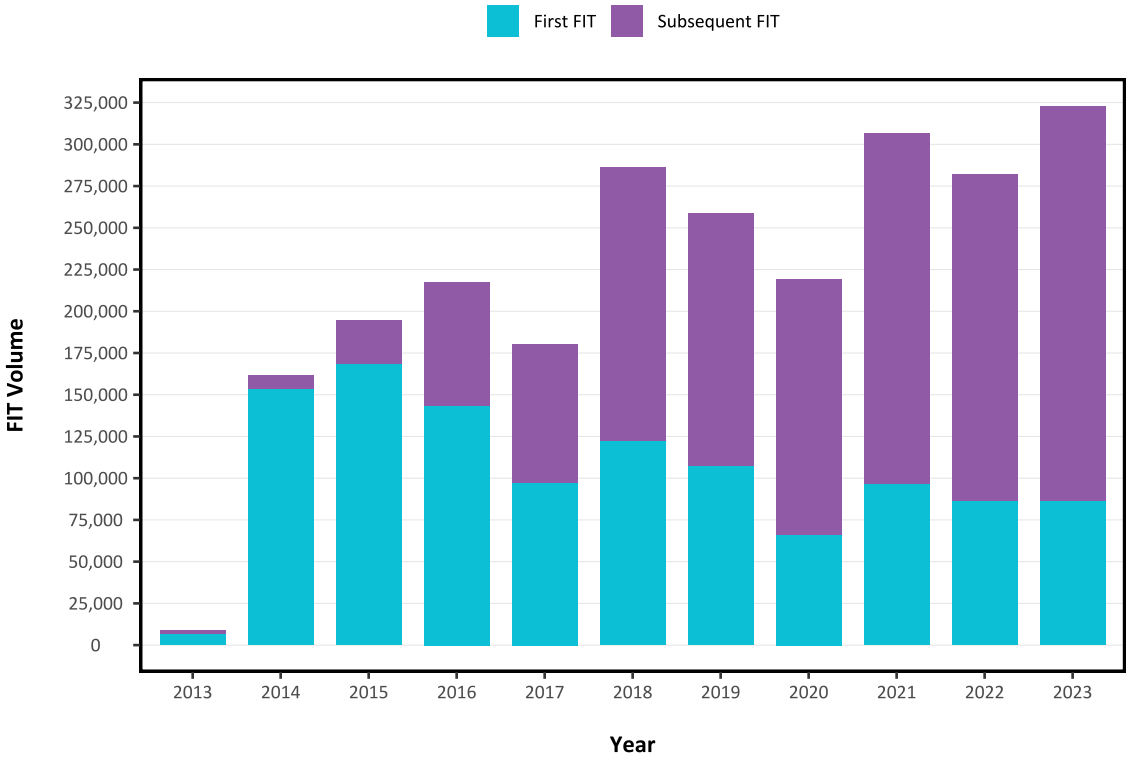
Figure 1 shows the volume of FIT results received by the Colon Screening Program since the inception of the provincial program. The number of people returning for subsequent rounds of screening is growing as expected. Volumes are lower in 2017 due to the FIT suspension that occurred that year, lower in 2019 due to the suspension 2 years prior and lower in 2020 due to the start of the COVID-19 pandemic. The proportion of FITs with results copied to the Colon Screening Program is 92% (Figure 2).

In 2023, 15.2% of patients had a repeat FIT within 21 months following a negative FIT in the program. Early return to screening utilizes screening resources but does not increase the uptake of colon screening in B.C.

In 2023, the program received 319,569 FIT results on 313,587 British Columbians ages 50-74. 11,649 individuals had a total of 11,823 colonoscopies for higher than average risk reasons. 9,157 colonoscopies were completed for a personal history of pre-cancerous lesion(s) plus an additional 1,405 colonoscopies performed within one year of a previous colonoscopy in patients requiring a short interval follow-up. 1,258 colonoscopies were completed for family history screening reasons. 58.1% of the age eligible population is up-to-date with colon screening in B.C. (Figure 5).

In 2022, the BC Guidelines and Protocol Advisory Committee updated the colonoscopy surveillance guidelines (https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/colorectal-cancer-part1). The colonoscopy surveillance interval was lengthened for individuals with fewer than five low risk precancerous lesions resected.

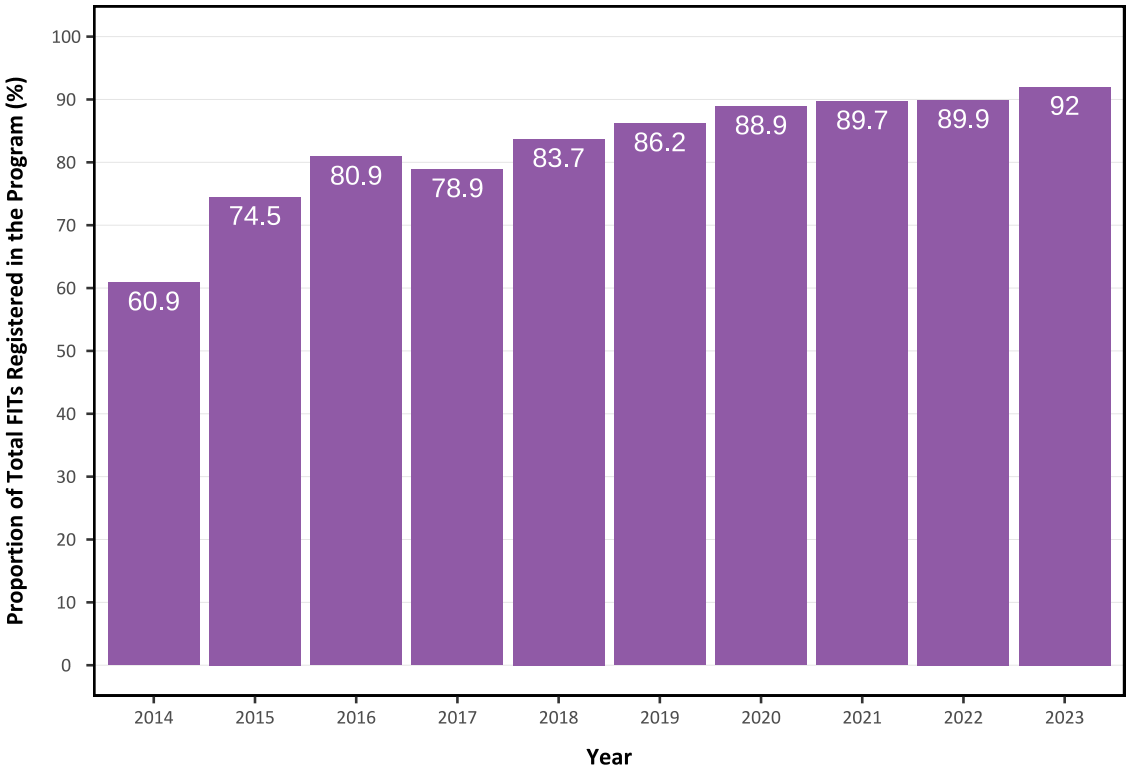
FIGURE 1: NUMBER OF FIT RESULTS RECEIVED BY THE COLON SCREENING PROGRAM OVER TIME



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. FIT was unavailable in B.C. for most of Q4 2017 and Q2 2020.

FIGURE 2: PROPORTION OF FITs REGISTERED WITH THE COLON SCREENING PROGRAM FOR BRITISH COLUMBIANS AGES 50-74

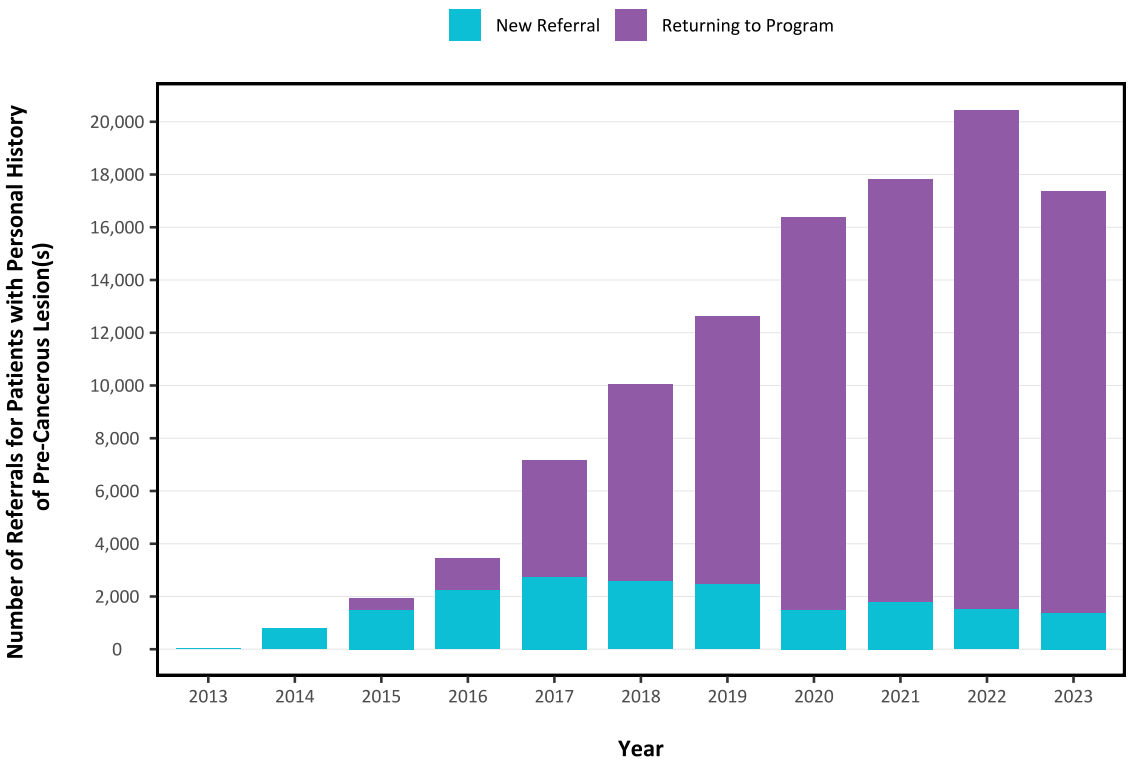


NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. An individual may have multiple FITS performed in any time period.
3. FIT was unavailable in B.C. for most of Q4 2017 and Q2 2020.

Figure 3 and Figure 4 demonstrate that the number of referrals for colonoscopy for individuals at higher than average risk reasons have continued to increase. This includes participants with a high risk family history defined as one first degree relative (i.e. parent, full-sibling or child) with colorectal cancer diagnosed under the age of 60 or two or more first degree relatives with colorectal cancer diagnosed at any age. A high risk family history is the colonoscopy referral indication in 11% of higher than average risk referrals while a personal history of pre-cancerous lesion(s) accounts for 89% of higher than average risk patients referred to regional health areas for colonoscopy in 2023. In 2023, there was a decrease in referrals for those with a personal history of pre-cancerous lesions as a result of the updated 2022 GPAC guidelines.

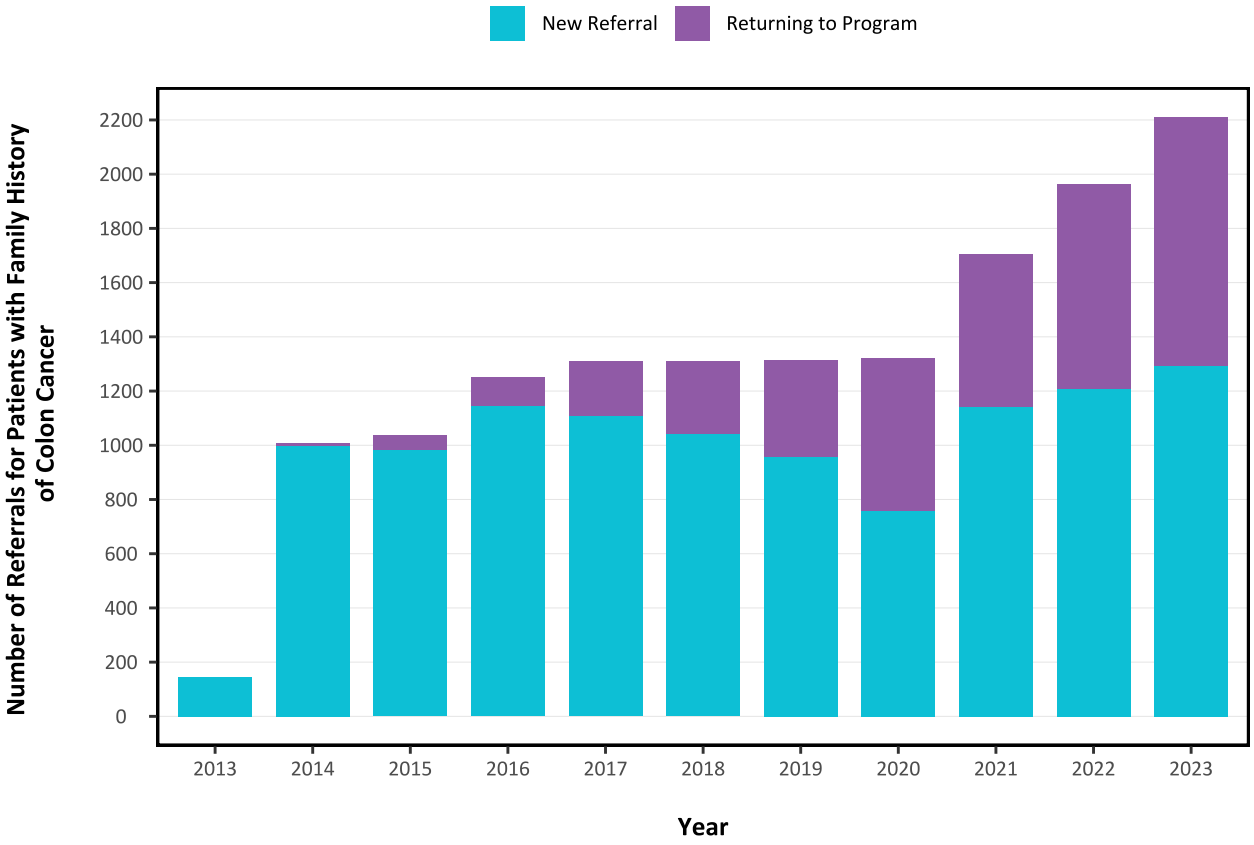
FIGURE 3: NUMBER OF REFERRALS FOR PATIENTS WITH PERSONAL HISTORY OF PRE-CANCEROUS LESION(S)



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. An individual may have multiple referrals.

FIGURE 4: NUMBER OF REFERRALS FOR PATIENTS WITH FAMILY HISTORY OF COLON CANCER

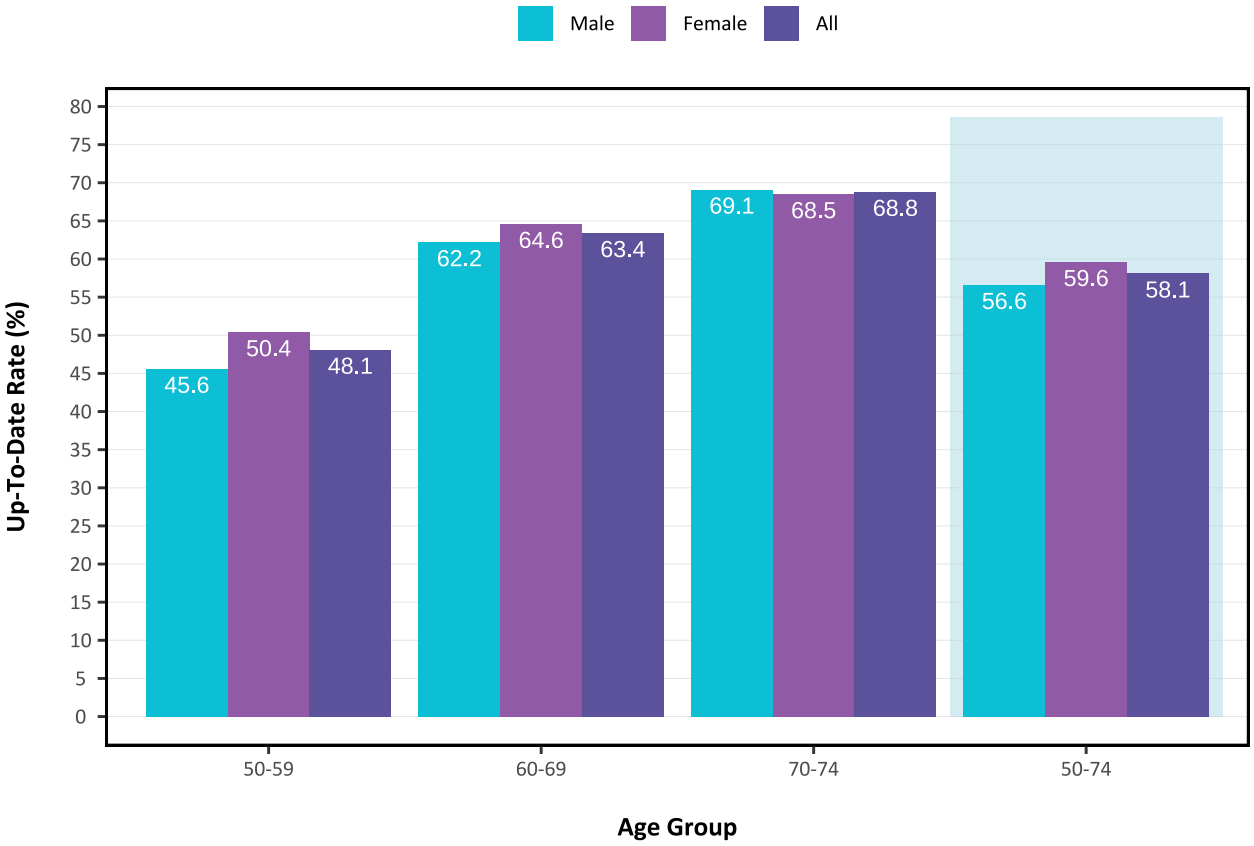


NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. An individual may have multiple referrals.

Figure 5 shows the up-to-date rate in B.C. for colon screening, by age and sex. Regional variation is shown in Figure 6. These data reflect individuals with a FIT in the last 30 months and those who are up to date with a program colonoscopy or who have had an MSP billed colonoscopy in the last 10 years.

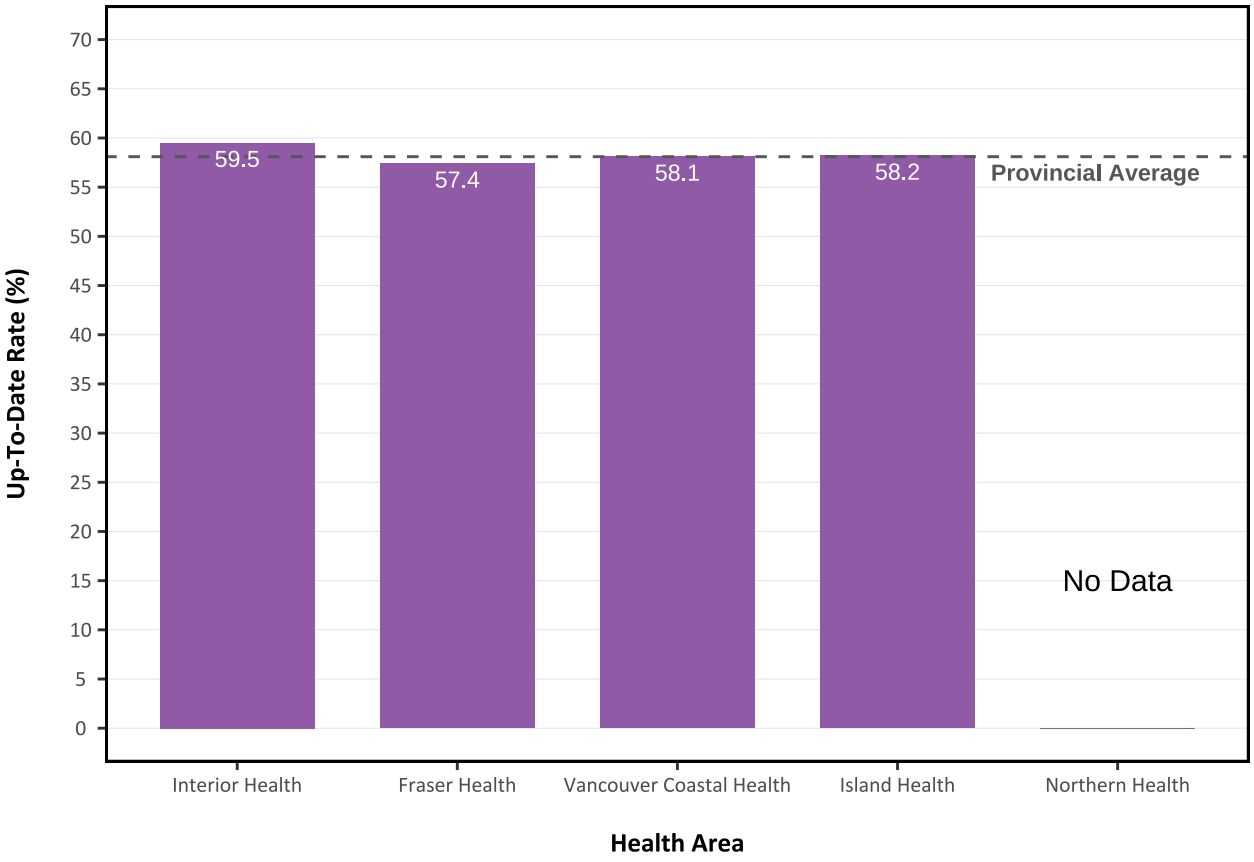
FIGURE 5: SCREENING UP-TO-DATE RATE IN B.C. BY AGE AND SEX



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026

FIGURE 6: SCREENING UP-TO-DATE RATE IN B.C. BY HEALTH AREA

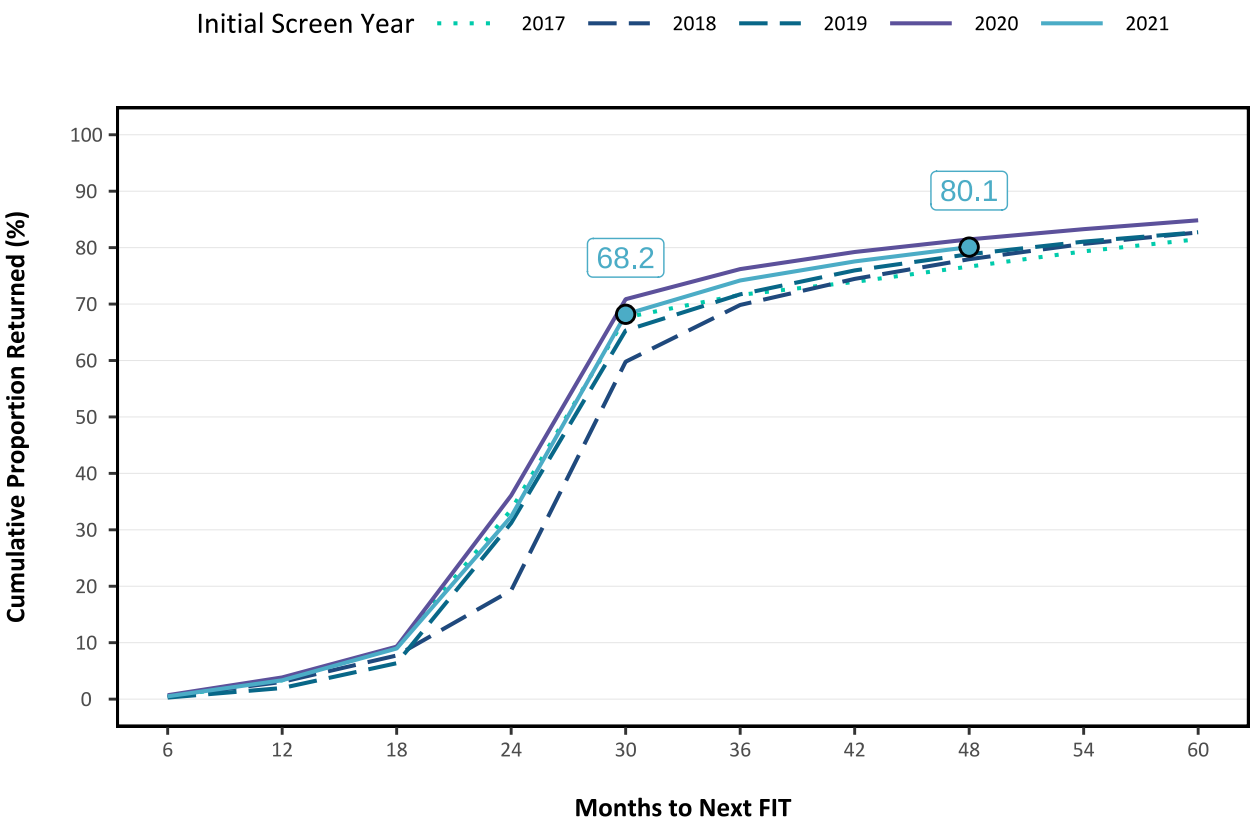


NOTES:

1. Colon Screening Program data extraction date: 11/02/2026

Figure 7 compares return rate patterns by initial screen year (2017 - 2021) for up to 60 months. 2018 initial screen year (due in 2020) return shows lower return by 30 months during the COVID-19 pandemic but has recovered by 60 months to return rates similar to other years.

FIGURE 7: RETENTION RATES BY PREVIOUS SCREEN YEARS

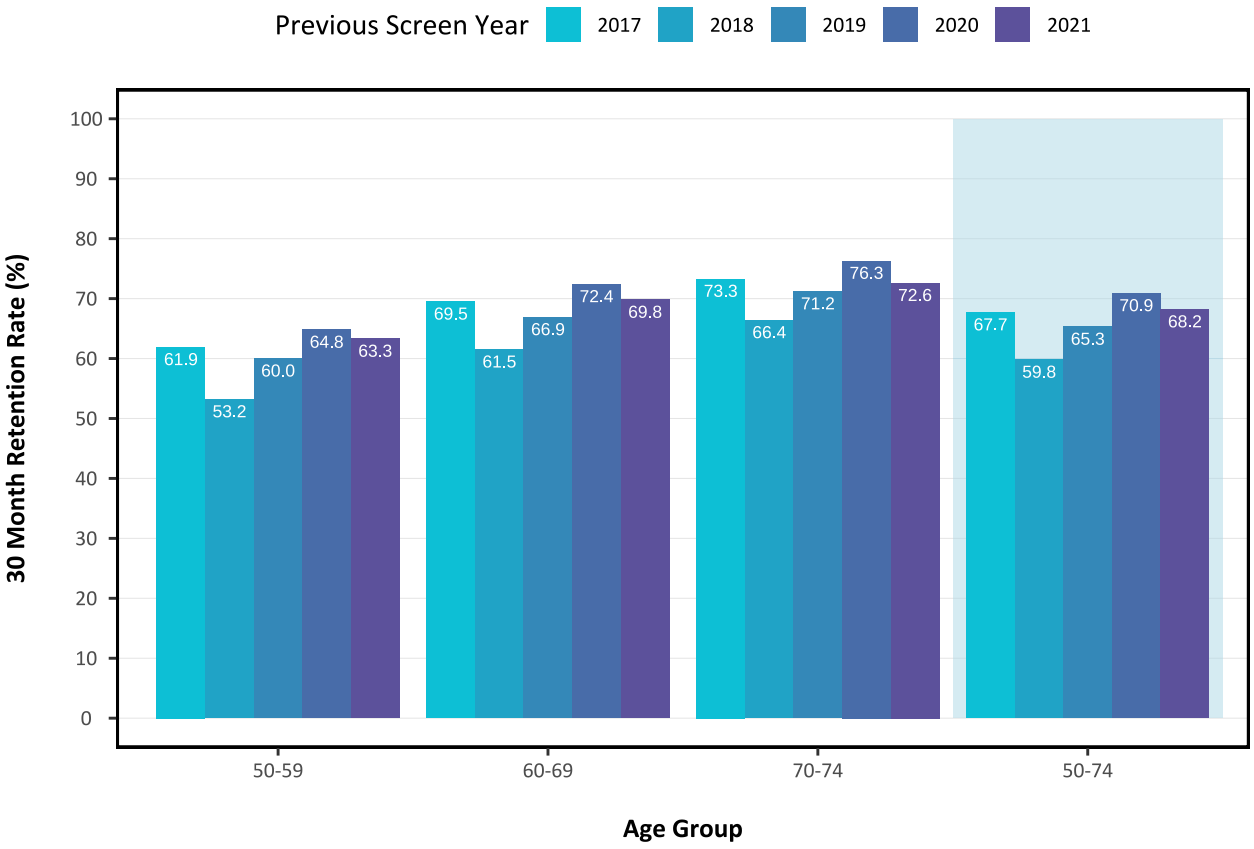


NOTES:

1. Colon Screening Program data extraction date: 11/02/2026

Figure 8 and Figure 9 show retention rates by age and sex respectively for participants who had a normal FIT result in 2017, 2018, 2019, 2020 and 2021 and then completed another FIT within 30 months. The retention rate improved for those initially screened in 2017 (due to return in 2019) with the implementation in 2018 of mailed FIT requisitions with recall notices, rather than participants needing to obtain a FIT requisition from their provider. The retention rate for those initially screened in 2018 (due to return in 2020) decreased due to the suspension of FIT March to June 2020 given the COVID-19 pandemic and overall health service reductions that occurred at that time.

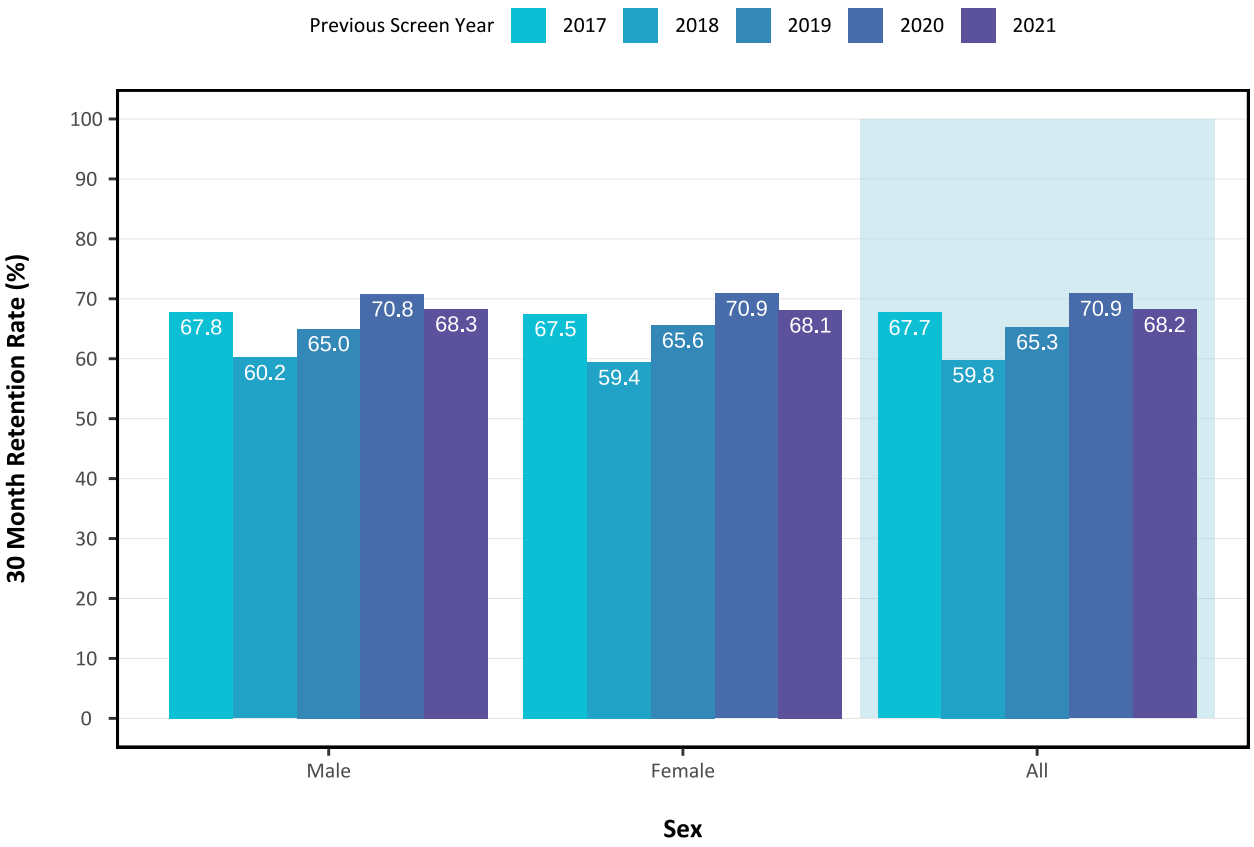
FIGURE 8: PROGRAM RETENTION RATE IN B.C. BY AGE



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026

FIGURE 9: PROGRAM RETENTION RATE IN B.C. BY SEX



NOTES:

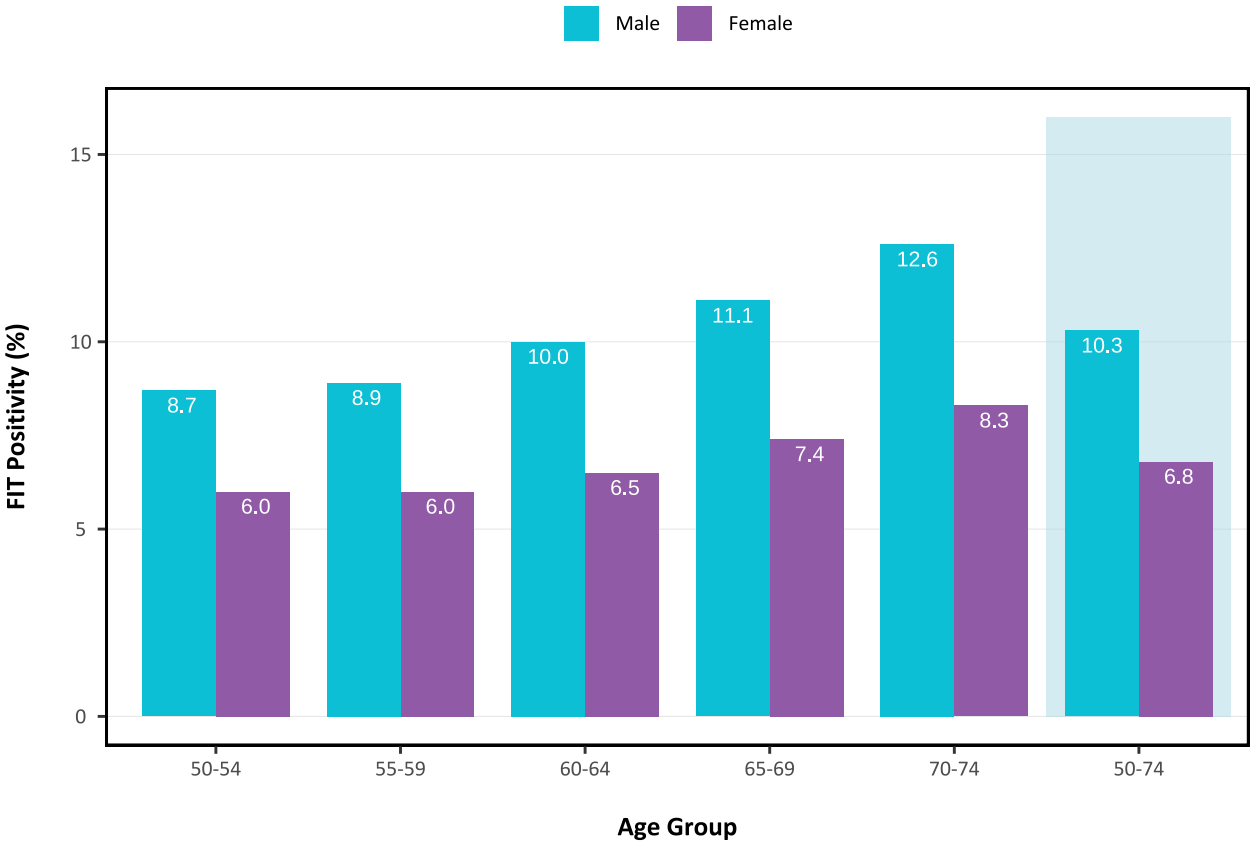
1. Colon Screening Program data extraction date: 11/02/2026

The following sections describe the Colon Screening Program results from January 1, 2023 to December 31, 2023.

2. FIT Results

The percent of FIT results that were abnormal in 2023 was 8.43%.
Figure 10 demonstrates that abnormal FIT results were more common in males and increase with age, which reflects the prevalence of colorectal cancer.

FIGURE 10: FIT POSITIVITY BY AGE GROUP AND SEX



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026

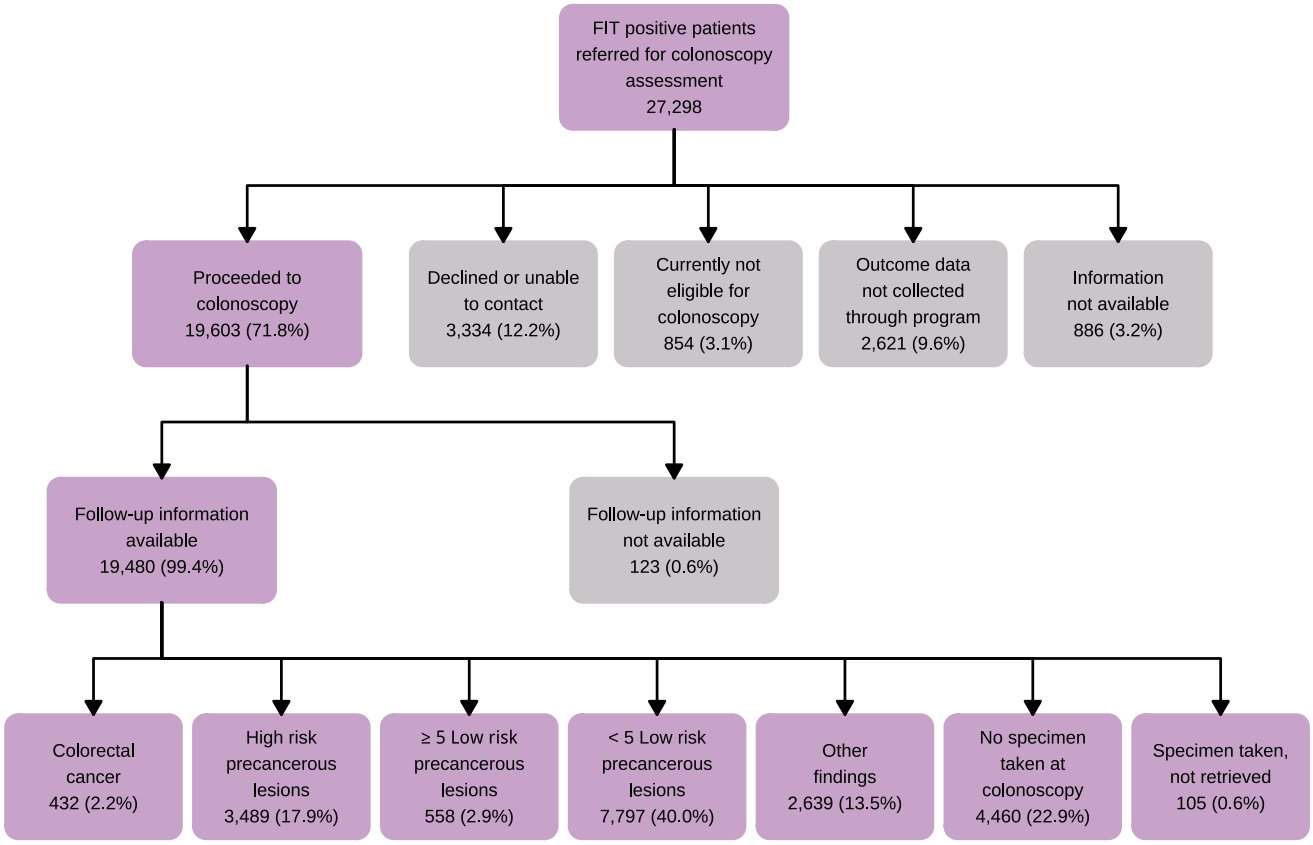
3. Colonoscopy Results

Participants with Abnormal FIT Results

In 2023, a total of 27,298 program participants with abnormal FIT results were referred to regional health areas for colonoscopy assessment. After initial assessment by health area staff, 71.8% proceeded to have a colonoscopy with outcome data captured by the Colon Screening Program, 12.2% declined colonoscopy or were unable to be contacted, 3.1% were deemed ineligible for the program and 9.6% did not proceed to colonoscopy through the program but likely obtained follow-up through a provider directly.

Figure 11 summarizes the outcomes for those with abnormal FIT results. Of the 19,480 cases with available pathology information 63% were diagnosed with colorectal cancer or a precancerous lesion. When categorized by the highest risk lesion discovered, 432 (2.2%) had colorectal cancer, 3,489 (17.9%) had high risk precancerous lesion(s), 558 (2.9%) had 5 or more low risk precancerous lesions, and 7,797 (40.0%) had less than 5 low risk precancerous lesion(s).

FIGURE 11: COLONOSCOPY FINDINGS FOR THOSE WITH AN ABNORMAL FIT RESULT



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. High risk lesion(s) include the following: tubular adenoma or sessile serrated lesion ≥ 10 mm in diameter, hyperplastic ≥ 10 mm, villous or tubulovillous adenoma, sessile serrated lesion with dysplasia and traditional serrated adenoma.

Quality indicators help assess the effectiveness of the colonoscopy. The unadjusted cecal intubation rate was 96.6% and the adequate bowel preparation rate was 95.8% in colonoscopies done for patients with abnormal FIT results.

The positive predictive value (PPV) of a test is a measure of performance. It represents the proportion of individuals with an abnormal FIT who have cancer or pre-cancerous lesion at follow-up colonoscopy. Table 1 summarizes the PPV by screening round, sex and age. The PPV of FIT increases with age and is higher in males than females.

Table 1: POSITIVE PREDICTIVE VALUE OF THE FIT

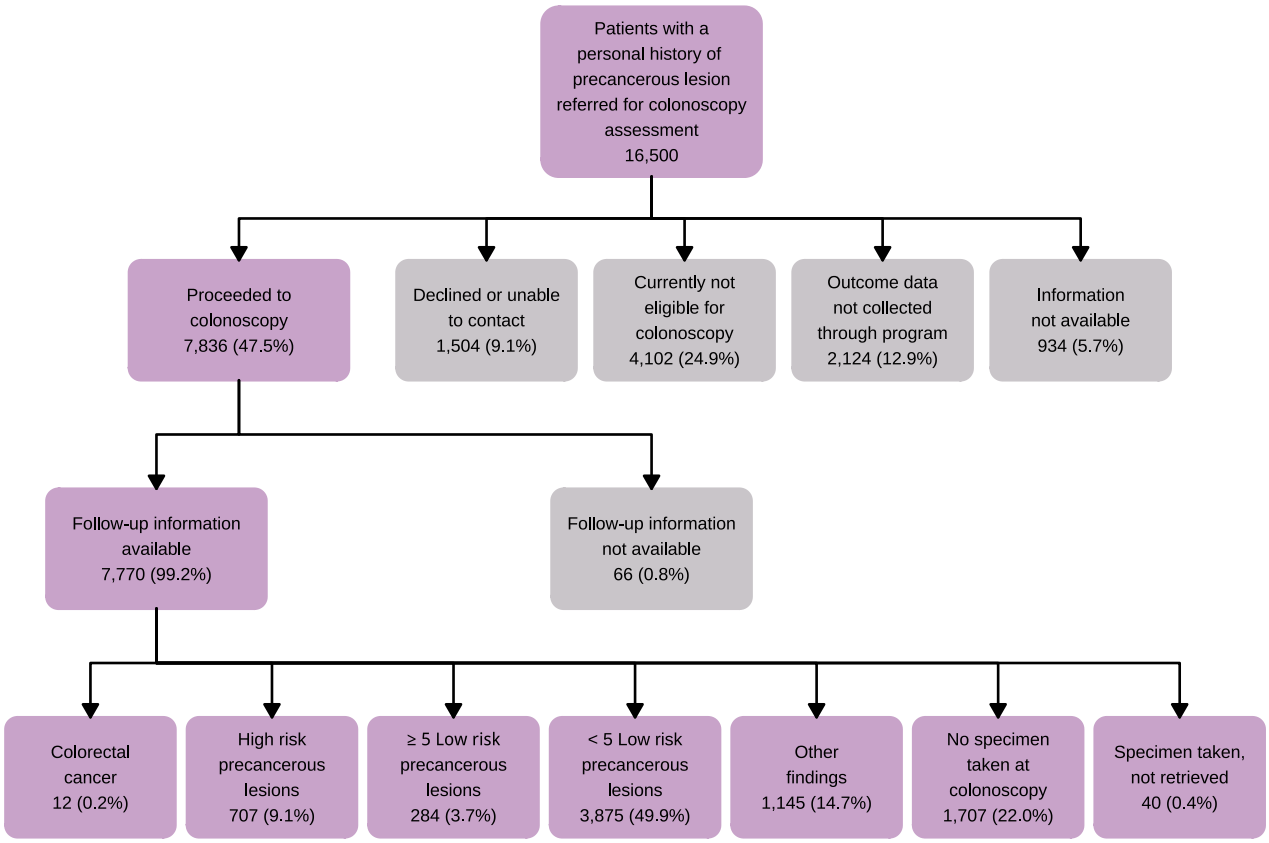
	Cancer	High Risk Precancerous Lesions	≥ 5 Low Risk Precancerous Lesions	< 5 Precancerous Lesions	Any Neoplasia
All	432 (2.2%)	3,489 (17.9%)	558 (2.9%)	7,797 (40.0%)	**12,276 (63.0%)**
By FIT					
First FIT	210 (3.2%)	1,542 (23.3%)	167 (2.5%)	2,389 (36.2%)	**4,308 (65.2%)**
Subsequent FIT	222 (1.7%)	1,947 (15.1%)	391 (3.0%)	5,408 (42.0%)	**7,968 (61.9%)**
By Sex					
Females	185 (2.2%)	1,265 (14.9%)	146 (1.7%)	3,053 (36.1%)	**4,649 (54.9%)**
Males	247 (2.2%)	2,224 (20.2%)	412 (3.7%)	4,744 (43.1%)	**7,627 (69.2%)**
By Age					
50-54	61 (1.8%)	630 (18.4%)	41 (1.2%)	1,199 (35.0%)	**1,931 (56.3%)**
55-59	63 (1.7%)	600 (16.5%)	82 (2.3%)	1,408 (38.6%)	**2,153 (59.1%)**
60-64	76 (1.7%)	789 (18.1%)	126 (2.9%)	1,785 (40.9%)	**2,776 (63.7%)**
65-69	129 (3.0%)	804 (18.6%)	145 (3.4%)	1,807 (41.8%)	**2,885 (66.7%)**
70-74	103 (2.8%)	666 (17.9%)	164 (4.4%)	1,598 (42.9%)	**2,531 (68.0%)**

Higher than Average Risk Participants with Personal History of Pre-Cancerous Lesion(s)

During the report period, 16,500 referrals for colonoscopy assessment were sent to the regional health areas for higher than average risk screening due to a personal history of precancerous lesion(s). After initial assessment by health area staff, 47.5% proceeded to have a colonoscopy with outcome data captured by the Colon Screening Program, 9.1% declined colonoscopy or were unable to be contacted, 24.9% colonoscopy was not indicated and 12.9% did not proceed to colonoscopy through the program but likely obtained follow-up through a provider directly. Of the 24.9% who were not currently eligible for colonoscopy, the vast majority had their colonoscopy surveillance interval extended due to the GPAC guideline change.

Figure 12 summarizes colonoscopy findings for those with a personal history of precancerous lesions. Of the 7,770 cases with available follow-up information, 62.8% were diagnosed with colorectal cancer or a precancerous lesion.

FIGURE 12: COLONOSCOPY FINDINGS FOR THOSE WITH A PERSONAL HISTORY OF PRECANCEROUS LESION(S)



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. High risk lesion(s) include the following: tubular adenoma or sessile serrated lesion ≥ 10 mm in diameter, hyperplastic ≥ 10 mm, villous or tubulovillous adenoma, sessile serrated lesion with dysplasia and traditional serrated adenoma.

Detection of neoplasia with screening colonoscopy, by sex and age, for those with a personal history of precancerous lesion(s) are presented in Table 2.

Table 2: DETECTION OF NEOPLASIA IN SCREENING COLONOSCOPY FOR THOSE WITH A PERSONAL HISTORY OF PRECANCEROUS LESION(S)

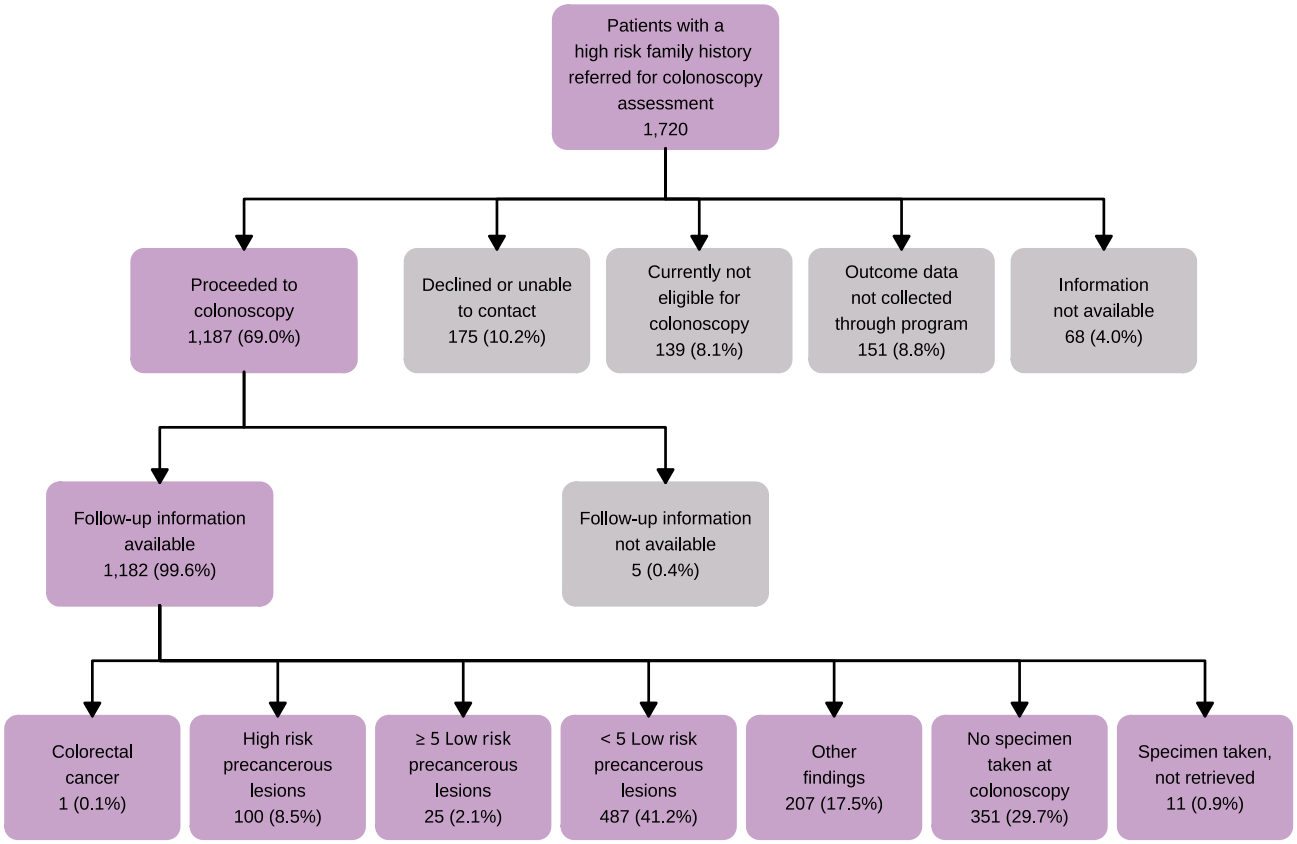
	Cancer	High Risk Precancerous Lesions	≥ 5 Low Risk Lesions	< 5 Precancerous Lesions	Any Neoplasia
All	12 (0.2%)	707 (9.1%)	284 (3.7%)	3,875 (49.9%)	**4,878 (62.8%)**
By Sex					
Females	5 (0.2%)	239 (7.7%)	72 (2.3%)	1,441 (46.5%)	**1,757 (56.7%)**
Males	7 (0.1%)	468 (10.0%)	212 (4.5%)	2,434 (52.1%)	**3,121 (66.8%)**
By Age					
50-54	0 (0.0%)	73 (8.3%)	17 (1.9%)	408 (46.2%)	**498 (56.3%)**
55-59	2 (0.1%)	120 (7.4%)	35 (2.2%)	767 (47.6%)	**924 (57.4%)**
60-64	2 (0.1%)	196 (9.5%)	69 (3.3%)	1,034 (49.9%)	**1,301 (62.8%)**
65-69	3 (0.1%)	224 (9.6%)	114 (4.9%)	1,206 (51.6%)	**1,547 (66.2%)**
70-74	5 (0.6%)	94 (10.8%)	49 (5.7%)	460 (53.1%)	**608 (70.1%)**

Higher than Average Risk Participants with Family History of Colon Cancer

During the report period, 1,720 referrals for pre-colonoscopy assessment were sent to the regional health areas for those with a family history of colon cancer. After initial assessment by health area staff, 69.0% proceeded to have a colonoscopy with outcome data captured by the Colon Screening Program, 10.2% declined colonoscopy or were unable to be contacted, 8.1% were deemed ineligible for the program and 8.8% did not proceed to colonoscopy through the program but likely obtained followup through a provider directly.

Figure 13 summarizes colonoscopy findings for higher risk participants with a family history of colon cancer. Of the 1,182 cases with available follow-up information, 51.9% were found to have colorectal cancer or a pre-cancerous lesion.

FIGURE 13: COLONOSCOPY FINDINGS FOR THOSE WITH A FAMILY HISTORY



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. High risk lesion(s) include the following: tubular adenoma or sessile serrated lesion ≥ 10 mm in diameter, hyperplastic ≥ 10 mm, villous or tubulovillous adenoma, sessile serrated lesion with dysplasia and traditional serrated adenoma.

Detection of neoplasia by sex and age in screening colonoscopy for those with a family history of colon cancer are presented in Table 3.

Table 3: DETECTION OF NEOPLASIA IN SCREENING COLONOSCOPY FOR THOSE WITH A FAMILY HISTORY OF COLORECTAL CANCER

	Cancer	High Risk Precancerous Lesions	≥ 5 Low Risk Lesions	< 5 Precancerous Lesions	Any Neoplasia
All	1 (0.1%)	100 (8.5%)	25 (2.1%)	487 (41.2%)	**613 (51.9%)**
By Sex					
Females	0 (0.0%)	50 (7.5%)	10 (1.5%)	245 (37.0%)	**305 (46.0%)**
Males	1 (0.2%)	50 (9.6%)	15 (2.9%)	242 (46.6%)	**308 (59.3%)**
By Age					
50-54	1 (0.4%)	21 (8.6%)	1 (0.4%)	76 (31.0%)	**99 (40.4%)**
55-59	0 (0.0%)	16 (6.4%)	1 (0.4%)	99 (39.6%)	**116 (46.4%)**
60-64	0 (0.0%)	23 (7.7%)	9 (3.0%)	137 (45.8%)	**169 (56.5%)**
65-69	0 (0.0%)	30 (10.5%)	11 (3.8%)	127 (44.3%)	**168 (58.5%)**
70-74	0 (0.0%)	10 (9.9%)	3 (3.0%)	48 (47.5%)	**61 (60.4%)**

Table 4 compares detection rates for four different populations participating in B.C.'s Colon Screening Program.

Table 4: DETECTION OF NEOPLASIA BY POPULATION TYPE

Pathology	FIT Positive	Personal History of Precancerous Lesion	Family History	Short Interval Surveillance
All	19,480	7,770	1,182	1,583
Cancer	432 (2.2%)	12 (0.2%)	1 (0.1%)	12 (0.8%)
High Risk Polyp	3,489 (17.9%)	707 (9.1%)	100 (8.5%)	257 (16.2%)
Any Neoplasia	12,276 (63%)	4,878 (62.8%)	613 (51.9%)	1,038 (65.6%)
No Neoplasia	7,204 (37%)	2,892 (37.2%)	569 (48.1%)	545 (34.4%)

NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. Any neoplasia includes any precancerous lesion and colorectal cancer.
3. No neoplasia includes colonoscopies without specimens or specimens that were not colorectal cancer or precancerous lesion.
4. Short interval surveillance is follow-up colonoscopy within one year.

4. Wait Times

Wait times for colonoscopy after an abnormal FIT result are shown in Figure 14. The target time from an abnormal FIT result to colonoscopy is 60 days. It is recognized that there are many indications for endoscopy services. The wait time benchmark from referral to colonoscopy for higher than average risk individuals is 180 days (Figure 15).

FIGURE 14: WAIT TIME FROM ABNORMAL FIT TO COLONOSCOPY

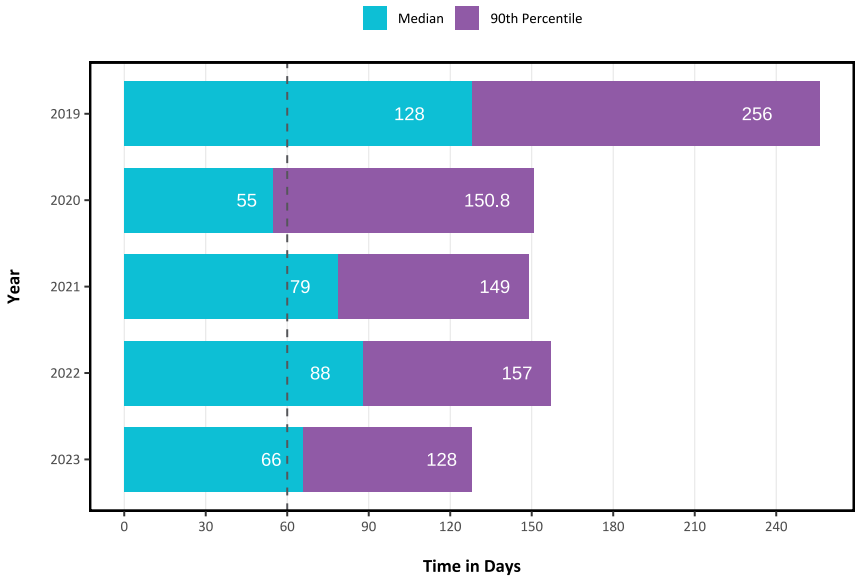
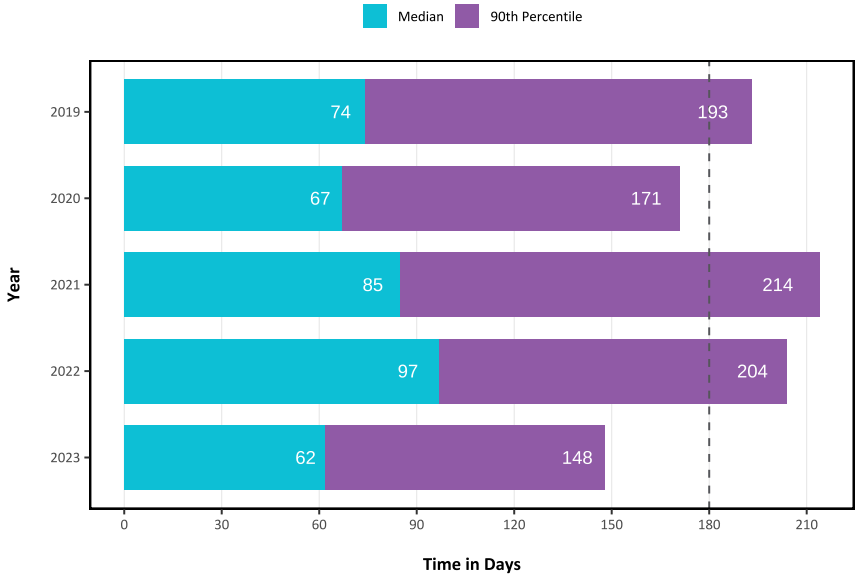


FIGURE 15: WAIT TIME FROM REFERRAL TO COLONSCOPY FOR HIGHER THAN AVERAGE RISK



NOTES:

1. Colon Screening Program data extraction date: 11/02/2026
2. Procedures that occurred more than 12 months after referral or surveillance due date are excluded.

5. Quality Assurance

Participation in direct observation of procedural skills (DOPS) is a standard for the colonoscopists providing procedures for Colon Screening Program participants in B.C. DOPS is a formative assessment of a physician's performance of colonoscopy in terms of technical skill as well as patient and staff interaction. The DOPS process involves two trained assessors simultaneously and independently observing a physician perform two consecutive colonoscopies and completing a validated form. The assessors provide constructive feedback to the physician in written and verbal formats.

All endoscopy units providing procedures for Colon Screening Program participants in B.C. are expected to participate in the Global Rating Scale-Canada (GRS-C). GRS-C is a biannual survey to assess all aspects of endoscopic quality assurance at the level of the endoscopy unit. The survey is a patient-centred tool which enables units to identify areas not yet meeting quality standards and design action plans for quality improvement. The survey exists on a web-based platform supported by the Canadian Association of Gastroenterology.

Annual quality reports are sent to regional health area leaderships, primary care providers, colonoscopists and pathologists participating in the program with individual and aggregate performance statistics.

6. Summary

The following are some key findings based on the 2023 data:

- The up-to-date rate for colon screening in B.C. for age eligible people is 58.1%.
- The number of FIT screens needed to detect one cancer is 740.
- The number of FIT screens needed to detect one cancer or high risk lesion is 82.
- The number of participants with an abnormal FIT needed to undergo colonoscopy to detect one cancer is 46.
- The number of participants with an abnormal FIT needed to undergo colonoscopy to detect one cancer or high risk lesion is 5.

APPENDIX: PERFORMANCE INDICATOR GLOSSARY

Colon Screening Up-to-Date Rate

Percentage of B.C. residents, ages 50-74, who completed a fecal immunochemical test within a 30 month period, those who are up-to-date with colonoscopy through the program or those who have had a colonoscopy billed through the Medical Services Plan within 10 years.

$$\text{Colon Screening Up-to-Date Rate} = \frac{\text{Number of up-to-date patients}}{\text{Eligible population of B.C.}} \times 100$$

FIT Positivity Rate

FIT positivity rate is defined as the number of satisfactory FITs with an abnormal result.

$$\text{FIT Positivity Rate} = \frac{\text{Number of FITs with an abnormal result}}{\text{Number of satisfactory FITs}} \times 100$$

FIT Positive Predicted Value (PPV)

FIT positive predicted value is defined as the proportion of abnormal FITs resulting in pathological confirmation, where pathology result is some specified category of neoplasia.

$$\text{FIT PPV} = \frac{\text{Number of abnormal FITs with pathologically confirmed neoplasia}}{\text{Number of abnormal FITs with diagnostic data confirmation}} \times 100$$

Detection of Neoplasia (Higher Than Average Risk Patients)

Neoplasia detection rate is defined as the proportion of colonoscopies resulting in pathological confirmation, where the pathology result is some specified category of neoplasia.

$$\text{Neoplasia Detection Rate} = \frac{\text{Number of colonoscopies with pathologically confirmed neoplasia}}{\text{Number of colonoscopies}}$$

Cecal Intubation Rate (Unadjusted)

Unadjusted cecal intubation rate is defined as the proportion of colonoscopies in which the cecum was intubated.

$$\text{Unadjusted Cecal Intubation Rate} = \frac{\text{Number of colonoscopies with cecal intubation}}{\text{Total number of colonoscopies}} \times 100$$

Adequate Bowel Preparation Rate

Adequate bowel preparation rate is defined as the proportion of colonoscopies where the bowel preparation was defined as either 'excellent', 'good' or 'fair' (i.e. not 'poor')

$$\text{Adequate Bowel Preparation Rate} = \frac{\text{Number of colonoscopies with adequate bowel prep}}{\text{Total number of colonoscopies}} \times 100$$

Wait Time to Follow-Up Colonoscopy

Wait time to follow-up colonoscopy is defined as the number of days elapsed between an abnormal FIT result and date of follow-up colonoscopy, for patients who had an abnormal FIT result and have received a colonoscopy.

For higher than average risk patients entering the program, wait time to colonoscopy is defined as the number of days elapsed between date of referral and date of colonoscopy. For patients returning for surveillance colonoscopy, wait time to colonoscopy is defined as the number of days elapsed between due date and colonoscopy.