BC CANCER CERVIX SCREENING
Provincial Health Services Authority

BC Cancer Cervix Screening 2023 Program Results

December 2025

Table of Contents

PROGRAM OVERVIEW

Cervical 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 materials 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.

The Cervix Screening Program started in B.C. in 1955. The data provided in this report is based on screening results for British Columbians registered in the Cervix Screening Program.

The screening pathway is initiated by primary care providers referring asymptomatic age eligible individuals for a screening test. In B.C., Pap tests are recommended every three years for eligible people 25-69 years of age. Pap tests are provided by primary care providers and trained nurses in the province and the tests are interpreted and reported by the Cervical Cancer Screening Laboratory (CCSL) of the Provincial Health Services Authority. The CCSL transitioned from conventional cytology to liquid based cytology (LBC) starting in 2022. By the end of 2023 most providers had switched to LBC.

The Screening Process

The Screening Process process consists of four stages:

1. Identify and invite the target population for screening
2. Conduct screening examinations
3. Investigate abnormalities identified during screening
4. Send screening reminders at the appropriate interval

For detailed information on the management of higher than average risk patients, see the BC Cancer Cervix Screening Overview document.

PROGRAM RESULTS

a) Volume of Samples

TABLE 1: NUMBER OF PATIENTS WITH CERVICAL/ENDOCERVICAL PAP TEST SAMPLES, 2023

	<20	20-24	25-29	30-39	40-49	50-59	60-69	70+	All Ages
Number of Patients	108	2,504	32,035	76,978	63,862	55,723	47,964	3,579	**282,753**
Number of Smears	113	2,622	33,650	80,633	67,002	57,524	48,943	3,678	**294,165**
New Patients	97	1,963	17,585	13,993	5,469	2,599	2,005	130	**43,841**
(%)	90%	78%	55%	18%	9%	5%	4%	4%	**16%**

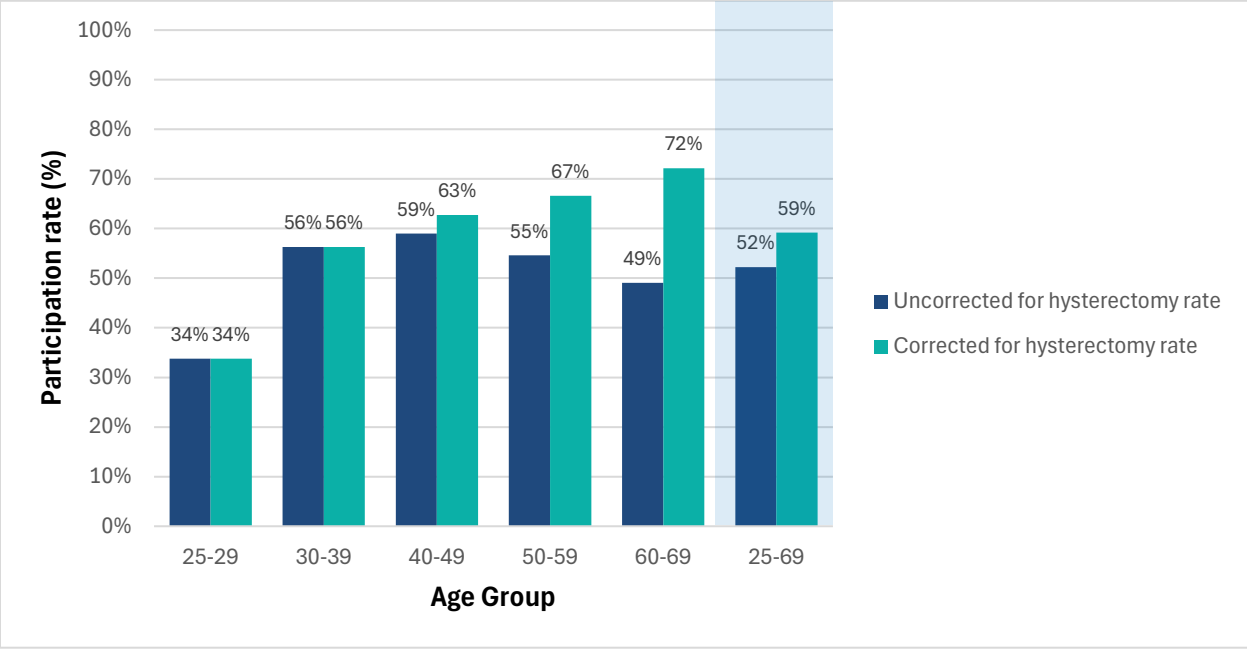
Notes:

1. BC Cancer Cervix Screening data extraction date: 29/5/2025
2. Age is computed on patient's last Pap test

b) Participation Rates

Participation rate is defined as the percent of eligible people with at least one cervical/endocervical Pap test in a three-year period. Statistic Canada's Canadian Community Health Survey (CCHS) data is used to adjust the denominator for hysterectomy rates in B.C. as most people who have had a total hysterectomy do not need routine screening. Hysterectomy rates can be calculated from the CCHS and applied to 10 year age groups at the provincial level. However, due to small sample size and large variation in rate estimates, they can only be calculated at the level of Health Authority across the target age group (25-69).

FIGURE 2: PARTICIPATION RATES BY AGE GROUP, 2023



Notes:

1. Based on average of 2023 and 2024 female population estimates
2. Population data source: P.E.O.P.L.E. 2024 (Aug 2024), BC STATS, Service BC, BC Ministry of Citizen's Services
3. Hysterectomy adjustment calculated using 2012 Canadian Community Health Survey
4. BC Cancer Cervix Screening data extraction date: 22/4/2025
5. Age is computed based on patient's age at end of 2023

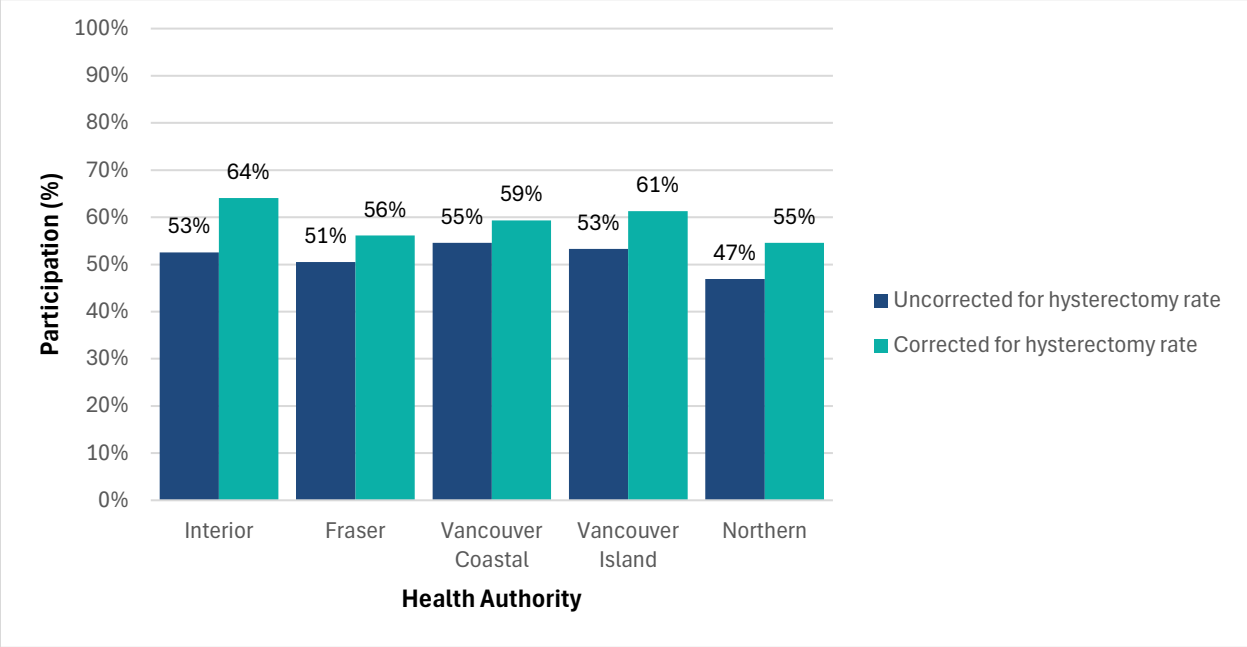
TABLE 2: PARTICIPATION RATES FOR AGES 25-29, 30-34, AND 35-39 BY HSDA, 2023

Health Authority	Health Service Delivery Area	25-29	30-34	35-39
Interior	East Kootenay	45%	61%	66%
Interior	Kootenay Boundary	43%	63%	65%
Interior	Okanagan	40%	59%	63%
Interior	Thompson Cariboo Shuswap	38%	57%	60%
Fraser	Fraser East	37%	55%	58%
Fraser	Fraser North	33%	51%	60%
Fraser	Fraser South	30%	48%	54%
Vancouver Coastal	Richmond	25%	45%	55%
Vancouver Coastal	Vancouver	30%	52%	64%
Vancouver Coastal	North Shore/Coast Garibaldi	39%	55%	63%
Vancouver Island	South Vancouver Island	37%	56%	62%
Vancouver Island	Central Vancouver Island	41%	57%	60%
Vancouver Island	North Vancouver Island	43%	61%	65%
Northern	Northwest	38%	55%	60%
Northern	Northern Interior	37%	53%	55%
Northern	Northeast	36%	51%	55%
BC		**34%**	**53%**	**60%**

Notes:

1. Based on average of 2023 and 2024 female population estimates
2. Population data source: P.E.O.P.L.E. 2024 (Aug 2024), BC STATS, Service BC, BC Ministry of Citizen's Services
3. Hysterectomy adjustment calculated using 2012 Canadian Community Health Survey
4. BC Cancer Cervix Screening data extraction date: 22/4/2025
5. Age is computed based on patient's age at end of 2023

FIGURE 3: PARTICIPATION RATES BY HEALTH AUTHORITY, 2023



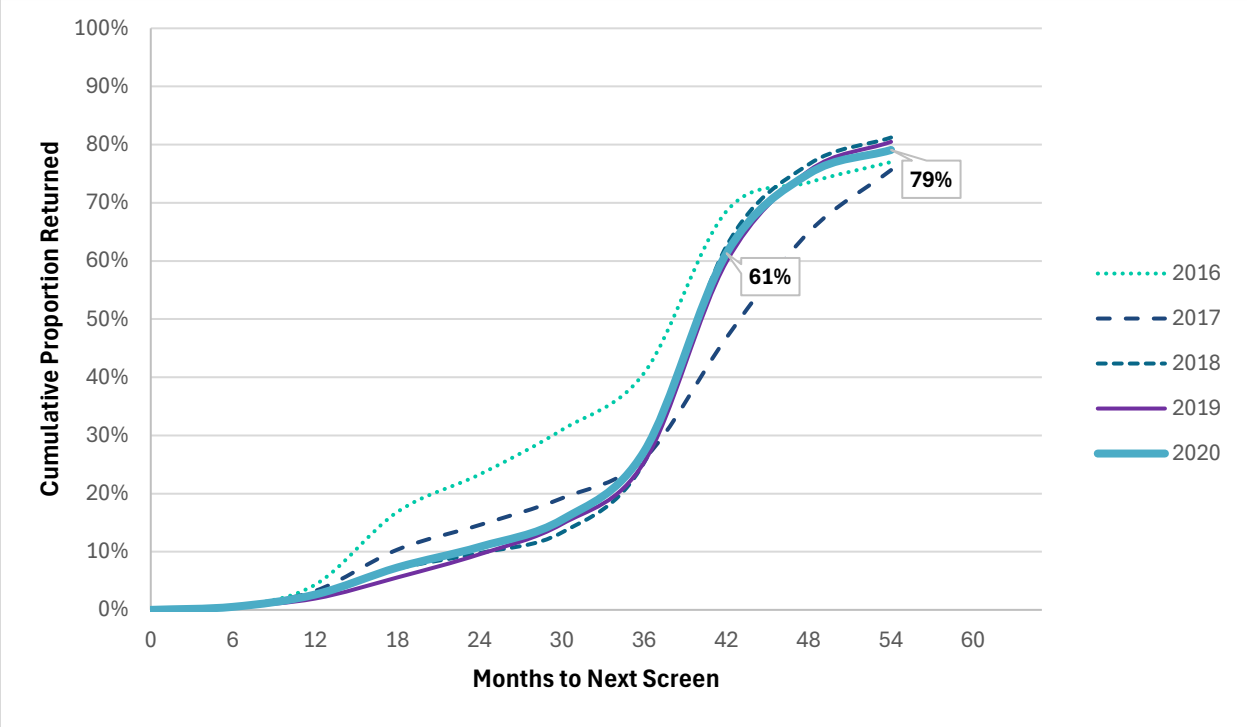
Notes:

1. Based on average of 2023 and 2024 female population estimates
2. Population data source: P.E.O.P.L.E. 2024 (Aug 2024), BC STATS, Service BC, BC Ministry of Citizen's Services
3. Hysterectomy adjustment calculated using 2012 Canadian Community Health Survey
4. BC Cancer Cervix Screening data extraction date: 22/4/2025
5. Age is computed based on patient's age at end of 2023
6. Data includes patients between ages 25-69

c) Retention Rate

Figure 4 compares return rate patterns by initial screen year (2016 – 2020) for up to 54 months. Retention rate curves changed for index screens in 2015 and 2016 due to a policy change in 2016 which extended the screening interval from two years to three years. Retention rate for 2016 index screens also started to change due to the COVID-19 pandemic that occurred in early 2020 which affected access to health services. Retention rate is defined as the proportion of average risk participants with a previous negative screen who returned for a Pap test by 42 months.

FIGURE 4: RETENTION RATES BY PREVIOUS SCREEN YEAR, 2015-2019



Notes:

1. BC Cancer Cervix Screening data extraction date: 06/10/2025
2. Data includes patients between ages 25-69

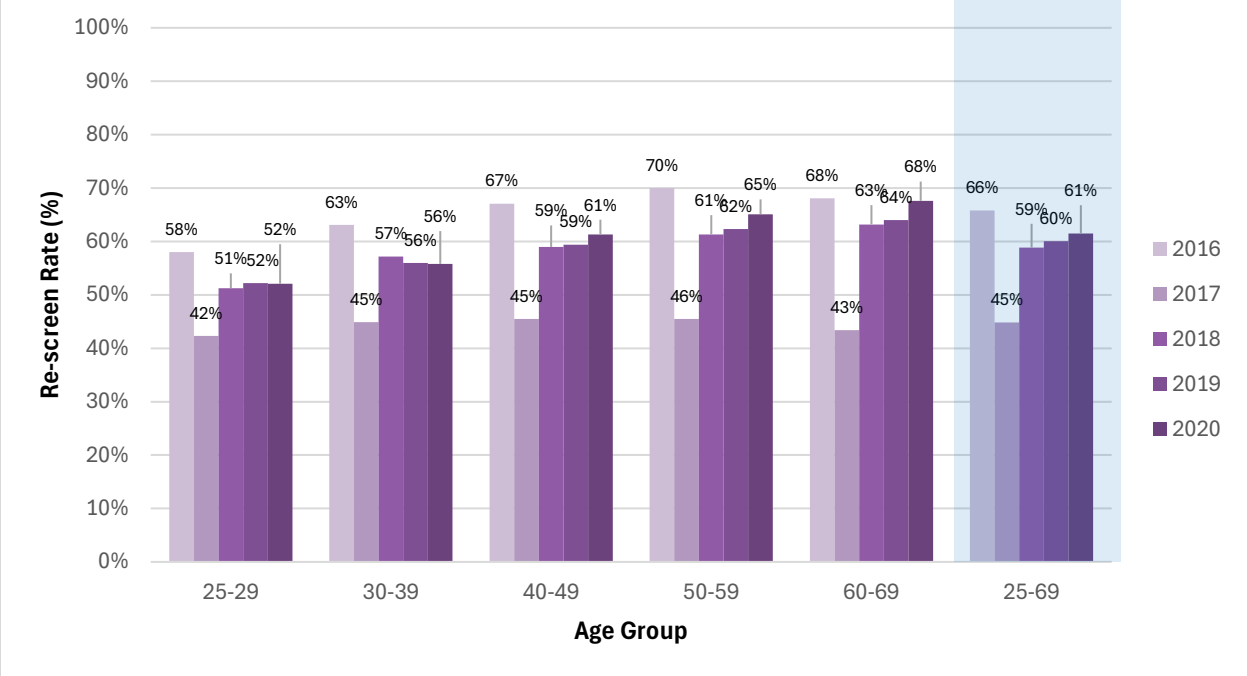
Table 3 shows retention rates up to 42 months by age. Figure 5 compares 42 month retention rate for those previously screened in 2016 – 2020, by age.

TABLE 3: RETENTION RATES (%) BY AGE GROUP, 2020

	25-29	30-39	40-49	50-59	60-69	25-69
Number of Patients	20,744	53,203	38,983	37,205	24,895	**175,030**
Re-screened by						
18 Months	6%	7%	7%	8%	8%	**7%**
24 Months	9%	11%	11%	12%	10%	**11%**
30 Months	13%	16%	16%	16%	14%	**15%**
36 Months	23%	27%	27%	29%	27%	**27%**
42 Months	52%	56%	61%	65%	68%	**61%**

Notes:
1. BC Cancer Cervix Screening data extraction date: 06/10/2025
2. Age is computed based on patient's age on report date of the index Pap test

FIGURE 5: 42-MONTH RETENTION RATE BY AGE GROUP OVER TIME, 2016 – 2020

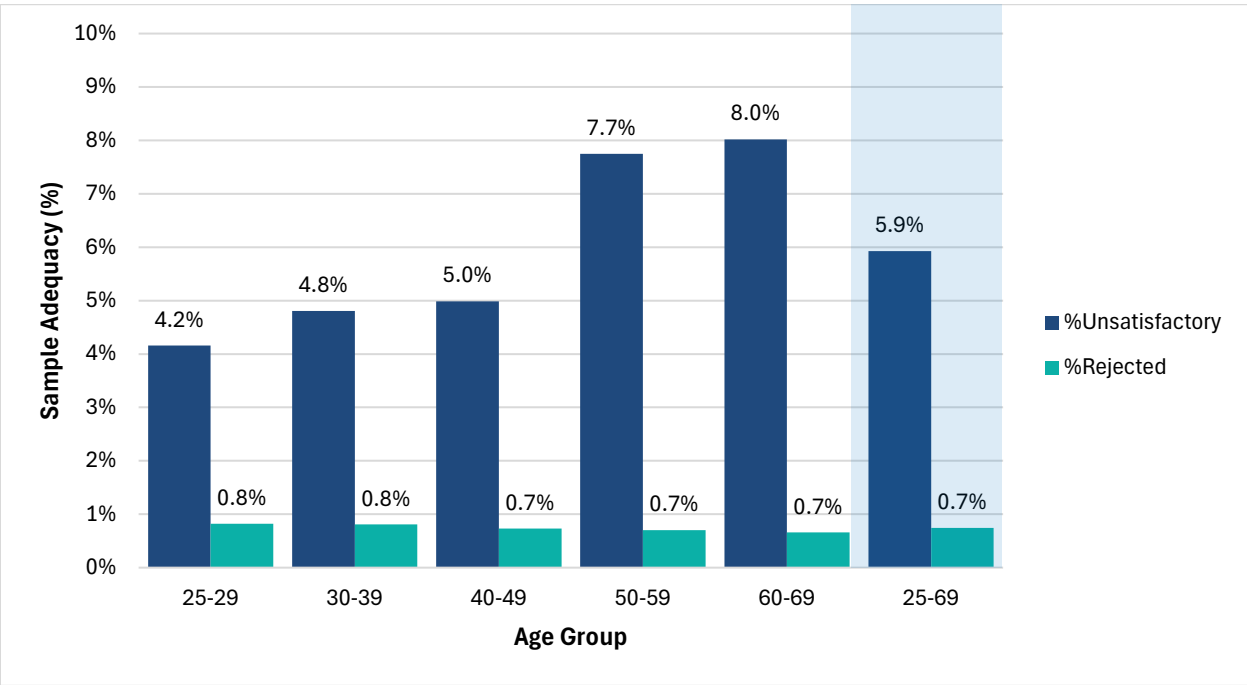


Notes:
1. BC Cancer Cervix Screening data extraction date: 06/10/2025
2. Age is computed based on patient's age on report date of the index Pap test

d) Adequacy of Pap Test Samples

The most cited reasons for an unsatisfactory cytology sample were insufficient squamous cellularity and obscuring inflammation, which represented 99% of the unsatisfactory samples. Additionally, some cytology samples were rejected by the CCSL. The most cited reason for a rejected cytology sample was due to missing or incorrect patient name or date of birth, which represented 95% of rejected samples. Multiple factors may be cited.

FIGURE 6: CERVICAL SAMPLE ADEQUACY RATES BY AGE GROUP, 2023



Notes:

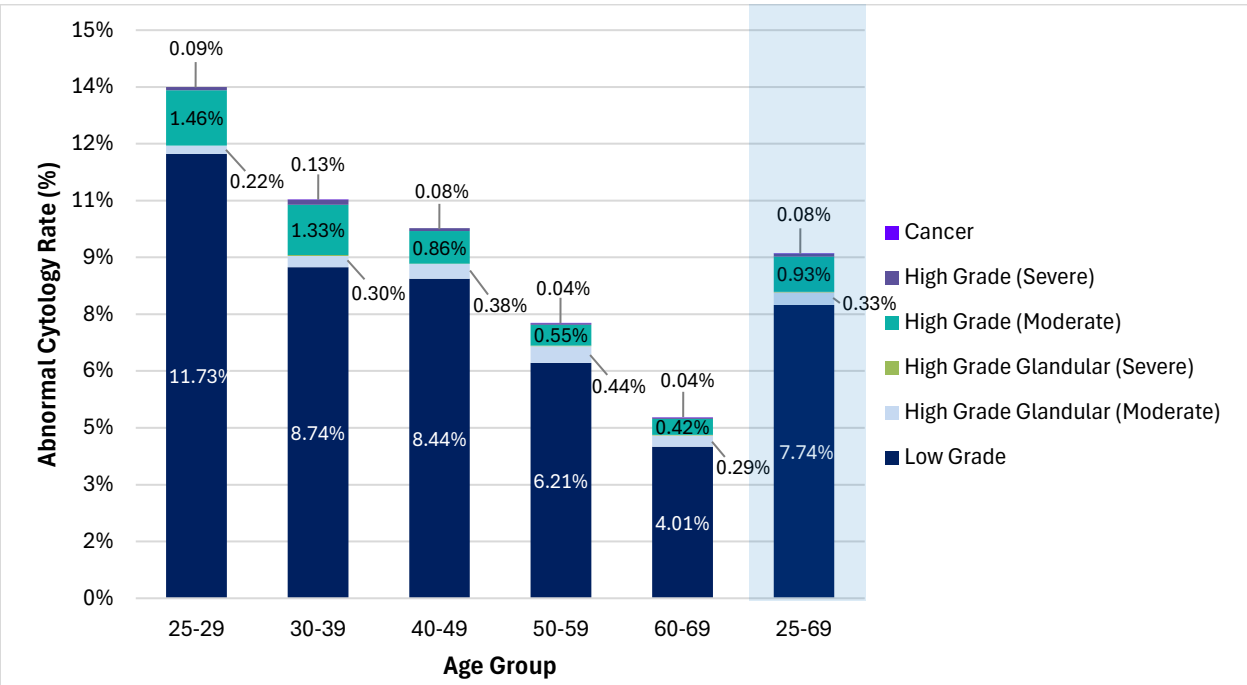
1. BC Cancer Cervix Screening data extraction date: 22/4/2025
2. Age is computed based on sample date

e) Screening Test Results

Cytology turnaround time is the average number of days from the date the sample is received by the CCSL to the date the finalized report is issued. The target turn-around time is for 90% of reports to be issued within 28 days. In 2022, of the cytology tests submitted for ages 25-69, 90% of the cytology tests had a turn-around time of 86 days. Of the cytology tests submitted, 29% met the target turn-around time.

The CCSL uses the international standardized Bethesda nomenclature to report cytology test results (Appendix A).

FIGURE 7: ABNORMAL SCREENING TEST RESULT DISTRIBUTION BY AGE GROUP, 2023



Notes:

1. BC Cancer Cervix Screening data extraction date: 5/8/2025
2. Age is computed based on sample date
3. **Cancer** includes adenocarcinoma, endocervical adenocarcinoma, endometrial adenocarcinoma, squamous cell carcinoma; **High Grade (Severe)** includes HSIL (Severe); **High Grade (Moderate)** includes ASC-H or HSIL Moderate; **High Grade Glandular (Severe)** includes AGC-FN, AEC-FN, atypical endometrial cells-favour neoplastic,; **High Grade Glandular (Moderate)** includes AGC; **Low Grade** includes ASC-US or LSIL

f) Follow-up of Abnormal Pap Test Results

Follow-up Recommendation

The current screening guideline is to follow ASC-US or LSIL results with a repeat Pap test at six-month intervals for up to one year. Colposcopy is recommended for either persistent ASC-US or LSIL or an initial interpretation of AGC, ASC-H, HSIL, AIS or invasive carcinoma. "Other Investigations" are predominantly recommendations for further investigation for suspected endometrial abnormalities.

TABLE 4: FOLLOW-UP RECOMMENDATIONS BY AGE GROUP, 2023

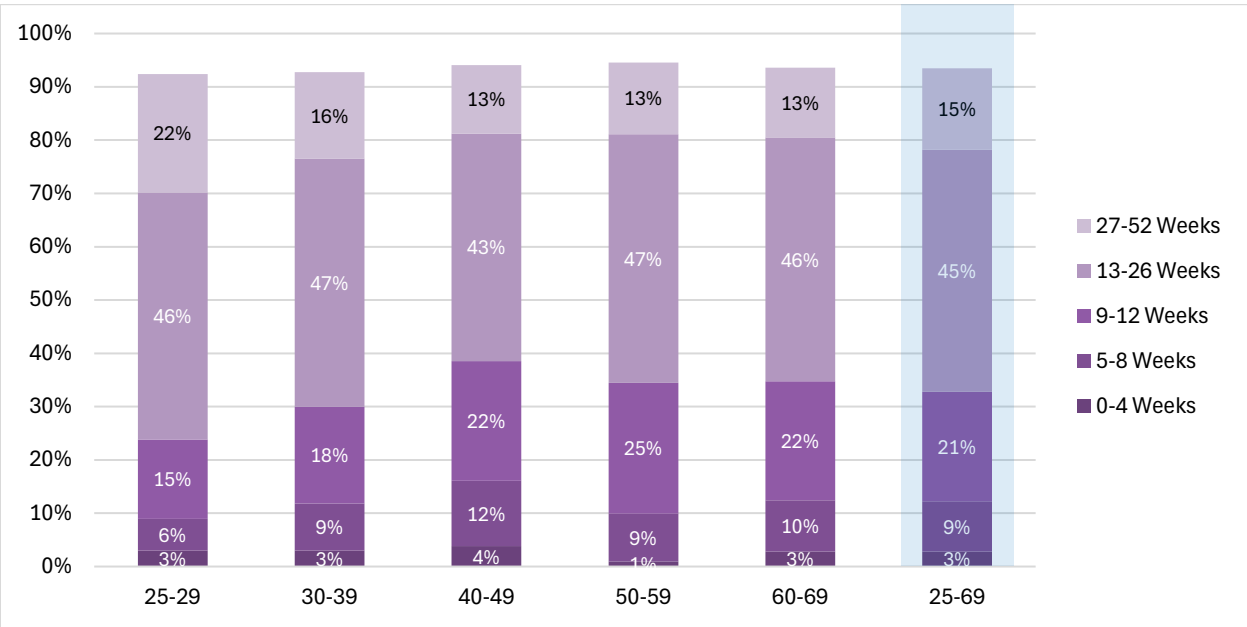
	25-29	30-39	40-49	50-59	60-69	25-69
Patients with ASC-US or LSIL	3,052	5,400	4,290	2,998	1,670	**17,410**
Repeat in 6 months	2,644	4,587	3,564	2,466	1,373	**14,634**
(%)	87%	85%	83%	82%	82%	**84%**
Colposcopy	368	773	713	519	285	**2,658**
(%)	12%	14%	17%	17%	17%	**15%**
Follow-up HPV Test or Routine Screening	40	40	13	13	12	**118**
(%)	1%	1%	0%	0%	1%	**1%**
AGC, ASC-H, HSIL, AIS or carcinoma	593	1,422	886	588	374	**3,863**
Colposcopy	589	1,418	866	543	340	**3,756**
(%)	99%	100%	98%	92%	91%	**97%**
Other Investigation	4	4	20	45	34	**107**
(%)	1%	0%	2%	8%	9%	**3%**

Notes:
1. BC Cancer Cervix Screening data extraction date: 30/5/2025
2. Age is computed based on the date of the patient's most recent Pap test in the year
3. All other investigations have "Refer to Colposcopy for investigation of endometrial abnormality" recommendation
4. Eight patients with ASC-US or LSIL were recommended a follow-up HPV test or routine screening.
5. Five patients with AGC, ASC-H, HSIL, AIS or carcinoma were about to age-out of program or recommended a repeat screening test in 6 months.

Colposcopy Follow-up Rate

The colposcopy follow-up rate is the percentage of participants recommended to have a colposcopy examination that had the follow-up procedure within 12 months of the Pap test. Colposcopies performed within one week of the Pap test are excluded, as the Pap test is unlikely to be the reason for the colposcopy referral.

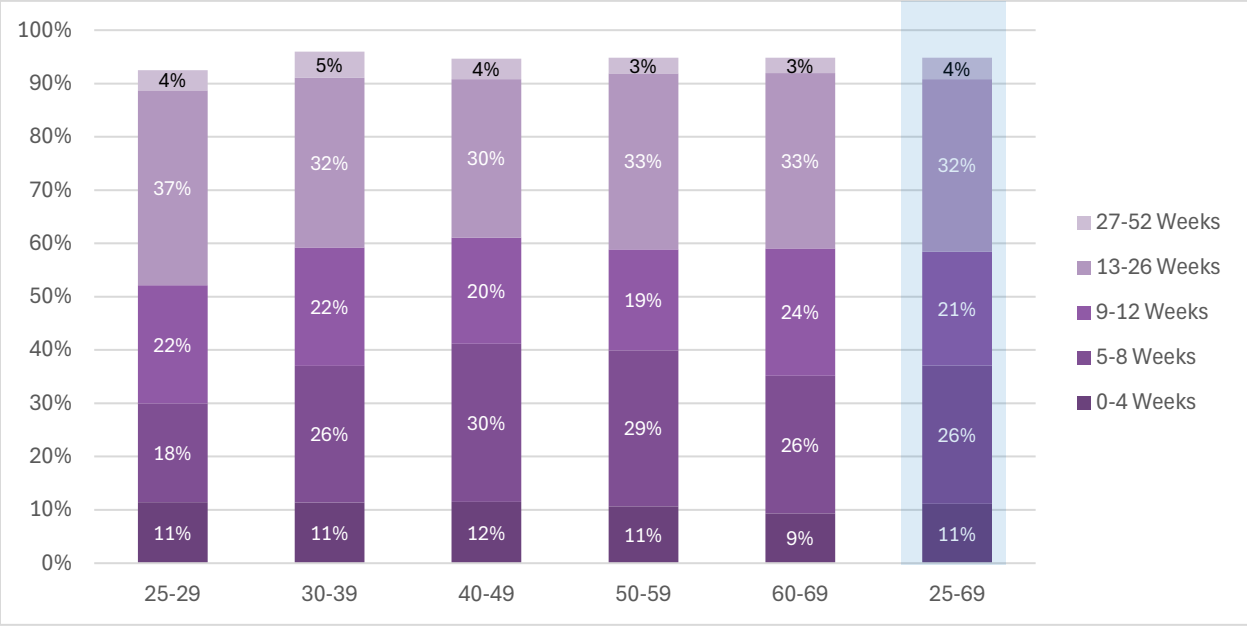
FIGURE 8: COLPOSCOPY FOLLOW-UP RATES THOSE WITH PERSISTENT ASC-US OR LSIL PAP TEST RESULT BY AGE GROUP, 2023



Notes:

1. BC Cancer Cervix Screening data extraction date: 22/4/2025
2. Age is computed based on patient's age on report date of the index Pap test

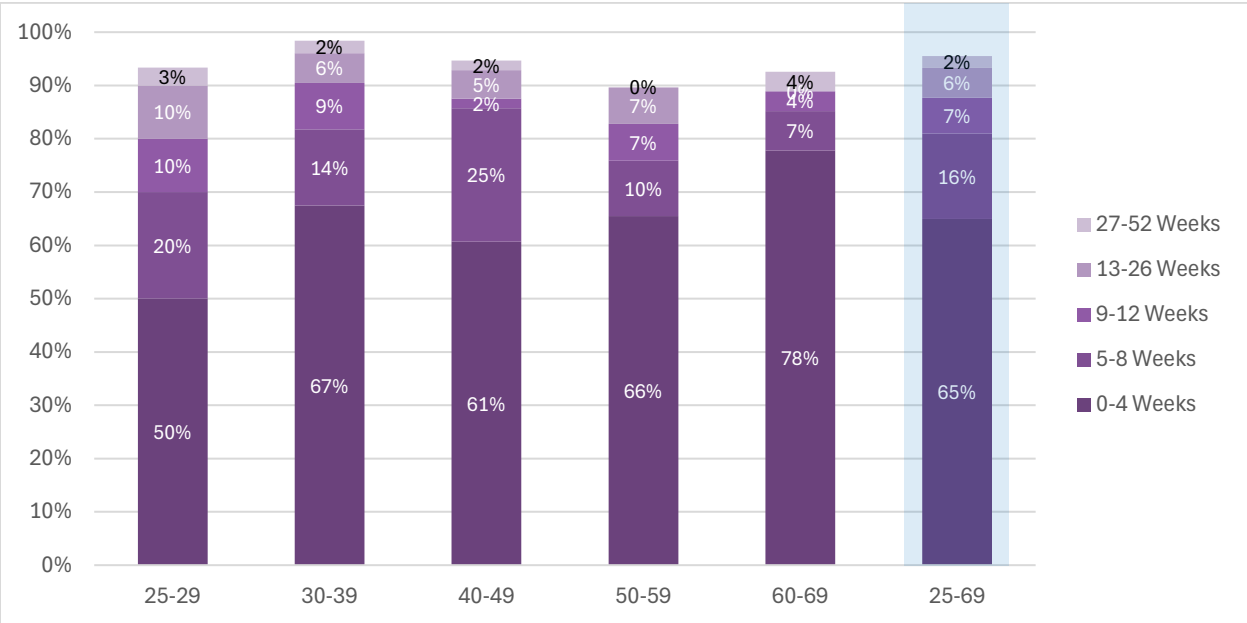
FIGURE 9: COLPOSCOPY FOLLOW-UP RATES FOR THOSE WITH ASC-H,HSIL MODERATE OR AGC PAP TEST RESULT BY AGE GROUP, 2023



Notes:

1. BC Cancer Cervix Screening data extraction date: 22/4/2025
2. Age is computed based on patient's age on report date of the index Pap test

FIGURE 10: COLPOSCOPY FOLLOW-UP RATES FOR THOSE WITH AGC-FN, AIS OR HSIL SEVERE PAP TEST RESULT BY AGE GROUP, 2023



Notes:

1. BC Cancer Cervix Screening data extraction date: 22/4/2025
2. Age is computed based on patient's age on report date of the index Pap test

Positive Predictive Value

The positive predictive value (PPV) is the chance of having histologically confirmed pathology when colposcopy has been recommended and a follow-up investigation with biopsy has been completed. For histology reporting cervical intraepithelial neoplasia (CIN) terminology is used.

TABLE 5: BIOPSY RATE, 2023

2022	ASC-US or LSIL	AGC	ASC-H or HSIL Moderate	AGC-FN, AIS or HSIL Severe	Grand Total
Recommended for colposcopy	2,380	544	2,451	427	5,802
Had Biopsy (%)	2,115 (89%)	480 (88%)	2,241 (91%)	408 (96%)	5,244 (90%)

Notes:

1. BC Cancer Cervix Screening data extraction date: 22/4/2025

TABLE 6: POSITIVE PREDICTIVE VALUE, 2023

2022	ASC-US or LSIL	AGC	ASC-H or HSIL Moderate	AGC-FN, AIS or HSIL Severe	Grand Total
CIN 2 or More Severe (%)	264 (12%)	85 (18%)	1,303 (58%)	366 (90%)	2,018 (38%)
CIN 3 or More Severe	109 (5%)	62 (13%)	829 (37%)	316 (77%)	1,316 (25%)
Carcinoma	2 (0%)	8 (2%)	32 (1%)	43 (11%)	85 (2%)

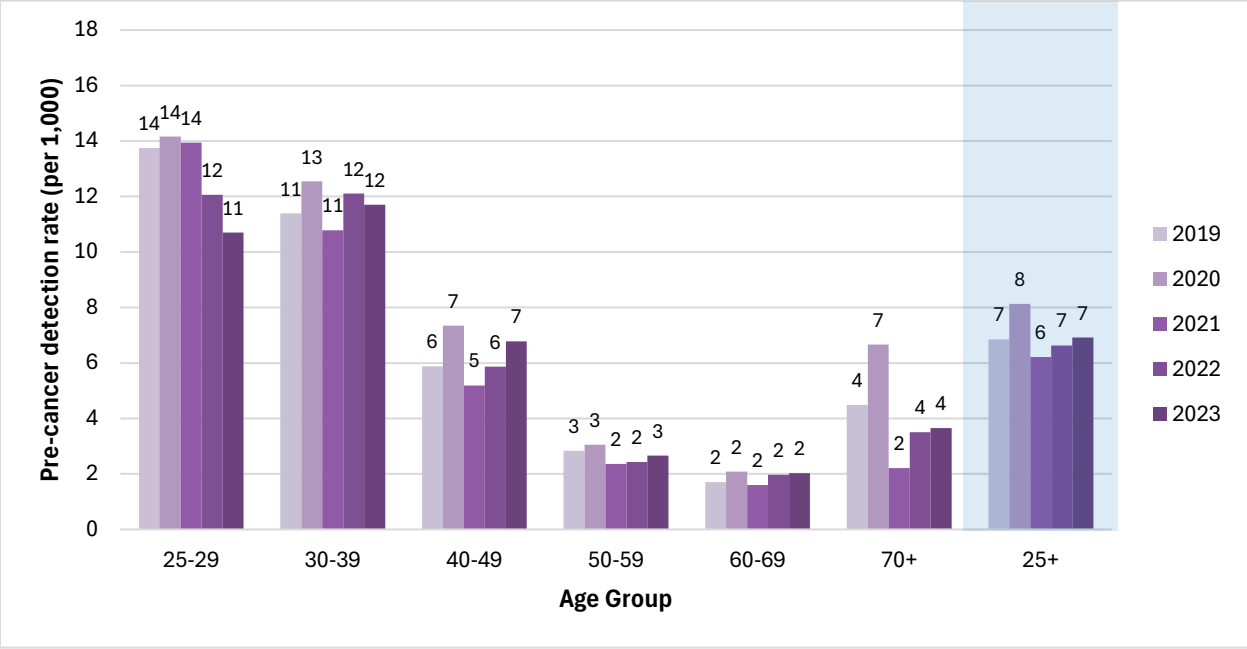
Notes:

1. BC Cancer Cervix Screening data extraction date: 22/4/2025

g) Pre-Cancer Detection Rate

Pre-Cancer Detection Rate is defined as the number of pre-cancerous lesions detected per 1,000 people screened in a 12-month period. Pre-cancerous lesions are histologically confirmed CIN 2, CIN 3 or adenocarcinoma *in situ* (AIS).

FIGURE 11: PRE-CANCER DETECTION PER 1,000 PEOPLE SCREENED BY AGE GROUP, 2023



Notes:

1. BC Cancer Cervix Screening data extraction date: 16/7/2025
2. Age is computed based on the date of the patient's most severe Pap result in the year

h) Cancer Incidence

Age standardized incidence and mortalty rates over time are shown in Figure 12. New invasive cervical cancers diagnosed in 2018-2022 were identified from the British Columbia Cancer Registry and the data collected by BC Cancer Cervix Screening. The age-specific cancer incidence rates for 2018-2022 are presented in Figure 13, and the cancer counts are shown in Table 7.

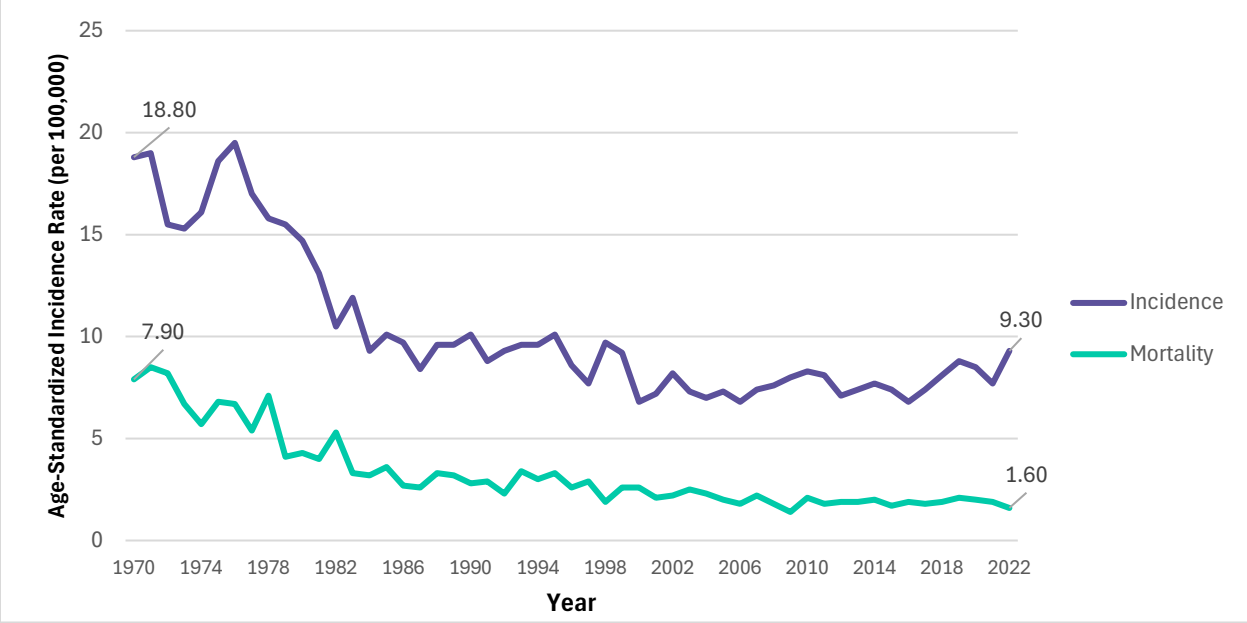
Age-Standardized Incidence Rate: weighted average of the age-range specific incidence rates, where the weights are the proportions of people in the corresponding age groups of the 2011 Canadian population (9.3/100,000, 2022).

Age-Standardized Mortality Rate: weighted average of the age-range specific mortality rates, where the weights are the proportions of people in the corresponding age groups of the 2011 Canadian population (1.6/100,000, 2022).

Incidence Rate: proportion of people in the population who develop cervical cancer in a given year, expressed as the number of cancer cases per 100,000 people.

Mortality Rate: proportion of people in the population who died of cervical cancer in a given year, expressed as the number of deaths per 100,000 people.

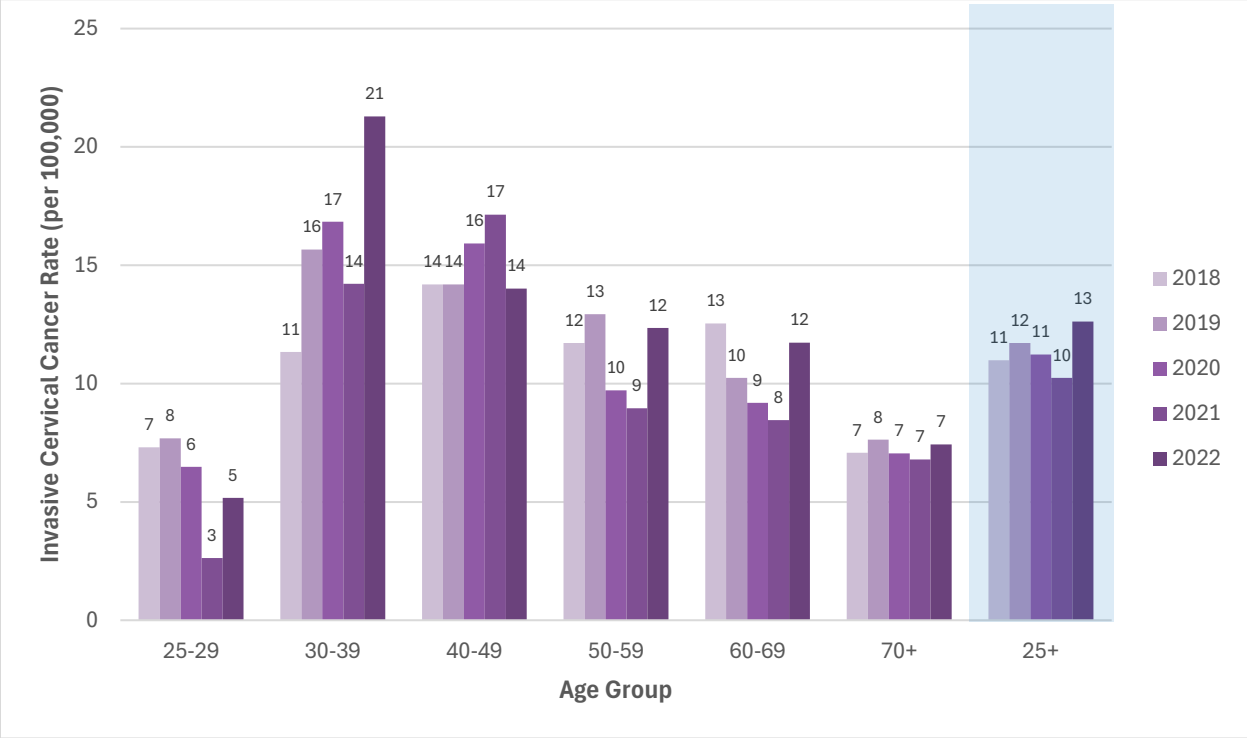
FIGURE 12: AGE STANDARDIZED INCIDENCE & MORTALITY RATE OF INVASIVE CERVICAL CANCER IN BC OVER TIME



Notes:

1. Rates are standardized to the 2011 Canadian population
2. BC Cancer Cervix Screening data extraction date: 23/4/2025

FIGURE 13: INVASIVE CERVICAL CANCER INCIDENCE PER 100,000 BY AGE GROUP, 2018 – 2022



Notes:

1. Population data source: P.E.O.P.L.E. 2024 (Aug 2024), BC STATS, Service BC, BC Ministry of Citizen's Services
2. BC Cancer Cervix Screening data extraction date: 23/4/2025
3. Age is computed based on date of diagnosis

TABLE 7: NUMBER OF INVASIVE CERVICAL CANCERS BY AGE GROUP, 2018 – 2022

		20-24	25-29	30-39	40-49	50-59	60-69	70+	20+
2022	**Number of cases**								
	All cell types	0	10	84	48	44	42	29	**257**
	Squamous cell only	0	6	53	30	19	27	17	**152**
	Incidence rate (per 100,000)								
	All cell types	0.00	5.17	21.28	14.01	12.35	11.73	7.43	**11.66**
	Squamous cell only	0.00	3.10	13.43	8.76	5.33	7.54	4.36	**6.89**
2021	**Number of cases**								
	All cell types	0	5	55	58	32	30	26	**206**
	Squamous cell only	0	3	41	31	22	22	19	**138**
	Incidence rate (per 100,000)								
	All cell types	0.00	2.63	14.21	17.14	8.95	8.46	6.79	**9.46**
	Squamous cell only	0.00	1.58	10.60	9.16	6.15	6.20	4.96	**6.34**
2020	**Number of cases**								
	All cell types	0	12	63	53	35	32	26	**221**
	Squamous cell only	0	10	41	29	24	22	18	**144**
	Incidence rate (per 100,000)								
	All cell types	0.00	6.48	16.84	15.92	9.72	9.19	7.05	**10.35**
	Squamous cell only	0.00	5.40	10.96	8.71	6.66	6.32	4.88	**6.74**
2019	**Number of cases**								
	All cell types	1	14	57	47	47	35	27	**228**
	Squamous cell only	1	11	35	30	36	26	13	**152**
	Incidence rate (per 100,000)								
	All cell types	0.59	7.68	15.67	14.19	12.93	10.24	7.63	**10.83**
	Squamous cell only	0.59	6.03	9.62	9.06	9.90	7.61	3.67	**7.22**
2018	**Number of cases**								
	All cell types	0	13	40	47	43	42	24	**209**
	Squamous cell only	0	10	25	31	28	27	20	**141**
	Incidence rate (per 100,000)								
	All cell types	0.00	7.31	11.34	14.19	11.72	12.54	7.08	**10.10**
	Squamous cell only	0.00	5.62	7.09	9.36	7.63	8.06	5.90	**6.81**

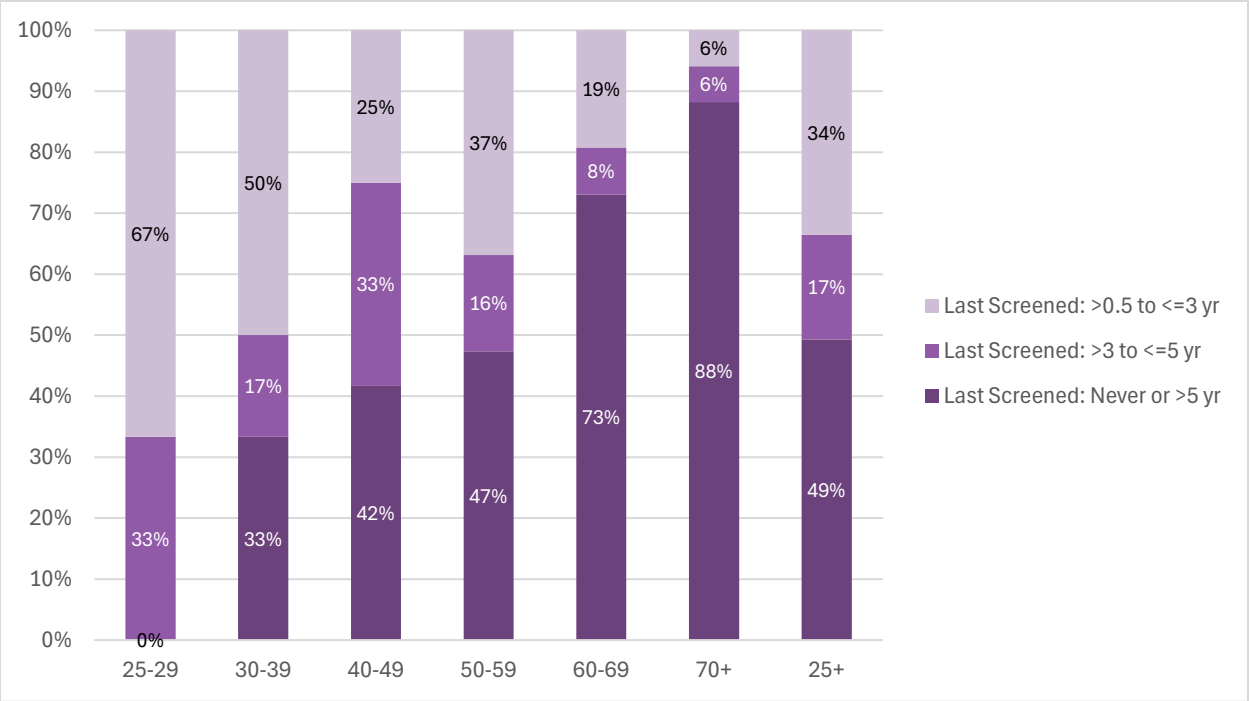
Notes:

1. Population data source: P.E.O.P.L.E. 2024 (Aug 2024), BC STATS, Service BC, BC Ministry of Citizen's Services
2. BC Cancer Registry data extraction date: 23/4/2025
3. BC Cancer Cervix Screening data extraction date: 23/4/2025
4. Age is computed based on date of diagnosis

i) Screening History in Cases of Invasive Cancer

Pap tests performed within six months prior to the invasive cancer diagnosis are less likely to be done for screening purposes; these Paps are disregarded in the categorization of screening history.

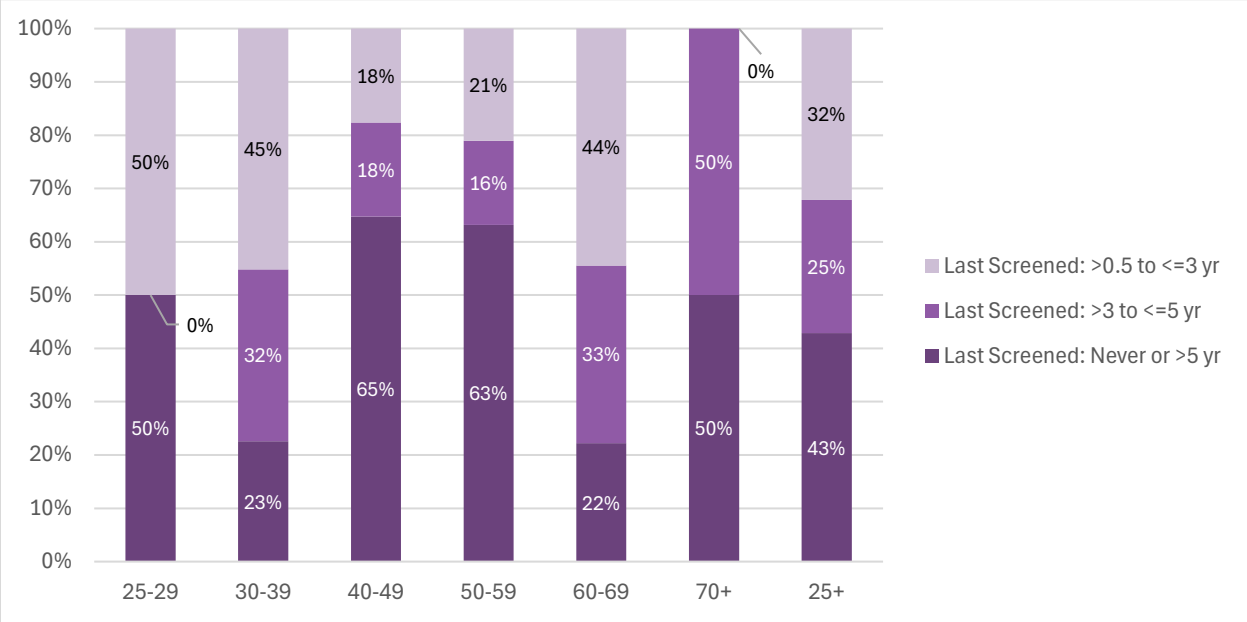
FIGURE 14: SCREENING HISTORY OF THOSE DIAGNOSED WITH SQUAMOUS CELL CARCINOMA, 2022



Notes:

1. BC Cancer Registry data extraction date: 23/4/2025
2. BC Cancer Cervix Screening data extraction date: 23/4/2025
3. Age is computed based on date of diagnosis

FIGURE 15: SCREENING HISTORY OF THOSE DIAGNOSED WITH ADENOCARCINOMA, 2022



Notes:`

1. BC Cancer Registry data extraction date: 23/4/2025
2. BC Cancer Cervix Screening data extraction date: 23/4/2025
3. Age is computed based on date of diagnosis

APPENDIX – THE 2014 BETHESDA SYSTEM

SPECIMEN ADEQUACY

☐ Satisfactory for evaluation

☐ Unsatisfactory for evaluation

INTERPRETATION/RESULT

NEGATIVE FOR INTRAEPITHELIAL LESION OR MALIGNANCY

(When there is no cellular evidence of neoplasia, state this in the General Categorization above and/or in the Interpretation/Result section of the report--whether or not there are organisms or other non-neoplastic findings)

Non-Neoplastic Findings (optional to report)
Organisms
OTHER

- Endometrial cells (in a woman 45 years of age)
  (Specify if "negative for squamous intraepithelial lesion")

EPITHELIAL CELL ABNORMALITIES

SQUAMOUS CELL

- Atypical squamous cells
  - of undetermined significance (ASC-US)
  - cannot exclude HSIL (ASC-H)
- Low-grade squamous intraepithelial lesion (LSIL)
  (*encompassing: HPV/mild dysplasia/CIN 1*)
- High-grade squamous intraepithelial lesion (HSIL)
  (*encompassing: moderate and severe dysplasia, CIS; CIN 2 and CIN 3*)
  - with features suspicious for invasion (if invasion is suspected)
- Squamous cell carcinoma (SCC)

GLANDULAR CELL

- Atypical (AGC)
  - endocervical cells (NOS or specify in comments)
  - endometrial cells (NOS or specify in comments)
  - glandular cells (NOS or specify in comments)
- Atypical
  - endocervical cells, favor neoplastic (AEC-FN)
  - glandular cells, favor neoplastic (AGC-FN)
- Endocervical adenocarcinoma in situ (AIS)
- Adenocarcinoma
  - endocervical
  - endometrial
  - extrauterine
  - not otherwise specified (NOS)

OTHER MALIGNANT NEOPLASMS (specified)