

# Standards of Practice for Mammography

By

**Mammography Faculty** 

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# 1. Brief information/background of mammography

Mammography is a dedicated radiographic technique for imaging of the breasts. It makes use of low doses of X-ray, high contrast, high-resolution detectors, and a dedicated X-ray system to examine the breasts. Mammography remains as the gold standard and plays a major role in the early detection and diagnosis of breast diseases in particular types of breast cancer, which in turn, increases the chance of successful treatment.

# 1.1 There are two types of Mammography: Screening and Diagnostic

# 1.1.1 Screening Mammography

- 1.1.1.1 Screening mammography is a radiological examination performed to detect unsuspected breast cancer in asymptomatic women.
- 1.1.1.2 Screening mammography is indicated for asymptomatic women 40 years of age or older. Screening mammography is not routinely recommended for women under the age of 40, but may have a role in selected individuals at extreme risk based on family history.
- 1.1.1.3 It has a lower probability of cancer detection compared to those from Diagnostic Mammography.

# 1.1.2 Diagnostic Mammography

- 1.1.2.1 Diagnostic mammography is a radiographic examination performed to evaluate clients who have signs and/or symptoms of breast disease, imaging findings of concern, or prior imaging findings that require a specific follow-up.
- 1.1.2.2 With a specific focus of clinical concern including, but not limited to, mass, induration, axillary lymphadenopathy, some types of nipple discharge, skin changes, or persistent focal areas of pain or tenderness.
- 1.1.2.3 With a possible radiographic abnormality detected on screening mammography.

# 1.2 Image Guided Breast Biopsy:

An investigation used for obtaining tissue samples from an area of previously determined abnormality of the breast. It is generally preferred for its comparatively minimal intervention with less scarring and deformity, and the ability to be carried out under local anesthesia in out-patient settings.

Common types of biopsy examinations:

- 1.2.1 Fine needle aspiration (FNA)
- 1.2.2 Core biopsy

# 1.2.3 Vacuum assisted biopsy (VAB)

These may be performed under the guidance of tomosynthesis, stereotactic, ultrasound, or magnetic resonance imaging.

# 2. Safety and precautions

- 2.1 Radiation protection
  - 2.1.1 Observe 28-day rule for women with childbearing age
  - 2.1.2 As low as reasonably achievable (ALARA) principle
- 2.2 Safety specific to Mammography:

There is no absolute contraindication or complication for both Screening and Diagnostic Mammography.

2.2.1 Young age:

Mammography is rarely carried out in women aged younger than 30 years due to the radiation sensitivity of breast tissue. It is also because the high radiographic dense breast density makes it difficult to review any forms of cancer in mammograms.

2.2.2 Pregnancy and breast-feeding:

Pregnancy and breast feeding are also relative contraindications due to the adverse effects of radiation exposure. Lactating breasts are usually denser and more sensitive to radiation, with regards to the likelihood of cancer being induced, compared with the breasts of women who are not breast-feeding; this small risk must be balanced against the risk of missing the diagnosis of breast cancer.

2.2.3 Post radiation therapeutic breast:

Post irradiated breasts within three months will appear very dense due to oedema, which will render the mammogram useless. Some mammography machines may not be able to produce X-rays with sufficient penetrating power.

- 2.2.4 Breast implant rupture have been reported during mammography. However, it is extremely uncommon.
- 2.2.5 Incomplete inclusion of breast tissue on a mammogram may miss the deep-seated lesion, causing a false negative mammogram.
- 2.2.6 Patients may encounter bruising or skin fissures.
- 2.2.7 Patients may feel discomfort.

# 2.3 Safety specific to **Breast Biopsy examinations**:

There are no absolute contraindications for breast biopsy examinations.

2.3.1 Bleeding tendency:

A client with a history of taking anticoagulants is a relative contraindication for breast biopsy. For a client on Warfarin treatment, blood tests to check on the anticoagulation index for some biopsy examinations (e.g., a vacuum assisted biopsy examination) may be required.

# 2.3.2 Pregnancy:

Pregnancy is a relative contraindication for tomosynthesis- or stereotactic-guided biopsy concerning radiation.

2.3.3 Breast-feeding:

Milk fistula may occur for a lactating client after performing a breast biopsy examination.

- 2.3.4 Bleeding / Hematoma:

  Some bruising may occur at the biopsy site.
- 2.3.5 Risk of infection at biopsy site; however, very uncommon.
- 2.3.6 Pneumothorax is a rare complication, but may occur if biopsy of the lesion is very close to the chest wall during the ultrasound-guided biopsy examination.

# 3. Roles and Responsibilities of a Radiographer (Mammographer)

- 3.1 Data integrity
- 3.2 Data privacy
- 3.3 Patient identification
- 3.4 ALARA principle application
- 3.5 Roles of Mammographers
  - 3.5.1 A qualified mammographer is a healthcare professional that produces highquality mammograms for the diagnosis of breast conditions by administrating ionizing radiation.
  - 3.5.2 A good communicator with excellent interpersonal skills; these include verbal, written, and non-verbal actions, as well as active listening skills.
  - 3.5.3 A first reader for assessing mammography and able to:
    - 3.5.3.1 review the image quality and take remedy action
    - 3.5.3.2 pick up the artefact and take remedy action
    - 3.5.3.3 suggest additional views to enhance the image and diagnostic outcomes
  - 3.5.4 A spiritual supporter for clients during mammography and breast biopsy procedures.
  - 3.5.5 A good team member in the breast imaging service team.
  - 3.5.6 A professional in educating clients about the diagnostic values of

# mammography.

# 3.6 Responsibilities of Mammographers

- 3.6.1 Mammographers should demonstrate good knowledge of human anatomy, physiology, pathology, and medical terminology. One should maintain a high caliber of accuracy in mammographic positioning.
- 3.6.2 Should be able to assess any potential patient limitations such as body habitus, physical or mental capabilities, and modify the positioning techniques as appropriate.
- 3.6.3 Should be able to execute alternative mammographic techniques based on the patient's age, hormonal status, and the presence of surgical implants.
- 3.6.4 Should be able to execute clinical judgment in the application of adequate compression to acquire a quality mammographic image.
- 3.6.5 Should provide thorough explanation and reassurance to clients about the examination procedures and answer clients' queries.
- 3.6.6 Apply appropriate radiopaque markers to the breast to indicate anatomic landmarks, including nipples, scars, and lumps according to the local policy.
- 3.6.7 Should perform all required quality assurance and quality control tests regularly and timely to ensure the image quality.
- 3.6.8 Should be familiar with the correct operation of the mammographic machine, accessories, and all related equipment.
- 3.6.9 Should be familiar with the center's mammographic workflow.
- 3.6.10 Keep good inventory of all equipment and accessories.
- 3.6.11 Maintain up-to-date mammographic knowledge and continued professional development.
- 3.6.12 Participate actively in staff training, technique development, and related research whenever applicable.

# 4 Requirements for Radiographers (Mammographers)

It is vital that certified mammographers are well educated and have appropriate training. This also includes ongoing, continued professional education to keep up-to-date with the ever-advancing world of mammography technology.

## 4.1 Academic qualifications

- 4.1.1 All mammographers should be radiographers that are registered with the Hong Kong Radiographers Board
- 4.1.2 Appropriate mammography training and breast anatomy education should be completed before performing single-handed mammography practice.
- 4.1.3 Applicable professional certifications and accreditations such as

HKCRRT certified Mammographer are encouraged.

#### 4.2 Patient care

- 4.2.1 Mammography is a test that requires an understanding of not only the science of the technology, but also a solid understanding of the fears and emotions of women having the tests performed. It is that caring passion that gives every mammographer the desire to understand the clients' rights along with their potential feelings of concern.
- 4.2.2 Should provide a thorough explanation and reassurance to clients about the examination procedures and need for adequate compression, and should also express their feelings when the maximum acceptable level of pain is reached.

# 4.3 Collaboration

- 4.3.1 Should be an active key member of the Breast Service team.
- 4.3.2 Should be able to understand and address the needs of referring clinicians and reporting radiologists so as to provide the best diagnostic value for the examinations conducted.
- 4.3.3 Should be able to understand the needs and constraints of other team members so as to derive the best workflow and results in the best interest of the patients.
- 4.3.4 Should be able to keep a good link with academic and clinical professionals in the mammography field for technical development, advancement, and research.

# 4.4 Training and education

All mammographers should undergo proper clinical training:

- 4.4.1 Complete at least 100 hands-on mammogram sessions and 20 additional views during the training period
- 4.4.2 Pass the image evaluation assessment –

The 20 most recently performed cases should fulfil the criteria of Perfect, Good, Moderate, Inadequate (PGMI) film rating:

- 4.4.2.1 75 % should be in the perfect or good category in the PGMI rating system
- 4.4.2.2 97% should be M or above
- 4.4.2.3 < 3% in inadequate group
- 4.4.3 The minimum requirements of a qualified mammographer is to take 4-view single-handed mammograms of at least 500 women a year prior to becoming a qualified mammographer in a clinical setting.
- 4.5 All qualified mammographers must be able to:

- 4.5.1 Perform mammograms to a consistently high standard and adapt her technique to clients' needs.
- 4.5.2 Perform first read to critically appraise images, determine the diagnostic value of the images, and select and undertake the most appropriate additional projections or techniques.
- 4.5.3 Assist radiologists to conduct interventional breast procedures.
- 4.5.4 Respond to clinical enquiries from clients.
- 4.5.5 Commit to the quality service to ensure maximum acceptability and minimal anxiety of the clients.
- 4.5.6 Be an active and informed member of the quality control team.
- 4.5.7 All mammographers must perform mammograms on a regular basis. This includes clinical involvement in breast imaging for an average of 150 hours per year.

# 4.6 Research and Development

4.6.1 Actively participate in research and development.

# 5 Clinical applications

# 5.1 Common clinical symptoms / indication for a Diagnostic Mammogram:

- 5.1.1 Breast lump
- 5.1.2 Spontaneous nipple discharge
- 5.1.3 Breast pain / tenderness
- 5.1.4 Suspected breast abscess
- 5.1.5 Accidental findings from screening mammogram, breast ultrasound
- 5.1.6 Strong family history
- 5.1.7 Interval follow-up for probable benign but abnormal lesions picked up by a previous mammogram

# 5.2 Common Pathologies Identifiable by Mammography:

These consist of a wide spectrum of pathologies from benign proliferations, high risk lesions, precursor lesions, to invasive malignancies.

# 5.2.1 Breast cysts

- 5.2.1.1 Simple breast cysts are the most common benign cause of breast lumps in women.
- 5.2.1.2 Some clients may be asymptomatic, while others may have associated pain or tenderness.
- 5.2.1.3 Breast cysts are caused by blockage of the terminal acini with resultant dilatation of ducts. Cysts may be unilateral, although they tend to be bilateral and multifocal.
- 5.2.1.4 On a mammogram, a breast cyst appears as a round, oval, or

lobulated mass with circumscribed margins. Supplementary ultrasound is always recommended.

#### 5.2.2 Fibroadenoma

- 5.2.2.1 Fibroadenoma is a painless, unilateral, benign (non-cancerous) breast tumor that is a solid, non-fluid-filled lump.
- 5.2.2.2 They are well defined and well-circumscribed clinically and the overlying skin is normal. The lesions are not fixed to the surrounding parenchyma and usually slip around under the palpating fingers.
- 5.2.2.3 Fibroadenoma arises from stromal and epithelial connective tissue cells that are functionally and mechanically important in the breast. These tissues contain receptors for both estrogen and progesterone. For this reason, fibroadenomas tend to proliferate during pregnancy because of excessive production of female reproductive hormones. Hormone sensitivity causes excessive proliferation of connective breast tissue.
- 5.2.2.4 On a mammogram, fibroadenomas are oval, or less frequently round, equal density masses with a smooth circumscribed or obscured margin distinct from surrounding breast tissue. Involuting fibroadenomas may contain calcification with the classic, coarse popcorn calcification appearance, usually in postmenopausal women. Some involuted fibroadenomas are totally calcified. Calcification may also present as crushed stonelike microcalcification which makes differentiation from malignancy difficult. Supplementary ultrasound is always recommended.

### 5.2.3 Fibrocystic change

- 5.2.3.1 Fibrocystic change is a benign alteration in the terminal ductal lobular unit of the breast with or without associated fibrosis. It is a mix of fibrous tissue like scar tissue and tiny cysts. It has a wide spectrum of altered morphology from innocuous to those associated with risk of carcinoma.
- 5.2.3.2 There are many terms used to describe fibrocystic change:
  - 5.2.3.2.1 Fibrocystic breast disease
  - 5.2.3.2.2 Diffuse cystic mastopathy
  - 5.2.3.2.3 Fibrosclerosis of the breast
  - 5.2.3.2.4 Chronic cystic mastitis
- 5.2.3.3 On mammography, the breasts are usually heterogeneous with

dense parenchyma. There are partially circumscribed masses which present reflecting cysts. One may appreciate teacup, low-density round calcifications in multiple lobes on a mammogram.

# 5.2.4 Intraductal papilloma

- 5.2.4.1 Intraductal papillomas are proliferative wart-like tumors originating from the walls of milk ducts, typically growing within the duct and tending to cause local ductal obstruction. They are made up of gland tissue along with fibrous tissue and blood vessels. They tend to be benign tumors, but may contain areas of atypia or carcinoma.
- 5.2.4.2 On a mammogram, there are dilated ducts and mass, which may be seen within the duct causing obstruction. Ultrasound and ductography may be required for diagnosis.

# 5.2.4.3 Symptoms:

- 5.2.4.3.1 Nipple discharge: especially if there is unilateral, spontaneous, persistent bloody or clear (serosanguineous) nipple discharge
- 5.2.4.4 More common in central versus peripheral papilloma
- 5.2.4.5 Bloody nipple discharge may have higher association with atypia or malignant lesions

#### 5.2.5 Mastitis

- 5.2.5.1 Mastitis refers to inflammation (swelling) of the breast parenchyma that may be painful. Mastitis usually occurs in women who are breastfeeding, when a milk duct becomes clogged.
- 5.2.5.2 There are several subtypes:
  - 5.2.5.2.1 Acute mastitis: usually occurs from infection with bacteria during lactation
  - 5.2.5.2.2 Plasma cell mastitis (mammary duct ectasia): uncommon subareolar inflammation without associated bacterial infection
  - 5.2.5.2.3 Granulomatous mastitis: rare; usually occurs due to tuberculosis or sarcoidosis
- 5.2.5.3 Clinically, the breasts will be indurated, red, and painful. Nipple retraction may also be evident. Nodal enlargement is common. The client may often have systemic symptoms such as fever or leukocytosis.
- 5.2.5.4 On a mammogram, bacterial (puerperal or non-puerperal)

mastitis will usually feature ill-defined regions of increased density and skin thickening. Supplementary ultrasound is always recommended.

# 5.2.6 Hyperplasia

- 5.2.6.1 Hyperplasia describes an overgrowth (proliferation) of cells. It most often occurs on the inside of the lobules or milk ducts in the breast.
- 5.2.6.2 There are two main types of hyperplasia 5.2.6.2.1 Usual and atypical.
- 5.2.6.3 Both increase the risk of breast cancer, but atypical hyperplasia imposes a higher risk. Atypical hyperplasia will have a larger than 20% lifetime risk of inducing invasive breast cancer.
- 5.2.6.4 The National Comprehensive Cancer Network (NCCN) recommends that women should have a 3D tomosynthesis mammogram every year, starting at the age of 30 years old for atypical hyperplasia. (8)

### **5.2.7 Breast Cancer**

- 5.2.7.1 Breast cancer is the third leading cause of cancer deaths among females in Hong Kong, after lung and colorectal cancers. In 2019, a total of 852 women died from breast cancer, accounting for 13.7% of all cancer deaths in females. Please refer to the Hong Kong Cancer Registry. (3)
- 5.2.7.2 The majority of breast cancers are adenocarcinomas. There are different types of breast cancer, including non-invasive and invasive. The most common types are:
  - 5.2.7.2.1 Invasive Ductal Carcinoma, sometimes called Infiltrating Ductal Carcinoma. About 8 in 10 is an invasive ductal carcinoma (IDC).
    - 5.2.7.2.1.1 Invasive Ductal Carcinoma refers to cancer that has broken through the wall of the milk duct and begun to invade the breast tissue.
    - 5.2.7.2.1.2 One key feature of an invasive breast cancer on a mammogram is spiculated margins.
  - 5.2.7.2.2 Ductal Carcinoma in Situ, about 1 in 5 new breast cancers will be ductal carcinoma in situ (DCIS).

    Nearly all women with this early stage of breast

cancer can be cured.

- 5.2.7.2.2.1 Ductal Carcinoma in Situ (DCIS) is a non-invasive breast cancer or pre-invasive breast cancer. DCIS is not life-threatening, but having DCIS can increase the risk of developing an invasive breast cancer later on.
- 5.2.7.2.2.2 On a mammogram, DCIS usually like looks a cluster of microcalcifications. Therefore, it can be difficult to determine from a mammogram image whether the cluster is DCIS or invasive breast cancer. Tissue sampling for pathological analysis by a radiologist may be considered.
- 5.2.7.2.3 Invasive Lobular Carcinoma (ILC), about 1 in 10 invasive breast cancers is an ILC.
  - 5.2.7.2.3.1 Invasive Lobular Carcinoma refers to cancer that has broken through the wall of the lobule and begun to invade the breast tissue.
  - 5.2.7.2.3.2 It can appear as a white patch or mass on a mammogram. However, ILC does not always show up well on a mammogram because of the cells' tendency to grow in a single-file line, rather than form of a mass.
  - 5.2.7.2.3.3 If a mammogram finds invasive lobular carcinoma, the tumor may appear to be smaller than it is.

# 6. Examination Routine

### **6.1** Before the start of an examination:

- 6.1.1 Ensure proper equipment preparation and perform daily Quality Assurance inspections (please refer to local guidelines).
- 6.1.2 Ensure all clinical information and previous mammograms are ready for review whenever possible.

- 6.1.3 Ensure proper verbal communication so that clients can get all of the necessary examination information and be cooperative. Provide thorough explanations and reassurances about:
  - 6.1.3.1 Discomfort encountered during the mammography examination,
  - 6.1.3.2 the need for optimum compression and,
  - 6.1.3.3 the indication for additional views
- 6.1.4 Understand clients' concerns, anxieties, and provide professional support
- 6.1.5 Check clients' preparation status to ensure proper and safe management for the examination
- 6.1.6 Ensure correct client identification through two different identifiers, which may include client's name, HKID number, and date of birth.

# 6.2 Full Field Digital Mammography Workflow

- 6.2.1 Choose the correct hanging protocol.
- 6.2.2 Choose the correct paddle. Use the corresponding sized compression paddle to respectively sized breast. Using a large paddle can minimize the number of exposures to the breast tissue, while using a small paddle can improve image spatial resolution.
- 6.2.3 Adjusting different exposure parameters to produce mammograms with the most diagnostic value.
- 6.2.4 Quality control of images with correct annotation and demographic data.
- 6.2.5 Additional views added by the mammographer upon the first read of images to streamline the workflow.
- 6.2.6 Ensure the images are sent to the corresponding workstations and Picture Archiving and Communication System (PACS).
- 6.2.7 Check the messages from the radiologist such as additional views or additional supplementary ultrasound examination if applicable.
- 6.2.8 Send clients away when the examination has finished. Instruct the client to arrange a follow-up appointment for the results or collection of a report after the examination.
- 6.2.9 Disinfect the related instruments (compression paddle, face guard, bucky surface) after the examination.
- 6.2.10 At the end of the session, ensure that the images are successfully sent to the PACS and dedicated destinations and workstations.
- 6.2.11 Reboot the mammographic machine at the end of each working day.

# **6.3** Biopsy Examination Workflow

6.3.1 Quality control of biopsy equipment before starting biopsy procedure.

- 6.3.2 Check client identification and informed consent.
- 6.3.3 Always check for the correct identification of a client through two different identifiers, which may include client name, HKID number, date of birth, and phone number.
- 6.3.4 Perform time out procedure in the presence of all related staff to ensure correct procedures and side of procedure.
- 6.3.5 Maintain tight verbal communication with clients during the examination to ensure client safety, and emotional support.
- 6.3.6 Adjusting different exposure parameters to produce the best quality mammograms with the most diagnostic value for biopsy.
- 6.3.7 Discussion and suggestion of related biopsy instrument to a radiologist when needed.
- 6.3.8 Double check client's identity vs biopsy specimen with client.
- 6.3.9 Ensure proper wound care procedures to stop bleeding and dressing.
- 6.3.10 Provide after care information to client.
- 6.3.11 Send clients away when the examination has finished. Instruct the client to arrange a follow-up appointment for the results and report collection after the examination.
- 6.3.12 Disinfect the related instruments after the examination.
- 6.3.13 At the end of the session, ensure that the images are successfully sent to the PACS and dedicated destinations and workstations.

# 6.4 Protocol for Diagnostic Mammography

- 6.4.1 Observe the 28-day rule for women at the childbearing age of 10–60 years old. Sign the LMP consent form if indicated after a thorough explanation to the clients.
- 6.4.2 Patient contact shielding is not recommended and not routinely given. It may be given if strongly requested (12).
- 6.4.3 Two views, craniocaudal view and mediolateral-oblique view, should be done for each breast as routine.
- 6.4.4 Spot compression may be applied over a suspicious area of a mass or abnormal density, especially whenever applicable. Spot compression applied around the post-surgical site to look for any relapse of a tumor.
- 6.4.5 Cone magnification may be taken over suspicious calcification, especially for better delineation of the morphology. A mediolateral view is preferred to identify tea cup calcification.
- 6.4.6 Use a 24x18cm paddle as far as possible, as it improves the spatial resolution of full-field digital mammography (FFDM).

- 6.4.7 If the breast is too big to be included with a 24x18cm paddle, use a 30x24cm big pedal instead.
- 6.4.8 In compliance with the infection precaution standards, all equipment and accessories should be properly disinfected before positioning.
- 6.4.9 Ensure the hanging protocol is correctly chosen for the intended exposure, as the data will be transferred to the DICOM header and digital view marker of the FFDM.
- 6.4.10 Use the correct auto exposure mode and auto sensor option to attain optimal exposures with different breast densities
- 6.4.11 For implant cases, auto filter mode with a manually adjusted sensor position could be used according to the respective manual of the mammographic machine.
- 6.4.12 Compression should be applied centrally over the breast tissue, so as to attain sufficient separation of the breast tissue. Optimal compression is usually reached when the skin becomes taut.
- 6.4.13 Compression should be stopped if the client claims that it is too painful.

  Manual compression is recommended to attain an optimal compression after automatic compression stops.
- 6.4.14 Use multiple automatic exposure control (AEC) chambers if available, as it can reduce retake of images relating to under/over exposure.
- 6.4.15 Size and position of the automatic exposure sensor should be well chosen to cover the glandular tissue resulting in good exposure in manual sensor mode.
- 6.4.16 Smooth out skin fold to avoid any prominent artifact.
- 6.4.17 Ensure correct film labels including clients' demographic data, body marking, correct views labelling, and date of examination.
- 6.4.18 Perform Quality Assurance according to the policy and manufacturer of the mammographic system.
- 6.4.19 Arrange machine servicing when needed according to local policy.
- 6.4.20 Check inventory and order consumables according to local policy.

# **6.5** Protocol for Breast Prostheses:

- 6.5.1 Breast augmentation is a surgical procedure for a variety of reasons ranging from cosmetic choice to reconstructive surgery following mastectomy. Breast implants may interfere with the accurate imaging of breast tissue. The mammographer must explain the significantly reduced sensitivity of screening due to the presence of an implant.
- 6.5.2 The presence of any visible breast asymmetry should be recorded before and

after the mammography is performed. Unusual breast changes due to implant deformity may include:

- 6.5.2.1 Differences in the size and shape of the breasts
- 6.5.2.2 position of the nipple
- 6.5.2.3 contour of the breast
- 6.5.3 If change is noted, seek guidance from a radiologist and follow local protocols. Mammographers should inform the client about any differences observed with sensitivity and care prior to mammography being undertaken.
- 6.5.4 Mammographers must explain the use of minimal compression and assure the client that there is no evidence that compression has caused an implant rupture. Explain that additional images may be needed to visualize as much breast tissue as possible for diagnosis. Advise the client that she may stop the examination at any time if she wishes.
- 6.5.5 Ensure the correct examination protocols are chosen in the mammographic system for screening mammography with implants.
- 6.5.6 The Eklund technique should be offered to all clients with breast implants, where appropriate. The recommended views include the following:
  - 6.5.6.1 Standard mediolateral-oblique (MLO) views should be performed first to assess the size and position of the prostheses (subjectoral or subglandular), then standard craniocaudal view (CC) to get as far back onto the chest wall as possible for sub-glandular implant.
  - 6.5.6.2 Then, perform Eklund MLO & CC views to demonstrate the anterior breast tissue with implant displaced posteriorly.
  - 6.5.6.3 A true lateral view may be considered as an alternative if the implant is immobile (encapsulated). Please follow local protocols.
- 6.5.7 For prostheses sited anterior to the pectoralis major, auto filter mode with a manual adjusted sensor position with FFDM is recommended. If no dedicated auto implant exposure mode is available, manual exposure factors are usually recommended; the mammographer may refer to the operations manual of the respective mammography system for the proper exposure parameters.
- 6.5.8 An ultrasound of the suspicious area is the preferred imaging method for the suspicion of a mass lesion.

# **6.6 Quality Control Programs**

- 6.6.1 Regularly perform quality control programs for the machine and accessories, according to the manufacturer's recommendations and local policy.
- 6.6.2 Conduct reject analysis at least monthly. Frequency depends on workload and staff roster.

6.6.3 Regularly conduct image rating by radiologists to ensure the continuous high standards of image quality.

#### 7. Declaration

The content of this SOP is a reference for radiographers and radiation therapists, or related professionals. However, it should not be used as comprehensive information for the related examinations or procedures. The further elaboration of this document is subject to the decision of the council of The Hong Kong College of Radiographers and Radiation Therapists.

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