

NOVA SCOTIA BREAST SCREENING PROGRAM

Table 1: Quality Indicators by Site, Zone and Province, women aged 40-74, Screen Year 2022 (January 01 - December 31 2022)

Indicator	National Target	AM	AN	BR	Central ¹	KE	NG	SY	TR	YA	Western Zone 1	Northern Zone 2	Eastern Zone 3	Central Zone 4	Nova Scotia ²
Number of Individuals Participated in Screening	NA	1638	1966	2846	24836	3736	2622	890	3586	2540	9122	7846	2856	24836	53780
Number of 1st Screens	NA	204	224	313	3517	523	327	191	433	294	1130	964	415	3517	7267
Number of Screen Detected Cancers	NA	13	17	15	162	19	17	5	22	19	53	52	22	162	338
Coverage															
Participation Rate (Ages 40-74), 30 month*	≥ 70%	Data not available									Data not available				39.5%
Retention Rate (Ages 40-72)*															
<i>Initial</i>	≥ 75%	37.4%	38.4%	29.4%	48.1%	37.3%	34.3%	34.8%	41.4%	30.1%	33.6%	38.4%	37.7%	48.1%	43.9%
<i>Subsequent</i>	≥ 90%	69.6%	76.1%	60.9%	73.8%	67.7%	67.8%	64.9%	73.8%	75.4%	68.0%	71.1%	75.1%	73.8%	73.0%
Follow-Up															
Abnormal Call Rate															
<i>Initial</i>	< 10%	16.7%	24.1%	18.2%	14.2%	15.7%	18.3%	7.9%	20.6%	21.8%	18.0%	19.0%	16.6%	14.2%	15.4%
<i>Subsequent</i>	< 5%	6.1%	10.2%	5.8%	5.4%	4.8%	8.1%	3.4%	8.3%	6.5%	5.6%	7.8%	8.3%	5.4%	5.8%
Diagnostic Interval															
A) % notified within 2 weeks of screen	≥ 90%	93.0%	88.8%	95.4%	93.6%	98.6%	98.7%	51.3%	96.4%	67.1%	88.8%	96.5%	77.2%	93.6%	92.1%
B) Time from abnormal screen to definitive diagnosis															
– without tissue biopsy (% diagnosed within 5 weeks)	≥ 90%	70.5%	20.2%	52.2%	93.2%	87.6%	81.9%	83.8%	82.1%	35.7%	60.4%	80.4%	48.4%	93.2%	75.0%
– with tissue biopsy (% diagnosed within 7 weeks)	≥ 90%	48.4%	40.0%	52.9%	31.1%	82.0%	70.2%	80.6%	62.8%	38.6%	57.0%	62.2%	67.3%	31.1%	43.6%
Quality of Screening															
Benign: Malignant Core Biopsy Ratio															
<i>Initial</i>	None	NA	NA	NA	5.07 : 1	NA	NA	NA	NA	3.0 : 1	3.80 : 1	6.43 : 1	1.80 : 1	5.07 : 1	4.93 : 1
<i>Subsequent</i>	None	1.50 : 1	0.80 : 1	1.64 : 1	2.54 : 1	1.20 : 1	1.75 : 1	NA	2.35 : 1	1.53 : 1	1.45 : 1	1.96 : 1	0.89 : 1	2.54 : 1	1.88 : 1
Benign: Malignant Open Surgical Biopsy Ratio															
<i>Initial</i>	≤ 1 : 1	NA	NA	NA	0.67 : 1	NA	NA	NA	NA	0 : 1	NA	NA	NA	0.67 : 1	0.38 : 1
<i>Subsequent</i>	≤ 1 : 1	NA	NA	NA	0.16 : 1	NA	NA	NA	0.31 : 1	0 : 1	NA	0.28 : 1	NA	0.16 : 1	0.14 : 1
PPV															
<i>Initial</i>	≥ 5%	NA	NA	NA	4.2%	NA	NA	NA	NA	7.8%	5.4%	5.5%	4.3%	4.2%	4.6%
<i>Subsequent</i>	≥ 6%	10.3%	8.4%	8.8%	12.2%	9.8%	7.6%	NA	7.3%	9.7%	9.4%	7.9%	9.4%	12.2%	10.7%

Indicator	National Target	AM	AN	BR	Central [§]	KE	NG	SY	TR	YA	Western Zone 1	Northern Zone 2	Eastern Zone 3	Central Zone 4	Nova Scotia [§]
Detection															
In-Situ Cancer Detection Rate															
Initial	None	0.00	NA	0.00	NA	NA	NA	0.00	NA	0.00	NA	NA	NA	NA	1.10
Subsequent	None	1.00	NA	NA	0.80	NA	0.00	0.00	NA	NA	1.00	NA	NA	0.80	0.67
Invasive Cancer Detection Rate															
Initial	>5 per 1,000 screens	NA	NA	NA	5.4	NA	NA	NA	NA	17.0	8.0	8.3	NA	5.4	5.9
Subsequent	> 3 per 1,000 screens	6.3	8.0	4.3	5.8	4.0	6.1	NA	5.1	4.5	4.3	5.7	7.4	5.8	5.5
Disease Extent at Diagnosis															
Screen Detected Invasive Tumour Size															
<= 10mm †	>25% †	NA	40.0%	NA	35.7%	NA	NA	0.0%	NA	NA	25.6%	25.5%	30.0%	35.7%	31.8%
<= 15 mm	>50%	NA	46.7%	38.5%	55.9%	73.3%	43.8%	NA	61.1%	53.3%	55.8%	46.8%	40.0%	55.9%	55.2%
Proportion of Node Negative Screen Detected Invasive Cancer	>70%	NA	66.7%	NA	80.4%	60.0%	NA	NA	NA	NA	67.4%	85.1%	65.0%	80.4%	78.3%

□ This includes three screening locations: Cobequid, Dartmouth and Halifax

§ Nova Scotia totals include M4 (mobile van) data; M4 data not displayed in this table.

* Participation Rate is presented for a 30 month period ending December 31 2022

‡ Retention Rate is presented for individuals screened in 2020, and who were re-screened within 30 months of their previous screen

† No longer monitored at the national level, but NSBSP continues to monitor

NA = Data is suppressed due to small numbers. This prevents the identification of individuals and misinterpretation of unstable rates.



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Table 2: Quality Indicators by Age Group, Screen Year 2022, January 01 2022 - December 31 2022

Indicator	National Target	40 to 49	50 to 59	60 to 69	70-74	75+
Number of Individuals Participated in Screening	NA	12835	16102	18485	6356	3172
Number of 1st Screens	NA	4707	1577	847	136	50
Number of Screen Detected Cancers	NA	56	88	134	60	37
Coverage						
Participation Rate, 30 month*	≥ 70%	34.3%	43.1%	45.0%	37.7%	11.0%
Retention Rate[‡]						
<i>Initial</i>	≥ 75%	50.5%	26.6%	38.0%	22.0%	NA
<i>Subsequent</i>	≥ 90%	78.4%	68.8%	73.1%	71.9%	65.8%
Follow-Up						
Abnormal Call Rate						
<i>Initial</i>	< 10%	15.6%	16.0%	14.2%	9.6%	12.0%
<i>Subsequent</i>	< 5%	7.0%	5.6%	5.4%	5.7%	5.6%
Diagnostic Interval - Time from abnormal screen to definitive diagnosis						
- without tissue biopsy (% diagnosed within 5 weeks)	≥ 90%	78.8%	74.0%	71.3%	75.0%	77.4%
- with tissue biopsy (% diagnosed within 7 weeks)	≥ 90%	38.1%	43.8%	49.0%	44.4%	51.4%
Quality of Screening						
Benign: Malignant Core Biopsy Ratio						
<i>Initial</i>	None	4.94 : 1	8.78 : 1	1.79 : 1	NA	NA
<i>Subsequent</i>	None	3.87 : 1	2.45 : 1	1.35 : 1	1.38 : 1	1.05 : 1
Benign: Malignant Open Surgical Biopsy Ratio						
<i>Initial</i>	≤ 1 : 1	0.48 : 1	NA	NA	NA	NA
<i>Subsequent</i>	≤ 1 : 1	0.21 : 1	0.22 : 1	0.08 : 1	0.13 : 1	0.00 : 1
PPV						
<i>Initial</i>	≥ 5%	2.7%	3.1%	8.3%	NA	NA
<i>Subsequent</i>	≥ 6%	3.1%	7.0%	10.1%	16.2%	18.0%

Indicator	National Target	40 to 49	50 to 59	60 to 69	70-74	75+
Detection						
In-Situ Cancer Detection Rate						
Initial	None	1.27	0.00	NA	0.00	0.00
Subsequent	None	NA	0.48	0.62	1.45	NA
Invasive Cancer Detection Rate						
Initial	>5 per 1,000 screens	4.5	6.3	13.0	NA	NA
Subsequent	> 3 per 1,000 screens	3.1	4.9	6.2	8.0	10.2
Disease Extent at Diagnosis						
Screen Detected Invasive Tumour Size						
<= 10mm †	>25% †	NA	35.8%	37.2%	33.3%	36.4%
<= 15 mm	>50%	43.5%	55.6%	59.5%	54.9%	57.6%
Proportion of Node Negative Screen Detected Invasive Cancer	>70%	67.4%	77.8%	78.5%	88.2%	NA

* Participation Rate is presented for a 30 month period ending December 31 2022

‡ Retention Rate is presented for an individual who had a screen in 2020, and who was re-screened within 30 months of their previous screen

† No longer monitored at the national level, but NSBSP continues to monitor

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Table 3: Quality Indicators by Screen Year, 2018-2022

Indicator	Target	2018	2019	2020	2021	2022
Number of Individuals Participated in Screening	NA	46950	45391	21558	39547	53780
Number of 1st Screens	NA	1950	1991	915	2121	7267
Number of Screen Detected Cancers	NA	267	257	120	241	338
Coverage						
Participation Rate, 30 month*	≥ 70%	51.4%	51.4%	43.6%	37.1%	39.5%
Retention Rate[‡]						
<i>Initial</i>	≥ 75%	39.2%	35.6%	21.8%	20.4%	43.9%
<i>Subsequent</i>	≥ 90%	73.9%	73.5%	50.1%	57.0%	73.0%
Follow-Up						
Abnormal Call Rate						
<i>Initial</i>	< 10%	16.5%	15.2%	16.4%	15.3%	15.4%
<i>Subsequent</i>	< 5%	5.7%	5.3%	5.5%	6.1%	5.8%
Diagnostic Interval - Time from abnormal screen to definitive diagnosis						
– without tissue biopsy (% diagnosed within 5 weeks)	≥ 90%	73.9%	74.5%	81.6%	71.9%	75.0%
– with tissue biopsy (% diagnosed within 7 weeks)	≥ 90%	56.7%	61.2%	67.2%	55.1%	43.6%
Quality of Screening						
Benign: Malignant Core Biopsy Ratio						
<i>Initial</i>	None	4.48 : 1	2.64 : 1	3.55 : 1	4.78 : 1	4.93 : 1
<i>Subsequent</i>	None	2.10 : 1	1.85 : 1	1.98 : 1	1.95 : 1	1.88 : 1
Benign: Malignant Open Surgical Biopsy Ratio						
<i>Initial</i>	≤ 1 : 1	0.14 : 1	0.06 : 1	0.00 : 1	0.50 : 1	0.38 : 1
<i>Subsequent</i>	≤ 1 : 1	0.07 : 1	0.06 : 1	0.08 : 1	0.07 : 1	0.14 : 1
PPV						
<i>Initial</i>	≥ 5%	6.9%	10.6%	6.7%	5.2%	4.6%
<i>Subsequent</i>	≥ 6%	9.6%	9.7%	9.6%	9.9%	10.7%

Indicator	Target	2018	2019	2020	2021	2022
Detection						
In-Situ Cancer Detection Rate						
Initial	None	2.05	2.51	1.09	0.47	1.10
Subsequent	None	0.82	0.97	0.87	1.07	0.67
Invasive Cancer Detection Rate						
Initial	>5 per 1,000 screens	10.3	13.6	10.9	7.5	5.9
Subsequent	> 3 per 1,000 screens	4.7	4.3	4.8	4.9	5.5
Disease Extent at Diagnosis						
Screen Detected Invasive Tumour Size						
<= 10mm †	>25% †	37.1%	35.8%	36.4%	34.0%	28.2%
<= 15 mm	>50%	64.2%	63.7%	63.6%	59.5%	54.5%
Proportion of Node Negative Screen Detected Invasive Cancer	>70%	78.0%	80.9%	81.8%	83.0%	76.3%

Δ Indicators are calculated for ages 50-74 for screen years 2018-2021, ages 40-74 for screen year 2022.

* Participation Rate is presented for a 30 month period ending December 31

‡ Retention Rate is presented for women ages 50-72 who had a screen in 2016, 2017, 2018, 2019, and who were re-screened within 30 months of their previous screen

‡ Retention Rate is presented for women ages 40-72 who had a screen in 2020, and who were re-screened within 30 months of their previous screen

† No longer monitored at the national level, but NSBSP continues to monitor

