

Nuclear Medicine ARCP Decision Aid 2021

This decision aid provides guidance on the requirement to be achieved for a satisfactory ARCP outcome at the end of each training year. The knowledge and workplace based assessment required for Clinical Radiology are set out in the curriculum and decision aid available on the Royal College of Radiologists website www.rcr.org.uk. Nuclear Medicine trainees will need to meet the requirements for both specialties in the dual CCT programme.

| Evidence / requirement | Notes | Year 1 – Year 3 (ST3-ST5) Evidence recorded in Radiology eportfolio | Year 4 (ST6) Evidence recorded in JRCPTB eportfolio | Year 5 (ST7) Evidence recorded in JRCPTB eportfolio | Year 6 (ST8) Evidence recorded in JRCPTB eportfolio |
|---|--|---|--|--|---|
| Educational supervisor (ES) report | There should be an ES report for both Clinical radiology and Nuclear Medicine in each training year | Confirms meeting or exceeding expectations and no concerns | Confirms meeting or exceeding expectations and no concerns | Confirms meeting or exceeding expectations and no concerns | Confirms will meet all requirements needed to complete training |
| Generic capabilities in practice (CiPs) | Trainees should record self-rating to facilitate discussion with ES. ES to record rating for each CiP | ES to confirm trainee meets expectations for level of training as set out in the Clinical Radiology curriculum | ES to confirm trainee meets expectations for level of training | ES to confirm trainee meets expectations for level of training | ES to confirm trainee meets expectations for level of training |
| Specialty capabilities in practice (CiPs) | Trainee should complete self-rating to facilitate discussion with ES. ES report will confirm entrustment level for each CiP | ES to confirm trainee is performing at or above the level expected for all CiPs as set out in the Clinical Radiology curriculum | ES to confirm trainee is performing at or above the level expected for all CiPs as set out in grid below | ES to confirm trainee is performing at or above the level expected for all CiPs as set out in grid below | ES to confirm level 4 in all CiPs by end of training |
| Multiple consultant report (MCR) | Indicative minimum number. Each MCR is completed by a consultant who has supervised the trainee's clinical work. The ES should not | N/A | 2 | 2 | 2 |

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|--|---|--|--|--|--|
| | complete an MCR for their own trainee | | | | |
| Multi-source feedback (MSF) | An indicative minimum of 12 raters including 3 consultants and a mixture of other staff (medical and non-medical). MSF report must be released by the ES and feedback discussed with the trainee before the ARCP. If significant concerns are raised then arrangements should be made for a repeat MSF | 1 | 1 | 1 | 1 |
| Case-based discussion (CbD) and mini-clinical evaluation exercise (mini-CEX) | Indicative minimum number to be carried out by consultants. Trainees are encouraged to undertake more and supervisors may require more if concerns are identified. Assessments should be undertaken throughout the training year. Structured feedback should be given to aid the trainee's personal development and reflected on by the trainee | As per Clinical Radiology ARCP decision aid | 4 CbD and 1 mini-CEX | 4 CbD and 1 mini-CEX | 4 CbD and 1 mini-CEX |

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|--|--|--|--|---|---|
| Mini-imaging interpretation exercise (Mini-IPX) | Indicative minimum number by a range of assessors including at least one of consultant level in each 4-6 months. Structured feedback should be given to aid the trainee's personal development and reflected on by the trainee | As per Clinical Radiology ARCP decision aid | 4 | 8 | 8 |
| Radiology-direct/direct observation of procedural skills (Rad-DOPS/DOPS) | Indicative number | As per Clinical Radiology ARCP decision aid | 2 DOPS | 1 DOPS | 1 DOPS |
| Quality improvement (QI) project | Project to be assessed with quality improvement project tool (QIPAT) | As per Clinical Radiology ARCP decision aid | | Design and undertake 1 quality improvement project (which may include audit) with presentation at a local audit meeting | Design and undertake 1 quality improvement project (which may include audit) with presentation at a local audit meeting |
| Patient survey | | As per Clinical Radiology ARCP decision aid | 1 | | 1 |
| Teaching observation | Indicative number | As per Clinical Radiology ARCP decision aid | | 1 | |

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|-----------------------------|-------|--|--|--|--|
| Examination | | FRCR 1 & 2a passed | FRCR 2b passed | | Post Graduate Diploma in Nuclear Medicine passed |
| Advanced life support (ALS) | | Valid | Valid | | Valid |

Clinical scenarios and interventions

The table below details clinical scenarios which Nuclear Medicine interventions commonly contribute to. The numbers provided are indicative and are intended to help guide the levels of training typically required to achieve competence.

| System | Type of scan | Examples of common indications | Indicative numbers |
|--|---|--|--------------------|
| Oncological Nuclear Medicine | Whole body PET-CT, SUV quantification | PET-CT staging of tumours, primarily 18F-FDG but to also include experience in other tracers such as PSMA, choline, somatostatin analogues | 800 |
| | Whole body single photon, SPECT, SPECT-CT | Staging of bone metastatic disease | 700 |
| | Lymphoscintigraphy | Sentinel node mapping | 50 |
| Cardiovascular Nuclear Medicine | SPECT, PET cardiac scans, quantification | Myocardial ischaemia, stress/rest, gated function (MUGA), viability, sarcoid, amyloid, sympathetic innervation | 500 |

| System | Type of scan | Examples of common indications | Indicative numbers |
|---|---|--|--------------------|
| Musculoskeletal Nuclear Medicine | Dynamic, planar, whole body, SPECT, SPECT-CT bone scans | Bone scans for musculoskeletal problems, white cell scan for infection | 130 |
| Pulmonary Nuclear Medicine | Planar, SPECT, SPECT-CT, possibly with quantification | Lung scans for pulmonary embolism evaluation, lobar quantification, shunt evaluation | 140 |
| Renal Nuclear Medicine | Dynamic, static, with quantification | Dynamic for renal function, drainage and micturating cystogram Static for renal function and parenchymal evaluation | 140 |
| Neurological Nuclear Medicine | SPECT, PET | Dementia, epilepsy, movement disorders etc. | 250 |
| Gastrointestinal Nuclear Medicine | Dynamic, static, possibly quantification | GI bleed, ectopic gastric mucosa, transit, biliary, liver & spleen parenchyma studies | 60 |
| Endocrine Nuclear Medicine | Static, SPECT, SPECT-CT, possibly quantification | Thyroid, parathyroid, adrenal pathologies | 150 |
| Infection or Inflammatory Nuclear Medicine | FDG PET-CT or single photon whole body labelled white cell scan | Pyrexia of Unknown Origin, vasculitis, activity of inflammatory bowel disease | 40 |
| Miscellaneous | | e.g. Lymphoscintigraphy for oedema dacroscintigraphy for epiphora | 30 |

| Nuclear Medicine Therapies | Examples of organ systems | Examples of common indications | Indicative numbers |
|----------------------------|---------------------------|------------------------------------|--------------------|
| Benign | Thyroid | Thyrotoxicosis Non-toxic goitre | 50 |
| | Joint | Synovitis | 5 |
| Malignant | Bone | Metastasis | 30 |
| | Thyroid | Primary lesion \pm metastases | 20 |
| | Neuroendocrine | Primary lesion \pm metastases | 10 |
| | Liver | Liver metastases (SIRT) | 5 |

| Nuclear Medicine Therapies | Examples of organ systems | Examples of common indications | Indicative numbers |
|--|---|--------------------------------|--------------------|
| Nuclear Medicine quantification without imaging | GFR, red cell mass, platelet non imaging studies, GFR, SeHCAT etc | N/A | 50 |

Levels to be achieved by the end of each training year and at critical progression points for Nuclear Medicine specialty CiPs

Level 1: Entrusted to observe only – no clinical care; Level 2: Entrusted to act with direct supervision; Level 3: Entrusted to act with indirect supervision; Level 4: Entrusted to act unsupervised

| Specialty CiP | ST3 | ST4 | ST5 | CRITICAL PROGRESSION POINT | ST6 | ST7 | ST8 | CRITICAL PROGRESSION POINT |
|--|-----|-----|-----|----------------------------|-----|-----|-----|----------------------------|
| 1. Advising and authorising appropriate Nuclear Medicine diagnostic and therapeutic interventions for individual patients | 2 | 2 | 2 | | 3 | 3 | 4 | |
| 2. Ability to direct optimisation of diagnostic Nuclear Medicine image quality in terms of patient preparation, image acquisition, post processing and display | 2 | 2 | 2 | | 3 | 4 | 4 | |
| 3. Providing timely, accurate and clinically pertinent reports on all Nuclear Medicine diagnostic studies | 2 | 2 | 2 | | 3 | 3 | 4 | |
| 4. Providing a safe and comprehensive radionuclide therapy service | 2 | 2 | 2 | | 2 | 3 | 4 | |
| 5. Leading all the clinical aspects of the Nuclear Medicine department in terms of compliance with regulations | 2 | 2 | 2 | | 2 | 3 | 4 | |