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NB-IRDT
New Brunswick Institute for Research, Data and Training

Breast Cancer Screening Database

DH12

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How to Obtain More Information

For more information about this Codebook or other services and data available from the New Brunswick Institute for Research, Data and Training (NB-IRDT), contact us in any of the following ways:

- visit our website at https://www.nbirdt.ca/
- email us at nb-irdt@unb.ca
- call us at 506-447-3363 Monday to Friday, 8:30am to 4:30pm

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ABOUT THIS GUIDE

This reference guide is intended for users of the Breast Cancer Screening Database. This guide provides an overview of the data, the general methodology used in its creation and important technical information. It contains operational procedures as well as table and field descriptions. The development of this document is an ongoing process that will be updated with changes that occur in the Breast Cancer Screening Database.

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OVERVIEW

Breast cancer is the most frequently diagnosed cancer and the second leading cause of cancer death among women in New Brunswick. The New Brunswick breast cancer screening (NBBCS) program was established in 1995. The program provides eligible women access to mammography screening in accordance to Canadian guidelines. The goal is to detect breast cancer at an early stage and reduce deaths due to breast cancer. The program provides bilateral, two-view screening mammography biennially to eligible women throughout the province. The target population is defined as asymptomatic women between the ages of 50 to 69 years without prior diagnosis of breast cancer. Women aged 40-49 or greater than 69 require a physician or nurse practitioner's referral to the program.

The Breast cancer screening database is a provincial database which contains data from the New Brunswick Breast Cancer Screening Program. The New Brunswick Institute for Research Data and Training (NB-IRDT) holds an anonymized, linkable version of this data which provides project specific datasets with further scrambled identifiers to researchers.

More information on the screening program may be found at: http://www2.gnb.ca/content/gnb/en/departments/health/NewBrunswickCancerNetwork/content/NewBrunswickBreastCancerScreeningProgram.html

Data Range

1996-2016 (Calendar Years)

Data Source

New Brunswick Department of Health

How to cite this guide – paper reference guide

New Brunswick Institute for Data, Research and Training. (2021). *Breast Cancer Screening Database Reference Guide for Year 1996-2016.* Fredericton, NB: New Brunswick Institute for Research, Data and Training.

How to cite this guide – online reference guide

New Brunswick Institute for Data, Research and Training. (2021). *Breast Cancer Screening Database Reference Guide for Year 1996-2020*. Retrieved from: https://www.unb.ca/nbirdt/data/holdings/nb-breast-cancer-screening.html

How to cite this product

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Acknowledgements

The Breast Cancer Screening Database is used with permission of the New Brunswick Department of Health.

ABOUT THIS PRODUCT

Purpose of the product

The purpose of the Breast cancer screening database reference guide is to provide information on the linkable New Brunswick breast screening data to researchers for public health and other research as well as for the development of population estimates and projections.

Content

This version of the Breast Cancer Screening Database contains four (4) groups of data elements:

Group	Description
1	Client Registry
2	Inquiry Log
3	Program Screens
4	Cancers from BCSS

Each group includes the name, type (character or numeric), length, description, and count of non-missing values of the data elements.

General methodology

The Breast Cancer Screening database contains anonymized socio-demographic information, risk factors, screening events, screening results, follow-up results, and, where applicable, diagnoses of screen and non-screen-detected breast cancers of participants of the screening program.

This data from the Department of Health is stored securely by the NBIRDT for authorized access to researchers.

Reference Date

1996-2020 (Calendar Years)

TECHNICAL SPECIFICATIONS

Record layouts and data descriptions

Client Registry

Contains client information recorded when client entered the screening program

Variable Name	Type	Description
IRID	C	Scrambled client ID
Birth_Place	C	Client's place of birth
Parity	N	Number of full-term pregnancies
Age_at_First_Birth	N	Age at first full-term pregnancy

The type 'N' refers to numeric values while 'C' refers to both alphabetic and numeric characters.

IRID (Interim Record ID)
Interim record identifier.

Birth_Place
Client's province or country of birth, 3 digit code. See the following for a complete list: http://unstats.un.org/unsd/methods/m49/m49alpha.htm

Code	Description
909	Canada
910	Newfoundland
911	PEI
912	Nova Scotia
913	New Brunswick
924	Quebec
935	Ontario
946	Manitoba
947	Saskatchewan
948	Alberta
959	British Columbia
960	Yukon
961	Northwest Territories
999	Unknown

Parity
Number of full-term pregnancies including still births

Age_at_First_Birth
Age in years at first full term pregnancy: Age at which the woman first completed a pregnancy beyond the period of viability (generally taken as 20 weeks gestation). This is the age at which the woman delivered her first infant, whether live or stillborn. The first induced or spontaneous abortion is not considered as this event occurred prior to 20 weeks of gestation.

Number	Meaning
9 - 55	Valid number
-8	N/A
-9	Missing

Changes

May 13, 2002: Name changed from Age at First Birth
May 13, 2002: Values changed to numeric age instead of range. In effect with data from 1998 onwards.

Inquiry Log

Variable Name	Type	Description
DT_Of_Prog_Screen	C	Date of program screen
Family_History	C	First degree family history of cancer
Menopsl_Status	C	Menopausal status
Hormone_Therapy	C	Hormone replacement therapy use
Months_Since_Intvl_Exam	C	Number of months since external mammogram

The type 'N' refers to numeric values while 'C' refers to both alphabetic and numeric characters.

Dt_of_prog_screen
Month and year that the screening event took place.

Family_History
First degree family history of breast cancer. A family history of breast cancer limited to first degree (mother, sister, daughter, father, brother, son) blood relative.

Code	Description
0	No
1	Yes, age not specified
2	Yes, diagnosed at <50 years of age
3	Yes, diagnosed at ≥50 years of age
-9	Missing

Changes

May 13, 2002: Name changed from Family History of Breast Cancer
May 13, 2002: Added categories 02 – Yes, diagnosed at <50 years of age, and 03 – Yes, diagnosed at ≥50 years of age. In effect with data from 1998.

Menopsl_Status
A client is classified as pre-menopausal if a menstrual period has occurred within the previous year, or a hysterectomy has been performed with one or both ovaries left in place and the current age is less than 50 years.
A client is classified as post-menopausal if no menstrual period has occurred in the previous year, or a hysterectomy has been performed with one or both ovaries left in place and the current age is ≥50, or both ovaries have been removed. If a client does not know if her ovaries were in place, it is assumed that they are.

Code	Value
01	Pre
02	Post
-9	Missing

Hormone_Therapy
The client's history of hormone replacement therapy usage.

Code	Description
01	Ever user (not current)
02	Never user
03	Current use
04	Not current user (previous HRT history unknown)
-9	Missing

Changes

May 13, 2002: New category 03 – Current user added. In effect with data from 1998
May 8, 2007: New category 04 – Not current user (previous HRT history unknown). In effect with data from 2002 onwards.

Months_Since_Intvl_Exam
Number of months between current screen (first screen or re-screen) and the last mammogram external to the screening program.

Code	Description
01	Never
02	<12 months
03	12-23 months
04	24-35 months
05	36-47 months
06	48-59 months
07	60+ months
08	Ever (number of months unknown)
-9	Missing

Changes
May 13, 2002: New category 03 – Current user added. In effect with data from 1998 onwards Altered/added categories
May 8, 2007: New category 04 – Not current user (previous HRT history unknown) added. In effect with data from 2002 onwards.

Program Screens

Records screen event information when a client visits the screening program

Variable Name	Type	Description
Dt_Of_Prog_Screen	C	Date of program screen
Screen_Method	C	Screening method
Screen_Result	C	Screening result
Fol_Up_Status	C	Referred for follow-up status
Tissue_Density	C	Fibroglandular tissue density
Dt_Of_Final_Diagnosis	C	Date of final diagnosis for screen-detected anomalies
Final_Diagnosis	C	Final diagnosis for screen detected anomalies
Date_Notified	C	Date notified of screen result
Mam_Exam_Img_Type_ID	C	Mammography exam image type
Mam_Read_Type_ID	C	Mammography read type
Screen_Site_Type	C	Screening site type
Facility_ID		Screening facility ID

The type 'N' refers to numeric values, 'D' refers to date, while 'C' refers to both alphabetic and numeric characters

Dt_of_pro_screen

Date on which screening event took place.

Screen_Method

Type of screening method performed during the screening visit.

Code	Description
01	Mammogram
02	Clinical breast examination
03	Both mammogram and clinical breast examination

Screen_Result

The result of the screening visit – a summary of the findings from the screening mammography.

Code	Description
00	Client not referred
20	Radiologist referred left breast
02	Radiologist referred right breast
22	Radiologist referred left and right breast
99	Either breast referred by radiologist

Fol_up_status

Referred for follow-up status. This field is used to determine if diagnostic follow-up is necessary and if the diagnostic follow-up is complete.

Code	Description
01	Not referred
02	Completed diagnostic follow-up
03	Still in the process of diagnostic follow-up
04	Lost to diagnostic follow-up
–9	Missing (follow-up complete but staging data not available yet)

Tissue_Density

Proportion of dense glandular tissue relative to fat tissue in the breast, as determined by the radiologist. If there is a double reading, the density is taken from the first reading if both are normal. Or if one is abnormal, the density is taken from the abnormal reading.

Code	Description
01	< 50 %
02	≥ 50 %
03	< 25 %
04	25 - <50 %
05	50 - <75 %
06	≥75%
07	<75%
-9	Missing

Changes

May 13, 2002: New categories: 03 to 07 added. In effect with data from 1998 onwards.
May 13, 2002: Definition altered: Added "as determined by the radiologist". In effect with data from 1998 onwards.

Dt_Of_Final_Diagnosis
Date of the first core or open biopsy to diagnose cancer, or the first conclusive open biopsy following an inconclusive or incorrect core. The date of final diagnosis for benign cases is the date of the last test before a return to screening or before the recommendation for repeat diagnostic imaging.

Changes

May 13, 2002: Definition added. In effect with data from 1998 onwards.
Mar 21, 2007: Definition added. In effect with data 2002 onward.
Apr 20, 2010 Definition added. In effect with data 2004 onward.

Final_Diagnosis
Final diagnosis at the end of screening episode.

Code	Description
01	Breast cancer
02	No breast cancer
03	LCIS alone
04	ADH alone
05	Other high risk lesions (e.g. papilloma, radial scar, phyllodes tumour)
06	Diagnosed high risk lesion - type unknown (Use if province does not record if AND, palilloma, radial scar, phyllodes tumour, etc.)
-8	N/A (not referred)
-9	Missing (in process or lost to follow-up)

Changes

May 13, 2002 Definition wording altered.
May 13, 2002 Category altered, added word: "breast". In effect with data from 1998 onwards.
Nov 18, 2009 New categories added: 04 – ADH alone, 05 – Other high risk lesions. In effect with data 2004 onwards.
May 5, 2010 Category added: 06 – Diagnosed high risk lesion - type unknown is used if province does not record if AND, papilloma, radial scar, phyllodes tumour, etc.

Date_Notified
Date result letter was generated notifying client of screen result. Some programs hold the letter for a certain length of time in order to allow time for a similar letter to reach the family physician first.

Mam_Exam_Img_Type_ID
Type of screening mammography image used. Equipment was used to do the exam.

Code	Description
01	Film screen
02	Digital DR
03	Digital CR
-9	Missing

Changes
May 8, 2007 Variable added. In effect with data from 2002 onwards.

Mam_Read_Type_ID
Type of screening mammography read. (How was the image read?)

Code	Description
01	Film (with CAD)
02	Film (without CAD)
03	Digital (with CAD)
04	Digital (without CAD)
05	Film (CAD unknown)
06	Digital (CAD unknown)
9	Missing

Changes
May 8, 2007 Variable added. In effect with data from 2002 onwards.

Screen_Site_Type
Type of screening site. Fixed site or mobile.

Code	Description
01	Fixed site
02	Mobile site
9	Missing

Changes

Nov 6, 2007 Variable added, in effect with data from 2002 onwards.

Facility_ID
Number which identifies facility where screening took place.

Cancers from BCSS

Variable Name	Type	Description
Dt_Of_Prog_Screen	C	Date of program screen
Dt_Of_Diagnosis	C	Date of definitive diagnosis
Detection_Type	C	Detection type code
MSRMNT_TYPE	C	Tumour measurement type

The type 'N' refers to numeric values, 'D' refers to date, while 'C' refers to both alphabetic and numeric characters.

Dt_Of_Prog_Screen
Date on which screening event took place.

Dt_Of_Diagnosis
Procedure Date of Definitive Diagnosis: Procedure date of earliest definite core or open biopsy that confirmed breast cancer diagnosis, or the first conclusive open biopsy following an inconclusive or incorrect core.
10000101 – Missing

Changes

May 13, 2002 Name changed from 'Date of Diagnosis'
May 13, 2002 Definition altered, in effect with data from 1998 onwards.
Apr 20, 2010 Definition added, in effect with data 2004 onward.

Detection_Type
Detection type code.

Code	Description
00	Screen-detected
01	Interval
02	Non-compliance

Interval cancer: Any post screen detected breast cancer diagnosed within the program-specific recommended screening interval (exactly 12 or 24 months) after a normal or benign screening episode.

Non-compliance cancer: A post screen detected breast cancer diagnosed beyond the program-specific recommended screening interval (exactly 12 or 24 months) after a normal screening episode or refusal of follow-up for an abnormal screen.

If no specific recommended screening interval exists, then biennial is assumed.

Changes

May 13, 2002 Definition modified
May 8, 2007 Definition modified
Nov 6, 2008 Definition modified
May 5, 2010 Definition modified, in effect with data 2004 onwards.

MSRMNT_TYPE
Measurement type code: Type of measurement used to determine the tumour size (best method). Includes post neo-adjuvant treatment staging if no pre-treatment information is available.

Code	Description
01	Pathologic
02	Radiologic
03	Clinical
04	Combination of above
-8	N/A
-9	Missing

Changes

May 5, 2010 Definition modified, in effect with data 2004 onwards.
May 8, 2007 Category added: 04 – Combination of above. In effect with data from 2002 onwards

Document History

Version	Author	Nature of Change	Date
1.0	Edna Kalu, Zikuan Liu	Document creation	
	Chandy Somayaji	Updated formatting	July 2017
Approved by		Approval Date	Review Date