

# SFHR1

## Acquire images, data and reference material for radiotherapy processes



### Overview

This standard covers the acquisition of images, data and reference material for radiotherapy planning and verification. It includes plain film, CT, MRI, ultrasound and portal images.

Users of this standard will need to ensure that practice reflects up to date information and policies.

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### Performance criteria

*You must be able to:*

- P1 apply standard precautions for infection control and other appropriate health and safety measures
- P2 confirm the location(s) of the region(s) of interest
- P3 select all equipment parameters required for the image acquisition and check for compliance with the procedure
- P4 select and position the accessories required by the protocol
- P5 position the patient and adjust their clothing according to the protocols for the examination to be performed in a manner which allows an optimal outcome to be achieved while:
  - P5.1 recognising the patient's need to retain their dignity and self respect
  - P5.2 ensuring his/her comfort as far as possible
  - P5.3 preventing the appearance of artefacts
- P6 check the room prior to procedure to ensure that no one except the patient remains
- P7 acquire an initial image where appropriate to check:
  - P7.1 that the patient's position is correct
  - P7.2 the image is suitable
- P8 mark reference points for further imaging and treatment on:
  - P8.1 the patient's body
  - P8.2 immobilisation and positioning devices
- P9 acquire the image, any further measurements, diagrams and instructions needed for reproducibility according to local protocols
- P10 review the image to ensure it is:
  - P10.1 technically acceptable
  - P10.2 suitable for its purpose
- P11 and take appropriate action where these are not met
- P12 record, collate and check all relevant data for accuracy and reproducibility
- P13 transfer data according to local protocols
- P14 support and monitor the patient throughout the procedure
- P15 recognise where help/advice is required and get this from appropriate sources

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### Knowledge and understanding

*You need to know and understand:*

- K1 the legislation and protocols relating to radiotherapy, in the areas of:
  - K1.1 current radiation protection regulations and local rules
  - K1.2 local protocols for data entry, utilisation, recording and transfer
  - K1.3 local treatment planning protocols
  - K1.4 local protocols on informed consent
  - K1.5 local protocols for patient identification
  - K1.6 national and local guidelines for radiotherapy planning and treatment
- K2 the importance of applying standard precautions and the potential consequences of poor practice
- K3 the importance of recognising, and not working beyond, the limitations of your own knowledge and experience
- K4 the roles and responsibilities of other team members
- K5 the following:
  - K5.1 relevant anatomy including sectional and functional
  - K5.2 signs of patient distress and anxiety
  - K5.3 clinical signs that require the attention of multidisciplinary team members
  - K5.4 concurrent and malignant disease progression and the potential impact on physiological systems
- K6 the principles of radiotherapy physics, including:
  - K6.1 interaction processes with matter
  - K6.2 production and utilisation of images
- K7 radiotherapy procedures in the areas of:
  - K7.1 principles of radiotherapy planning
  - K7.2 contra-indications to the procedure
  - K7.3 image manipulation and interpretation
- K8 the principles of radiotherapy, including:
  - K8.1 patient positioning and immobilisation in order to optimise reproducibility of treatment delivery
  - K8.2 selection of appropriate treatment technique for optimum delivery
- K9 the principles and operational procedures associated with images obtained by the equipment in use including the criteria for technical acceptability
- K10 the advantages, disadvantages, risks and benefits of the imaging equipment being used including:
  - K10.1 radiography
  - K10.2 computed Tomography
  - K10.3 magnetic Resonance Imaging
  - K10.4 ultrasound
  - K10.5 linear Accelerators

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- K11 equipment capabilities and limitations
- K12 the efficiency and efficacy of patient immobilisation and positioning devices

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## Additional Information

### External links

This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):

Dimension: HWB6 Assessment and treatment planning

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