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平成16年12月20日	資料１

資料１：諸外国における取組例

１－①　諸外国ガイドラインの例１

「Quality Determinants of Organized Breast Cancer Screening Programs in Canada」（カナダ）

１－②　諸外国ガイドラインの例２

「NHS Breast Screening Programme」（イギリス）

資料１：諸外国における取組例

指標

２－①　諸外国ガイドラインの例１
「Quality Determinants of Organized Breast Cancer Screening Programs in Canada」（カナダ）

① 受診率
② 再受診率
③ 要精密検査率
④ 浸潤がん発見率
⑤ 表皮がん発見率
⑥ 精密検査受診率
⑦ 陽性適中度
⑧ 良性・悪性率（バイオプシーによる）
⑨ 浸潤がんにおけるサイズ
⑩ 浸潤がんにおけるリンパ節転移率
⑪ 浸潤がんにおける偽陰性率

２－②　諸外国ガイドラインの例２
「NHS Breast Screening Programme」（イギリス）

①受診率
②要精密検査率
③良性率（バイオプシーによる）
④表皮がん発見率
⑤浸潤がん発見率
⑥１５mm以下浸潤がん発見率
⑦非手術的がん診断率
⑧標準発見率
⑨再受診者数

がん検診に関する検討会	
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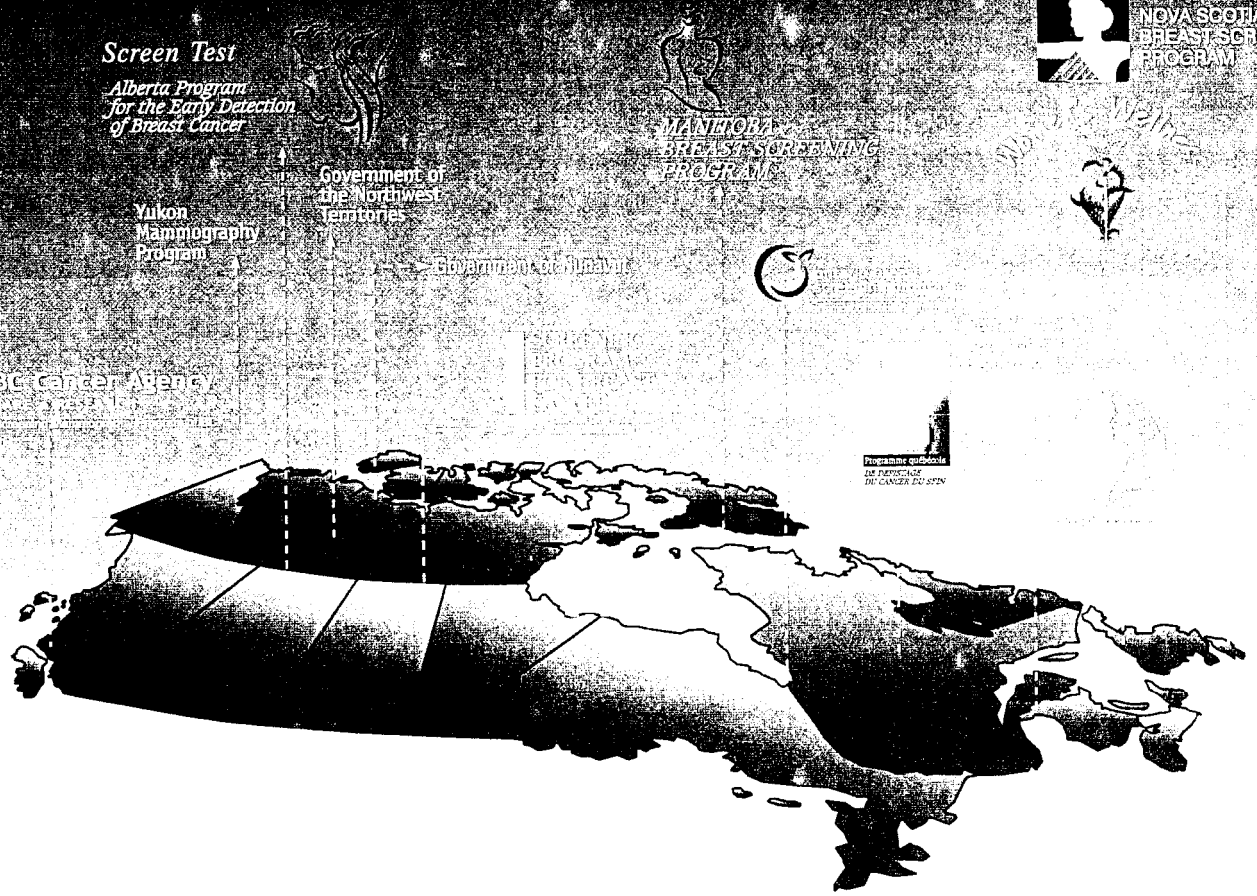
資料１－①　諸外国ガイドラインの例１

「Quality Determinants of Organized Breast Cancer Screening Programs in Canada」（カナダ）

Health Canada | Santé Canada

Quality Determinants of Organized Breast Cancer Screening Programs in Canada



Canada

8. Program Evaluation

- Organized programs should build and use a database.
- Organized programs should monitor and measure program performance and outcomes.
- Organized programs should evaluate client satisfaction.

In order to achieve reductions in breast cancer mortality and morbidity and to minimize the unwanted effects of screening, the delivery of organized screening must be of high quality. The Evaluation Indicators Working Group of the National Committee for the Canadian Breast Cancer Screening Initiative (CBCSI) selected 11 performance measures and targets according to their utility for assessing program progress toward these goals[1]. These measures were developed on the basis of recognized population screening principles, evidence from randomized controlled trials, demonstration projects, and observational studies (see Table 2).

The target population for evaluation is the same as the national target population for organized screening. This population is defined as asymptomatic women between the ages of 50 and 69 years with no prior diagnosis of breast cancer.

The screening programs should also monitor the extent to which the services are perceived as acceptable and appropriate to the needs of the eligible population[2]. Regular surveys should be conducted in order to assess satisfaction with information, waiting time, the physical environment, pain and discomfort, and interactions with staff[2,3]. The results of client surveys and client comments will be used to improve service provision. Satisfied clients are more likely to return for rescreening and to provide positive comments to others.

Table 2
Breast Screening Program Performance Measures
(February 2002)

Indicator	Definition	Target* (age 50-69)
1. Participation Rate	Percentage of women who have a screening mammogram (calculated biennially) as a proportion of the eligible population	≥ 70% of the eligible population
2. Retention Rate	The estimated percentage of women who are rescreened within 30 months of their previous screen	≥ 75% rescreened within 30 months
3. Abnormal Call Rate (%)	Percentage of women screened who are referred for further testing because of abnormalities found with a program screen	< 10% (initial screen) < 5% (rescreens)
4. Invasive Cancer Detection Rate	Number of women detected with invasive cancer during a screening episode per 1,000 women screened	> 5 per 1,000 on initial screen > 3 per 1,000 on rescreens
5. In Situ Cancer Detection Rate	Number of women detected with ductal carcinoma in situ cancer (rather than invasive cancer) during a screening episode per 1,000 women screened	Surveillance and monitoring purposes only
6. Diagnostic Interval	Total duration from abnormal screen to resolution of abnormal screen	≥ 90% within 5 weeks if no open biopsy ≥ 90% within 7 weeks if open biopsy
7. Positive Predictive Value	Proportion of abnormal cases with completed follow-up found to have breast cancer (invasive or in situ) after diagnostic workup.	≥ 5% (initial screen) ≥ 6% (rescreen)
8. Benign to Malignant Open Biopsy Ratio	Among open biopsies, the ratio of number of benign cases to the number of malignant cancer cases	≤ 2:1 open (initial and rescreen combined)
9. Invasive Cancer Tumour Size	Percentage of invasive cancers with tumour size of ≤ 10 mm in greatest diameter as determined by the best available evidence: 1) pathological, 2) radiological, 3) clinical	> 25% ≤ 10 mm
10. Positive Lymph Nodes in Cases of Invasive Cancer	Proportion of invasive cancers in which the cancer has invaded the lymph nodes	< 30% node positive
11. Post-screen Detected Invasive Cancer Rate	Number of women with a diagnosis of invasive breast cancer after a negative screening episode per 10,000 person-years at risk, within 12 AND 24 months of the screen date.	< 6 per 10,000 person-years (within 12 months) < 12 per 10,000 person-years (within 24 months)

* Canadian targets obtained by consensus and based on evidence supported by literature

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資料１－②　諸外国ガイドラインの例２

「NHS Breast Screening Programme」（イギリス）

NHS
Cancer Screening Programmes

NHS Breast Screening Programme

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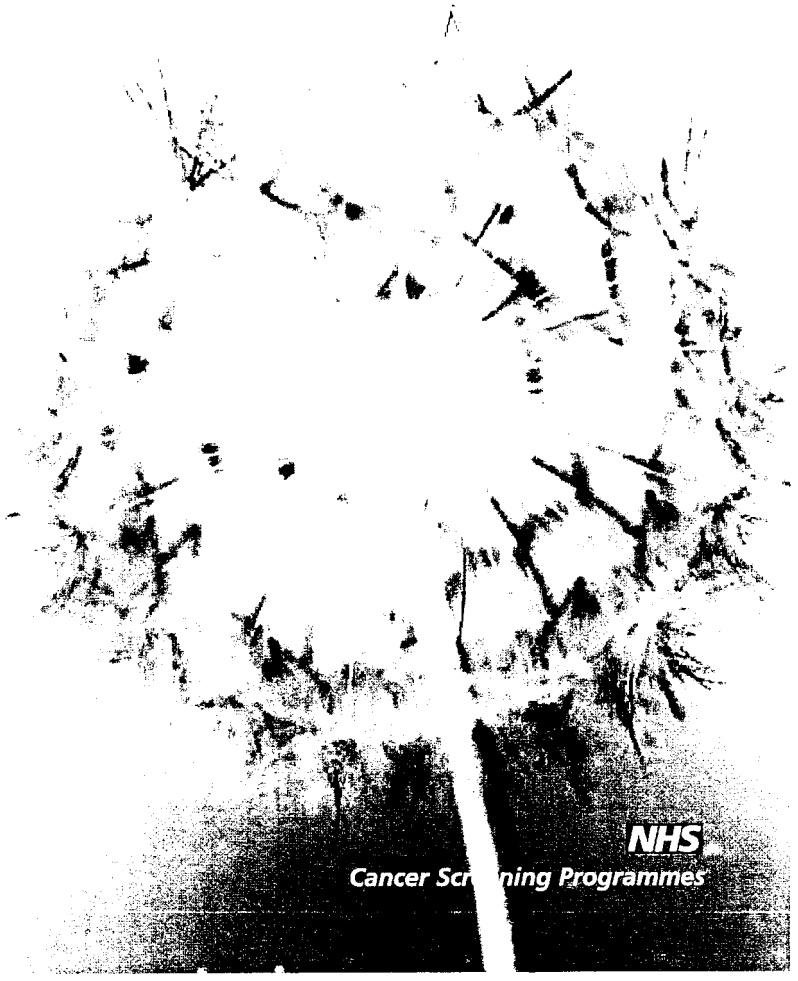
NHS Breast Screening Programme



These two tables compare actual achievement in 2002/3 with the minimum quality standards for the programme.

The standards were revised in 2000 and were based on screening only women aged 50 to 64. In view of the expanded programme, figures are also given for women aged 65 to 69 although the data for these women in table 3 should be treated with caution as so few are included.

By and large the minimum standards are met or exceeded. The obvious exception is the in situ cancer rate (ductal carcinoma in situ rate). Since the target was set, new diagnostic techniques, particularly the use of core biopsy, have led to a tremendous increase in the number of cancers diagnosed without the woman needing an operation. This can be seen in the very high non-operative diagnosis rates reflected here. This has led to an increase in the detection of small invasive cancers and also of in situ disease.

These standards are now being revised to reflect the older age group being screened.

Table 3: Screening quality – first screen following first invitation

	Standard (50-64)	Achieved (50-64)	Achieved (65-69)
Acceptance rate at first invitation	≥70%	78%	27.9%
Recall rate	≤10%	10.5%	9.2%
Benign biopsies per 1,000 women screened	≤3.6	6.5	2.5*
In situ rate per 1,000 women screened	0.4-0.9	1.0	5.7
Invasive cancer rate per 1,000 women screened	≥2.7	5.2	5.7
Invasive cancers less than 15mm per 1,000 women screened	≥1.5	2.6	2.9
Non operative diagnosis rate for cancers	≥70%	73.1%	92.8%
Standardised detection ratio	≥1.0	1.41	-
Total number of women screened for 1st time following 1st invitation	-	1,041,818	349

* includes first attendance but not first invitation

Table 4: Screening quality – subsequent screen

	Standard (50-64)	Achieved (50-64)	Achieved (65-69)
Acceptance rate at invitation following previous attendance	-	85.1%	79.6%
Recall rate	<7%	4%	4%
Benign biopsies per 1,000 women screened	<2.0	0.8	0.9
In situ cancer rate per 1,000 women screened	0.5-1.0	1.3	1.9
Invasive cancer rate per 1,000 women screened	≥3.0	5.2	8.9
Invasive cancers less than 15mm per 1,000 women screened	≥1.65	2.8	5.0
Non operative diagnosis rate for cancers	≥70%	78%	92%
Standardised detection ratio	≥1.0	1.41	-
Total number of women screened	-	1,041,818	55,481

Table 5: Screening outcomes

	First screen (invited)		Subsequent screen (invited)		Self/GP referral		Early recall	
	50-64	65-69	50-64	65-69	50-64	65-69	50-64	65-69
Number of women screened	1,041,818	349	1,041,818	55,481	31,656	67,106	2,842	231
% recalled for assessment	6%	9%	4%	4%	4.4%	4.7%	61.4%	59.6%
Benign biopsies per 1,000 women	2.6	2.5	0.8	0.9	0.7	0.8	16.9	5.0
Overall cancer rate per 1,000 women	7.6	10.6	6.5	10.8	8.3	10.8	24.3	60.8
In situ cancer rate per 1,000 women	1.0	1.7	1.3	1.9	1.0	1.9	7.0	4.7
Invasive cancer per 1,000 women	6.7	8.9	5.2	8.9	7.3	8.9	17.3	56.1
Invasive cancer ≤15mm per 1,000 women	2.9	2.9	2.8	5.0	3.9	4.8	12.7	16.5

This table portrays the various outcomes for women who have entered the programme in different ways. Results are shown for the 50 to 64 and the 65 to 69 age groups separately. Caution should be employed about the data presented for the older women attending for their first screen because of the small numbers in this category. The early recall group is also small, but has a very high risk of cancer.

The 65 to 69 year old women who self refer have a very similar profile to women invited for subsequent screens in this age group. This suggests that they are women without symptoms who are referring themselves since they have not yet been invited as part of programme expansion. In the 50 to 64 age group, however, there are much higher levels of invasive cancer in the women who self refer than in the invited women. This suggests that these women, having not attended when invited, may refer themselves for screening when they suspect a problem.

Table 6: Screening numbers – women 65 and over

These data show the increase in women 65 and over who have been screened over the last five years. There were steady increases over the first four years while the pilot for screening older women was in operation.

This year there has been a tremendous increase, particularly amongst women 65 to 69. There is no upper age limit for screening, so the 70 or over category will include not only some 70 year olds who have been invited at the start of the expansion, but older women who have requested screening.