

M2 Position individuals and produce radiographic images of the breast

OVERVIEW

This standard is concerned with the preparation and positioning of individuals and the application of compression for radiographic imaging of the breasts. The standard also covers the preparation of the radiographic equipment and performance checks for basic breast imaging, and for initiating the correct exposure. Basic radiographic images of the breast are medio-lateral oblique and craniocaudal mammograms. These are taken of eligible women as part of a regular screening programme or diagnostic procedures. This standard includes the production of diagnostic mammograms through the accurate positioning of the individual, the use of radiographic equipment, safe delivery of radiation and the restoration of the equipment to its standby state. Imaging of individuals with breast implants is excluded from this standard. Users of this standard will need to ensure that practice reflects up to date information and policies. Version No 1

KNOWLEDGE AND UNDERSTANDING

You will need to know and understand:

1. The purpose of the breast diagnostic and screening services
2. The quality assurance programmes in the breast diagnostic and screening services
3. The current legislation, national guidelines and organisational policies and protocols in relation to producing radiographic images of the breast
4. The current legislation governing the use of ionising radiation and of the responsibilities as defined in the legislation
5. Radiation physics and x-ray imaging
6. Ergonomics, your own body posture and safe working practices
7. That the responsibility for confirming equipment is in good working order rests with the user
8. The functions, specifications and performance characteristics of mammography machines in the unit
9. The functions, specifications and performance characteristics of the local image handling devices
10. Identification markers
11. Where and how to access previous records and images and how to add further information
12. The features of mammographic image receptors and screens and the imaging process

- 13.The importance of reporting faults and malfunctions promptly and the correct procedures for reporting these
- 14.The types of legends available in the unit and the importance of complying with the local protocols for their use
- 15.The relevant information which should be sought and recorded
- 16.The importance of compliance with the legal and organisational requirements for imparting information relating to the procedure
- 17.What creates artefacts on images and the importance of avoiding their presence
- 18.The need for the individual's compliance throughout the procedure and the factors which might influence that compliance
- 19.The various ways in which distress and discomfort may be presented and the strategies for handling these
- 20.The need to minimise the radiation dosage received by the individual
- 21.The factors which influence the exposure setting
- 22.The result reporting procedures and the importance of giving timely and accurate information to the individual
- 23.The importance of maintaining clean mammography equipment and following local protocols
- 24.The local procedures for checking mammography equipment and image handling devices and the importance of undertaking these on a regular basis
- 25.Radiographic standards for the production of the optimum diagnostic mammogram
- 26.Techniques to optimise positioning of the breast to overcome physical constraints
- 27.Normal and abnormal breast's physical appearance
- 28.The signs and symptoms of breast cancer
- 29.The importance of accurate labelling according to local protocols
- 30.How images should be correctly displayed
- 31.The anatomy and physiology of the breast and related structures

PERFORMANCE CRITERIA

You must be able to do the following:

- 1.clean the mammography machine with suitable cleansing agents prior to use each day and after each examination
- 2.check the mammography machine for safety and optimal performance before use
- 3.check the image handling and identification devices for safety and optimal performance before use
- 4.check the cassettes and screens for damage and cleanliness before use
- 5.carry out all additional equipment checks according to national standards and local guidelines
- 6.report faults promptly to the appropriate person(s) and document appropriately
- 7.view previous records and mammograms relating to the individual where available, and use the information obtained to guide and make adjustments to the imaging procedure
- 8.receive the individual and explain the procedure explained in a manner which encourages the individual to relax and co-operate with the requirements of the

procedure

- 9.confirm the individual's personal details
- 10.obtain and record all the information relevant to the procedure, and act upon it according to local protocols
- 11.assess the individual's emotional state and respond appropriately
- 12.ask the individual in an appropriate manner to undress for the procedure
- 13.assess the individual's physical size and condition
- 14.observe and record any obvious external abnormalities of the breasts
- 15.use all available information to position the individual for the procedure with the minimum of discomfort and to achieve optimal images
- 16.ensure compliance with the procedure is recognised and take the appropriate action if consent is withdrawn at any time
- 17.advise the individual of the reporting procedure and give any necessary additional information
- 18.answer any questions accurately and honestly, or refer to others if they are outside your terms of reference
- 19.assess the individual and select receptors of an appropriate size
- 20.adjust the mammography unit to accommodate the image receptor selected
- 21.adjust the angulation of the tube to ensure maximum coverage of breast tissue
- 22.select the appropriate exposure factors if required
- 23.position the correct legends to accurately record on the images which breast is being imaged together with any additional legends required by local protocols
- 24.make sure that the individual's breast is properly positioned and compressed to ensure the whole breast is included and no potential artefacts are present
- 25.determine the number of views according to local and national guidelines
- 26.determine the number of images required to optimise breast coverage
- 27.use all available information to make appropriate exposures in compliance with current legislation governing the use of ionising radiation and local rules
- 28.correctly and permanently label the images with the individual's identification before processing or storage
- 29.recognise and respond to distress or discomfort appropriately
- 30.recognise and respond to equipment malfunctions appropriately
- 31.where possible check the images for diagnostic quality and repeat the images if necessary
- 32.recognise where help and/or advice is required and obtain it from appropriate sources

ADDITIONAL INFORMATION

This National Occupational Standard was developed by Skills for Health. This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004): Dimension: HWB6 Assessment and treatment planning