SFHR4
Produce treatment parameters for standard
individual patient external beam radiotherapy using
a planning computer

Overview

This standard relates to the production of treatment parameters, normally including isodose distributions, for individual patients in circumstances for which there is an established departmental protocol. A plan may be undertaken by a suitably competent person working to established protocols.

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   collate the relevant patient data and patient treatment related data and check for validity, consistency and completeness

P2   check the relevance and validity of the proposed treatment against agreed departmental protocols

P3   review deviations from the protocol and take appropriate action

P4   check that the outlining and the addition of margins have been carried out according to agreed departmental protocols

P5   use appropriate planning software and algorithms to produce a treatment plan which meets all required criteria

P6   work interactively with the relevant clinician to review and optimise the treatment plan and to obtain acceptance and approval of the final plan

P7   critically review the treatment plan before handover for independent checking

P8   record all calculations, calculation results and treatment instructions according to departmental protocols

P9   enter all relevant calculation results and treatment instructions into the treatment machine record and verification system, where appropriate

P10   provide sufficient detail for the methodology and data to be verified sufficiently to satisfy an independent check and for the data to be used for treatment and treatment verification

P11   export the data from the treatment planning system according to departmental protocols

P12   recognise situations where you need to seek advice / support from appropriate sources, and respond appropriately

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Knowledge and understanding

You need to know and understand:

K1 relevant departmental protocols and policies and their application with respect to dose planning

K2 local protocols for data entry, utilisation and transfer

K3 the roles and responsibilities of other team members

K4 when to seek advice or support including where the complexity required for the treatment plan exceeds your personal level of competence or where you have concerns about the patient's suitability for the prescribed treatment

K5 relevant pathology and regional, sectional and functional anatomy

K6 image manipulation and virtual simulation

K7 the criteria for acceptable dose to the planning target volume and maximum allowed dose to organs at risk dependent on disease site

K8 the data required for treatment calculation

K9 factors influencing the quality of treatment plans including:

   K9.1 conformation to agreed departmental protocols

   K9.2 relevance to the type, grade and stage of the tumour

   K9.3 appropriateness to achieve the intended purpose of radiotherapy,

   K9.4 taking into account limiting doses to organs at risk

   K9.5 compliance with the treatment prescription

   K9.6 deliverability in both geometric and practical terms,

   K9.7 taking full consideration of patient mobility, movement and condition

K10 verification methods and techniques and how to apply them

K11 treatment planning algorithms and their limitations

K12 the relevant principles of radiation physics relating to calculation of dose distributions within patients including local application of dosimetry methodology

K13 the use of treatment planning systems

K14 how to critically appraise treatment plans against planning/patient information

K15 the range and extent of independent checks required

K16 the capabilities and limitations of treatment machines

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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: HWB7 Interventions and treatments

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