

CERTIFICATE PROGRAM

CERTIFICATE IN BREAST IMAGING SCREENING



CANDIDATE HANDBOOK

2021

© **Canadian Association of Medical Radiation Technologists**

1300-180 Elgin Street Ottawa ON K2P 2K3
Tel: 1-800-463-9729 or (613) 234-0012

www.camrt.ca

specialtycertificates@camrt.ca

PROGRAM TIMELINES EFFECTIVE JANUARY 2021

The CBIS program must be completed within **five years of successful completion of the first eligible full-length Breast Imaging course.**

- Experience requirement* and successful completion** of Breast Imaging 1 and 2 is required for eligibility to register into the Certificate program.

[Download the CBIS Verification form](#)*

- Once registered in the certificate program, the candidate may begin working on their SCC. **The SCC must be completed within three years of the date of first clinical entry.**
- **Breast Cancer: An Overview** is not a pre-requisite for entry into the CBIS program but must be completed within the five-year timeframe.
- **Breast Cancer: An Overview** and the clinical component of the program (Summary of Clinical Competence) can be worked on simultaneously however the SCC may not be submitted for review until all didactic courses are complete.

**Please complete and have prepared to upload during your CBIS registration.*

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Introduction

Breast cancer is a complex disease that will affect 1 in 8 Canadian women during their lifetime. In 2020 it is estimated that 27 400 Canadian women and 240 Canadian men will be diagnosed with breast cancer.

It is the most common cancer in Canadian women over the age of 20; representing 25% of all cancer cases in Canadian women. It is the second leading cause of cancer deaths in Canadian women and the 3rd leading cause of death. Since the peak of breast cancer deaths in 1986 there has been a decrease by almost 40% due to early detection through regular mammography screening, advances in imaging technology and improved treatments.

Breast imaging dates to the early 1900's with standard x-ray equipment, high kV techniques, non-screen film with manual processing, minimal if any compression and radiation doses far exceeding today's standards. In 1960 the concept of low kV / high mA techniques with dedicated imaging units was introduced and the next few decades found changes in equipment design, and film/screen and processing technology. Breast imaging today uses digital technology and includes many imaging modalities. Advances in breast screening technology and quality standards have increased the breast cancer survival rate by helping to reduce death and disability caused from breast cancer.

Medical radiation technologists (MRTs) who perform screening mammography and other breast imaging procedures have a special role in the healthcare of the public. MRTs must be highly competent practitioners excelling in their ability to produce quality images and to manage the patient with care and expertise in a highly technical environment.

The CBI programs in screening and diagnostic breast imaging are designed to provide a means that will provide knowledge and clinical competence. It is recognized with a designation that will be sought after by technologists and encouraged and advocated for by employers.

Individuals with questions about the Certificate in Breast Imaging program are encouraged to contact:

CAMRT

1300-180 Elgin Street Ottawa ON K2P 2K3

Tel: 1-800-463-9729 or (613) 234-0012

Web site: www.camrt.ca or specialtycertificates@camrt.ca

Purpose of the Program

This Certificate in Breast Imaging – Screening (CBIS) is intended to provide a mechanism for radiological technologists to demonstrate knowledge and competence in the screening mammography aspect of breast imaging, to promote standards of excellence within this clinical area, and to identify those who have met a nationally recognized standard.

This certificate is intended to:

- be dynamic and progressive in nature
- address the current and future challenges in screening mammography
- become the Canadian *gold standard* for those working in this clinical area
- provide a Canadian credential that is admired and sought by employers
- provide a recognition mechanism for the public to identify technologists who have achieved a level of excellence in screening mammography
- provide an opportunity for continuing professional development
- enhance safe and effective practice as described by the *CAMRT Member Code of Ethics and Professional Conduct*– see www.camrt.ca.

The CBI Committee strives to keep aware of current practice in screening mammography. As such, the CBIS Handbook is updated regularly.

Eligibility

The CAMRT Breast Imaging Certificate program for screening mammography is available to:

- Medical radiation technologists who have been certified by CAMRT in the practice of radiological technology
- Internationally educated medical radiation technologists (IEMRTs) in the specialty of radiological technology who are graduates of medical radiation technology programs substantially like Canadian accredited programs
 - Documentation required from IEMRTs*
 - Notarized copy of diploma /degree/certificate from entry-level education program.
 - Original letter from entry-level education program verifying length of program to include both didactic and clinical components.
 - Attestation Letter – **APPENDIX A**

**Required documentation not received within 30 days of program registration will result in a program cancellation/partial refund.*

CAMRT strongly recommends candidates obtain required documentation prior to program registration and send by courier within the required timeframe.

Candidates may only begin working on the Summary of Clinical Competence upon approval of received documentation from CAMRT.

Prerequisite requirements for application to the CBIS

- Successful completion of CAMRT's Breast Imaging 1 and Breast Imaging 2 examinations. A mark of 75% or higher is required on each Breast Imaging (BI) final examination.
- Proof of 1450 hours as a practicing mammography technologist over the three (3) years preceding registration into the CBIS program**

*** The experience verification form must be uploaded during registration or submitted to CAMRT **within 30 days** to confirm program registration. Forms not received within this timeframe will result in a program cancellation/partial refund. **Candidates are encouraged to [download the form](#) and provide it at the time of registration.***

SEE APPENDIX B & C FOR BREAST IMAGING EXAM BLUEPRINTS

Registration

Registration for the Certificate in Breast Imaging – Screening program is done through the CAMRT website. **Candidates are encouraged to [download the form](#) and upload it at time of registration.**

Required documentation not received within 30 days of program registration will result in a program cancellation/partial refund.

Program Overview

- Candidates have 5 years from the date of completion of their first eligible Breast Imaging course to complete the requirements of this program
- All components of the CBIS program must be completed within a 5-year timeframe.
- Breast Cancer: An Overview is not a pre-requisite for entry into the CBIS program but must be completed within the 5-year timeframe.
- Breast Cancer: An Overview and the clinical component of the program (SCC) can be worked on simultaneously however the SCC must not be submitted until all didactic courses are complete.

The CBI screening program has both didactic and clinical components.

- Breast Cancer: An Overview Quick Self Study. A minimum pass mark of 75% or higher on the post quiz is required.
- The clinical component requires the completion of a Summary of Clinical Competence and verification of performing a minimum of 750 cases.

Note: The CBIS competency-based exam has been discontinued for any applicant registered after January 1, 2021.

Upon confirmed registration into this program, the Summary of Clinical Competence will be made available to the candidate in their personal profile on the CAMRT website.

Once registered in the certificate program, the candidate may begin working on their SCC. The SCC must be completed **within three years of the date of first clinical entry.**

Breast Cancer: An Overview is not a pre-requisite for entry into the CBIS program but must be completed within the 5-year timeframe.

Didactic Component

Breast Cancer: An Overview (Quick Self Study):

- Candidates registered into the CBIS must complete this Quick Self Study prior to their program end date.
- This didactic requirement must be completed within the candidate's 5-year timeframe.
- A mark of 75% or higher is required on the post quiz.

Clinical Component

The clinical component is a practicum in screening mammography that requires the candidate to be practicing in mammography under the supervision of an eligible clinical advisor. The candidate must

- perform a minimum of 750 mammograms (2 view bilateral, CC, MLO)
- complete a Summary of Clinical Competence (SCC)

The SCC is a list of procedures and associated competencies that must be assessed by a clinical advisor/delegated assessor. The candidate is responsible for ensuring that all sections of the SCC are complete.

Candidates must be able to perform all breast imaging procedures as listed in this Handbook.

Candidates must complete all sections of this SCC within three years of the first clinical entry and submit to the CAMRT for final review and approval by the CBI Committee.

A Summary of Clinical Competence deemed incomplete by a reviewer will be subject to a resubmission fee.

Random audits will be conducted periodically to ensure the proper process has been followed.

Format of the Summary of Clinical Competence:

The following provides an overview of the requirements in the SCC:

- Demographic information
- Identification of Clinical Advisor and others to whom the Clinical Advisor has delegated assessment responsibilities.
- Verification of required practice in mammography (750 bilateral 2 view exams within three years following registration into this program).
- Guidelines for performance of quality control procedures
- Log for the purpose of documenting quality control procedures.
 - Phantom testing
 - Compression test
 - Repeat analysis procedure
 - Mechanical / visual inspection
 - CNR / SNR
 - Full (flat) field artifact
 - Monitor QC for reading/review workstation
 - Monitor QC for acquisition workstation
 - Tomo qc (if site does tomo)
- Guidelines for the assessment of competency in the performance of breast imaging (screening) procedures and image evaluation to include
 - General assessment
 - CC assessment
 - MLO assessment
 - Technical assessment.
- Log for the purpose of documenting 20 bilateral mammograms (CC & MLO).
 - The clinical advisor must witness these studies to review the
 - candidate's interaction with the patient
 - correct room preparation and cleanliness
 - use of proper positioning skills
- Professional Accountability form
- Declaration of Completion

Clinical Advisor (CA)

It is the candidate's responsibility to identify a clinical advisor at the clinical site and to ensure the clinical advisor is made aware of their role. See **APPENDIX F** for *Clinical Advisor role*. When the candidate has one or more clinical sites, one Clinical Advisor must be identified per site.

The Clinical Advisor (CA) must:

- be a medical radiation technologist practicing in **mammography**
- have a minimum of five years' experience in the practice of **mammography**
- not be currently registered in either CBIS or CBID Certificate Programs
- perform the assessment on the candidate for procedures/related competencies or delegate assessment to another mammographer
- verify that others identified to assess candidates are competent in their practice

Note: A clinical advisor with a CBI is preferred but not mandatory.

The importance of an ongoing QC program is an integral part of a breast imaging center. However, we recognize that a radiologist acting as CA may not be familiar with the stringent QC procedures required for dedicated mammography. In this situation a department QC technologist, your supervisor or manager must sign off. This person must be added to the DELEGATED ASSESSORS (DA) list in the SCC with their credentials. We trust that it is in the best interest of the breast imaging department to have the mammography technologists competent in QC procedures.

The clinical advisor must attest to the competency of the candidate personally or by delegation to a competent individual(s) with the appropriate credential and expertise.

Delegated Assessor (DA)

The Delegated Assessor (DA) must:

- be a medical radiation technologist practicing in **mammography**
- have a minimum of three years' experience in the practice of **mammography**
- not be currently registered in either CBIS or CBID Certificate Programs
- perform the assessment on the candidate for procedures/related competencies

All professionals acting as delegated assessors must be identified on the Delegated Assessors form in the Summary of Clinical Competence.

Clinical Advisors outside of Canada:

The following must be submitted within 30 days of program registration*:

- A notarized copy of the advisor's credentials (degree, diploma, or certificate)
- A letter **on institutional letterhead** from the Clinical Advisor's immediate supervisor verifying that the Clinical Advisor is a practicing technologist with a minimum of 3 years' experience in the practice of mammography.

**Required documentation not received within 30 days of program registration will result in a program cancellation/partial refund.*

CAMRT strongly recommends candidates obtain required documentation prior to program registration and send by courier within the required timeframe.

Candidates may only begin working on the Summary of Clinical Competence upon approval of received documentation from CAMRT.

Proficiency for achievement of competency for this program is characterized as follows:

- When presented with situations, the MRT performs relevant competencies in a manner consistent with generally accepted standards and practices in the profession, independently, and within a reasonable timeframe. The MRT anticipates what outcomes to expect in a given situation, and responds appropriately, selecting and performing competencies in an informed manner.
- The MRT recognizes unusual, difficult to resolve and complex situations which may be beyond their capacity. The MRT takes appropriate and ethical steps to address these situations, which may include consulting with others, seeking supervision or mentorship, reviewing literature or documentation, or referring the situation to the appropriate healthcare professional.

Program Extension

Extensions beyond the three-year time frame are available under **exceptional circumstances**. Please contact specialtycertificates@camrt.ca **prior to the end of your program**, for information regarding an extension.

There is a fee associated with an extension request.

Submission of Summary of Clinical Competence

Candidates must submit the completed Summary of Clinical Competence to the CAMRT for review and approval by the CBI Committee. Electronic copies submitted as one file will be accepted. Email to specialtycertificates@camrt.ca.

A Summary of Clinical Competence deemed incomplete by a reviewer will be subject to a resubmission fee.

Continuing Education Recommendation

Consistent with best practice and continuous learning principles, CAMRT encourages and advocates that those who earn the CBIS designation demonstrate continuing competence in their field.

The Canadian Association of Radiologist Mammography Accreditation Program (CAR-MAP) requires the technologist to achieve 15 hours of continuing education every three years.

APPENDIX A

INTERNATIONALLY EDUCATED MEDICAL RADIATION TECHNOLOGISTS CERTIFICATE PROGRAM REGISTRATION ATTESTATION STATEMENT

Included with this signed statement, is the required documentation to finalize my Certificate Program Application with the Canadian Association of Medical Radiation Technologists.

Candidate Name: _____

Certificate Program: _____

Title of Program Completed: _____

Name of Diploma/Degree: _____

Educational Institution for theoretical instruction: _____

Institution for Clinical Training: _____

Length of Total Program: Theoretical (months) Clinical (months)

By signing below, I verify that:

- ✓ All statements and documentation in this application are accurate. I understand that a false or misleading statement, omission or misrepresentation may compromise my registration request.
- ✓ The documentation attached regarding my education program and/or my clinical advisor is original and has not been modified in any way.
- ✓ I authorize CAMRT to contact any authority, institution, association, body or person in any jurisdiction to verify the statements in my application and related documents.
- ✓ I understand that I may be required to submit further information if required.

Signature of Applicant

Date (month/day/year)

Breast Imaging 1 Exam Blueprint

Item presentation - % of question types	
Multiple Choice: 100%	
Exam structure	
Exam length: 2:0 hours Number of questions: 100	
Exam delivery format	
On-line	
Course Content and question weighting	
Chapters	Percentage weighting of number of questions/chapters
1 – Breast Anatomy	16-20%
2 – Mammographic Positioning	24-28%
3 – Patient Care in Mammography	11-14%
4 – Organized Approach to Breast Imaging	4-8%
5 – Breast Cancer Screening	11-15%
6 – Breast Cancer	24-28%

Breast Imaging 2 Exam Blueprint

Item presentation - % of question types	
Multiple Choice: 100%	
Exam structure	
Exam length: 2:0 hours Number of questions: 100	
Exam delivery format	
On-line	
Course Content and question weighting	
Chapters	Percentage weighting of number of questions/chapters
1 – Mammographic and Digital Breast Tomosynthesis Equipment	12-15%
2 – Quality Control / Quality Assurance with Mammographic and Digital Breast Tomosynthesis Equipment	12-15%
3 – Adjunctive Breast Imaging Modalities	12-15%
4 – Differentiation of Benign and Malignant Breast Abnormalities	17-21%
5 – Basic Breast Pathology	17-21%
6 – Diagnostic Imaging and Interventional Procedures of the Breast	17-21%

RESOURCES

Following is a list of texts and other resource material that may be of benefit to practicing mammographers.

Textbooks

Andolina, Valeria F., Lille, S.L., Willison. K. M.

Mammographic Imaging A Practical Guide 4th ed

Lippincott Williams & Wilkins 2018 ISBN 9781496352026

Cardenosa, Gilda

Breast Imaging Companion, 3rd and 4th editions

Lippincott, Williams & Wilkins, 2007/2017, ISBN 9780781764919 / 9781496314963

De Parades, Ellen Shaw

Atlas of Mammography 3rd edition

Lippincott William & Wilkins, 2007, ISBN 978 0787164339

Dutton A.G., Linn-Watson, T., Torres, Lillian

Torres' Patient Care in Imaging Technology, 8th edition,

Lippincott Williams & Wilkins, 2012, ISBN 9781451115659

Websites

Canadian Association of Radiologists

CAR practice guidelines and Technical Standards for Breast Imaging and Intervention

<https://car.ca/wp-content/uploads/Breast-Imaging-and-Intervention-2016.pdf>

Canadian Breast Cancer Foundation

<http://www.cbcf.org/ontario/AboutBreastCancerMain/FactsStats/Pages/default.aspx>

Decision for Breast Screening in Canada

<https://canadiantaskforce.ca/?s=breast+screening&search-type=default>

Safety Code 36: Radiation Protection and Quality Standards in Mammography – Safety Procedures for the Installation, Use and Control of Mammographic X-ray Equipment

http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/safety-code_36-securite/index-eng.php

The Role of a Clinical Advisor

To maintain the integrity of CAMRT Certificate programs, it is essential that all parties involved in the training and evaluation of certificate program candidates follow the procedures set out in the Program Handbook and Summary of Clinical Competence (SCC). A CAMRT Certificate indicates a level of competence above entry-to-practice that has been verified through the requirements of the program.

Clinical Advisor's responsibilities include:

- review the Program Handbook and SCC with the candidate.
- mentor and support candidates in their skill development
- assess firsthand competency/procedures performed by the candidate and verify competence by signing and dating each procedure in the SCC at the time competence is established and/or
- delegate assessment duties to individuals who have the expertise and qualifications outlined in the Program Handbook.
- ensure all delegated assessors have read the most current version of the Program Handbook and SCC. These documents are updated on an annual basis, so clinical advisors and delegated assessors must review the handbook and SCC with each new candidate.
- attest to overall competency by signing at the end of each module
- verify the overall competence of the candidate at the end of the clinical placement by signing the Declaration of Completion.

During clinical placements, the following criteria must be upheld:

All competencies must be **performed** independently by the candidate on a patient. A candidate cannot be deemed competent if they have only observed or simulated a procedure, unless otherwise indicated in the SCC.

The clinical advisor/delegated assessor must witness competent practice for a procedure/competency multiple times prior to the date of the final assessment. A signature in the SCC verifies that the technologist has **consistently shown** they have the knowledge, skill and judgement to be declared competent in each aspect of practice. It is recognized in some circumstances that procedures are not performed frequently; however, it is appreciated that there is a transference of skills between many procedures. ***It is the responsibility of the clinical advisor or delegated assessor to ensure this expected level of competence as evidenced by their signatures in the appropriate areas.***

If there are procedures in the SCC that are not performed at your clinical site it is the responsibility of the candidate to contact CAMRT to determine an alternate option (if any).

Detailed guidelines for assessment of competency are found in each module of the SCC. The guidelines listed provide an overview of the expectation for assessment by the clinical advisor or delegated assessor.

It is recognized being a clinical advisor or delegated assessor adds to your already heavy workload and responsibilities in your daily practice. The CAMRT appreciates your professionalism and commitment to help the candidate continue their education in an ever-changing healthcare environment.