

SCHEDULE 3

Regulation 17

Adequate Training

1. Practitioners and operators must have successfully completed training, including theoretical knowledge and practical experience, in—

- (a) such of the subjects detailed in Table 1 as are relevant to their functions as practitioner or operator; and
- (b) such of the subjects detailed in Table 2 as are relevant to their specific area of practice.

Table 1

Radiation production, radiation protection and statutory obligations relating to ionising radiations

| <i>Fundamental Physics of Radiation</i> | |
|--|---|
| Properties of Radiation | Excitation and ionisation Attenuation of ionising radiation Scattering and absorption |
| Radiation Hazards and Dosimetry | Biological effects of radiation – stochastic and deterministic Risks and benefits of radiation Absorbed dose, equivalent dose, effective dose, other dose indicators and their units |
| <i>Management and Radiation Protection of the individual being exposed</i> | |
| Special Attention Areas | Pregnancy and potential pregnancy Asymptomatic individuals Breastfeeding Infants and children Medical and biomedical research Health screening Non-medical imaging Carers and comforters High dose techniques |
| Justification | Justification of the individual exposure Use of existing appropriate radiological information Alternative techniques |
| Radiation Protection | Diagnostic reference levels Dose Constraints Dose Optimisation |

Status: This is the original version (as it was originally made).

| | |
|---|---|
| <i>Fundamental Physics of Radiation</i> | |
| | Dose reduction devices and techniques |
| | Dose recording and dose audit |
| | General radiation protection |
| | Quality Assurance and Quality Control including routine inspection and testing of equipment |
| | Risk communication |
| | Use of radiation protection devices |
| Statutory Requirements and Non-Statutory Regulations | |
| | Regulations |
| | Non-statutory guidance |
| | Local procedures and protocols |
| | Individual responsibilities relating to exposures |
| | Responsibility for radiation safety |
| | Clinical audit |

Table 2

Diagnostic radiology, radiotherapy and nuclear medicine

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|---|--|
| <i>All Modalities</i> | |
| General | Fundamentals of radiological anatomy |
| | Factors affecting radiation dose |
| | Dosimetry |
| | Fundamentals of clinical evaluation |
| | Identification of the individual being exposed |
| <i>Diagnostic radiology</i> | |
| General | Principles of radiological techniques |
| | Production of X-rays |
| | Equipment selection and use |
| Specialised Techniques | Computed Tomography: advanced applications |
| | Interventional procedures |
| | Cone Beam Computed Tomography |
| | Hybrid imaging |
| Fundamentals of Image Acquisition etc. | Optimisation of image quality and radiation dose |

| <i>All Modalities</i> | |
|--|--|
| Contrast Media | Image formats, acquisition, processing, display and storage Use and preparation Contraindications Use of contrast injection systems |
| <i>Radiotherapy</i> | |
| General | Production of ionising radiation Treatment of malignant disease Treatment of benign disease Principles of external beam radiotherapy Principles of brachytherapy |
| Specialised techniques | Intra-operative radiotherapy Stereotactic radiotherapy and radiosurgery Stereotactic ablative radiotherapy Proton therapy MR Linac therapy |
| Radiobiological Aspects for Radiotherapy | Fractionation Dose rate Radiosensitisation Target volumes |
| Practical Aspects for Radiotherapy | Localisation equipment selection Therapy equipment selection Verification techniques including on-treatment imaging Treatment planning systems |
| Radiation Protection Specific to Radiotherapy | Side effects—early and late Toxicity Assessment of efficacy |
| <i>Nuclear Medicine</i> | |
| General | Atomic structure and radioactivity Radioactive decay Principles of molecular imaging and non-imaging exposures |

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All Modalities

| | |
|---|---|
| | Principles of molecular radiotherapy |
| Molecular Radiotherapy | Dose rate |
| | Fractionation |
| | Radiobiology aspects |
| | Radiosensitisation |
| Specialised techniques | Quantitative imaging – advanced applications |
| | Hybrid imaging – advanced applications |
| | Selective Internal Radiation Therapy |
| Principles of Radiation Detection, Instrumentation and Equipment | Types of detection systems |
| | Optimisation of image quality and radiation dose |
| | Image acquisition, artefacts, processing, display and storage |
| Radiopharmaceuticals | Calibration |
| | Working practices in the radiopharmacy |
| | Preparation of individual doses |
| Radiation Protection Specific to Nuclear Medicine | Conception, pregnancy and breastfeeding |
| | Arrangements for radioactive individuals |