
MAMMOGRAPHY CLINICAL EXPERIENCE REQUIREMENTS



*Eligibility Requirements Effective for Examinations Beginning July 2009**

All candidates must demonstrate core clinical procedures to establish eligibility for ARRT certification. The requirements listed in this document are the minimum core clinical procedures necessary to establish eligibility for the ARRT Mammography certification. ARRT encourages individuals to obtain education and experience beyond these core requirements.

Directions

1. **Perform the Procedures:** Candidates must be in compliance with MQSA requirements for technologists, and are required to complete: (a) a specified number of mammographic examinations; (b) quality control procedures; (c) selected special procedures; (d) mammographic review and critique. All procedures must be completed within the 24 months immediately before application for certification.
2. **Document Performance:** Candidates must use the attached *Mammography Clinical Experience Documentation Form* to record the performance of each repetition of the procedures. The documentation includes: name of procedure, date performed, time of day completed, name of facility where performed, and initials of supervisor verifying performance. Candidates must keep accurate records while assuring that patient confidentiality is not violated. The “Verified By” column on the form must be initialed by the supervising mammography technologist or the supervising mammography radiologist. The name and address corresponding to each set of initials must be provided on the form.
3. **Apply for Certification:** When applying for the certification, candidates must complete the *verification section* of the application to attest to the completion of the requirements. Mail only the application for certification to the ARRT; do not send the *Clinical Experience Documentation Form* to ARRT with the application. Submitting false documentation to ARRT as part of the application process is a violation of the ARRT Standards of Ethics and may result in sanctions up to and including revocation of eligibility for certification in all categories, including those already held.
4. **Maintain Your Records:** Candidates must keep the *Clinical Experience Documentation Form* for at least 24 months after the application for certification is submitted. The ARRT conducts **audits** of some applications for certification. Individuals who are audited will be required to send the *Clinical Experience Documentation Form* to ARRT. Additional documentation may be required from individuals who are audited.

* Candidates who submit their applications up to June 2011 may use either the previous requirements (effective 2006) or the current requirements (effective 2009). Candidates who apply after June 2011 may no longer use the previous clinical experience requirements

A. MAMMOGRAPHY TRAINING / EDUCATION REQUIREMENT

The candidate must have met the initial MQSA requirements for mammography and must be in compliance with MQSA continuing education and continuing experience requirements. Compliance must be verified by the supervising mammography technologist or the supervising mammography radiologist.

B. EXPERIENCE REQUIREMENT FOR MAMMOGRAPHIC EXAMINATIONS

The candidate must perform mammographic examinations (screening and/or diagnostic) on 75 patients addressing the following tasks in each examination. These 75 examinations are in addition to the 25 examinations that are required by the initial MQSA mammography requirements. All examinations must be performed on patients (not phantoms or simulated patients).

Patient Preparation / Education

- Provide for patient comfort and cooperation by familiarizing patient with the equipment and procedure, stressing the need for compression, and by providing general psychological support.
- Solicit and record patient clinical history relevant to the performance and interpretation of the mammographic examination.
- Document location of lumps, scars, moles, etc. by means of radiopaque markers on breast and/or diagram on clinical information sheet.
- Respond to patient questions on BSE, CBE, patient dosage, possible need for additional projections, ACS guidelines for screening mammography, and other breast imaging procedures.

Mammographic Procedure

- Select equipment appropriate to the patient and the examination to be performed (e.g., image receptors, grids, compression plates, cassettes).
- Select exposure factors based upon breast tissue density, patient's age, numerical compression scale, and equipment characteristics.
- Select markers to document breast imaged and projection used.
- Position patient and equipment to provide projections specified by department protocol or requisition form.
- Evaluate the images to assure that they contain proper identification and are of diagnostic quality.

C. EXPERIENCE REQUIREMENT FOR QUALITY CONTROL

The candidate must participate¹ in the performance, evaluation, and recording of all the QC tests from either the film-screen (C1) or the digital (C2) pathway. The film-screen QC tests are described in the Mammography Quality Control Manual (1999) published by the American College of Radiology. Users of digital systems should follow the manufacturer's QC documentation.

C1. Film-Screen Systems	Number of Repetitions	C2. Digital Systems	Number of Repetitions
Processor QC	20	Laser imager QC test	20
Screen-film contact	8 cas.	Workstation QC including test pattern	5
Darkroom cleanliness	5	Monitor cleaning	5
Phantom images	5	Phantom images	5
Screen cleanliness	4	Detector calibration or flat field	4
Viewboxes and viewing conditions	4	Viewboxes and viewing conditions	4
Darkroom fog	2	Signal to noise (SNR), Contrast to noise (CNR), Modulation transfer function (MTF)	4
Compression force	2	Compression force	2
Repeat analysis	2	Repeat analysis	2
Visual checklist	2	Visual checklist	2
Analysis of fixer retention in film	2		
Review medical physicist's annual survey report	1	Review medical physicist's annual survey report	1

D. EXPERIENCE REQUIREMENT FOR INTERVENTIONAL / SPECIAL EXAMINATIONS

The candidate must observe, assist with, or participate¹ in at least four different of the following procedures:

- Needle localization
- Breast MRI
- Breast ultrasound: imaging, biopsy, or fine needle aspiration
- Stereotactic procedure
- Breast implant imaging
- Ductography
- Diagnostic work-up

E. EXPERIENCE REQUIREMENT FOR RADIOGRAPHIC CRITIQUE / INTERPRETATION

The candidate must review at least 20 mammographic examinations with an MQSA qualified interpreting physician to evaluate radiographic technique, positioning, breast anatomy, and pathology.

¹“Participate” means being actively involved in the performance of the procedure even though the candidate may not have primary responsibility for performing the procedure.

MAMMOGRAPHY CLINICAL EXPERIENCE DOCUMENTATION FORM

A. MAMMOGRAPHY TRAINING / EDUCATION REQUIREMENT

I have met the initial MQSA requirements for mammography and am in compliance with MQSA continuing education and continuing experience requirements.

Signature of Candidate

Signature of Supervising Mammography
Radiologist or Technologist

Printed Name

Printed Name

Date Signed

Date Signed

B. EXPERIENCE REQUIREMENT FOR MAMMOGRAPHIC EXAMINATIONS

The candidate must perform 75 mammographic examinations (screening and/or diagnostic). All examinations must be performed on patients (not phantoms or simulated patients).

Date Performed	Time of Day	Facility Name	Verified By (Initials)
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C. EXPERIENCE REQUIREMENT FOR QUALITY CONTROL

Candidates must participate in the performance, evaluation and recording of the following film screen or digital QC tests. Candidates cannot combine requirements and document tests from film screen and digital systems.

C1. FILM SCREEN QC TESTS

QC tests for film-screen are described in the Mammography Quality Control Manual (1999) published by the American College of Radiology.

PROCESSOR QC

Date Completed	Facility Name	Verified By (Initials)
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SCREEN-FILM CONTACT (8 CASSETTES)

Date Completed	Facility Name	Verified By (Initials)
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8		

DARKROOM CLEANLINESS

Date Completed	Facility Name	Verified By (Initials)
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4		
5		

PHANTOM IMAGES

Date Completed	Facility Name	Verified By (Initials)
1		
2		
3		
4		
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SCREEN CLEANLINESS

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

VIEWBOXES AND VIEWING CONDITIONS

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

DARKROOM FOG

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____

COMPRESSION FORCE

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____

REPEAT ANALYSIS

Date Completed	Facility Name	Verified By (Initials)
1	_____	_____
2	_____	_____

ANALYSIS OF FIXER RETENTION IN FILM

Date Completed	Facility Name	Verified By (Initials)
1	_____	_____
2	_____	_____

VISUAL CHECKLIST

Date Completed	Facility Name	Verified By (Initials)
1	_____	_____
2	_____	_____

REVIEW MEDICAL PHYSICIST'S ANNUAL SURVEY REPORT

Date Completed	Facility Name	Verified By (Initials)
1	_____	_____

C2. DIGITAL QC TESTS

Users of digital systems should follow the manufacturer's QC documentation.

LASER IMAGER QC

Date Completed	Facility Name	Verified By (Initials)
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WORKSTATION QC INCLUDING TEST PATTERN

Date Completed	Facility Name	Verified By (Initials)
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MONITOR CLEANLINESS

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

PHANTOM IMAGES

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

DETECTOR CALIBRATION/FLAT FIELD

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

VIEWBOXES AND VIEWING CONDITIONS

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

**SIGNAL TO NOISE (SNR), CONTRAST TO NOISE (CNR), MODULATION
TRANSFER FUNCTION (MTF)**

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

COMPRESSION FORCE

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____

REPEAT ANALYSIS

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____

VISUAL CHECKLIST

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____
2	_____	_____	_____

REVIEW MEDICAL PHYSICIST'S ANNUAL SURVEY REPORT

	Date Completed	Facility Name	Verified By (Initials)
1	_____	_____	_____

D. EXPERIENCE REQUIREMENT FOR INTERVENTIONAL / SPECIAL EXAMINATIONS

The candidate must observe, assist with, or participate in at least four different of the following procedures:

Procedure	Date Performed	Time of Day	Facility Name	Verified By (Initials)
Needle localization	_____	_____	_____	_____
Breast MRI	_____	_____	_____	_____
Breast ultrasound: imaging, biopsy, or FNA	_____	_____	_____	_____
Stereotactic procedure	_____	_____	_____	_____
Breast implant imaging	_____	_____	_____	_____
Ductography	_____	_____	_____	_____
Diagnostic work-up	_____	_____	_____	_____

E. EXPERIENCE REQUIREMENT FOR RADIOGRAPHIC CRITIQUE / INTERPRETATION

Candidate must review at least 20 mammographic examinations with a radiologist to evaluate radiographic technique positioning, breast anatomy, and pathology.

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