



Mammography

Candidates for certification and registration are required to meet the Professional Requirements specified in the *ARRT Rules and Regulations*. ARRT's *Mammography Clinical Experience Requirements* describe the specific eligibility requirements that must be documented as part of the application for certification and registration process.

The purpose of the clinical experience requirements is to verify that candidates have completed a subset of the clinical procedures within a discipline. Successful performance of these fundamental procedures, in combination with mastery of the cognitive knowledge and skills covered by the examination, provides the basis for the acquisition of the full range of clinical skills required in a variety of settings.

The job responsibilities typically required of mammographers are delineated through a periodic practice analysis. This results in a "task inventory." An advisory committee then determines the number of clinical procedures required to demonstrate adequate candidate experience in performing the tasks on the inventory.

Candidates for Mammography certification and registration must document performance of a minimum of 75 repetitions of mammography procedures according to the criteria noted below. Procedures are documented, verified, and submitted when complete via an online tool accessible through your online account at arrt.org. ARRT encourages individuals to obtain education and experience beyond these minimum requirements.

Completion of each procedure must be verified by a certified and registered supervising mammographer, or an MQSA qualified supervising mammographer, or an MQSA qualified interpreting physician. The verification process is described within the online tool.

Specific Procedural Requirements

Mandatory Procedures

A. Initial MQSA (Mammography Quality Standards Act)

The candidate must meet initial MQSA requirements including, among other provisions, completion of 25 supervised mammography procedures. Documentation of completion is required by MQSA. ARRT requests confirmation that you completed these initial MQSA requirements.

B. Mammographic Procedures

The candidate must perform mammographic procedures (screening and/or diagnostic) on 75 patients addressing the following tasks in each procedure. These 75 procedures are in addition to the 25 procedures that are required by the initial MQSA mammography requirements. The procedures may be performed using any mammography modality. All procedures must be performed on patients (not phantoms or simulations).



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 procedure.
- 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 dose, possible need for additional projections, ACS and ACR guidelines for screening mammography, and other breast imaging procedures.

Mammographic Procedure

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

C. Quality Control (QC)

The candidate must participate¹ in the performance, evaluation and recording of all the QC tests.

Manufacturer's QC recommendations for date intervals should be followed.

If there are any Quality Control requirements that are not available due to the type of equipment in your facility, an exemption must be granted prior to submission of the application for certification and registration. Please see the Exemption section at the end of this document for further detail. If you have questions, please call the Clinical Requirements Department at 651.687.0048, ext. 8570.

QC Documentation

- Interpretation Workstation (5)
- Monitoring Cleaning (5)
- Phantom Images (5)
- Artifact Evaluation* (e.g., Flat Field, Detector Calibration) FFDM-DR only (5)
*Important FFDM-CR users: If you are unable to complete this requirement, please see the Exemption section at the end of this document.
- Signal-to-Noise Ratio (SNR), Contrast-to-Noise Ratio (CNR), Modulation Transfer Function (MTF), as required by the manufacturer (5)
- Compression Force (2)
- Repeat Analysis (2)
- Visual Checklist (2)
- Review of Medical Physicist's Annual Survey Report (1)

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.



D. Radiographic Critique/Interpretation (10)

Candidate must review at least 10 mammographic procedures with an MQSA qualified interpreting physician to evaluate radiographic technique, positioning, breast anatomy and pathology.

Elective Procedures

Interventional/Special Procedures

The candidate must observe, assist with or participate¹ in at least four of the procedures listed below.

- Needle Localization
- Breast MRI
- Breast Ultrasound: imaging, biopsy, FNA or cyst aspiration
- Stereotactic Procedure
- Breast Implant Imaging
- Ductography/Galactography
- Tissue Marker Clip Placement
- Diagnostic Mammogram
- Recall from a Screening Mammogram

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.

Exemption

If a candidate is very close, but unable to meet all of the clinical experience requirements due to medical, facility or employer policy limitations, an exemption may be granted for one or two types of required procedures. Requests are made by submitting a letter that includes the following:

- An explanation of your current situation;
- The reason the exemption is necessary; and
- An explanation and source information of the educational activity you have completed to meet the intent and take the place of the requirement.

Letters should be mailed to the Clinical Requirements Department at 1255 Northland Drive, St. Paul, MN 55120, or faxed to 651.994.8510. Please allow up to two weeks for your request to be reviewed. If the exemption is approved, you will be notified and your Progress tab will be updated to reflect the exempted procedure(s). If you have any questions, please call 651.687.0048, ext. 8570.

Suggestions for articles for educational opportunities for the Artifact Evaluation Requirement:

<http://www.ajronline.org/doi/full/10.2214/AJR.10.5563>

Computed Radiography Image Artifacts Revisited Chandrakant Manmath Shetty, Ashita Barthur, Avinash Kambadakone, Nilna Narayanan and Rajagopal Kv American Journal of Roentgenology. 2011;196: W37-W47.

<http://radiographics.rsna.org/content/19/2/503.full>

Quality Assurance in Mammography: Artifact Analysis Jacquelyn P. Hogge, MD, Carolyn H. Palmer, R.T.(R)(M)(ARRT), Caroline C. Muller, R.T.(R)(M)(ARRT), Sherrill T. Little, MD, Deborah C. Smith, R.T.(R)(M)(ARRT), Panos P. Fatouros, PhD, Ellen Shaw de Paredes, MD.

If you are not able to access these links, copies of these articles are available upon request to ARRT.

Call the Clinical Requirements Department at 651.687.0048, ext. 8570.